Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, NOVEMBER 11, 1899. NO. 9.

History of Paint and Colors.

BY JOHN COLLET.

Before I enter into a more thorough discussion of paint and its constituents, that is, the various pigments and vehicles, or liquids, in which these pigments are mixed or ground, and before I attempt to give you a fair understanding of what we may call: "Chemistry of Paint and the appliance and relation of the former to the manufacturing of the latter, and its constituents in particular," permit me, as an introduction, to make you first acquainted with: "The History of Paint and Colors."

A short, well-to-be-understood explanation of color, its origin and meaning, in a concrete sense as well as in an abstract point of view, will also be a subject of the first chapter of our educational meeting or symposia.

No doubt paint is as old as man and very likely a good deal older, for when we assume that in the pre-historic times long before man inhabited our planet, one of these gigantic animals as mastadons, mammoths or other saurier relied himself in marsh and moor in order to cover his immense body with a coat of mud, so was this kind of "dipping" doubtless only done with the purpose of protecting himself against the burning rays of the sun and the molesting bites of flies and mosquitos, the size of which was very likely proportionate to that of these first pre-historic painters. It shows us also that the "dipping process" in painting is not as new and modern as we think it is. The paint in this kind of early painting was certainly used more for "protecting" than "decorating."

Later on, man made his a pearance (on our globe), and we may rest assured that he adopted in the first state of his existence the same kind of protecting painting. Being, however, gifted with a higher sense he soon commenced to beautify his coat of paint by using various colored earths as nature would provide him, and as soon as he learned by necessity to build abodes and dwellings to find shelter against the elements, and became thus naturally more and more sedative in his habit of living, he applied paint also in a decorating purpose to his dwellings and to his edifices of worship.

Man became historic, and with him and with that period we may date properly the history of paint.

If we go back, say 600 years before the Christian Era, the time the Babylonians erected the Temple of Baal, the history of which, thanks to recent scientific investigations, is clearly and undeniably known to us, we see inscriptions on tiles found in excavations on the spot where this immense building for the worship of Baal (the god of sun) was located, several times paint or kalsomine mentioned, and as a matter of fact, tiles and other articles have been found that were painted with what was recognized as bitumen or asphaltum.

These paintings were crude, much more so than those of the ancient Egyptians, whose history we are able to read now without any fault down to 6,000 years before Christ.

If paint ever had a history it had so with the ancient "Pharaohs on the Nile." Indeed their history is a history in paint, and is written exclusively and read by their most elaborate paintings.

6,000, or rather 6,000 years, is a very long time, and when we think that all these paintings, applied on wood, canvas or stone, are just as fresh and bright as the time they were painted, we must indeed give the highest credit to the marvelous skill and knowledge of these ancient painters.

The selection of pigments for outside work was in fact so judicious that on pillars and walls exposed for so many thousand years to the hottest sun and to the grinding sand-blast of the desert, the stone under the paint crumbled and perished, but the paint stayed, holding in many instances under its coat the honey-combed stone together. Their inside work, and especially the decorations of oracles at tombs and sarcophagi were even more astonishing. The mummies and caskets of their rulers, as taken from the tombs, where they were laid to rest so many thousand years ago, show the paint with which they were decorated intact in the fullest sense of the word. Bright, and without any fading or cracking, the red, blue, green and yellow of the various hieroglyphics are presented to our eyes. The writer himself saw in one of the largest museums on the continent specimens of these ancient Egyptian masters of the brush.

The selection of these, we may say imperishable pigments, came naturally down to the Greeks and later to the Romans also, and we meet, therefore, these colors again in the excavation at Pompeii and Herculaneum at the foot of Mount Vesuvius. Both cities perished, as is well known, in the year 70 after Christ, in one of the eruptions of the named volcano, and lay buried under lava and ashes nearly 2,000 years. Astonishing is here also the preservation of paint in the paintings on the walls laid bare by these excavations. Among others a complete paint-shop was discovered with pots of paint and tools, and many a bath and toilet room of a Roman lady was brought to light again, showing intact on the marble dresser in the concubinium the various pots and vases of paint used by the fair females for beautifying their faces, hands, and strange to imagine, but true, their feet also.

Naturally we ask: "What kind of pigments and vehicles did these people use to obtain a paint of such marvelous durability?"

Chemical analysis, in connection with many data given to us in various scriptures by Theophrastus and especially Pliny (the Webster of the period), gave us the answer.

Very incompetent and small were the means of the ancients to produce dry colors artificially, but still especially the Egyptians have proved to have been quite experts in the production of artificial blues and reds, as a matter of fact they were using a blue resembling very much our present ultramarine blue in color and chemical construction, not the natural "lapis-lazuli," or blue stone, but an artificially made pigment. The secret of its manufacture had been lost and was never transferred to the Greeks and Romans. The blue used by these nations were simple copper blues on a lime basis. 6,000 years later, in the year 1820, chemistry enabled our modern color-makers to duplicate the Egyptian blue in the present ultramarine blue.

TO BE CONTINUED

Directory.

No question No. 1

W. A. M. Woodward

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

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VOL. I. DETROIT, MICHIGAN, NOVEMBER 18, 1899. NO. 10.

History of Paint and Colors.

BY JOHN COLLET.

(Continued from last week.)

The ancient artists having had a very limited knowledge of chemistry and color making were therefore naturally compelled to fall back to nature and to use such material and pigments as "mother earth" would provide them with, and as we all know these natural or native pigments being the fastest and most durable ones, we have to deem it very wise and fortunate for us that providence enabled us thus to read the history of these ancient nations through their paintings with such lasting and durable colors.

In regard to the pigments used in these paintings and inscriptions, they were, as I said before, mostly of native nature. Thus, for White, Gypsum and Carbonate of Lime were used, the former especially for priming and the latter as a white base in tints. The Yellows and Reds of the Egyptians are Ochres and Sulphur, compounds of arsenic, however Cinnabar, or natural Quicksilver Vermilion, Red Lead and Orange Mineral were also known to them, at least the Greeks knew these pigments and also White Lead, as a natural product — the so-called Cerusa, they knew also to manufacture Red Lead from this Cerusa. Their Greens were Copper Greens and natural manganese earth, the Verona Greens of a later period. Their Blacks were Lamp or Carbon-Black, manufactured in identically the same way as we manufacture Lamp-Black, that is, condense the production of combustion of resinous matter, and use the produced black soot as pigment.

As much light as the modern chemical analysis gave us in regard to the constitution and properties of the pigments used by the Egyptians, Greeks and Romans, so much are we left in almost complete darkness in regard to the vehicle or binder these nations were using. However, if we take into consideration that the southern part of Europe, Asia Minor and Africa, abundant with many species of Mimosa and other trees yielding Gum and Resins, and that the properties of Gum-Tragacanth especially, and the manufacture of Gelatine-Glue was known to the ancients, and that very probably they had the knowledge of the drying qualities of one or other vegetable oil, we may assume that they were experts also in manufacturing a vehicle or size for their pigments. That they were experts is proved by that not one of their paintings show cracks, blisters or peeling as so many of our old ones do, painted only 100 or even 200 years ago.

The preparation or manufacture of paint with the ancients was naturally crude, but not very much cruder or simpler than it was actually with us to about 50 years ago. Slab and muller were the grinding tools, and as we all know, our own fore-fathers used the same, and in fact we may still find these slow and cumbersome tools in many a paint shop.

However, the last half of our present century brought with all its inventions, discoveries and modern improvements the same revolution and progress in the manufacture of paint as it did with so many others. These improvements and the various models of machinery, as mixers and mills, used by the modern paint and color-maker, will be, however the subject of a separate discussion.

Then I said that paint was as old as man, so may I say the same of Color, for there would not be paint if there was no color, the word color applied in a concrete meaning.

What is color? The explanation of this term is two-fold. When a beam of white light, say sunlight, is made to pass through the angle of a triangular prism and the passing light is caught or thrown upon a screen we find that it has undergone a wonderful change. It is spread out in a band of many colors, and colors of the rainbow, of which we can easily distinguish six, that is, Red, Orange, Yellow, Green, Blue and Violet.

We see these colors by the effect or by the sensation they produce by their action on the nerves in the retina of the eye and by the transmitting of this sensation to the brain. These colors have, therefore, an abstract existence only. We see, but we cannot handle them, and when we speak of a color we use the term color in its abstract sense to indicate the sensation which this color creates in our eyes and brain.

However, if we speak of colored bodies as colors, bodies which give the sensation of color, as do we mean that we can impart color to other bodies by the appliance of these colored bodies. The word color is used then in a concrete sense and indicates tangible bodies which we can handle at will.

Although the subject of color in an abstract sense and the nature of colors produced by the splitting of a beam of light in its six or more spectra is very important and interesting, this short essay does not intend to enter more closely in a discussion of same, but will pass over to the "Cause of Color in Colored Bodies."

When light falls upon a substance the light may be affected in one or two ways: it may be reflected, that is, it may be thrown back from the body, or it may be transmitted that is it may pass through, or it may be absorbed by the body on which it has fallen. As a matter of fact it is by reflected light that we see bodies. Upon the character of the reflected light thrown off from the body corresponds its color.

If all the rays of light falling upon it are reflected then the body appears to the eye white; if all the rays of light are absorbed that is, none are reflected, the body appears black. If some of the rays are absorbed and the rest reflected, then the body appears colored, the color being of that of the reflected rays alone or in combination, as only the red rays of the light are reflected the body appears red; if the yellow rays are reflected it is yellow, if the red rays and a small part of the blue rays are reflected, the body appears red with a bluish tint, and so on, and so on in combination.

Why such or such a body appears such or such a color, that is, why a body has its color, separated from white light absorbs the rest of the light is a question our knowledge goes almost as far to investigate, and science takes it here, as in so many cases, to refer to saying: "The color of a body is the same, the properties of a body to reflect a certain combination of rays and to absorb the rest, creating thus in our eyes the sense of its color, is due to the peculiar construction of this same body."

This theory is very well verified and can be explained by taking basic Chromate of Lead, the American Chrome Yellow, for example. This pigment is a bright yellow body, its red color being due to the

Thoughts

RE. WHITE LEAD

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VOL. I. DETROIT, MICHIGAN, NOVEMBER 25, 1899. NO. 11.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

The liquid composition to which we have given the term and name "paint" is used to an enormous extent for two purposes: first, to act as a protective substance or coating to preserve the surface of the body on which it has been applied from the destructive action of the weather and second, as a mere decorative agent.

The first object is brought about by making the Paint with such materials which are not acted upon by the various agents in the atmosphere, such as water, carbonic acid, oxygen, heat and light, all of which exert a more or less destructive effect on bodies which may be exposed to their action.

The bodies which have been found to resist this destructive action of the atmospheric influences are the various so-called drying oils, resinous matter and the pigments. These materials, mixed into a liquid composition, that is, what we call Paints, when applied to the body to be painted and afterwards exposed to the atmosphere, will dry and leave behind it a hard but elastic and opaque coating which may be more or less lustrous and be capable of resisting weather and other influences. The capacity and the color of this coating we obtain by using pigments or solids of various kinds, which also tend, according to their nature, to increase the resisting power of the paint.

These pigments are mixed with liquid bodies such as oils, spirits and compound resinous preparations, which are used partly to obtain a composition that is easy of application, and partly to secure volatility so that they will evaporate, leaving behind a hard mass firmly binding the pigment to the body over which they have been painted.

The liquid bodies such as mentioned, their properties and relations to the manufacturing of paint, will, however, find a proper place for discussion later on.

The primary purpose of paint is, as said before, to hide the character of the surface to which it is applied and protect this surface, but paint is also in the most cases more or less colored in order to secure at the same time decorative effect, and this coloring, as we know, is effected by the addition and use of various colored pigments.

Among the group of pigments used in the manufacture of Paint, the white pigments take doubtless the first place.

They may be subdivided into two separate groups: first, as so-called body colors, they are the principals which give body and covering capacity, especially to the white and tinted paints, and include White Lead, Lead Sulphate, the so-called Sublimed Lead, Zinc Oxide, Zinc Whites, and Zinc Sulphide or Lithophone; second, as extenders or inert pigments, comprising the group of Barytes, China Clay, Silex, Whiting and others.

The most prominent place in the first group of white pigments is doubtless taken by Basic-Carbonate of Lead, the White Lead of commerce. As we have seen, White Lead has been known and used as pigment for centuries, for the Greeks and Romans used the natural Carbonate of Lead, the so-called Cerussa. As this natural product is found only in comparatively small quantities, and as its properties and qualities made it in the highest degree desirable and adaptable for the use as Paint pigment, the human genius was, therefore, naturally bent towards finding a process for the artificial production of this white pigment.

It is not known when White Lead was first made, who made it, or to what country it owes its discovery or invention. Evidently White Lead has been made for at least two centuries, for we see the oldest known method, the so-called "Dutch Process" mentioned in 1640, a method which has not undergone considerable change during all this period up to the present time, and, although a number of processes and almost innumerable modifications of processes have been devised, the ancient "Dutch" process still remains preeminently the best process for the manufacturing of White Lead, at least that is what its advocates say, for whose benefit and advantage it is doubtless the best process.

Before, however, we enter into a discussion of any of these processes and into that of the "Dutch" and of the Carter processes, the only two used to any extent in the United States in particular, and as only few people realize the importance of commercial White Lead and the extent to which it is used in the manufacturing of other goods and as many do not even know that it ought to be the principal base of almost all paints having any value whatever, excepting possibly artists colors and as generally speaking people do not know how White Lead is made and may have a very vague idea as to its physical and chemical properties, and are consequently compelled to ask: What is White Lead? I shall first attempt, therefore, to give you a small understanding and a comprehensive explanation of the general physical and chemical properties of this pigment.

A general knowledge of the properties of White Lead is the more desirable as it will greatly help to understand and comprehend the manufacture of same. However a more explicit and more detailed discussion of the chemical properties and their relations to the use of this pigment in paint will be given after we have become familiar with the different processes of the manufacturing White Lead. These chemical relations will then be better explained by a comparison of the qualities of different products produced by different processes.

The commercial article White Lead is an amorphous white pigment, possessing all the good qualities desired by painters as to good color, body or covering power and permanency. It is distinguished from other pigments by the ease with which it mixes with oil and by forming a paste that readily flows from the brush and spreads, resulting in a hard but elastic coat of paint.

TO BE CONTINUED

Editor THOUGHTS

I am much pleased with No. 1 as to the subject of "How to Sell Me a First Grade Prepared Paint." I think it possible for any one to cover the point better than he has done. Yours

Notes.

Salesmen should be careful when sending in samples to see that each sample is correct and properly marked.

Thoughts

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VOL. I. DETROIT, MICHIGAN, DECEMBER 2, 1899. NO. 12.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(*Continued from last week.*)

Chemically White Lead is a basic Carbonate of Lead, that is, it is a chemical combination of Lead Oxide, Carbonic Acid and water, *or rather a combination of* Carbonate and Hydrated Oxide of Lead in the proportion of two parts of the former to one part of the latter. But, as a matter of fact, White Lead is not always of this composition exactly, but differs sometimes to a great extent, as regards the proportions these two constituents are present.

By chemical analysis and practical tests, however, it is more than doubtless proved that a White Lead, having the above composition, or showing 86.32 per cent. Lead Oxide, 11.36 per cent. Carbonic Acid, and 2.32 per cent. Water, equal to 88.95 per cent. Lead Carbonate and 31.05 per cent. Hydrated Lead Oxide, or to the chemical formula $2PbCO_3 : Pb_2HO_2$ is to be considered a standard of the best quality obtainable, from a painter's point of view.

A White Lead that differs from this composition has one or other faults. This may be explained as follows: It is the Hydrated *Lead Oxide that unites with the oil, giving* thus as a lead soap, or a lead fatty varnish, or the elasticity and the flowing properties to the paint but hydrated Lead Oxide alone would have little opacity or covering power. This latter is imparted by the Carbonate of Lead which also imparts the white color to the pigment and thus to the paint. Both constituents are *necessary*, and, as I said before, in order to give the best results in just the given proportions, or nearly so, for hydrate Lead Oxide alone would turn yellow and has no opacity, and Carbonate alone having opacity and whiteness, lacks elasticity and would chalk off.

The two constituents, however, combined chemically in the indicated proportions, balance one another in regard to their properties in such a proper way that the pigment produced is considered and classified as the best of all painters' pigments.

The question arises now which process will produce a white lead corresponding the nearest to this composition? Taking all the faults and weighing them against the many good qualities and properties of white lead produced by the old "Dutch" process, we have to say that the question is answered by the pigment produced according to this method

The Dutch, or Stack, process takes advantage of the production of heat, water and carbonic acid in the natural fermentation of suitably chosen organic matters, as dung, manure and tan-bark, and depends upon the reaction of these in conjunction with acetic acid or vinegar on metallic lead.

The process *itself* may be subdivided into three *series of operations.*

The first consists in a physical change in the *lead metal* from pigs or bullion into buckles or scraps. The latter form is, however, especially here in America, mostly abandoned, and buckles *or* discs are used. They are not solid discs but contain holes in order to expose more surface of the lead metal to the corrosive agents. They are about 4 to 5 inches in diameter, 1-8 to 1-4 inches thick, and weigh from 10 to 16 ounces each.

As the vapors of molten lead given off by the melting and molding of these buckles is very hurtful to the health of the workmen, an apparatus which guards the worker against these dangerous influences has been generally adopted, and consists of a melting pot of cast iron, hooded with a funnel leading to a high chimney, which assures a good draught. A cast-iron door with double vent holes, opening by slides, allows the hood to be shut, and this is indispensable, especially when the oxidized lead resulting from preceding operations or white lead scrapings are to be fused.

The metal is introduced into the melting pot where it is heated progressively in such a way that its temperature is never more than a few degrees higher than the melting point, that is 635 degrees Fahrenheit. The door of the hood is then opened and the melted lead is run out into molds of cast iron from which it is taken out after cooling.

To speed and simplify the operation of molding a table turning on a pivot is advantageously employed. The casting and molding of buckles is done by hand but recently a so-called buckle machine superseded here also manual labor as in so many other branches of industry and arts. This machine receives the melted lead casts and molds the buckles, and conveys them by means of an endless chain to the spot where they are placed into earthen pots, the so-called corroson pots. These are earthen vessels 9 to 10 inches high, and 6 to 7 inches in diameter, provided with two vent holes and glazed bottom, *in which to receive* about half a pint of very diluted Acetic Acid or vinegar. They have a shelf inside on which the buckles, numbering 10 or 12, are placed

The corroson pots being filled with buckles and the diluted Acetic Acid or vinegar added, *they are ready for the second series of operations*—the building up of the stack

The plant used comprises a building subdivided in stalls or chambers the walls of which are generally made of brick and having about 240 square feet of floor space and are 20 to 24 feet high. They are open in front.

The bottom of these stalls is covered to the depth of two or three feet with spent tan from the tanneries, or with manure in which fermentation has already begun. On this surface the pots are set close together, leaving however, ample space, say 8 to 12 inches between the pots and the walls. The outside rows of pots are higher and upon these planks are laid covering the entire layer. On these boards another layer of tan is spread about 8 to 12 inches deep, upon this is placed another layer of prepared pots which are again covered with boards, and so on until the stack is completely built up

The number of successive layers varies from 12 to 18. The space between the pots and the walls of the chambers is filled with tan and the top is covered also. The opening in front of the stack is closed up with boards as the stack progresses in height.

The quantity of lead used varies considerably, 5 to 7 tons in a layer or bed so that in a large stack there may be something as much as 100 tons of lead.

TO BE CONTINUED

Thoughts

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Paint and Its Solid Constituents--The Pigments.

BY OHN COLLET.

(Continued from last issue.)

When a stack is built up it is left for a period of about three months. During this period the whole stack gets quite hot through the fermentation of the tan or manure which sets in. Large quantities of Carbonic Acid gas and steam are given off and the Acetic Acid is converted into vapors. These Acetic Acid vapors, in contact with the oxygen of the air, act on the lead buckles, forming basic acetate of lead, upon which then the Carbonic Acid gas acts, converting gradually in an atmosphere saturated with moisture, the lead (technically termed "Blue Lead") into "White Lead."

At the end of three months the stack is torn down, that is, the boards and the tan are removed and the pots lifted out. It is found then that the lead which has been corroded still retains the form of the buckles, but is more bulky in volume, is white or sometimes grayish in tint, and opaque.

The percentage of corrosion in the "Dutch Process" does not, however, average 70 per cent, and sometimes fails as low as 50 per cent.

The corroded portion of the buckles is not of a uniform character throughout, the exterior being somewhat different from the interior owing to the facts that the corrosive agents corrode the surface of the buckles first and have to act through that already corroded in order to act upon the lead metal still unaffected. In fact if we were to cut a buckle in two, just as it is taken from the pot we would have in the center the blue or metallic lead, and on either side layers of corroded lead, somewhat different in texture and color.

This difference of quality of the corroded lead in the Dutch Process is one of its great faults. The corroded lead in the stack, as same is pulled to pieces, is in some places flaky, firm to handle and does not break up. This kind gives the best quality of White Lead. In other parts of the stack the corrosions are soft and easily crumble into powder when handled. They yield an inferior quality of White Lead.

According to the difference in their physical properties, the corrosions taken from different parts of the stack show naturally all the variations in their chemical compositions. In some places they will approximate closely to the normal composition of White Lead that is, two parts carbonate to one part hydrated Lead Oxide, the proper basic Carbonate of Lead. In other words more or less nearly so, and in others they will be straight Carbonate of Lead.

The White Lead may also be more or less colored brownish by droppings of colored water from the layers of tan onto the lead, or through the use of a very cheap and impure tarry Acetic Acid. But this is not detrimental to the final product, as same has to undergo still many other operations, such as washing, sifting and grinding, which processes purify and whiten the White Lead before it is ready for the market.

But not so if, instead of tan, manure or dung were used as a generator of heat and carbonic acid gas. The sulphur compounds, especially Hydrogen Sulphide, generated by the fermentation of the manure, are apt to, and will darken the White Lead to a certain extent, and this discoloration cannot be obliterated by the above named operations, and this is the main reason why in the modern stack process almost mostly spent-tan alone is employed, although manure would shorten considerably the length of time in which the stack would be under operation.

The Lead is corroded, at least a certain percentage of it, and the next process, the third series of operations as already indicated, consists in separating that which is corroded from the metal, which is done by passing the buckles through the rollers or crushers. These break up the masses, the White Lead crumbles to powder, while the unchanged Blue Lead is flattened out into thin plates. The latter is sent to the melting pot again, where it is melted and recast for use in building up another stack. A few small particles of Blue Lead, however, pass on with the corroded lead, which are very difficult to remove.

TO BE CONTINUED

How to Sell New Era High-Grade Prepared Paint.

BY NO. 9.

Ashley Ill Dec 9 99

Editor THOUGHTS

You are propounding a hard question but I can only answer by giving my experience in introducing other brands in former years and some of the modes adopted by other parties. The first essential in working the best is how to work. This depends upon the party you are trying to secure and it is essential to success to know them and their peculiarities. Knowing your goods and the claims you have for them you must break these, not by insidious comparisons and claims of superiority over any and all other goods, but by fair and honest statements which, should you secure an order the dealer will find positively true and thoroughly supported in the use of the goods. The combatting of the point so frequently brought up "that your goods are higher in price than those we now handle with satisfaction" is best met by showing that when the difference in weight is considered ours is even a cheaper basis of original cost as the vast majority of whites on sale rarely go fifteen pounds to the gallon and when I ask them if they or we can make two and a half pounds of good paint for ten cents the answer is always in your favor. But they stick to the point that if they have to pay ten cents more per gallon they have to add ten cents per gallon to selling price, their customers won't agree to the same, especially as their competitors have made no advance on their brands which have been looked upon and are recognized as first class goods. I am now writing from a town in my territory, where every man wants most money for the least work and a place where but few will look carefully into results and profits. In the origins of the firm of Martinez & Longman's name's men made their first work with the brush. The traveller called on the best trade, talked up his goods, took the name of the painter, reported one or more accounts of size of market to the house, and then sent to the painter a gallon or less as a sample or two new paint brushes asking him to

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Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week.)

Water is either added to the buckles before they are removed from the pots or at the time they are put through the rollers, or just after, in order to lessen the amount of dust which is so very poisonous if taken into the system by the workingmen.

In some cases, as I said, the corroded lead is not moistened until after it comes from the rollers, at which time a considerable quantity of water is added, the corrosion being carried to large tanks full of water, passing at the same time through a shaking or revolving screen, which retains the finer particles of blue and partly corroded lead. In these tanks the White Lead is thoroughly agitated, and the small traces of Acetate of Lead and Acetic Acid which it contains are washed out. After being washed the watery white lead-pulp is pumped into large water-mills, in which it is thoroughly ground, the coarse lead being returned again and again to the eyes of the stones, the fine White Lead being carried on with the water to another vat where it is left to settle out.

The settled-out White Lead is either pressed or as here in America, dried directly on large steam heated copper pans, and sold in a dry state or ground in Linseed Oil to a stiff paste and cooperad up ready for the market. Many, if not almost all, modern corroders and grinders of White Lead do not dry their White Lead intended to be ground in oil any more but grind the pigment as wet lead-pulp direct with Linseed Oil. In this process the Lead takes up readily the Linseed Oil, in fact better and much quicker than the dry pigment would do, the oil taking the place of the water, which is siphoned off by a special arrangement, the mixture of lead and oil passing through the grinding mills.

This lead is termed "pulp-lead" and its process of manufacturing caused no little controversy among the grinders, and especially among its consumers. A good number of the latter, the too conservative and therefore less progressive small paint manufacturerers and painters claimed, and do so still, that this lead is inferior to that where the pigment is dried before the oil is added, which is styled "pan-dried," in contrast with "pulp."

They say the small percentage of water which is naturally retained by the White Lead in grinding is detrimental to the final product, forgetting, however, that they themselves have the habit of adding a certain and sometimes even a larger percentage of water to their dry lead to be ground in linseed oil.

On account of the great importance of White Lead in regard to the manufacture of paint and other goods, this pigment deserved, doubtless, the foregoing more detailed discussion and explanation of its original and most met with process of manufacturing. Acquainted with the technical part of the process, and with the principal of the chemical reactions which take place inside of the corroding stack, that is the generation of heat, moisture and Carbonic Acid, and their actions on the metallic lead, it will be now less difficult for us to understand a more explanatory and scientific discussion of the various chemical transformations the lead has to undergo, in this, as well as in other processes, in order to become the final product, *White Lead*.

These various successive chemical transformations, the Carter process, and a short explanation of other important methods, the principals of which and their faults I shall show and explain by experimental demonstrations, will be the subject of my next paper

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Editor THOUGHTS

I think an excellent advertisement and big help in selling New Era High-Grade Prepared Paint in the way of securing help of painters, would be to print the combinations of colors on houses same as large chart, on card board, about 6x10 inches, and samples of colors on opposite sides, put up in a nice neat case. They would please and win the good will of the painters and be a standing ad. for a long time to come, as they would be of practical use to them, and would be preserved and brought into use in all cases, as well as being a big help in winning their good will and help. Be a good fellow with the painters and you will be paid for it. What say the other salesmen.

Yours truly. No 8.

How to Sell New Era High-Grade Prepared Paint.

BY NO. 14.

Editor THOUGHTS

Select the largest, best and most successful business man in town. New Era High-Grade goes hand in hand with the big trade. He will see and appreciate a rare article, catch onto a good thing more quickly than the small 2x4 dealer. carry a gallon package of the "real thing." It will save two hours time, besides confirming what you say in regard to size, weight and appearance of the goods, and gives your after talk a weight because you have made good your assertions. It is a good plan to take the package out of the case and place it on the scale when you first go in. Mr. Dealer will weigh it and incidentally look at the guaranteeing attached thereto, and this is your opportunity to say: "You note, Mr. Dealer that we attach a certificate of purity to each and every gallon package that leaves our factory." Ask him at this time if the paint he is handling is a chemically pure article.

Mr. Dealer—"Oh, yes, it is sold subject to chemical analysis."

Salesman—"Our New Era High-Grade is not only sold subject to chemical analysis but we give you a guaranteed certificate of analysis with each package, so that you know what the paint is composed of, and your customer also knows. The materials in the paint you hold, no matter what they may contain, would be safe in selling it subject to analysis, because they are, as you know that you are not going to give it $5 or $60 to have it analyzed. For instance, you don't know whether you are to-day giving your customers what you claim or not."

Mr. Dealer—"Well, I have handled now going on two years and it has always given satisfaction so far as I know, and the paint is all right. Besides I have put a lot of money advertising it and by doing so your line in this would be lost more."

Salesman—"When you talk about advertising, that's where we shine. We ask *you* to do the advertising. We do the

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, DECEMBER 23, 1899. NO. 13.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET

The eminent German chemist, Justus von Liebig was the first who explained the theory of the process of White Lead making by the Dutch or Holland method, putting same down in empirical chemical nomenclature and formulas. Later on Hochmetter and others substantiated his theories by experiments and analytical tests.

As you are not familiar with the nomenclatures and formulas employed in chemistry I shall abstain as far as possible from using them and will explain to you Liebig's theory of the successive chemical reactions in the following way.

We can divide the whole process into three distinct stages of action, bearing in mind that which we have to deal with, viz.: Heat, metallic lead, acetic acid, water and carbonic acid gas.

The first action which goes on in the stack is the conversion of the blue lead into a basic acetate of lead, which takes place in two stages of action.

First.—The volatized acetic acid acts on the lead metal, forming a normal acetate of lead. Thus:

Lead and acetic acid, or normal acetate of lead.

Second.—This normal acetate of lead, under the influence of heat and in the presence of water or steam, takes up this water but is at the same time split into a basic acetate of lead and free acetic acid. Thus we have, then:

Normal acetate of lead and water, or, basic acetate of lead and free acetic acid.

This free acetic acid is ready to attack a further quantity of metallic lead.

The basic acetate of lead takes up very readily the carbonic acid evolved by the fermenting tan. The carbonic acid taking the place of the acetic acid in the basic acetate of lead, forming thus a basic carbonate of lead, or White Lead, sets the acetic acid free, and this acetic acid is then also ready again to attack more blue lead. Thus we have:

Basic acetate of lead and carbonic acid, or, basic carbonate of lead (White Lead) free acetic acid.

It attacks the blue lead, just as in the start, forming the normal lead acetate, which is then again changed into a basic acetate and then into White Lead, also, so that a continuous cycle of changes and transformations take place, the acetic acid being taken up by the "blue lead" and liberated again by the formations of basic acetate of lead and White Lead, both as we know evolved by the heat of the fermenting tan.

As the "blue lead" in the corrosion process takes up water and carbonic acid, forming thus White Lead, and becomes as such more bulky in form, so is naturally the yield of White Lead larger than the corresponding amount of lead metal placed into the stacks. As a rule nearly all the "blue lead" is converted into White Lead; one ton of lead producing about one and one-fourth tons of White Lead, or an increase of about twenty-five per cent., the amount varying from time to time according to the degree of perfection with which the corrosion has proceeded.

The great fault of the Dutch process is the great length of time required, 10 to 12 weeks, the great amount of capital it takes to construct a stack of lead and the loss of interest on the capital invested while the lead is undergoing the corrosion process; furthermore, although the modern Dutch process is almost perfect in regard to construction and working, there is always a certain risk, owing to some defect of producing a useless and imperfectly corroded lead which has to be sent back to the melting furnace and again be reduced to "blue lead," or which is used for the manufacturing of orange lead, the orange mineral of commerce. It is, therefore, no wonder that inventors have turned their attention to devising other simpler and quicker methods of producing White Lead, methods which are claimed to be free from all defects and drawbacks of the Dutch process. So far, however, with the exception of one or two, all these new methods have proven to be complete failures, with sometimes disastrous financial results, while the old Dutch process goes on smiling and profitably wherever it is carried on. There have been many scientific processes which give the same results as to the article produced being good and equal in quality to the Dutch-process-lead, but which have not paid either the inventors or the manufacturers adopting same. I mention only the various methods and processes which suggest the manufacturing of White Lead by electrolysis.

To discuss all these methods and other processes is hardly necessary and would take too much space and time. I shall, therefore, explain and discuss only a few of them, that is, the so-called Chamber Process," precipitation process, and essentially the first line, the American Carter process.

The Carter process employs the same principal as the Dutch, for that is absolutely necessary. White Lead being made by chemical action, as already indicated; but the materials used for the corrosion are handled in a more modern way, and the corrosion itself is carried out in a more scientific manner. The idea of using lead metal in the form of perforated buckles, instead of pigs or bullion, to expose more surface to the agents, is carried still further in perfection in the Carter process using the lead metal. Again the use of the spent tan in preference to steam for the purpose of generating the carbonic acid gas is carried to a further of perfection by burning coke for this purpose, the gas being thoroughly purified before it is utilized with steam or water and acetic acid.

Like the Dutch process the Carter may be subdivided also into three operations.

TO BE CONTINUED.

Note.

Salesmen are reminded that letters of introduction to the agencys—R. G. Dunn & Co. Bradstreet Co.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT MICH.

Devoted to Matters of Interest to Our Representatives

VOL. I. DETROIT, MICHIGAN, DECEMBER 30, 1899. NO. 16.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET

(*Continued from last week.*)

The first step is to atomize the pig-lead as it is received from the smelting and refining works, which is done by melting the lead in a large kettle, allowing the melted lead to flow therefrom through a proper apparatus, the principal of which is a fine passage or slot or perforated plate through which the melted lead passes, after which it is blown by superheated steam at a high pressure as a finely, partly oxidized and hydrated lead into brick chambers. The blowing system is on the principal of the ordinary nasal or throat spray. The lead is, in fact, so fine that it resembles ground graphite, or, as the degree of oxidation may be, powdered litharge, and that sometimes, especially as it was the case when the Carter process was new and not in such a state of perfection as it is now, this finely divided lead oxidized so rapidly when exposed to the air that combustion or explosions took place, resulting in a total loss of the powdered metal.

This finely divided lead is charged in quantities of 300 to 500 pounds into slowly revolving cylinders about 5 to 7 feet in diameter and 8 to 12 feet long. These cylinders revolve continually day and night, the lead charged therein assumes a position along the cylinders on the side which is turned up, the powdered lead as it reaches a certain height overturns and falls to the bottom of the cylinder, undergoing thus a perfect mixing and overturning.

Into the ends of these cylinders, at the center, through a special arrangement, the carbonic acid gas is admitted. The gas is generated, as stated, by the combustion of coke, and is drawn by means of an exhaust fan through a purifying chamber, in which fine particles of coal and other gases are retained, and hence to the revolving cylinders. The gas as it enters the corroding cylinders is kept at a uniform temperature, such as experience has shown to produce the best finished product.

A very diluted acetic acid, more diluted than that used in the Dutch process, and water or steam, are also sprayed into the corroding cylinders, the lead being at the same time continually agitated. Its entire surface is thus exposed to the combined and continual action of the acetic acid vapors, water and carbonic acid.

The time required for the corrosion is 7 to 9 days, which is indeed a great advantage compared with the length of time (say 100 days) of the Dutch process, and another obvious advantage of the Carter process is the fact that the lead can be examined at any stage of corrosion without interfering with the chemical actions.

The temperature in the corroding cylinders is about 140 degrees until the lead is corroded, after which it cools off and becomes cold by itself, which cooling indicates then the end of the chemical actions, that is the conversion of the lead into White Lead.

The corrosion is almost perfect, being very seldom below 95 per cent, the remaining uncorroded lead is then easily separated from the White Lead.

As the lead is charged as an amorphous powder into the cylinders, and continues during the process of corrosion as a powder, so is the product a powder also and is finished as such. This fine White Lead powder, however, is moistened when still in the cylinders to form into balls, varying from the size of a buckshot to that of a small marble. This is done to prevent the dust which would be given off if the product was handled in a dry state.

The lead as taken from the corroding cylinders is carried to the washing machines, which consist of rapidly revolving pronged shafts inside a cylinder or trough, into which the lead is put with a large quantity of water. The water holds the lead in suspension, flowing from the machine like milk into a series of revolving reels or screens covered with fine mesh brass wire cloth. That which passes through flows into the first of a series of vats. The tailings from the screens, consisting of blue lead and partly corroded lead, are used for making red lead, orange mineral and litharge. That which passes through the screen on to the first vat of battery of tubs, as stated, is allowed to flow from one tub into another, and so on, being, however constantly agitated and more water added and by this process it is thoroughly washed.

It is then pumped into the settling tanks and from there run on steam heated [illegible] pans and dried, and handled then [illegible] finished product of the Dutch process.

The Carter process, which was introduced into America in 1886, is operated in Omaha and Chicago with a capacity of 30,000 tons per year.

TO BE CONTINUED

This is what *The Detroit Free Press* says of our anniversary reception

EMPLOYEES BANQUETED

ACME WHITE LEAD AND COLOR WORKS THE HOSTS.

William Richards, Jacob Heinz and John Collet, the Prize Winners.

Last evening at Strassburg's Academy the Acme White Lead & Color Works tendered its annual reception to the employes and their friends. Quite one hundred ladies and gentlemen were present and souvenir programs, the covers of which were made of Japanese wood, were presented to each of the guests.

The early part of the evening was devoted to dancing until everyone was called to the banquet hall, where an enticing lunch was spread. After Samuel S. Marquis delivered the invocation, which formality was dispensed with until the lunch had been disposed of. A program of toasts had been arranged and the position of toastmaster fell to G. B. Fuller, accountant of the company. He introduced President W. L. Dean, who had the pleasant task of welcoming the guests. Rev. S. S. Marquis talked on "[illegible] a Higher Standard Than Duty," and Secretary Thomas Neal followed with a personal [illegible] garding the factory and the employes. S. H. [illegible] the official representative of the company [illegible] its early days, and A. M. Woodward entertained the evening of the traveling men. A recitation entitled "The Fred Son" was given by A. St. [illegible] Dougall.

Every year the firm gives three prizes consisting of $25, $15 and $10 in gold to the three employes who advance the most valuable suggestions during the year, and everyone present was in anticipation as to who the winners were. The first prize was awarded to William Richards for suggesting a method for the saving of what has been hitherto a waste product in connection with the dry color process. Jacob Heinz won the second prize by suggesting a mechanical method for the oiling of machinery, and the third prize fell to John Collet, who suggested a valuable suggestion in connection with the educational system that has been established for the employes.

A cake walk followed and Finney's band again took up the dancing program which continued until an early hour.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, JANUARY 6, 1900. NO. 1?

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(*Continued from last week.*)

The Carter product is a good White Lead, fully up in quality and properties to the old Dutch process lead, and, as the case may be, considered by many experts on White Lead rather better and more uniform in every respect than the product of the latter.

Permit me to state that I myself have found by many quantitative analyses of *Carter* White Lead produced in *different* years and given to me for examination, that the constitution and composition of these samples did almost perfectly correspond with the analysis I made of the first keg of Carter's White Lead used by us in our works in 1890.

This uniformity I could not find in samples of White Lead produced by the old Dutch process. The samples under analytical examination showed sometimes a composition resembling that of White Lead made by the so-called precipitation process, that is, their *compositions were in some cases very* divergent from that which a good White Lead should show, viz: As accurately as possible, two parts carbonate to one part hydrated oxide of lead.

Furthermore, I might state that whenever we had trouble in our White Lead grinding department with White Lead paste getting hard and lumpy, in nine cases out of ten the lead undergoing the grinding or mixing was an old Dutch process lead.

As with so many new methods and processes of manufacturing, the Carter process had, and has still, to meet a certain *opposition* and prejudice, but the test of time will certainly, and has almost already, given the Carter White Lead its proper place, due to *its* superiority in quality and uniformity, as well as to its simple and quick method of production.

The main reason that this process is not yet adopted in general, and why so many corroders don't abandon their old Dutch process, is doubtless because there is at the present time about thirty-five millions of capital invested by these old style corroders, and just as long as they can market their product through appeals to prejudice and ignorance, they will continue the antiquity argument, and not sustain the loss of the vast amount of money such a radical change would naturally necessitate. But the Carter process, or a still more scientifically improved one, will and must supplant the old *and imperfect method of corrosion* which has remained almost unchanged for centuries, the old Dutch process.

We come now to other processes for manufacturing of White Lead, such as the so-called precipitation process and chamber methods. They are not used in America.

The precipitation process of White Lead is either based on the precipitation of basic carbonate of lead by carbonic acid gas or by the alkali carbonates, such as soda or bi-carbonate of soda in a solution of basic acetate of lead.

Its principle is based on the fact that a solution of normal acetate of lead obtained by dissolving litharge or lead oxide in diluted acetic acid is capable to dissolve still more litharge, forming then a basic acetate of lead solution, and that this superfluous litharge or the basic lead constituent of this solution, is precipitated out, or separated by carbonic acid introduced into this solution, the precipitation being a more or less basic carbonate of lead.

TO BE CONTINUED

What Do You Think of This?

Davenport, Ia. Dec. 26, '99.

Editor THOUGHTS:

For some time I have been thinking of a scheme that would help us to push New Era to the front more rapidly than through the "painter," who, we all know, is not always as reliable as he might be, even after he has been well treated and learned beyond a question of doubt that New Era Paint is a *better* article than he can make himself.

Why not assist those painters that are with us, and force those who are working against us to come our way by working a scheme with the "building contractor" from whom the painter gets nine-tenths of his new work anyway? I would suggest writing the contractors, offering a certain amount of our New Era Paint to every one sending us a copy of an agreement with a certain painter, giving the name of the painter and also the name of the owner of the house. Then I would increase the offer until after we had put New Era Paint on about three houses. The contractor would have enough paint to paint his own residence. This could be worked through our merchant customers without any prejudice. Each representative could send in the names of one of two good contractors in each town.

—If you think well of the scheme you can suggest it to the "family."

Respectfully Yours, No. 13

Granite Floor Paint.

Detroit, Mich., Jan 2, 1900

Editor THOUGHTS:

I for one believe we should have some scheme inducement of a special nature to further the sale of above goods. Everywhere you may go you will find "Sensible Floor Paint" on same basis of stability as our N. C. P. is with the trade and consumers in general. They have a nice line of advertising matter, with a special assortment price for opening orders, and give a number of sample quart cans for free distribution, letters to consumers, etc. The quality we have them beat, why can't we do the same thing on amount of sale? They also have in the past had special salesmen pushing that line only. If they succeeded why can't we? Let's hear from some of the other salesmen on this subject. A happy and prosperous New Year to the Acme and all of its employees are the wishes of Yours truly

No. 1

San Francisco, Cal., Dec. 21, 99.

Editor THOUGHTS.

I think the suggestion of No. 13 THOUGHTS Dec. 16, '99, as regards sample cards for painters, an excellent one, one that I feel positive it would pay to adopt. Respectfully,

N.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, JANUARY 13, 1900. NO. 18.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week.)

The chemical reaction may be expressed in the following

Lead oxide and acetic acid, or normal acetate of lead.

Normal acetate of lead and lead oxide and water, or basic acetate of lead.

Basic acetate of lead and carbonic acid, or basic carbonate of lead (White Lead), or normal acetate of lead.

The normal acetate of lead which is thus reformed is then used over and over again for the preparation of a fresh solution of basic acetate of lead.

Theoretically there should be no loss of acetic acid or normal acetate of lead; but practically a small quantity of new acetate has to be added from time to time to make up for the little loss which does occur.

The process is used in France, and on an extraordinary large scale at Clichy, hence the name "Clichy" process, or "Thenard" process, after its inventor and promotor.

The litharge is dissolved in diluted acetic acid with the aid of steam, and to this normal acetate of lead solution a certain amount of fresh litharge is added again and dissolved likewise. The principal feature in preparing this (basic acetate of lead) is to obtain it in a certain strength of basicity, in order to obtain a proper and good basic carbonate of lead.

Into this solution, after it is purified by settling and filtering, carbonic acid gas is introduced.

The carbonic acid gas is generated by burning lime stone or chalk abundant in the vicinity of Clichy with coke in a system of furnaces.

The gas precipitates the White Lead which is left to settle, and is then pumped into extra large vats and washed and dried in the same or a similar manner as in the previous described processes.

The product given by this process is fairly good, but liable to vary considerably in composition from time to time, according to the strength of the solution of basic acetate of lead and to the basicity or proportion of lead oxide the normal lead acetate has dissolved.

We know that the character of a White Lead, both chemically and physically, effects materially its value as a pigment. The character of the Clichy lead will therefore depend upon the character of the solution of lead used: the temperature at which the reaction between the carbonic acid gas and the lead solution takes place, and last but not least, upon the strength of this solution.

The quantity of carbonic acid should be so regulated that not more than two-thirds of the basic lead in solution is converted into carbonate. If too much gas is used, then more will be liable to be converted into carbonate, and the White Lead has a strong tendency to become crystalline, instead of amorphous, the White Lead will lack then in covering capacity or body.

As a matter of fact it is very difficult to ascertain exactly when sufficient gas has been used and the above mentioned fault is one generally met with in the White Lead produced by the Clichy process. The strength of the solution will not have so much influence on the quality of the product; however, too strong a solution will precipitate a coarse White Lead, and as a rule weak solutions give a fine White Lead. Another drawback of this process is that the precipitation must take place always at the same temperature, that is to say, under exactly the same conditions of density and basicity of the solution in order to obtain a uniform White Lead in regard to composition and texture, for an increase of temperature facilitates the absorption of the carbonic acid gas, and herewith the formation of larger crystalline precipitations. The White Lead will be coarse, less amorphous and will be inferior in regard to body and covering capacity. The increase of carbonate of lead in such a White Lead naturally decreases the percentage of hydrated lead oxide in its construction, and therefore it will take less oil in the preparation into paint, it will cover less, or what is the same, it will not go as far as a good proper White Lead pound for pound. Furthermore, such a White Lead will not be combined with the vehicle "linseed oil" as well as a good White Lead and consequently it has shorter life, the increased percentage of carbonate of lead causes it to "chalk off."

In the precipitation process, using carbonate of bi-carbonate of soda the tendency of the formation of White Lead with such an irregular constitution and composition is even more pronounced than in the foregoing method.

The operations as a whole are the same but instead of using carbonic acid gas as a precipitating agent a solution of soda is used.

No normal acetate of lead is reformed in conjunction with a more or less basic carbonate of lead, but acetate of soda which is either sold as such or has to undergo a special process for the recovering of the acetic acid. Among many processes based on this, or a simpler method, the Condy process is the only one which was operated a short while, but as the result seemed to be so variable it was soon considered a complete failure from a commercial point of view and was therefore discontinued.

The other process for the manufacturing of White Lead which we will discuss more closely is the so-called "Chamber process" which is operated like the old Dutch process in large chambers and is carried on on the same principle: that is, metallic lead cast in grates, stripe or plates, or as the Western Lead Co., in Denver, Colo., used to do in a fibrous or threadlike form, is exposed to the simultaneous actions of acetic acid, water, steam and carbonic acid gas. The difference from the Dutch process is that these corrosive agents are generated outside of the chamber and conducted or admitted by means of a pipe and spray system. The lead is placed in shallow dishes or trays on shelves inside of the chamber, the latter is closed, the currents of steam, acetic acid vapors and carbonic acid gas are turned on.

The chemical action which proceeds is supposed to be the same as that which takes place in the old stack process. The acetic acid acts upon the lead, forming normal acetate of lead. This, under the action of the aqueous vapors, is transformed into basic acetate of lead, and this in its turn is changed by the carbonic acid into the carbonate of lead, or White Lead.

TO BE CONTINUED

Thoughts

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Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, JANUARY 20, 1900. NO. 19.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(*Continued from last week.*)

After a period varying from four to five weeks, the Denver Co. claimed even three to four days, the White Lead will have been formed and is collected and treated as in the Dutch process.

The quality of the product is usually good, certainly better than that of the precipitation process.

It is, however, inclined to be very variable, and the process requires great experience and care to be carried out in the best possible manner to insure a good White Lead. In order to obtain a White Lead of the desired approximate composition it is absolutely necessary to regulate the currents of gases and steam in the proper proportions. Thus if an excess of acetic acid vapor is admitted, too much normal acetate of lead is formed, which will not be acted on by the steam and the carbonic acid gas, and too much of the latter tends to cause the formation of an excess of lead carbonate, which, as we know, lessens the covering capacity of the White Lead.

The worst feature of this method, however, is that in case the operator injects too much steam into the chamber, and allows thus the temperature to get somewhat too high, too much hydrated lead oxide will be formed and this by the rise of the temperature will partly be split again into water and lead oxide. This formation of lead oxide, as it is of yellow color, gives then to the final product an objectionable yellow tone and tint.

The same result is brought about by a deficiency of acetic acid, and, as I said before, experience is the only factor which can guide the White Lead maker in adjusting the various gases in the proper proportions.

There is no plant here in America operating this process now, the Western Lead Co. in Denver, starting in 1891, has failed since and went into liquidation.

Various alterations in the details of this method have been made from time to time by various inventors, but none have so far overcome all these difficulties.

As indicated there are innumerable different processes for the manufacturing of White Lead, and each and every year brings forth new and improved methods but it is not within the province of this small essay to deal with all of them.

I may perhaps say that the time will be not far off in which an electrolytical process (and there are already two or three in experimental operation here and in Germany) will successfully displace all other processes for the manufacturing of White Lead.

Paper Read at Our Anniversary Reception.

OUR REPRESENTATIVES—BY MR. A. M. WOODWARD.

It is a matter of common regret that our representatives, with a very few exceptions, are unable to be with us to-night.

We who are together from one end of the year to the other and watch with pride and satisfaction the constant advancement of our business, are, perhaps, inclined to forget occasionally to what extent the men who are constantly working in our behalf in all corners of the market are responsible for the favorable conditions under which we annually celebrate our success.

It is the rule for the uninitiated to suppose that a representative's life approaches as near a continual round of unadulterated pleasure as is possible to attain. They are apt to think of the many interesting places visited, the luxuriously appointed hotels and railroad coaches, and the attentive service rendered in connection with these accommodations, forgetting that it is not always possible to put up in hotel palaces, or ride in Pullman or Wagner sleeping and parlor cars. Too often the time for retiring is 1 a. m., to be called in three or four hours to catch an early train, and frequently instead of riding in a palace car, an uncouth freight train must be utilized in order to "make time." We think of the lovely drives along picturesque country roads, among green fields and whispering woods. Think of the same roads and fields with the thermometer down to zero, or the mud up to the hubs—the latter phase of the situation occurs just as frequently as the former. As for sight seeing, when a representative is in a place where there are any sights worth seeing, his time is so occupied in calling on the trade and making reports to the house that he forgets there are "sights to see." He is out for business and knows that he must make the best of his time from that standpoint.

I don't like the word salesman, and the term "drummer" is much worse. Representative is the best, because it implies the proper scope of his duties. A man who represents his house must do so with intelligence and dignity. He must be equipped to meet and overcome difficult situations on the spot. Representation has grown to be a profession requiring a high order of intelligence. Great changes have and are constantly taking place in the character of this class of work. In years gone by the man who was properly termed as "drummer" was posted on the names and selling prices of the goods made by his house. His whole duty when thus equipped was to go out and sell those goods, and if he could not sell enough to pay expenses he must necessarily lose his job. It is not much wonder that when so meagerly equipped he would resort to vilifying competitor's lines and other narrow minded and unscrupulous methods to gain preference for his own. Neither is it much wonder that in those days of unscrupulous methods he was looked upon with a degree of suspicion as regards his standard of morality and truthfulness. The days of the "drummer" however, have gone by. Modern progression has replaced him with the representative—a man equipped to represent his house in the truest and best sense of the term. He must be a man of intelligence and tact, a student of human nature, and beyond all, above reproach morally. It would be an unjust imputation upon the business men of to-day to suppose that any other than a representative their equal, morally and intelligently could succeed in doing business with them.

A representative must know his business in these days, and this means more than being equipped with a complete knowledge of the goods he is offering. He must also

Thoughts

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VOL. I. DETROIT, MICHIGAN, FEBRUARY 3, 1900. NO. 21.

Paint and Its Solid Constituents—The Pigments.

SUBLIMED WHITE LEAD AND ZINC WHITES.

BY JOHN COLLET.

(Continued from last week.)

The furnaces are lighted over night, so that in the morning they may be thoroughly heated and the fire bright and clear. The temperature of the furnaces is kept at about 2,400° fahrenheit. All being in good condition, the ore mixed with slack is thrown upon the fire and immediately commences to volatize, forming the fume which is drawn into the flues by the action of a steam jet. In these flues the fumes are met with a current of hot air which serves to oxidize any "galena" which may have been volatized unchanged. The fume, after passing through the main flue and meeting with the current of steam and hot air, is conducted by means of a powerful blower through other strongly heated flues into the condensers.

The condensers are chambers constructed of wood or iron, those nearest the furnaces being lined with firebrick to withstand the immense heat. They are provided with partitions, so as to split up the current of gas or vapors as much as possible. The fumes before passing through these condensers have to traverse a layer of water, so that they are gradually cooled down. The fume deposits then in the condensers, and if there be any zinc in the ore, which is more or less the case, it will be condensed as oxide here also.

The condensed fumes are then collected and have to undergo other processes and manipulations for production and whitening, among these the treatment with diluted sulphuric acid in large tanks. The object of this is to change the most part of the lead oxide, which is condensed with the sulphate, into the latter also, depriving thus the final product of its more or less yellowish tint. The Pitcher Lead Co., however, obtain in their present improved method a product of such perfection in the start that they do not employ this part of the manufacturing process any more.

The pigment is then washed thoroughly dried and ground in order to render it as fine as possible, and is then ready to be sold.

This lead sulphate, or rather lead sulphate combination, is not as crystalline as the precipitated sulphate of lead, but is amorphous like the White Lead of the Dutch and Carter process.

It is of a fine white color, with somewhat of a bluish tint or hue. It is a good pigment, and if used according to its peculiar properties and composition gives more than satisfactory results.

Its body or covering capacity is good, almost, if not equal, to that of White Lead, and what makes it even superior to the latter is that it is perfectly permanent. Sulphurous gases and vapors have little or no action upon it, and so heat also, which latter changes the basic carbonate of lead into the yellow and orange oxides.

If mixed with oil, and applied as paint, the Sublimed Lead gives a much smoother and harder surface than the carbonate, due to the small percentage of zinc oxide it contains.

It has, as I said, peculiar properties, and must be treated in a special manner by the paint grinder. If ground as a stiff paste or paste with linseed oil, it gets from the proportion of lead oxide it contains the characteristic usual to all oxides, that the tendancy to dry hard and cake. The way and means by which this is to be prevented, and the chemical action which is supposed to take place, will be discussed later on when we come to the chapter on the so-called "graded leads."

The composition of Sublimed Lead is somewhat variable, but not as much as to alter its properties and qualities. The manufacturing process is, as I said at the present time complete.

TO BE CONTINUED.

MR. S. H. HART.

Mr. Hart is one of the "old timers" with the Acme, his starting point dating back as far as '85. Although an "old timer," this does not signify that his methods of securing business are in the least antiquated. He is always up to the latest "wrinkles" and a thorough student of the times and business conditions. He is even better looking than his portrait indicates, which, combined with a "smooth" and benevolent manner, are characteristics which are the envy and admiration of our younger representatives, in whom he takes a most fatherly interest.

Mr. Hart is a man of family, a prominent member of commercial travelers and other fraternal bodies, is much interested in church work, and the fortunate possessor of vocal powers that have won for him the leadership of the Sunday school choir with which he has been identified for a long time. In a business way New Era High-Grade is near his heart, and no doubt the vocal culture in which he has indulged so freely is largely responsible for the excellent results from his constancy in singing the praises of these goods.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, FEBRUARY 10, 1900. NO. 22.

Paint and Its Solid Constituents—The Pigments.

SUBLIMED WHITE LEAD AND ZINC WHITES.

BY JOHN COLLET.

(*Continued from last week.*)

The composition of our present "A" lead which is 83 per cent. lead sulphate, 10 per cent. lead oxide, 7 per cent. oxide of zinc, is almost the same as that of our first lot received, with an improvement of a smaller percentage of lead oxide and an increase on that of its principal constituent, the lead sulphate.

We come now to the class of white pigments which have zinc as a base, or are manufactured from the metallic zinc, the spelter of commerce or from zinc ores. The latter process is some times called also the American process and its product "American Zinc White."

The manufacturing of zinc white, which is the oxide of zinc, is carried on by the combustion of zinc metal, or spelter, in a special form of plant, or furnace and is based on the properties of zinc being a volatile metal, that is when heated to a white heat it is capable to be readily converted into vapors. If this zinc vapor comes then in contact with air, it undergoes combustion, or what is the same oxidation, and the oxide of zinc will be formed, the zinc combining with the oxygen of the air.

The plant consists essentially of two portions, one in which the zinc metal is melted and heated up to a high degree of heat, transforming it into vapor, and the other of chambers or condensers in which the white oxide is collected.

The vaporizing part of the plant consists of several furnaces provided with retorts or muffles made out of fireclay, and into which the zinc is charged. They open into sort of combustion boxes or flues to which air has free and plentiful access so that a continuous current of air can pass through them. The other ends of these flues open into the first of series of collecting chambers or condensers. Continued in third column.

MR. J. R. GOLDSBOROUGH.

Mr. J. R. Goldsborough has been an Acme representative since 1895. His record reflects the characteristics of thoroughness and a careful observance of detail that imparts to his customers, as well as the house, a perfect confidence that his statements are absolutely correct and based upon the firms foundations. There is no guess work in his composition. "When Goldsborough says its so—its so" is a bye word, and he always has the

documents to prove it. Mr. Goldsborough's home is in La Grange, Ky. He has a host of friends in and out of the trade, especially in the Southern States, which form his present stamping grounds. He is probably the oldest in point of years of our representatives and is remarkably vigorous mentally and physically, being able to give many a man much younger in years a tussle in the way of hard and persistent work on the road that would be a revelation. Mr. Goldsborough's length of service with the Acme is only a fraction of the long time he has spent on the road, and can relate innumerable "good stories" and interesting reminiscences of his own experience.

The white hot vapors of zinc when they come from these retorts or muffles into these flues are set on fire, or burn and combine with oxygen of the air drawn into these flues by the continual draught generated by the heat. The results are large and dense volumes of white oxide of zinc, which are then drawn by the same draught into the collecting chambers.

These chambers vary in numbers, from three to five, and more, and are constructed of wood, communicating with one another by means of apertures or openings so placed alternately at top and bottom that the vapors and gases from the retorts and flues must take a circuitous course through the whole series of condensers. The oxide of zinc is deposited into these chambers.

In order to facilitate the collection of the deposited oxide, the bottom of these condensers are made hopper shaped, so that by placing barrels underneath and opening a slide the zinc white can be easily taken out as the density and purity of the zinc oxide formed inside the flues is uniform, that is, as the process proceeds, the zinc oxide is formed in more or less dense or compact masses weighing more or less being fine or coarse as to the particles of oxide, its tendency settle out and deposit is therefore different also. We find therefore that the heavier particles and also the least pure ones deposit in the first chamber and partly even in the second, and that the finest and lightest and purest ones are in the last or end chamber of the condensing system.

The zinc white separates thus itself in different commercial grades. That taken out of the last chamber being the finest seal, and that from the first, the lowest or cheapest grade, the yellow seal of commerce, the chambers located between these, yielding then the medium grade, the so-called red seal zinc.

This combination process is chiefly used abroad.

TO BE CONTINUED

Thoughts

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Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, FEBRUARY 17, 1900. NO. 23.

Paint and Its Solid Constituents—The Pigments.

SUBLIMED WHITE LEAD AND ZINC WHITES.

BY JOHN COLLET

(*Continued from last week.*)

Here in America the process is operated by the Florence Zinc Co., in Philadelphia, which company however is a branch of the American Zinc Trust, the New Jersey Zinc Co., a commercial combination comprising all zinc white manufacturing plants of America, with the exception of the American Zinc Lead Co. of Colorado. This latter company ill went into liquidation, but is now to be reorganized) used to apply a process similar to that of the Picher Lead Co.'s for the manufacturing of a combination zinc lead white, which process is used by the Mineral Point Zinc Co. and the Lanyon Zinc Co., both of Wis., the latter however having been sold out to the former.

They use a zinc lead ore, containing more zinc in proportion to the lead, and obtain by a process, as I said, similar to the Picher process (they mix more slack in the ore) a so-called leaded zinc, that is, a zinc oxide in combination with lead sulphate and oxide.

Our former standard zinc and our present brand of leaded zinc are made according to this process by these firms.

The pigment consists practically of fifty per cent. to sixty per cent. zinc oxide, the rest being lead combination.

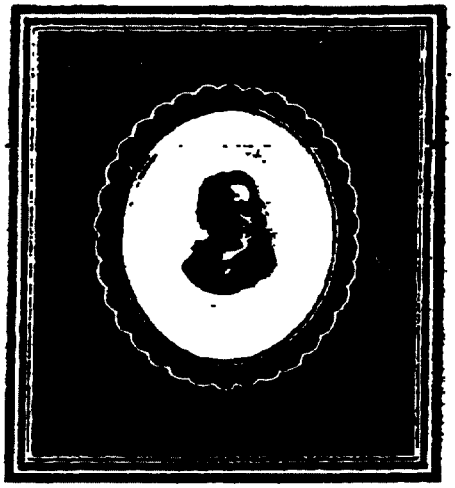
There is, however, another process for the manufacture of zinc whites, the zinc oxide, operated by the New Jersey Zinc Co. and by its branch the Lehigh Zinc Co. in particular. This process yields a straight oxide, the "horse head" brand of the zinc white, known under the commercial grades of "XXX," "XX" selected, and "XX" zinc.

This process manufactures zinc oxide from zinc ore also, but uses an ore almost free of lead, the ore being chiefly sulphide and carbonate.

Continued on third page.

MR. A. E. BARRON.

Mr. Barron, whom our representatives will probably remember as the winner of the prize offered for the best paper on "How to Sell New Era High-Grade Prepared Paint," has been an Acme representative since 1891. There are some of us who remember the young man who appeared at the office about nine years ago as an inexperienced candidate for a position "on the road," and we admire the judgment of our President who at that time recognized the possibilities in



Mr. Barron a "make up" that would develop into the well-rounded characteristics that indicate the perfect representative. It goes without saying that he has many friends on his territory in Wisconsin, both in and out of the trade and of both sexes. We are sorry to say that he is unmarried, but we believe this is wholly due to extreme caution on his part, and that in this respect he is exercising the same principle that leads him to invariably work hardest for the best dealer in a town and to take no other, even if it does require more time to win out. Mr. Barron is an up-to-date progressive representative in every sense, a good conversationalist, story teller and a brilliant pianist.

The ore is mixed with coal or slack and undergoes a reduction and oxidation process in a specially constructed furnace. It is first reduced to the metallic zinc but same evaporates as soon as it is formed and becomes oxidized into the white oxide which is then condensed and collected by means of chambers like in the combustion process.

On account of the necessity to mix the ore with coal or slack, in order to obtain reduction, first the zinc oxide in the first chamber and especially in the long and extensive flue leading to the condensing system, contains more or less small particles of coal and other impurities. This lower grade of oxide, commercially named "P" (pipe) zinc is either used again in charging the furnace or is sold as a cheap and inferior grade of zinc white.

These fine particles of coal in the ore are met with also and a... in the zinc lead or the leaded ... of the previous mentioned gr..., and as these pigments are mad... and as a bulk, no sedim... taking place into different ... they all show therefore, m... less, these impurities, which ... drawn by the powerful ... the zinc lead fume into the ... ing system.

These fine particles of coa... in connection with free ... lead, present in zinc leads ... main cause, but these pig... the lower grades the horsehe... are very seldom perfectly white b... show either a grayish or yellow ... tint.

As a pigment, zinc white, ... the oxide in particular, is rather b... and light in gravity. Expos... atmospheric influences, as air ... and sulphorous gases, has no visib... it, inasmuch as the latter, so det... white lead, changes the oxide into ... sulphide, the pigment is there... considered permanent.

It mixes well with linseed oil ... almost 22 per cent. of the same ...

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

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VOL. I. DETROIT, MICHIGAN, FEBRUARY 24, 1900. NO. 24.

Paint and Its Solid Constituents—The Pigments.

BARYTES.

BY JOHN COLLET.

(*Continued from last week.*)

Of all the inert materials, or so-called extenders, at the disposal of the paint manufacturers as well as of the painters, Barytes, the natural sulphate of barium, is doubtless the most important pigment. It is found mostly associated with other much more valuable mineral products of the earth, the ores of gold, iron and especially of lead, which ores it accompanies as a matrix or so-called gangue. As it occurs in vast and immense quantities it is obtained by a regular mining process. Missouri, Virginia, the New England States and Illinois being the principal States where Barytes here in America is found and mined, and where manufacturing concerns as Diggee and Weisman, Kaplan & Klein and the Arrow Rock Mining Co., and others are located, which grind and purify the natural product in order to render it adaptable for the various industries, especially for the manufacturing of paint and colors.

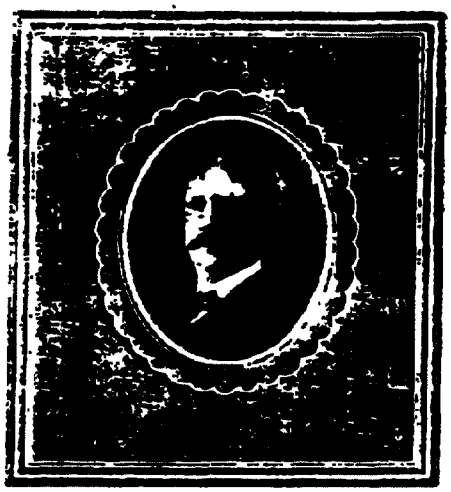
Chemically, Barytes is the sulphate of barium, a chemical combination of the metal barium with sulphuric acid. It is generally crystalline, sometimes transparent, irregular in structure, but often also opaque or of milk-white color. This latter variety is much softer and therefore most commonly looked for and used in the manufacturing of Barytes intended for the use in paints.

If merely powdered, Barytes ore is so stubbornly irregular in structure and hardness that it is very difficult to reduce it to a uniform powder by grinding or crushing even with the heaviest and strongest machinery. Again it is so transparent from its crystalline structure that it has little or no color when used as a pigment and for this

Continued in third column

MR. ALF. R. KELLY.

Mr. Kelly has been connected with the Acme almost since the inception of the business, the first relations dating back to 1885. He has been an Acme representative since 1892. Everybody on the Pacific Slope and the States of Idaho, Montana, Wyoming, Utah and Nevada who knows anything about paints and painters' supplies is acquainted with him. He has been in the paint business practically all his life, and understands it "from the cellar up." He



is prime advisor for a large clientele of paint buyers and users than usually falls to the lot of any one man, and on disputed points "Kelly's word goes" because he never makes mistakes, no matter if its figuring the cost of freight per gallon, or pound, on goods shipped to his territory, or explaining the chemistry of paints to a customer.

Mr. Kelly's family resides in San Francisco and with the exception of our President, no one connected with the home office has had the pleasure of meeting him, although we are reliably informed that he is a most genial Irish gentleman, enjoying advantages derived from a particularly liberal and broad education.

resume it has to undergo several more processes assimilating, bleaching and washing.

In the first place the manufacturer of Barytes has to take great care in selecting only the very white and opaque ores. These are carefully washed to free them from all earthy matter, then they are heated to a certain degree to break up and loosen the crystalline structure, rendering thus the rock or ore more fit for the following crushing and grinding process. The crushing is done by very heavy and powerful machinery and the coarse powder thus obtained is further pulverized under flat stone mills, with the aid of a constant current of water passing through these mills. From these mills the finely powdered Barytes runs into tanks where it is treated with a mixture of sulphuric and muriatic acid, it undergoes there a bleaching process, that is, the acids free it from iron and other mineral impurities which impart to the product a more or less yellow tint. It is then washed with pure water and sometimes ground again in flat stone mills under a current of water, which carries the now impalpable powder off to the tanks.

The floating process consists in running the pulp-Barytes into large vats, the lighter and finer particles will naturally be last to settle out and these are run off into other vats in succession. Those that float the furthest are then naturally the finest and most opaque. This product after settling is removed to pans where it is dried by steam or other drying arrangements, and sold as the best grade the so-called "floated" Barytes.

The sediment in the tanks or vats nearer to the second set of mills is sold as a inferior grade, or is ground over and floated again.

Barytes is a fine and very heavy white powder, insoluble in all acids, unaffected by any injurious influences of the atmosphere and therefore the most permanent of the pigments known. When mixed with oil it is positively inert and for these reasons it never chalks or cracks like white lead, or peels as zinc white.

TO BE CONTINUED.

Thoughts

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Paint and Its Solid Constituents—The Pigments.

BARYTES.

BY JOHN COLLET.

(Continued from last week.)

Zinc white has one fault, that is it is very translucent, and consequently has poor body or covering capacity. If, however, mixed in certain proportions with other pigments, as per instance with zinc white, it gives to these mixtures qualities and superior properties to those of these pigments in regard to especially durability and covering power.

In the discussion of graded leads, zincs and prepared paints, we shall see later on that Barytes is not alone used as an adulterant or so-called extender as so many believe, but that a certain amount of this so frequently unjustly condemned pigment—and a pigment it is—added to other pigments in the manufacturing of dry, paste, or liquid paints, quasi necessary either in order to bring out all the good qualities of certain so-called body colors, or in order to counterbalance or compensate many an inferiority these pigments may possess, and show if used straight or alone.

Beside the natural product of Barytes, there is another white pigment of exactly the same chemical composition. Baryta-sulphate, which is used to somewhat a large extent in the manufacturing of paint, especially in dry colors and colors in pulp form for paperstainers. This pigment is the artificially produced Baryta-sulphate, the blanc-fix or satin-white of commerce. Not long ago here in America it was brought on the market as an American product, under the name of barо-fine, and was as much extensively used instead of natural Barytes. It is obtained by the precipitation of the barium-sulphate from a soluble Baryta combination by means of sulphuric acid. It is a very fine and excellent white precipitate, showing somewhat better body and covering capacity than the natural Barytes.

(Continued in third column)

MR. DANIEL DAVIES.

This is a likeness of Dan that does not half fill the bill. This statement may be considered as somewhat obscure, as we do not say in what respect the picture is lacking, but we don't believe that any man whose appearance and manner were not calculated to please could have so many warm friends among the ladies. Everybody in the trade embraced in the area from Missouri to Colorado and Nebraska to Indian Territory inclusive, looked after by our Middle-West representative, knows "Dan," and the majority of them do not know he has another name. His first break as a representative was made in 1886, when with satchel in hand he walked back and forth before a prospective customer's door, and finally, whenh is courage was screwed up to the highest notch, made a rush for the inside, landed safely, and was told by the dealer that he had been watched all the time.

"Dan" says he told him a few good stories, demonstrated a number of "steps" from the latest stage dances, sang a song or two, and the merchant rewarded his maiden effort with an order, and has been a steadfast friend ever since. We don't know whether this was a sample of the method pursued by him ever since, or not, but the fact remains that his trail is marked everywhere with good strong business friends from the manufacturing, jobbing and store trade, and his work indicates a degree of shrewdness, thoroughness, persistency and carefulness that is highly commendable. Dan's list of "kids" at Christmas time is something remarkable, the express company being taxed to its limit in delivering reminders from "Uncle Dan" to his numerous little friends. No; he is not married.

This impalpable white powder forms the principal constituent of another white pigment, belonging to the group of body whites the so-called lithophone. Same is a combination or chemical-mechanical mixture of blanc-fix or Baryta-sulphate with zinc sulphide.

It is obtained by the following process:

Common rock Barytes from the mines is ground together with a certain amount, about twenty-five per cent., of soft coal, to a fine powder and mixed in a chaser or under edge-runners with a small percentage of chloride of lime and water.

This mass is then calcined in special constructed furnaces by which process the Baryta-sulphate is reduced or converted into the soluble Baryta-sulphide and chlorida; these Baryta compounds are then dissolved in water and to the solution is added a certain amount of zinc sulphate, obtained by dissolving zinc in sulphuric acid.

The result is a white precipitate consisting of Baryta-sulphate and zinc sulphide in the proportion of about twenty per cent. of the former to thirty per cent. of the latter, according to the strength and proportion of the solutions applied.

The precipitate white is then washed and left to settle. It is filtered off and dried. The dried pigment, however, has to undergo another calcination, which is done either in large crucibles or better in so-called muffle-furnace. This second calcination gives to the pigment the body or covering power, whitens it and fastens the combination between the Baryta-sulphate and the zinc sulphide to a great extent, in fact it makes this combination more chemical.

TO BE CONTINUED.

Thoughts

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VOL. I. DETROIT, MICHIGAN, MARCH 10, 1900. NO. 26.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week.)

BARYTES.

It is then ground, preferably under water, dried and sold under the name of lithophone or zinc-sulphide-white.

This pigment is an excellent substitute for white lead. Its color is good. Its body nearly equal to that of white lead, and therefore much better than zinc oxide or combination lead-zincs.

It possesses the great advantage of not being decolorized by sulphurous gases or pigments containing sulphur, and of not being poisonous. It mixes well with all vehicles and is very permanent in regard to the influences of the atmosphere and others.

It has, however, one drawback and that is that it cannot be used with such colors or pigments that contain lead in one or another form. Thus a white paint made from white lead and lithophone, or a tinted paint made on a lithophone base and tinted with chrome green or yellow, will be very soon decolorized owing to the action of the sulphur in the zinc-sulphide on the lead in the white lead or in these tinting colors, forming thus the black sulphide of lead, the paint in question will become brown or dirty gray.

WHITING OR PARIS WHITE.

The next important inert pigment used by the paint manufacturer and painter is doubtless Whiting or Paris White, names and designations given to powdered, levigated and purified chalk. The Latin name for chalk, Creta; German, Kreide, is derived from the Island of Crete from which the Romans obtained their supply. But chalk was used as a pigment, as we know, not alone by the Romans, but also by the Greeks, and by the ancient Egyptians, and furthermore by the Chinese, even long before these former nations were in historic existence.

(To be continued.)

MR. C. F. McCAULEY.

Mr. McCauley has been with us as a representative since 1891. His home is in Fredericksburg, Va., about the centre of his territory. He is a methodical and hard worker, and a man whose many friends in the trade place absolute reliance upon his judgment and advice. He "wears well" and is a steady builder of business. His field is a large one, as he goes as far south as Georgia and reaches north to towns in the southern part of New York State.

Mr. McCauley is a Southern man and understands his customers "like a book," and is successful in a field that could not be cultivated satisfactorily by a representative who was not specially fitted for the work. He has been identified with the paint and kindred line of business in the capacity of a representative for a large portion of his lifetime, or at least since he has been able to "shift for himself." He joined the "Acme family" immediately after leaving the employ of a prominent varnish manufacturing house. His combines with energetic and convincing methods, the faculty for making "a good impression" from the start, and we are in position to know that this impression "stands," as the first criticism from the trade regarding him has yet to be received.

The immense chalk deposits of such great depth which are formed in the Thames and Paris basins, in some of the Danish islands and on the islands of Rugen, Usedom and Wollin on the mainland of Germany, have by their preponderance given their name to a whole aggregation or group of rocks. This group constitutes the chalk or cretaceous system of geologists, a group or classification which stands between the Jura and the tertiary formation; that is, it was formed after the volcanic forces of our globe were comparatively at rest, and the vegetable and especially the animal life in the immense and enormous bulk of water covering then the earth, gave it formed in the length of time say millions of years, sediments and precipitations, which after laying on the bottom of these great basins of prehistoric seas came to light or to the surface at the beginning of the so-called tertiary period of our mother earth. I may say here that these precipitations and sediments are still going on in our fresh and salt water seas, and therefore the formation of this group of rock or earth may be considered continual. But as a matter of fact, the whole beds of these cretaceous aggregations are not pure chalk, or in other words are not adapted to furnish the Whiting or Paris White of commerce, but they include besides pure chalk, deposits of clay and common lime stone the latter although having the same chemical composition as chalk, is however not to be used for the manufacturing of the above named painters' pigment. Besides that the origin of chalk and limestone, notwithstanding they belong to the same group of rocks geologically, are very different from each other, and may easily be recognized by an expert familiar with their natures and structure of formations.

The only and chief way to discriminate one from the other is by means of a microscopical investigation. The limestone is formed by the precipitation of limestone in solution by the water.

(To be continued.)

Thoughts

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VOL. I. DETROIT, MICHIGAN, MARCH 17, 1900. NO. 27.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(*Continued from last week*)

WHITING OR PARIS WHITE.

These lime compositions are in form of basic carbonate, oxide or gypsum, and will be precipitated by the carbonic acid of the air, the chalk, however, the raw material for the manufacture of Whiting or Paris White is formed and consists of minute shells of so-called foraminiferan analogus in every way to those being still deposited at the bottom of the Atlantic at the present day.

These very small, microscopical small, bodies have the property of secreting a shell of calcium carbonate,—and chalk is, therefore, nothing else than carbonate of lime, the remains of a deposit of these shells which has been formed after the death of the animal that inhabited them, and furthermore, chalk may be considered almost pure carbonate of lime with only mere traces of silica, alumina, magnesia, ironoxide and sometimes with very small traces of phosphoric acid.

These immense deposits of chalk are met with in form of very soft, smooth, friable white masses, interspersed with layers and boulders of flint, which latter intermixture, natural in the origin of chalk deposits gives no little trouble and extra work to the manufacturer of Whiting and Paris White.

Before chalk can be utilized for the many purposes to which it is applied in the arts and manufactures, especially as a painters' pigment, it must be purified by grinding and levigation.

When required for paint purposes it should be in as fine a condition as possible; chalk, as quarried, cannot be used for that purpose. Small pieces of flint may get caught in the paint mill and play havoc with the stones or eyes of same. In addition thereto the gritty particles of silica, invariably disseminated through the body of chalk, are not properly crushed, neither by an edge-runner nor by a paint mill. Therefore the chalk has to undergo first a crushing process in a powerful disintegrator, and the then finer grit can be removed by levigation after grinding.

From these disintegrators the chalk is carried to flint-stone mills in which it is ground very fine under and with the aid of water. But even the finest grinding fails to crush all the hard grit; this can only be completely removed, as I said, by levigation.

The levigation plant is very simple and is worked on the same principle as stated previously with white lead, and especially with barytes in regard to the floating process of this inert material. After all, or after almost as much as possible of the grit is removed, the chalk suspended in water is allowed to settle down and after that the water is drawn off.

The chalk has now been converted into Whiting or Paris White and forms a thick, heavy, white pulpy mass. It is lifted out of the tanks and dried either by natural or artificial heat, but as the weather being such an unreliable factor artificial heat is now-a-days mostly applied, using specially arranged drying kilns.

Care, however, must be taken not to overheat the Whiting or as the technical term is, roast or "stew" it. Whiting dried in this way is always more or less tabby owing to its having been overheated and thus partially converted into quick-lime.

In order to make the Whiting finer, more purified, that is, in order to obtain still better and higher grade of article, undergoes a bolting process and comes out as English Cliffstone Paris White or Bolted Gilders' Whiting, on the market.

It is furthermore evident that the finer the crude material was, and the farther the purifying and levigation processes have been carried out, the higher is the grade of article obtained in the end.

TO BE CONTINUED.

MR. A. D. HOAGG.

Mr. Hoagg has been "on the road" for us since 1891. He is "business" all the way through. We find that no two representatives work the trade on exactly parallel lines, although the same general characteristics may be noticeable in the work of different men. Mr. Hoagg probably represents the extreme of those who may be considered as "determined" workers. His plan is on the vigorous order and his method is to "come to the point at once," and confine the talk to business facts, a policy that evidently meets the approval of the trade in that section, as he has many good customers that have been established for years. He is aggressive, persistent and not easily discouraged, and usually when he makes up his mind that we *must* have a certain customer he *gets* him. Mr. Hoagg has worked Eastern Iowa since he started with us and is familiar with "every foot of the ground" and takes good care of the jobbing, store and manufacturing trade that has been established on that territory. He is a man in the prime of life and resides with his family in Davenport.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives

VOL. I. DETROIT, MICHIGAN, MARCH 24, 1900. NO. 28.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week.)

WHITING OR PARIS WHITE.

Thus we know that the lowest article, as common commercial Whiting, is made of the lowest grade of raw chalk and with the simplest and quickest process, while the highest grade, as English Cliffstone Paris White, has undergone the most elaborate manufacturing process of preparation and the natural raw material was the purest and whitest selected.

Whiting or Paris White by itself, like Barytes, has little or almost no covering power, that is, as we understand, when mixed with oil. It has not sufficient opacity to prevent the surface underneath shining through. It is therefore of no value by itself as an oil pigment for the painter, yielding as it does, only a dirty semi-transparent yellowish or grayish white. But it is in virtue of this transparency in oil, or want of opacity, that we may say enormous quantities, perhaps now-a-days, larger ones than Barytes are used as extender and are added to other pigments of good body or covering power, may it be in good faith, for the purpose of cheapening the price of the article, or for fraudulent purposes as adulteration.

Different, however, it is, when we consider Whiting or Paris White as a pigment in regard to distemper colors. For this kind of painters' material, it must be considered the ideal pigment, for white as well as for a basis for other colors.

Mixed with water and the necessary adhesive agents it shows good and sufficient body, much more than it does with oil, and furthermore, and this being one of the main points in regard to its appliance, it is the best adapted, the cheapest and most economical pigment for this style of painting.

Another article pertaining and allied to the manufacturing of paint, and in the manufacturing of which Whiting and especially its lower grades are used, is putty; the so-called glaziers' putty of commerce. This consists of Whiting and linseed oil, at least it ought to, ground and mixed under edge-runners, into an impalpable stiff paste.

In regard to the durability of Whiting we may say that we can consider it quite a permanent pigment, especially if it was dried in the proper way, that is, if it shows no traces of causticity. It is not acted on by any of the atmospheric agents, which are often so destructive to other pigments.

If, however, Whiting shows small traces of causticity, its permanency as pigment to be used with linseed oil is somewhat, we may say, greatly diminished; for it is apt then, under all circumstances, and some paint experts as Weiss, Pearse and Dudley chemists of the Pennsylvania R. R. say, all and every Whiting — it be caustic or not, to cause a certain degree of saponification the free acids in the linseed The consequence is, there lime-soap formed, a soap very and without any elasticity permanency, and furthermore soluble in water. Therefore paint containing such a de whiting as a constituent ments cannot be permane and other external influences the brittle lime soap, mo rain dissolve it out of the coating, rendering same incoherent in texture, the paint will crack and chalk off.

The element or metal calcium alone in its combination with carb in form of chalk, or when same and purified by grinding and lev Whiting or Paris White, a valua pigment for the painters' use, but in another form of carbonate of lime ent in an amorphous form as but in a crystalline structure, a able white pigment for the painter particular very adaptable and by paint manufacturers.

Continued on third column

MR. W. H. CONNOR.

Mr. W. H. Connor, the subject of our sketch this week, is one of those quiet, unassuming men who, while not possessing the "gift of gab" which it is sometimes erroneously believed is an absolute necessity to make a success as a representative, has a habit of "getting there" with his trade, which indicates that *thinking*, intelligent and persistent effort will win out where frequently a flow of oratory would fail to accomplish the same result. The general

manufacturing trade in Ohio, which is Mr. Connor's field, is being cultivated by him assiduously and on scientific principles, and as many of our representatives will appreciate, such soil is not the most fertile. It is his habit to study the requirements of his customers, and those whose business he is endeavoring to secure, very carefully, and being thoroughly posted upon all the up-to-date methods of finishing and fully understanding what is best to suggest in each particular case, his judgment is always good and he wins and merits the confidence imposed in him by his trade. Mr. Connor has been with us since 1898, and has called upon all classes of trade in Michigan and Ohio. His home is in Toledo, Ohio, where he resides with his family.

TO BE CONTINUED.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, MARCH 31, 1900. NO. 29.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(*Continued from last week.*)

WHITING OR PARIS WHITE, GYPSUM AND CHINA CLAY.

I relate here to the white pigment, used by us under the nomenclature of "white filler." It is nothing else than a very finely ground and levigated marble-dust, chemically like Whiting or Paris White "carbonate of lime." It is, as I said, not amorphous, but of a crystalline structure, and in virtue of this, it has the properties similar to those of barytes, to appear under oil not as dirty or yellow, grayish white, like whiting, but whiter and more transparent: that is, it is as an oil pigment whiter than Paris White, but has naturally, according to its molecular crystalline construction, very much less body or covering power.

But as it is used as an extender only, and as it is very much lighter in gravity than barytes, it was found that it may be used with great advantage in connection with white lead, zinc whites, and especially in the so-called "graded leads," the white color of which it will not impair, but which would be greatly deteriorated by the use of carbonate of lime in form of Whiting or Paris White.

Another advantage this pigment has, is that it will not settle hard or caky in a paint put up as can or shelf goods or to be used in dipping tanks, owing to its light gravity it stays very well in suspension, and owing to its crystalline structure it will not settle hard, but is easily broken and stirred up again.

Another white inert pigment, the base of which is calcium or lime also, is Gypsum, or hydrated plaster of paris. It is the sulphate of lime of chemistry. However, it is not used extensively as a paint pigment in the manufacturing of liquid paint, its chief use is as an inert or extender in the manufacturing

(Continued in third column)

MR. M. J. REYNOLDS.

Mr. Reynolds has "grown up" with the Acme. His knowledge of the intricacies of a representative's calling has been gleaned entirely in our service, a matter of considerable satisfaction to us, as we have no reason to be ashamed of his accomplishments in this direction.

He is a diligent student and apt scholar, and an enthusiastic worker, and everything he does, from the "landing of a big jobber" to the care exercised in writing orders, indicate the result of thoughtful work. Enthusiasm probably explains the cause of his success better than any other word. It is the element in the work of any representative that overcomes more obstacles and discouragements than anything else. Mr. Reynold's work as a representative commenced in 1888, and for the past twelve years he has been hard at it with unabating energy. He is a young married man, his home being in Rochester, N. Y., and his field the State of New York. His work with all classes of trade indicates the result of concentrated and persistent effort and the inevitable result that invariably follows such a course.

of dry colors, such as red-iron-oxides, and sometimes it is found to form the base of chrome greens and chrome yellows, especially in the so-called "golden ochres."

It is mined or quarried in its native state and needs only little further preparations to be used as a pigment. Artificially prepared by precipitation, it forms in connection with alumnia-hydroxide, which latter is precipitated simultaneously the valuable white pulp pigment the "satin white" of the paper-stainers and color-lake manufacturers.

Besides Barytes and Whiting usual met with in paint and among its raw material, as so-called extenders or inerts, china clay is found also frequently. It is, however, at the present time not as much used as it was ten or fifteen years ago. Its appliance is nowadays more restricted to the manufacturing of specialties, or rather articles which being not in the strictest sense of the word paint, nevertheless are allied or relative to paint and to its appliances, and therefore are mostly more or less also manufactured by paint manufacturing concerns. I refer here to wood fillers and other sundries, in which china clay and mostly also another inert pigment "silex," or ground quartz are the chief and main constituents.

China clay, or kaolin, as it is named sometimes, is chemically a silicate of alumina, varying in composition according to its locality and origin. Thus is the more comprehensive and natural when we consider that china clay is the product of decomposition of the mineral feldspar, the main constituent of the vast and immense aggregations of granitic rocks. This feldspar intermixed with sand and sometimes also mica—falsely named tangiass—the latter giving the glittering appearance to the granite, is chemically a silicate of alumina and potassium or sodium, and when coming in contact with the atmosphere, that is the carbonic acid and water, as rain, is decomposed, that is, the carbonic acid transforms the potassium and sodium components into soluble carbonates. TO BE CONTINUED

Comparative Cost to Consumers of New Era High-Grade Prepared Paint, and Strictly Pure Lead and Oil.

100 lbs. White Lead.....	$ 7 00
4½ gallons Linseed Oil @ 70c.....	3 15
½ gallon Dryer	25
½ " Turpentine.....	25
	$10 65

Making 7½ gals. of paint at a cost of..... $1 40 per gallon

New Era High-Grade will cover at least 15 per cent. more surface than paint as per above, and it would require, say, only 6½ gallons for the same surface for which 7½ gallons of above paint would be needed.

7½ gallons above paint.....	$10 65
6½ " New Era High-Grade @ $1.40 per gallon.....	9 10
Actual saving	$ 1 55

A difference in favor of New Era High-Grade of about 15 per cent. No allowance is made here for time and trouble required to break up lead in oil, which should be figured at least five cents a gallon, for the cost of the colors used in tinting, nor for the much greater durability of our goods as compared with white lead alone, due to the addition to the lead paint of the zinc oxide, and also the consequent greater quantity of oil per pound of base we are enabled to use.

NOTE—The above we consider correct. The ideas of our different representatives on this subject will be published, so that comparisons may be made and a proper understanding of the subject arrived at.

Mr. A. R. Kelly's Ideas Regarding the Comparative Cost of New Era High-Grade and Lead and Oil Paint.

At the present time lead and oil are very high out here on the coast, the established retail price of same being, white lead, 7½ cts. per lb.; boiled linseed oil, 75 cts. per gal. Figuring upon this basis, we find that the cost of the two are about alike, taking the general retail price of $1.75, which is the established figure out here.

To illustrate, I give you the generally accepted standard, adopted by the master painters of this coast, figuring out my volume of lead, or in other words the number of gallons it bulks, according to the figures of the National Lead Trust, 2¾ gals. to the 100 lbs., these figures are based on two-coat work, outside.

4½ gals. Boiled Linseed Oil @ 75c	$ 3 74
½ gal. Turpentine @ 75c.....	19
100 lbs. White Lead	7 75
2 lbs. Tinting Color @ 25c	50
	$12 18

Making 7½ gals. paint, at a cost of say..... $1 56 per gallon.

To this must be added the cost of labor in breaking up the lead, and mixing above, say 5 cts. per gallon, making a total of $1.61 per gallon.

Now, to finish a job in an equal manner with above mixture of lead and oil, it would take:

6 gals. New Era H.-G. @ $1.75....	$10 50
1½ gals. thinner oil and Turps. @ 75c	1 12
	$11 62

Making 7½ gals. paint costing, say, $1.55 per gallon.

Seven and a half gallons New Era High-Grade, thinned as above, will cover as much surface as the lead and oil mixtures given.

In addition to the advantage of price, there is also the advantage of the cans, which are certainly worth something for use as paint pots.

In answer to your second question, as to who it is that decides as to whether lead and oil, or prepared paints shall be used for house-painting, would state that in my experience on new work, this question is generally decided by the architect; on old work, by the painter, as a rule, although in some instances by the owner, but even the architect is influenced in most cases by the painter.

I find the better plan is, if possible, to see all three, but by all means to work the painter, as I suppose you are aware, the painter, as a rule, is generally very bitter against the use of prepared paints. Many call this prejudice upon his part. I do not, as I believe in nine cases out of ten, he has very good reason for this prejudice, owing to the very many worthless paints now being sold with all sorts of cast iron guarantees.

I have seen many and many a framed certificate of purity, guaranteeing pure lead, zinc, linseed oil and turpentine, and nothing else, hanging upon the walls of dealers, signed with the manufacturers names, and offering to forfeit the goods if not as represented, when I knew, and the dealer handling them knew that they were adulterated, all the way from 20 per cent. to 40 per cent., hence it is not astonishing that the poor painter becomes mixed up, and places all prepared paint in the same category.

How to overcome this is a hard question. The best results that I have noticed so far, are attained by the samples you send out to the painters.

Now, as to your third question: "who is it that applies the paint?" In large cities, in ninety-nine cases out of a hundred, the goods are applied by a painter; in smaller towns and villages, the work of application is about equally divided between the house painter, owner, or some handy andy around the place.

As a rule, in the cities, the painter furnishes both labor and material, in the country the owner generally supplies his own stock furnishing such material, however, as suggested or recommended by the painter.

With the New Era High-Grade, all cans of the same shade of color are identical. If a painter opens up a dozen cans today, and in a month from now opens up another dozen, to finish a job, there is no trouble at tinting to match the first lot; whereas, in the case of lead and oil, the contrary is the case, the painter very frequently loses hours of valuable time, in the endeavor to match a first lot, and in many instances makes a botch of it; as in all my experience I have never known a painter to work by rule or formula, always by guess work, whereas, the mixed paint grinder works entirely by rules, and carries out his formulae with mathematical nicety and accuracy.

Respectfully,
ALF. R. KELLY.

Queries.

When you call on a merchant and sell him a nice little bill of specialties, how is it you never also sell him, say a few pounds of oil colors?

What's the reason you cannot do just as well as some of our other men and include in your orders a few pounds of Japan colors, black?

Select some one item in each line; make a leader of it; get in a few pounds this trip and next time you can undoubtedly increase it, and thus increase your sales and the volume of our business.

Next trip make a leader of something else, and finally you will establish every line we make.

Some men on the road take orders, *others sell goods*. We like the latter class best. Which class are you in?

Who can offer the best suggestion, based on the foregoing items?

Indianapolis, Ind., Feb. 25, 1900

Editor THOUGHTS:

I think our sample cards are all right as they stand, no doubt that a twelve color card would be a good thing in some sections, but believe we can get along very nicely with what we now have. Yours truly,

No 5

St. Paul, Minn., Feb. 24, 1900

Editor THOUGHTS:

What is the difference between an old and Acme New Era High-Grade Prepared Paint?

An old hat will cover a multitude of sins and New Era High-Grade Prepared Paint will cover a multitude of dark spots in your home. Yours truly,

No 3

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, APRIL 7, 1900. NO. 30.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week)

WHITING OR PARIS WHITE, GYPSUM AND CHINA CLAY.

Water, as rain or snow, dissolves these potassium or sodium carbonates and carries them away, the insoluble component the silicate alumina, is left behind, or sometimes washed down to lower localities where in the length of time immense beds of pits of silicate alumina, that is China Clay, are deposited.

These beds are quarried similar to the method employed in the quarrying of chalk: the China Clay is soft enough to be cut or sawed in large square blocks, which are then crushed in disintegrators, and the powdered mass is then purified from sand, mica, grit and other foreign matter by levigation and dried in almost an exact way as in the finishing process of Whiting or Paris White.

In case the deposit or pit of China Clay is not large enough to afford a regular mining or quarrying, and in case a plentiful supply of water is on hand, the China Clay deposited in the pit is transformed, first in a soft pulpy mass by means of a constant stream of water, and then pumped by special arrangements up to the washing and levigating plant. This method is mostly in vogue in England, while the former regular mining process is generally used in Germany and France.

In regard to the properties of China Clay, making it adaptable for a painter's pigment, I have to say, that it must be considered not a very good one. Its body and covering capacity is very inferior; with oil it produces a yellow-grayish, very transparent mixture, and although it is very permanent as a pigment for itself, it does not give a fairly permanent coating when applied as oil paint.

The reason is its nature is rather repelling

(Continued in next column)

towards linseed oil, than assimilating or combining with this medium. It will therefore not act as a protector for the oil film this consequence is that the external influences will freely act on the oil destroying its protecting properties, and the pigment having then no other support, will peel, powder and chalk off.

If properly prepared and of good quality China Clay is a white amorphous very light powder, having a somewhat greasy or soapy feel.

As I said before, it is not much used nowadays in the manufacturing of liquid and paste paints However, it is not long ago that in virtue of its very light gravity and of its fineness and freedom of grit, it was used as an extender, or as means to give to other heavier pigments more buoyancy in the vehicle; that is, it was used especially in so-called dipping paints and as a preventer against settling in the paint in canned and shelf goods But experience taught very soon that the use of China Clay in such paints was rather a draw back than an improvement: the paint did not alone lose its durability, but showed still another very bad feature, the feature of "livering-up."

The reason and cause of this in general is not yet clearly understood, and many theories are set and laid down by paint experts contradicting often themselves and one another. The only right and doubtless very adaptable theory is that the water of combination in the China Clay, a hydrated silicate alumina, causes a [illegible] saponification in one or another way with the linseed oil, similar to that which occurs in paints containing Gypsum. This theory, I intend to make later on the subject of a special paper, dealing with "hardening and livering-up" of paint.

Of all the China Clay yielded by nature the arts and industries, only a comparatively small percentage is used by paint manufacturers: the main bulk, however, finds its way into the manufacturing of pottery and fire bricks, and as filling-up of paper and textile

MR. F. R. DOUGALL.

"Frank" has been with us since 1894, and has demonstrated beyond the shadow of a doubt his ability to sell our goods. He is one of the kind of men whom, after a few meetings, you never think of "calling by his last name." It is not a "familiarity that breeds contempt," either. He is liked for his good natured *genuineness*. His easy-going and genial style may not at first indicate the strength of character and degree of resoluteness of which he is capable, but these factors in his make-up are soon recognized, and from mere friendliness the genuine respect for a man whose views, opinion, knowledge and judgment are worthy the most careful consideration, is quickly inspired. By hard and intelligent work he is rapidly building up a good business in all our lines in the States of Pennsylvania, New Jersey, Connecticut and Rhode Island. He is a benedick, having been married last June to a lady with whom we at the Acme offices are all personally acquainted, and had the pleasure of offering sincerest congratulations on the occasion. He is now residing with his family in Philadelphia.

We are in receipt of advices that Mr. Dougall's family has been increased by an 8 1/2 lb. boy.

goods, and last, but not least, is used as raw material or basis for the manufacturing of ultramarine blue and green.

Previously in connection with China Clay, there was mentioned also "silex," as an inert pigment, stating that it was ground or pulverized quartz. I will only state here that in comparison with China Clay it has almost the same properties in regard to its appliance as a pigment, and the same relations to linseed oil or other vehicles, as the white filler has in comparison with Whiting. That is, it gives with oil a whiter and clearer but less opaque mixture than China Clay, owing to its more or rather almost perfect crystalline structure. If ground very finely and having undergone a levigating or floating process, it has even more buoyancy than China Clay, but its crystalline structure is of such a system that it is very apt to form a somewhat solid and hard-to-break-up cake or mass after it has settled down out of the paint in which it has been used as a pigment extender.

Its chief use, however, is only as pigment for fillers and sometimes for so-called surfacers. It is a white more or less fine powder, according to the perfection of its preparation, and at the same time of an exceedingly hard grain or composition, harder than even barytes, in fact, the hardest and least affected pigment known.

Among other white inert pigments, as carbonate and oxide of magnesia, carbonate of baryta and others of inferior importance, there is perhaps only one that may still deserve special mentioning, as it is now used by many paint concerns, and among these by ourselves.

This pigment is the so-called asbestos-pulp or it in a finer state and less fibrous, the talcum or soap-stone of commerce.

It is, however, not used as an extender, or as we may call it, as an adulterant, but its use in certain classes of paint has a certain and defined reason and cause. We use it, and that in very small quantities only in certain paints, as a buoyant, in order to keep the pigments in suspension, for which purpose its very light gravity and its molecular construction, the latter being of a fibrous form seem to and in fact proved to make it the ideal and proper medium. The quantity used however, must not exceed 5 per cent., or at the most 10 per cent. of the total pigments, as it would then greatly interfere with the covering, or rather spreading properties of the paint: the fibrous nature of the asbestos-pulp would cause a more or less rolling of the paint under the brush.

TO BE CONTINUED.

Comparative Cost to Consumers of New Era High-Grade Prepared Paint, and Strictly Pure Lead and Oil.

100 lbs. White Lead	$ 7 00
4½ gallons Linseed Oil @ 70c	3 15
¼ gallon Dryer	25
¼ " Turpentine	25
	$10 65

Making 7⅞ gals. of paint at a cost of ..... $1 40 per gallon

New Era High-Grade will cover at least 15 per cent. more surface than paint as per above, and it would require, say, only 6¼ gallons for the same surface for which 7⅞ gallons of above paint would be needed.

7⅞ gallons above paint	$10 65
6¼ " New Era High-Grade @ $1.40 per gallon	9 10
Actual saving	$ 1 55

A difference in favor of New Era High-Grade of about 15 per cent. No allowance is made here for time and trouble required to break up lead in oil, which should be figured at least five cents a gallon, for the cost of the colors used in tinting, nor for the much greater durability of our goods as compared with white lead alone, due to the addition to the lead paint of the zinc oxide, and also the consequent greater quantity of oil per pound of base we are enabled to use.

NOTE—The above we consider correct. The ideas of our different representatives on this subject will be published, so that comparisons may be made and a proper understanding of the subject arrived at.

MR. F. R. Dougall's Ideas Regarding the Comparative Cost of New Era High-Grade and Lead and Oil Paint.

The following is about right at present costs:

Cost to consumers of lead and oil.

100 lbs. White Lead	$ 8 00
6 gals. Linseed Oil @ 70c	4 20
¾ gal. of Turps. and Dryer	80
	$13 00

9 gals. of paint cost $13.00, or 1 gal. would cost $1 44 4-9.

New Era Paint is pretty generally held to the consumer at $1.40 per gal. That would make lead and oil cost, per gallon, $1.44 4-9: New Era High Grade Paint, per gallon, $1.40. Difference in favor of New Era High-Grade Paint per gal., 44-9c., or practically 5 cts. per gallon in first cost, that of course is not taking into consideration the difference in covering capacity and the saving in time and labor effected by using New Era High-Grade Paint. In the large majority of cases a man who wants his house painted, goes to a painter and gets him to estimate on the job, the painter to furnish everything—labor, brushes and material. What is to be used in the way of material is left to the painter to decide, the man who owns the house generally contenting himself with telling the painter to use the best, than the painter proceeds to use what ever he sees fit.

This is particularly the case in the larger cities. This is the reason there is such a small percentage of prepared paint used in the large cities, as compared with the lead and oil used, as painters, as a class, are dead against mixed paint. We all know the principle reason. They think it detracts from their prestige, as artists.

In the smaller places, I should say, the consumer who recommends the material to be used and the one who leaves it to the painter, is about evenly divided.

Yours truly,

F R Dougall.

How Do You Vote on This?

What do you think of putting up Dariex Varnish Stain in two shades of oak, light or dark? A number of our competitors are doing it, and customers are asking for it. I suppose it has come from light or dark oak graining. No. 9

Notice.

One of our representatives has sent us a one pound can of empire permanent green manufactured by Benj. Moore & Co., N. Y. Papers regarding same have been mislaid in some unaccountable manner and we have no means of knowing who sent it in, or what was wanted. Will the person who sent it please advise us?

Certificate of Purity.

The above certificate sent to C. Inwood, reached me O. K. to day. I think it is a grand thing to have, and you surely have my compliments for same. I think it gives a salesman additional evidence of the good faith of our officers in the superior quality of our products, and deserves the compliments of our entire travelling staff.

Yours truly. No. ...

Notes

Some of our representatives are careless about marking samples sent to be examined and duplicated, and in such cases samples come in without being marked in any way, which causes annoyance and delays orders.

Salesmen, when sending in orders for firms to be shipped together, should always make notation to this effect on both orders. When only one is marked, it sometimes happens that the order sheet not marked passes through and is shipped before the other one is ready, and so often as a very small order to be sent alone

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. I. DETROIT, MICHIGAN, APRIL 14, 1900. NO. 31.

Paint and Its Solid Constituents—The Pigments.

BY JOHN COLLET.

(Continued from last week.)

WHITING OR PARIS WHITE, GYPSUM AND CHINA CLAY.

We have herewith reached the end of the list of "white pigments" used either as "body colors," or as "extenders," and may proceed now to that of the so-called "color-pigments," the blacks, blues, yellows, greens and reds.

Before, however, I shall go further and give you more details in regard to these pigments, their manufacturing and their properties and qualities as paint pigments. I shall attempt to give you a fair and prehensive understanding about the commeaning of the various chemical operations and expressions, as oxydation and reduction, calcination, sublimation, striking or precipitation of colors and others, operations and expressions used in explaining same, we are naturally to meet with in discussion of such a matter. I shall not attempt to convert you into expert chemists or expert colormakers, but will try to make our meetings here more interesting for us all, by enabling you to follow me better in my explanations regarding the different chemical operations and the various chemicals used, by which the final result in form of apigment of such or such a color is obtained.

CARBON, BONE AND LAMP BLACKS.

Nearly all the black pigments in use by the painters and paint manufacturers are composed either of Carbon itself, or have that element as their coloring principle. Although Carbon exists naturally, as you know, in form of coal, yet this, its native form, is not used as a pigment in painting as it lacks the properties required for that purpose: therefore, all the black pigments are made artificially or are products of the arts and industry.

(Continued to third column)

MR. M. TAYLOR.

Mr Taylor is tall, good looking, married and a hustler. He joined us in 1897 with these qualifications and a thorough practical knowledge of paints and painting, derived from years of actual experience in the shop and with manufacturing concerns. We think he is better looking than when he first came, and also knows more about paints and painting, but otherwise his qualifications remain the same. As a result of hustling and a perfect knowledge of the requirements of the manufacturing trades, combined with tact, persistency and ability to handle this class of business as it ought to be handled, he has been particularly successful in this direction.

The store and jobbing trade has also been looked after carefully, and we consider his territory of Illinois one of our best for all-round business. Like all other successful representatives, his work indicates thoroughness and a carefully studied plan of action that must win out in time. His home is in Peoria.

The principle of their manufacturing is based on the following: When combustible bodies, such as wax, fat, resin, coal gas and other so-called hydro-carbons that are bodies composed of hydrogen and Carbon, undergo combustion, the hydrogen which these substances contain, is the first element to undergo oxidation, or be consumed, that is, it will burn off first, while the Carbon, especially if the flame be suddenly cooled by bringing a cold surface in contact with it, may almost entirely escape combustion and be deposited as soot.

When the burning substance is very rich in Carbon, the flame may smoke without being cooled, and it will do so all the more strongly the less the supply of air present.

This simple fact, as I said, is the basis which underlies all processes for the manufacture of the finely divided Lamp or Carbon Blacks.

As I stated in my first paper the ancients used to make their Lamp black, and this was the only black they had, exactly in the same manner as we do it at the present time, that is, we obtain it on a large scale by collecting the smoke produced during the imperfect combustion of oils, resins, pitch and other fatty residues of other kinds. These substances all yield a fine black of various grades and qualities. The operation is quite simple and consists merely in consuming the constituents of the body except the Carbon and preserving as much of that as possible.

Lamp-black is prepared in large quantities from the impure resins and other tarry matters that remain after the distillation of turpentine. These are burned in shallow pans or sometimes in specially arranged furnaces supplied with a very limited access of air, the dense smoke produced by the combustion being conveyed into chambers lined with sacking or cloth, upon the surface of which the Lamp-black is deposited. It is periodically shaken off from time to time, and finally packed in barrels, and is now ready for the market.

TO BE CONTINUED

White City News

Devoted to Matters of Interest to Our Representatives.

PUBLISHED BY

ACME QUALITY PAINTS ENAMELS COLORS VARNISHES ACME QUALITY

DETROIT, MICH.

VOL. 1. JULY 3, 1903. NO. 6

F R DOUGALL, Sales Manager

New Lead Kegs.

It will undoubtedly interest our representatives to know that a very large shipment of lead in assorted sizes has been received by our distributers, The W. E. Little Paint Co., Los Angeles, Cal., and Mr. Kelly has written us that never in his experience did he see a shipment of lead arrive in more satisfactory shape. There was not a leaky package in the entire lot, and to use his expression "if the kegs are all right in other respects, we have a winner."

During the past four months since we have been putting these kegs out, we have only had three complaints, and those were to the effect that the packages absorbed the oil and left the lead in a hardened condition when it came in contact with the package on the inside. In taking the matter up with the manufacturers of the kegs, they stated that in our first carload they had put in a few kegs, upon which they had been experimenting with a new kind of coating, and that same was unsatisfactory, and for that reason we might possibly have a few complaints of the nature referred to above, but if we do, their guarantee on the kegs would make us good for any loss we or our customers would sustain, and that we would have absolutely no trouble of that character in future. The complaints received by us have been so few that we are inclined to accept their statement as representing facts.

We have placed in the box of each representative a little circular giving the points of advantage that customers will receive from buying lead in this kind of package. Those advantages are not imaginary, but real, and based on actual tests, the customer can get more lead out of these packages than he can ever hope to get out of the old style wooden kegs. This information is given so that if you should have a few complaints, you will carefully investigate them and rest assured that they result from the cause mentioned above, and you should try to overcome any prejudice that may exist with a customer regarding this very much improved style of package. The use of this package by us should be a strong talking point with you, and we hope to enjoy a largely increased business on that account on our various lines of lead.

Patentwood kegs are superior to wooden kegs for at least *ten good reasons.*

1. They are in one piece—not of staves.
2. Smooth on the inside—no joints, cracks or crevices.
3. Absolutely impervious to the action of oil, turpentine, benzine, etc. Do not absorb.
4. Headed with a strong steel cap—no chippering.
5. Air tight—no hard lead.
6. Package can be opened with ease by withdrawing staples and knocking off cap as you would a hoop, and when cap is replaced the package is again air-tight.
7. All the lead and oil can be removed from the keg—no waste.
8. Weigh the same as stave kegs before filling, but compare the weights of a Patentwood with a stave keg after the lead has been removed, and note the difference.
9. Not affected by atmospheric conditions—no expansion or contraction.
10. Attractive in appearance—the *best* keg at *all times* and the *only* keg in *hot weather*—no leakage.

They Increase Sales.

Troy, N. Y., June 5th, 1903.

Acme White Lead and Color Works.

Gentlemen: Replying to your letter of the 28th ult., in reference to your weekly letters we beg to say that we hand them to our travelling men, and presume they have more or less effect to keep your goods especially before their minds. We know that they all take an active interest in the goods, and anything that will give them new points and ideas will naturally be helpful. We think that your Mr. Wilson, who is in pretty close touch with our travelling men, and a very good friend to them all, would call their attention as he meets them to any new points that would help to build up trade. We are glad to note quite an increase in our sales of your goods this season.

Yours truly,

JOHN L. THOMPSON, SONS & CO

Arguments in Favor of N. C. P.

Neal's Carriage Paints were the first line of ready-mixed carriage paints in colors ever offered the trade.

They have been leaders ever since they were first placed upon the market, twenty years ago.

They are made from the finest grade of carriage varnish, which is most elastic, brilliant and durable.

The black is made from this varnish and the best quality of ivory drop black.

The colors are very finely ground and are especially selected for their richness of tone and permanency of color.

Neal's Carriage Paints are *right* in every sense of the word. They will stand the most severe exposure and usage, and will not check, crack or blister. Very brilliant, very durable and very popular.

They afford a nice margin of profit to the dealer, and as this line possesses the best reputation for quality of any in the country, you should be able to place Neal's Carriage Paints and Neal's Carriage Top Dressing very liberally with your customers.

We want orders.

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, OCTOBER 27, 1900. NO. 4

Paint and Its Solid Constituents—The Pigment.

BY JOHN COLLET.

(Continued from last week.)

RED PIGMENTS.

As the iron oxide for itself acts to a certain extent as a dryer when in connection with linseed oil, and as in the drying of linseed oil, as we shall see later in a special article —water is liberated, the partly hydrated gypsum of the base, will and must link itself to or absorb this liberated water, forming thus fully hydrated gypsum, or in other words "sets" like plaster paris, in fact the process is the same as in the hardening of a quantity of plaster paris stirred up with water into a paste.

The gypsum will thus set or harden throughout the whole paint, the consequence is that same will liver and by length of time cake.

Another draw back of these gypsum red oxides is, that the gypsum is slightly soluble in water, which draw back comes especially in evidence, when such a red is used in so-called flat brick or mortar paints.

These paints contain not much oil, in fact very little, lack therefore considerably in binder, and especially in protecting vehicle.

The gypsum, not sufficiently protected by a film of oil is therefore strongly exposed to the elements, particularly water in form of rain and dew and the drying rays of the sun. It takes all the water up necessary to its full hydration and after that more by absorption, in which water it is soluble to almost a saturated solution.

The drying rays of the sun drives or forces now this saturated solution of gypsum out again to the surface of the coat of paint, evaporates the water and leaves the gypsum in form of minute white crystals upon the surface, which later will then appear as coated all over with patches of meal-dew.

Many a painter was thus not little surprised after leaving a bright and finished flat brick job in the evening, to find the next day the house covered all over with these white patches.

The nearest and best explanation for this phenomenon the house owner and the painter himself could find was "fading of paint," and would then naturally blame the manufacturer of the paint in question or the jobber who sold the pigment, while the real and only cause was the use of a gypsum based venetian red in connection with the above stated circumstances, as the writer sometime ago had the pleasure to explain and to demonstrate with experiments to one of our most prominent master painters of the town.

TO BE CONTINUED.

Prices Affected by Recent Heavy Advance in Linseed Oil.

The recent advances in linseed oil have confronted us with a serious problem as regards prices for our goods. From indications at this time it would appear that the present price of oil will not only be maintained, but further advances will occur, and dollar oil would not surprise us. Our representatives will readily realize that new conditions, if maintained, mean a greatly increased cost of production, so much so in fact that the situation cannot be covered by any "law of average" that might apply to a temporary advance that was not so great and did not bear evidence of "coming to stay." We have deemed it good policy to issue the following notice to our trade generally:

DETROIT, MICH., October 24, 1900.

TO THE TRADE:—

Owing to existing unsettled and abnormal conditions covering the present and prospective market for raw material, particularly Linseed Oil, we are reluctantly forced to withdraw all *firm* prices for our manufactured product, and herewith beg to advise you, that for the time being, and until the market becomes steadier, we can only accept orders subject to such revisions in prices as may be found *necessary*. We propose to handle any necessary revisions in the most conservative, reasonable manner possible. We regret that the market conditions force us to take this action, and beg to remain,

Yours very sincerely,

We wish our men to bear out our policy fully. *To-day* our prices are the same as heretofore; *to-morrow* they may be advanced, as no manufacturer can afford to hold old prices in face of the present situation for any length of time. *We don't want you to book business for future delivery at present prices under any conditions.* This means that you must not accept business at present prices agreeing to permit customer to order goods shipped at any time we may decide to advance. We are not anxious for orders *from established trade* under existing conditions, in fact we prefer to discourage such business. We will make a partial exception to this position as regards *new customers* for *New Era High-Grade*. Note our instructions carefully in this connection as follows. You are at liberty to book a limited number of orders from *strictly first-class new customers* at the present price for New Era for *immediate shipment* with usual spring dating, if necessary, or, if customers do not wish goods shipped at once, they must agree over their signatures to permit us to forward goods upon any day that prices may advance. All prices must be made subject to change based upon market conditions. *It is important that you realize that these instructions must be lived up to to the letter.*

These instructions in some particulars are contradictory to our views as expressed in THOUGHTS of last week, in article entitled "Cinching" Orders for Spring Business but are rendered necessary, based upon later developments.

Note.

A *few* of our representatives have not yet complied with our request to enter the "approximate" amount of each order in the upper left hand corner of order sheet. Please attend to this hereafter.

Coach Color Sample Books.

ROCHESTER, N. Y., October 21, 1900.

Coach color sample book received, and must say same is a dandy. If you do not note an increase in the sale of coach colors from now on it will be no fault of the back, I can assure you.

Yours respectfully, No 19.

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	QUANTITY SOLD TO DATE
No. 1	
No 2	
No 3	
No. 6	
No 7	
No. 8	
No 9	
No 10	
No 11	
No 12	
No 13	
No. 15	
No. 16	
No. 17	
No 18	
No. 19	
No. 20	
No. 21	
No. 22	
No. 23	
No. 27	
No 28	
No. 29	
No 80	
No. 85	
No. 90	
No 93	

A Suggestion.

New Era High-Grade Prepared Paint, the paint that made Detroit famous.

Yours respectfully, No. 1.

Passing of The Red Barn.

Farmers Now Use Ready-Mixed Paints of Various Colors

"There was a time," said a paint manufacturer, "when every farmer painted his barn red. The paint used was called venetian red and was made of oxide of iron instead of white lead and zinc. It cost about half as much as lead paint and stood the weather well. The farmer bought this paint dry and mixed it with oil himself, and put it on himself. Now I suppose about one-third of the country's barns are painted red and about two-thirds in other colors, with the proportion of red barns still decreasing. This change is due somewhat to fashion and more to the wide introduction of mixed paints ready for use.

"Nowadays prepared paints are put up in simply scores of colors and shades, and many of them are manufactured and sold as cheaply as the old venetian red was. In the old days if the farmer wanted to paint any color but red he had to mix his own colors. He couldn't get a painter to come from town to mix the colors, unless he could also have the job of doing the painting. Now the farmer can buy paint in any color or shade that he wants from sample card and when he knows the area of surface to be painted he can ascertain just the quantity required.

"There are district fashions in barn painting. It might be, for instance, that in one place the 'squire painted his barns red and thus set a fashion that his neighbors would follow. It might be that some city man who had bought an abandoned farm would paint the old barns in modern style. Then the neighbors would say: 'I don't know how much Mr. Cityman knows about farming, but he certainly knows how to paint a barn.' And the people thereabouts would be likely to paint their barns more or less like his. Thus you might find districts where the barns would run much alike.

"In modern barn painting the body is of one color and the trim of another. The present prevailing style is colonial, in which the body is of a light yellow and the trim white. But barns are painted also in grays and in other colors and various shades of color and with various kinds of trim, and take everything together the old red barn is being more and more crowded by those painted in modern fashion."—New York Sun.

This is Not Politics.

DAVENPORT, Ia., October 18, 1900.

On September 26th the people at St. James hotel here opened up a ballot-book for traveling men, and results to-day are: McKinley, 416; Bryan, 53.

No. 30.

Watch the Linseed Oil market and you will realize that prices must advance.

Editor THOUGHTS:

THOUGHTS, dated October 20, 1900, is received. Guess it will not be necessary for me to state that the future Mrs. "D" will not have the chance to ragg sams.

Yours respectfully, No. 5.

Editor THOUGHTS:

Regarding salesman No. 7's suggestion, wish to say that I agree with him as regards caps for varnish cans.

Yours respectfully, No. 5.

P. S.—I still think a varnish sign is necessary.

Editor THOUGHTS:

I find a good many of my customers would just as soon have their goods packed in barrels as cases. It is quite a saving both in freight and cost of packages. I now ask my customers if they would just as soon have their goods packed in barrels, and if they say yes, I so specify on bottom of my order sheet.

Yours truly, No. 18.

Editor THOUGHTS:

It strikes me that the general run of retail dealers throughout the country is firmly convinced in his own mind that the spring will bring lower prices on paints and oils, and that some paint salesmen coincide with them is a well known fact. Now, if a dealer feels that lower prices will prevail in the near future, he will not urge and in fact will sometimes discourage his customers from painting at this season, advising them to wait till spring and secure the benefit of lower prices. Now, this is a mistake. In the first place there are not going to be any lower prices at the first of the year and perhaps not till the middle of 1901, and I firmly believe it would be desirable for each of our boys to put the matter before the trade now in such a light that they will be prepared for the advance in New Era to $1.30, which advance will probably come at January 1st and will therefore be more anxious to have their farmers paint now than in the spring when paint will be so high that it will scare them out altogether. Do not allow your trade to expect lower prices, for they will be disappointed in all probability.

Yours respectfully, No. 7

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, NOVEMBER 3, 1900. NO. 5

Paint and Its Solid Constituents—The Pigment.

BY JOHN COLLET.

(Continued from last week.)

LAKES, AND RED LAKES IN PARTICULAR.

For many years past constant endeavors have been made to utilize the numerous and beautiful coal-tar-colors for the preparation of pigments suitable for the painter's use, and these endeavors have met with more or less success, and there is now available many pigments which owe their color indirectly to coal-tar and some of which have now acquired a place of their very own alongside with the older pigments, especially among the reds.

The old-fashioned lakes, such as carmine, the carmine No. 40 of commerce, crimson and rose lake, rose and dutch pink and many others are made by precipitating the natural coloring matter obtained by extraction from various bodies, as cochineal, Brazil wood, Persian berries and others with metallic oxides, such as those of aluminum, tin and antimony applied in form of their soluble salts.

Generally the coloring principle of these natural organic coloring matters is of a slightly acid character, and has the property of combining with the metallic oxides above and previous mentioned to form insoluble colored compounds. The tint of these thus formed pigments is dependent not only on the coloring matter itself, but also on the metallic oxide used. Thus cochineal with alumina gives a bluish red, with tin rather a more scarlet shade, and so on.

I do not intend to give a detailed explanation as to the manufacturing and striking of these pigments in the color maker's vat, but will only say that when the coloring matter and oxide are used by themselves they make or yield a pure lake—carmine for example. These are, however, rather expensive, and when a cheaper body is required it is customary to add, as I mentioned before, a quantity of barytes, china clay, whiting or other inerts as a base, as it is called, which then is more or less stained so to speak with the lake proper, and thus inferior cheaper pigments—as rose and dutch pink—are produced which still have sufficient color and staining property for a variety of purposes.

As the pigments are characterized by being insoluble substances, and as the greater their insolubility in a variety of solvents, the more useful they likely are to be as pigments, and as all the coal-tar-colors are characterized by their solubility in various solvents, which property is indeed an essential feature, that is to be used for dying and fabric-printing, the problem was to convert these coloring matters into insoluble compounds or pigments, just as the soluble acetate of lead is converted by bi-chromate of potash into the insoluble chrome yellow. The problem was solved by combining the soluble coal-tar-color with the oxides or salts of metals, as chiefly the acetate or nitrate of lead—the sulphate of alumina—or alum and the chloride of barium, with which metallic salts, the soluble coloring matters form insoluble compounds, or lake pigments. The combination is obtained by simple precipitation, that is by mixing the two constituents, the color and metallic salt in form of solutions together, the precipitated color lake is allowed to settle, is washed and filtered off and dried at a moderate temperature.

As a matter of fact, however, these compounds or lakes are usually or almost always combined with some inert substance like barytes, china clay, whiting or as in the case of the eosine lakes, the artificial vermillions of commerce, with the red or orange oxides of lead, first, to make them cheaper and second, at the same time to develop the tint and shade of the coloring matter better.

TO BE CONTINUED.

Withdrawal of Prices to Manufacturing Trade.

Our representatives will, of course, understand that our notice to the trade, withdrawing prices, affects the manufacturing trades to as great an extent as any class of customers. In fact, as this class of trade is very frequently sold on close margins, figures will have to be considered with the greatest care. Prices must not be guaranteed for the future, and no contracts made in which prices are not subject to revision, should conditions render it necessary.

MR. O. F. RICHMOND.

We have had considerable difficulty in obtaining a photograph of Mr. Richmond. The following letters explain his reasons for holding back:—

Will send to this at once, as I am aware that I have neglected this matter. Seeing so many good looking men among our representatives, I have naturally felt reluctant about having my picture alongside. But I will chance it, and send same in the near future

Yours truly,
O. F. RICHMOND.

Later he writes as follows:

Enclosed find my picture which I promised you some time since. This was taken out in the short grass country in western Kansas, and is not a very commendable work of art. However, I assure you that it does me justice, as I am not one bit better looking than the photo. I am, Yours very truly,
O. F. RICHMOND.

Mr. Richmond need not apologize for his appearance. He is no worse looking than the rest of our western representatives. In any event it is evident he does not bank on selling goods "on his looks," and also that in Kansas and western Missouri the trade must think beauty is only skin deep, as he has been able to make a very favorable impression for himself and our goods. Mr. Richmond was formerly a druggist, having had practical experience in this line, from running the soda fountain to compounding prescriptions. We should judge his age to be about twenty-five, single, but with matrimonial prospects, and an all-round good fellow whom it is a pleasure to know. His home is in Atchison, Kan. He has been with us about a year.

Flaxseed and Linseed Oil Record Figures.

Thursday of last week flaxseed scored a record in prices which equaled that of last year, and on Friday the 1899 top price was distanced by 1@2c. The first day named displayed the distress signal, and the American Linseed Company made haste to put linseed oil prices on a safe footing. Accordingly they advanced the selling basis at 10c per gallon at noon, making 70c the inside figure for raw oil in car load lots, f. o. b. Chicago. The advance was as startling as it was unprecedented, for oil prices generally move up and down by 1@3c jumps. On Monday a further advance of 2c occurred. The consuming trade generally have no important stocks of oil, and the market performance on Thursday amounted to a doushing of their warm hopes of "35c oil before January 1st" with water as icy and chilly as are the election returns to a defeated candidate. The factors in the advance are the extraordinary high prices ruling in the foreign seed market, same ranging above 60s per qr., compared with 44⅛s last year, and 35⅛s in 1898; the big damage to the seed crop in the northwest, principally in North Dakota, making the total outturn of seed from all the flax-producing sections of the country relatively small, more particularly contract seed, and lastly, the firm control over the market exerted by the American-Dickinson oil and seed people in the interest of liberal profits for handling the crop and its resulting products. It is now believed that the current American crop will not exceed 18,000,000 bushels.

Mr. Adams, President Major's assistant, was asked by a press reporter to give the American Linseed Company's view of the situation, and made the following very frank and interesting statement:

"It is simply a question of supply and demand. We raised our price of linseed oil because we had to. Almost all the flaxseed, from which the oil is made, is grown in North and South Dakota, and the recent rains and drouths in that section have so diminished the crop that an advance in price was imperative. The fact that the average amount of seed brought into Duluth, Minn., this season has been only thirty-seven car loads per day, whereas it was 217 car loads last year, shows what is the difference in the crops of the two seasons. In this business we reckon on our year from August to August. The consumption of linseed oil in the United States in ordinary times is about 800,000 barrels, or 40,000,000 gallons per year. This season I think it will be cut at least 40 per cent, for the simple reason that not enough oil will be produced to supply the trade.

"Business men who are affected by any change in the cost of linseed oil are dealers in linoleum, oilcloths, patent leathers, paints, varnishes and other such materials. The cost of these articles is bound to go up, as far as I can see, for I do not see any possibility of the oil resuming its wonted prices after the scant crop of seed that we have had. It looks now as if oil would continue to rise fast. I should say that it might go as high as $1.50 per gallon."

Manager Rugg, of the oil sales department, talked much in the same strain to a Review man. He said:

"I guess Mr. Adams is about right. Supply and demand regulate prices. We are not responsible for the flax crop failure in the northwest, neither did we have anything to do with the Indian crop failure a year ago. Unlike some people who claim to be in league with Providence, we cannot say that the Almighty and us are running the universe. Seed is worth what is asked for it on the basis of world values, and we have to pay those prices for it as crushers and take our chances. Oil prices follow the course of values marked out by seed. We cannot make cheap oil out of famine-priced seed. If oil does not go higher I shall be agreeably surprised. I hope it will not, but as I said before the Lord and the American Linseed Company are not operating as a joint partnership, and we of the American Company will have to take things as they come, exercising such judgment, foresight and conservatism as we may be able to command."

A representative of the Albert Dickinson Company, undoubtedly the best posted seed house in the country, had this to say about the situation Friday:

"A most peculiar condition exists in the flaxseed crop of the northwest. First there came the dry period, which made the seed slow to sprout. Next, along in July the rains began to come, and the fields were covered with patches of growing grain. Heavy rains later in the season damaged the crops by affecting that already cut and keeping that in the process of growth too long green.

"The conditions are so mixed that I believe no one can tell what the yield will be. Such situations as this may come only once in a lifetime. The speculative price of flaxseed may have in part an artificial value. The reason for that would be that much of the grain is being rejected as No. 1, which is the only grade speculated in. The buyer getting rejected flaxseed, in order to complete his sale, must enter the market and buy No. 1 seed at the increase in prices. In the public warehouses in this city to-day there are but 10,000 bushels of the seed. However, nobody knows what there is in the private warehouses excepting the owners of the seed."

Prior to last summer when 65c was the top price, the highest figure at which linseed oil sold for many years was 60c. This price was obtained in the year 1880, 1889 and 1882. The lowest price on record was made in 1897 when oil was quoted regularly at 24c, and some few sales were made at 1c under this figure.—*Paint, Drug and Oil Review, October 24, 1900.*

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of Thoughts. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon all of trade to whom the goods can be sold are omitted for obvious reasons:

	POUNDS SOLD TO
A. E. Barros	
S. J. Olson	
Dan Davies	
O. F. Richmond	
A. S. Dougall	
W. C. Neal	
J. R. Goldsborough	
I. R. Nesbit	
C. P. Potter	
S. H. Hart	
A. D. Hogg	
A. R. Kelly	
C. F. McCauley	
Geo. B. Smith	
F. R. Dougall	
M. J. Reynolds	
H. P. Torrance	
M. Taylor	
C. Mahlig	
H. P. Whitaker	
H. C. Carter	
W. P. Wigton	
R. M. Billings	
R. A. [illegible]	
M. G. Smith	
C. F. Elliot	
Herman Sevrich	

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, NOVEMBER 10, 1900. NO. 6

Paint and Its Solid Constituents—The Pigment.

BY JOHN COLLET.

(Continued from last week.)

LAKES. AND RED LAKES IN PARTIC LAR.

The best principle of treating coal-tar coloring matters for the production of lake-pigments is as I said, to precipitate them from their solutions by suitable precipitants, the nature of these depending upon the properties of the coloring matter to be precipitated.

As, chemically spoken, every lake-pigment is a salt, it is obvious that the organic coloring matter to be capable of and used in forming a lake must be either a base or an acid, this explains why indigo, which possesses neither of these qualities, is quite incapable of forming lakes, and its unique method by which indigo is applied to the fibre of fabrics is another illustration of this fact.

We may therefore divide the organic coloring matters, and especially the coal tar colors, commonly called aniline colors, according to their lake forming qualities, into two large classes, basic and acid coloring matters, to which correspond fundamentally different methods of producing lakes.

There is, however, among the vast variety of aniline colors, which comprise in themselves 16 different groups, one kind or special group named the so-called adjective coloring matters, the chief constituent of which is alizarine. These approach more nearly the natural coloring matters in their properties, having a very slight acid character as they require also metallic oxides to form lakes. As a rule this class of coal-tar preparations have little or no color for themselves, but the coloring matter and the lakes are both formed simultaneously by the taking up of and subsequent precipitation with the metallic oxides.

As one must be familiar with the chemistry, that is, the constitution, composition and properties of this immense large number of organic coloring matters, their manufacturing and that of their raw materials, from which they are obtained, in order to get a full and exact comprehension of their nature and properties, which makes them available for the color-maker for the manufacturing

(Continued in next column.)

MR. J. R. NEWELL.

This is a correct likeness of "Jack" Newell. We have had a very hard time getting it. Presumably the innate modesty, which is one of his chief characteristics, has prevented him from responding before to our frequent and urgent appeals for a pasteboard that would enable us to "show him up" to the rest

of the boys. He covers Texas and spreads over to a section in Louisiana and a few towns in Mexico. He is about the only one of our salesmen who would not dare tell his customers that he was competing for a silk hat to be worn should his sales of "Michigan Seal" reach the necessary volume. They don't believe in "plug" hats in his territory and it probably would not last five minutes. A wide-brimmed "slouch," with store clothes and guns, is his usual make-up, and he graces the costume as if he were a born ranger. Although only on the territory for about a year, and without any previous training that would fit him specially for the undertaking, he has succeeded by careful application and a few "experiences" in learning "the ways that win and the arts that please" in a land where the rules of society demand personal independence, but the expression of too radical views is apt to get you into trouble. We will venture the assertion that he is one of the best liked paint men in that section, and know by material evidence that the trade appreciate his intrinsic value and the merits of his line. He will be at the convention next month and we will all have an opportunity to call upon him for a recital of personal reminiscences of Texas life, that no doubt will prove highly interesting. He is a hustling, conscientious, level-headed worker, with the stuff in his composition that is sure to win success.

of lake pigments, I shall not go into further details. I will explain and show you all this better and more interesting to you by a few experiments, as precipitating various color lakes, especially reds, such as we manufacture in our dry color department.

Among these lakes, especially two kinds have a prominent place. They are the different shades and grades of eosine vermillions and scarlet, or azo reds.

The former, although first introduced into commerce about 20 years ago, as a substitute for English quicksilver and American chrome vermilion, have failed to displace these two reds, but have instead made a distinct place for themselves, filling as they did, and still do the demand for a cheap bright red pigment. The number of shades of these products, as you are well aware, is infinite. Many color makers, and among these ourselves, produce ten to twenty or even more shades and tints, and naturally, according to the composition of the base employed, more or less different qualities or grades.

Suggestions to be Discussed at Convention

We want this convention to be the "rounding up" point at which the best thoughts of our salesmen in the way of ideas for increasing business, or strengthening our position with the trade, will be submitted for the general consideration of all our representatives and the officers of the company. Very few men can go through a season's work on the road without forming ideas along the line of improvement, such as suggested. These thoughts should be written promptly and submitted to the house, so that they may be brought up at the convention for discussion in the order that they are received.

"A Suggestion" by No. 1 to Thoughts

DAVENPORT, IA., October 29, 1900.

No. 1 is nearly one year behind the times. I notified you nearly that long ago that we had a sign in the window of Ludolph & Hill Clinton, Iowa, placed above a pyramid of New Era High-Grade Prepared Paint, which read as follows: "The paint that made Detroit famous." In Centerville Ia. where we have twelve houses painted with New Era since June, I suggested the same lines for a local ad. in Mr. Johnson's local paper.

Respectfully No. 13

THOUGHTS

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active *effort in this direction.* It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	QUANTITY SOLD TO DATE
A E Barnes	
S. J Olson	
Dan Davies	
O. F. Richmond	
A S Dougall	
W C Neal	
L. R. Gehl-berger	
I R Newell	two lbs.
C. P Polfer.	
S H. Hart	
A D Hoagg	two lbs
A. E Kelly	
C. F. McCauley.	
Geo. R. Smith.	
F. R. Dougall	
M J. Reynolds	
H. P Torrance	
M. Taylor	
C. Mehlig	
H. F. Whitaker.	
H. C. Cater	two lbs.
W. P Wiggins	
R. M. Billmeier	
R A. Irvin	
M. G Smith	
C P Elliot	
Herman Scratch	

Detroit, Mich., Nov. 5th, 1900.

Editor THOUGHTS:

The present high and prospective higher price of linseed oil makes it very apparent to me that the change made to-day, advancing to $1.35 per gallon, with a chance of a still higher price, is what we must expect upon New Era High-Grade Prepared Paint for the season of 1901. Such being the case, we cannot do other than to advise and even insist upon our customers getting from the consumer $1.75 per gallon. We shall meet with the statement from merchants that they are not able to sell at so high a price and that their customers will buy lead and oil instead of New Era paint. I think all of our salesmen should be prepared to show them in a way that they may be able to convince their customers that the cost of material to paint their buildings will be less by using New Era paint at $1.75 per gallon than to use lead and oil at the present prices, to say nothing of the prospect of higher prices than now prevail. For instance, take a 100 lb. keg of lead and use 4½ gallons of linseed oil, 1 quart of japan dryer and 1 quart of turpentine and adding to that 50 cents for the painters time in breaking up the lead ready to apply and you have 7½ gallons of white paint, costing the consumer at least $1.58 per gallon. This paint will not cover to exceed 220 square feet to the gallon, two coats. Take a house containing 3000 square feet of surface, it will require 15 gallons of paint mixed as suggested above to cover, costing the consumer $23.70. With our New Era paint, a very conservative estimate of the surface we can cover is 250 square feet to the gallon for two-coat work. Twelve gallons of New Era paint at $1.75 per gallon will cover such a building nicely. This estimate is for white paint and should a consumer wish to use shades, the cost of his material where he buys white lead and oil will be increased, whereas the shades in our New Era are furnished at the same price that we furnish white, with the exception of the bright colors, with which all are familiar. You will see that 3000 square feet of surface with paint at $1.75 per gallon will cost the consumer $20.00, effecting a saving of from 20 to 25 per cent.

Yours very truly,

No. 26.

Editor THOUGHTS:

The plug hat *offer* is noticed. I am going to do my best to win it. Hope the rest of the boys will do the same. I think also it will pay you to get out some good ad. signs for it, as when you get it going it will help sell other goods.

Yours truly,

No 8.

Editor THOUGHTS:

Was in Warrensburgh, N. Y., *yesterday* and although it is very near election, the people of that town were spending most of their time talking about New Era High-Grade, so much so that if one was a stranger in this country they would have taken New Era to be the name of one of the candidates.

Mr. B. F. Hammond of that place gave me an order when last there, and has since painted his store. It was only finished this week and the painters have caused New Era to be very popular. In the first place the man next to Hammond started painting his store with Sherwin-Williams' paint on the same day that the men began Hammond's and as the stores are about the same size the result was watched very closely, and it only took half as much of New Era to paint B. F. Hammond's store as of S.-W. to paint the next one, and every one agrees that our paint looks the best. The painters say it is the best they have ever used and can not say enough for it. Hammond is the same way.

They were waiting anxiously for an order of New Era that Hammond sent in for the catholic church.

Hammond told me that he had never tried to do any business in the paint line before because he had no faith in the goods, but says now he is going out after the business, as he believes New Era to be just what we claim. As for him going after the business, guess that he told the truth for he has something like a half dozen houses to paint in the spring, and is still on the "war path" looking for more.

Yours truly,

No 75.

Editor THOUGHTS:

Atchison, Kas., Nov 4th, 1900

I can endorse what No. 19 says regarding new coach and car color sample book. I have sold nearly every carriage concern I have called on since I received same. A customer of mine in Southern Missouri bought some gear finishing varnish of a certain Detroit firm, under the positive guarantee that mud would not spot same. Now everyone who has ever traveled in Southern Missouri knows that the mud in that country will spot anything. I sold him a gallon of our Elastic Gear, and he told me recently that it was the only varnish he had used which did not spot. In justice to the mud, however, let it be said that the job on which he used our goods, stood about 90 days before it was used. However, I thought it a very good testimonial for Elastic Gear.

Yours truly,

O. F. RICHMOND

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, NOVEMBER 17, 1900. NO. 7

Making Suggestions for Discussion at the Convention.

The above illustration shows how our people at the factory make suggestions for improvements, or submit complaints regarding existing conditions for consideration of the Executive Committee. Our representatives should not overlook the fact that they owe it to themselves and the house to offer anything they may believe will be for our mutual benefit, and while they have no suggestion boxes at hand, communications of this character will receive just as careful attention as if they came through that medium. We want you to bring up everything you may believe needs attention. Write your suggestions fully and plainly. We will number them in the order received, and as there will be two hours each day during the convention for open discussion of such subjects, you will have an opportunity of emphasizing your suggestions personally as well as expressing yourself on any others that are made.

JACKSON, Tenn., Nov. 11, 1900.

Editor THOUGHTS:

Bulletin No. 117 just received, and I shall look forward to the assembling of our traveling fraternity and feel sure that great good will result. It will be a great pleasure to personally know each of my fellow travelers, and I shall certainly be on hand.

Very respectfully,

R. M. BILLINGS.

Notes.

When sending in names of prospective "New Era" High-Grade Prepared Paint purchasers, we note some of our salesmen are in the habit of appending to the printed form furnished them, a communication requesting that a strong letter be written, and giving general information as to the desirability of prospective purchasers whose names they hand us. This is unnecessary, inasmuch as we are following up your initiatory work in a special manner, and if you will simply fill the form out properly, we will endeavor to do the rest.

Proper care and discrimination should at all times be exercised in submitting figures to different classes of trade. Your advices are definite, and if our reminder is carefully borne in mind, the order, as well as the correspondence department will be saved time and worry. We very much dislike to advise our customers that figures must be considered as applying to a particular purchase, and that on subsequent orders we must get an advance, and the necessity of pursuing such a course would be entirely removed if proper figures were secured in the first place.

Note This Carefully.

Salesmen when sending in orders from towns that are not on their lists often overlook the matter of sending in a memo. with each order asking us to add such towns to their lists, and as a result of their failure to do so we credit the order to mail. Recently Mr. Barron sent in seven orders, each from a different town, not one of them being on his list, and as we were not ordered to add same, the orders were charged and credited to mail. It would be to each one's interest to be careful on this point.

SIOUX CITY, Ia., Nov. 8, 1900.

Editor THOUGHTS:

I congratulate Mr. and Mrs. Billings. May the boy grow as strong and good looking as the father. Yours respectfully,

S. J. OLSON.

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	QUANTITY SOLD TO DATE
A. E. Barron	
S. J. Olson	
Dan Davies	
O. P. Richmond	
A. S. Dougall	
W. C. Neal	
J. E. Goldsborough	
J. R. Newell	
C. P. Feifer	
S. H. Hart	
A. D. Heagg	
A. E. Kelly	
C. F. McCauley	
Geo. R. Smith	
F. R. Dougall	
M. J. Reynolds	
N. P. Torrance	
M. Taylor	
C. Mabie	
H. F. Whitaker	
H. C. Case	
W. P. Wiggins	
R. M. Billings	
R. A. Irvin	
M. G. Smith	
C. F. Elliot	
Herman Scratch	

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, NOVEMBER 24, 1900. NO. 8

Paint and Its Solid Constituents—The Pigment.

BY JOHN COLLET.

(Continued from last week)

LAKES, AND RED LAKES IN PARTICULAR.

The pigments owe their bright color to eosine—the commercial name for the coal tar preparation or dye, "tetra bromo or iodo-eosine," or rather the potassium salt of this organic acid.

The lake is usually obtained by precipitating the coloring matter with acetate or nitrate of lead upon a base of orange or red lead, extended according to the quality of vermilion to be produced with more or less barytes or another inert pigment. As pigments these eosine vermilions are very brilliant in color, of good body, if the extension with inerts does not exceed sixty per cent. They work well with oil, applied as paint, but have like red lead and orange mineral, owing to these two lead compounds in their composition, the tendency to harden or to liver when ground in linseed oil or varnish containing rosin.

They are not very permanent against light, although they will stand a considerable amount of exposure to light and atmosphere, especially if varnished over.

TO BE CONTINUED.

Decline in Price of Linseed Oil.

The decline in price of linseed oil, which we presume our representatives have noticed during the past two weeks, is undoubtedly due to manipulations on the stock market. The fact that only an average crop of flax seed can be offered, stands out prominently as well as the fact that this market will be called upon to make up deficiencies on account of failures of crops in Russia and India. Argentine seed will not be on the market before late in the spring. The foreign demand in the meantime will maintain a high price for seed in this market, and we shall be greatly surprised if the present flurry in prices does not result in the near future in a settled price for seed and oil that will be as high or higher than any figures that have been quoted this fall. Even if oil should not advance beyond the market of to-day, manufacturers of paints could not afford to recede from recent advances that have been announced and maintain quality.

Suggestions for discussions at the Convention are coming in from our various representatives. If YOU have anything to bring up, send it in promptly. They will be numbered and discussed in the order received.

Notes.

Some of our men book orders for Neal's Enamels—Gold, Silver and Aluminum—half-pints. Discontinue doing so. We offer only in quarter-pints, and are obliged to omit the larger size on all such orders placed with us, and a letter of explanation is in each case necessary.

Neal's Carriage Paint contracts cover as well Neal's Carriage Top Dressing. In a number of instances we do not feel that we are securing the volume of business we should in the latter. Why? It would be well to direct this matter to our different distributors' attention, and see if you cannot prevail upon them to place before their salesmen in such a way that a more lively interest will be manifested.

Representatives will please remember that if they call at any local agency of R. G. Dun & Co. or the Bradstreet Co., and ask to see reports on any person, that copies of such reports are always sent to us and *charged for*. Therefore, when it is *necessary* to look as closely into the credit standing of a person or firm, *always* send us a *duplicate* of the ticket you are required to sign before the agency shows you their files. We then may understand *why* such reports are sent us. Your letter of introduction only permits you to examine book ratings *free of charge*.

Representatives will please bear in mind our invitation for written suggestions. I am particularly anxious to hear from all the men in regard to any way of improving our credit or collecting system. I am pleased to acknowledge many valuable "pointers" received from the men in the past, and assure you of my earnest desire to co-operate in every way consistent with good business policy, in avoiding bad debts and maintaining harmonious relations between customers, salesmen and the company.

C. B. PULPER.

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons.

	QUANTITY SOLD TO MAY 1
A. E. Barron	
E. J. Olsen	
Dan Davies	
O. P. Richmond	
A. S. Dougall	
W. C. Neal	
J. E. Goldsborough	
J. R. Newell	1700 lbs
C. P. Fuller	
S. H. Hart	
A. D. Heagy	900 lbs
A. E. Kelly	
C. F. McCauley	
Geo. R. Smith	
F. R. Dougall	
M. J. Reynolds	
H. P. Terrance	
M. Taylor	
C. Mehlig	
H. F. Whitaker	
H. C. Cater	
W. P. Wiggins	
R. M. Billings	
E. A. Irvine	
M. G. Smith	
C. F. Elliot	
Herman Schmick	

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, DECEMBER 1, 1900. NO. 9

Palat and Its Solid Constituents—The Pigment.

BY JOHN COLLET.

(Continued from last week.)

LAKES, AND RED LAKES IN PARTICULAR.

The second group of red lakes, the so-called aso-reds, forming chiefly in their deeper shades, substitutes for the more expensive pigments, the carmines, made from the natural coloring matter, "cochineal," are obtained from the various shades and tones of scarlets, ponceaux and bordeaux, all aniline colors of a more complicated form and chemical constitution than the former cosines. These aniline colors are said coloring matters or dyes, and are precipitated from their solutions by metallic salts, as lead acetate, aluminum sulphate, magnesia sulphate, and as a rule, most completely by chloride of barium.

The number of these coloring matters with their derivates is enormous and is still growing, as in the last ten years and still at the present time the best and most scientific workers and chemists are employed by the aniline color works, especially in Germany, to experiment in this line, and we may say that in an average a new color, shade or tone, or a new process to obtain same is discovered or invented every day of the year. These coloring matters and their lakes range from a very light citron yellow to a very deep red with a blue or purple tone.

The lakes are obtained by two different processes, either the coloring matter is precipitated on a natural inert base, such as barytes, china clay and others, or the base is an artificially one, that is, it is formed along with the color lake proper. Such bases would be blanc-fix, which is, as you know, nothing else than precipitated baryta sulphate, or it would be carbonate of baryta, or according to the chemicals used, aluminum hydroxide—baryta sulphate, the so-called satin white of the paper mainer. The base forming chemicals are mixed in solution with that of the coloring matter and the precipitating mordant, and are thus precipitated simultaneously with the color lake proper. In this way a much more homogeneous mixture of lake and base—we may call it almost a chemical combination—is obtained than in using a natural inert base, and furthermore, the lake color pigment will be of a finer and softer texture, and last but not least, of a more brilliant and cleaner color and tone.

The principal pigment among a series of shades made by us in our dry color department, and belonging to this class of color lakes, is represented by our handsome and brilliant color "carmenalta."

As a rule, all lakes without any exception, such made from natural coloring matter as well as those made from aniline colors, are fugitive, some more, some less, and it was generally believed that the former are more durable than the latter. But that is by far not the case, we may concede that the so-called cosine vermilions are not quite as durable as the reds, although of different color and shade, made from the natural coloring principle, but as a matter of fact, these latter reds or lakes—as rose pink, rose lake, carmine red—in all its variations are far excelled by the aso reds of the present time in regard to durability against light and atmospheric exposure.

Still chemistry was bound to go a step further in the manufacturing of a red pigment lake—a pigment unfadable and indestructable by such elements as it would be exposed to when applied as paint, and in fact recent researches in this line have indeed procured red pigments which combine in their nature and constitution all these qualities in the fullest extent. They are the coal tar products para or meta nitraniline in combination with another coal tar product beta and alpha naphtol sulphonate of soda.

They are the so-called para reds and are the most handsome, finest and brilliant reds ever artificially produced, have an enormous body or covering capacity and a tinting strength unexcelled by any other red pigment. They may be called the red pigments of the future as they will doubtless succeed all other bright reds used in the past and at the present time. Well aware of this and the excellent qualities of these pigments we adopted not long ago, as one of the first concerns in this country, their manufacturing in our own dry color plant, adding thus to our extensive list of dry colors a complete series of shades of these new pigments also.

END

[Will be continued under Paint Vehicles, after New Year.]

Some of our salesmen are dilatory in reporting on matters placed in their hands for attention, and quite frequently we are obliged to direct their attention to the oversight. The time to dispose of such matters is when you are on the ground, and if you will make it a point when you visit each town, to consult your "tally file" and secure for us the desired information, you will save unnecessary correspondence.

Suggestions for discussion at the Convention are coming in from our various representatives. If YOU have anything to bring up, send it in promptly. They will be numbered and discussed in the order received.

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and ask our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with the demanded for standard brands upon the market. Michigan Seal as now presented, an article that is certain to give perfect satisfaction in every particular—working qualities, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901 and will publish the record of sales for each month in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. Members of our representatives who sell upon a class of trade to whom this paint should be sold are omitted for obvious reasons.

A. E. Barrow.....
S. J. Olson.....
Dan Davies.....
O. P. Richmond.....
A. S. Dougall.....
W. C. Neal.....
J. R. Goldsborough.....
J. R. Newell.....
C. P. Pulfer.....
S. M. Hart.....
A. D. Heagy.....
A. R. Kelly.....
C. F. McCauley.....
Geo. R. Smith.....
F. R. Dougall.....
M. I. Reynolds.....
H. P. Torrance.....
M. Taylor.....
C. Mobile.....
H. F. Whitaker.....
H. C. Cater.....
W. P. Wiggins.....
E. M. Billings.....
E. A. Irvin.....
M. G. Smith.....
C. P. Rillet.....
Herman Scratch.....

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, DECEMBER 8, 1900. NO. 10

Last Call.

Come to the representatives convention, December, 18, 19 and 20, prepared to do your share to make it a success. Come prepared to be benefited and to benefit others. Don't hold back from suggesting subjects for discussion because you *suppose* they will be brought up anyway. Make sure of it by sending them in *now*. Waiting until the last minute is bad policy. This convention is as much *for you* as anybody else, and *you* must do your share to make the expense involved a profitable investment.

The business of the convention will be transacted in a business like way. We want you to be on time at every session, to pay close attention to the proceedings and to do your share towards the general benefit we expect to derive. Don't forget to keep a careful record of all expense incurred from the time you leave your home until you return.

Be at the Russel House, Monday night, of the 17th, so that you can reach our offices by 8:15, central standard time, on the morning of the 18th. Mr. Hart will meet you at the hotel on that morning and will be held responsible for your safe delivery at the office at the time designated above. You will easily recognize him as the best looking man in the hotel, but to make sure here is his picture:

S. H. HART.

Notes.

Some of our men are in the habit of requesting us to name prices on regular lines to prospective purchasers. We consider that it is your duty to attend to such matters, furnishing us with quotation sheets in the usual way. If you wish us to send literature, confirm your figures, and follow up your work, we will be pleased to do so. When on the ground you are naturally in better position than we are to decide what figures different classes of trade are entitled to.

Regarding Linseed Oil.

It is difficult to determine at this time what the market conditions for the product will be in the near future. Evidently some interests are suffering and there is absolutely no seeming reason why the market for oil for spot delivery should be as weak as it is. Flax seed has ruled high ever since the crop matured. All the seed it was possible for the farmer to thresh has undoubtedly been so disposed of and marketed at high prices. The present market on flax seed ranges from $1.65 to $1.70 for spot, and about $1.60 to $1.65 for May delivery, which will not admit of crushers buying seed and selling oil at present prices. All sorts of rumors are afloat about the American Linseed Co. In the meantime they seem to be taking things quite comfortably; they are not urging the sale of oil; their prices are materially above outside crushing interests, and there you are.

There is one factor in this business that may be important, and that is this: Some outside crushers are said to have bought some seed at about $1.50 per bushel. The trust may be simply working the same old game during the off season, letting the market sag, making the outsiders make the price on oil, keeping just above it themselves, thus stimulating the demand for the other fellows goods. Their output is limited and as soon as they, the outsiders, are sold up, again taking control of the market and pushing the price of oil up to a figure consistent with the present price of seed, gradually advancing seed, and at the same time oil as well. That is practically what was done last year and its likely to be repeated. The trade is very likely to receive a few more violent jolts in the near future on oil. The situation will undoubtedly fully adjust itself before our men start out on their spring campaign. In the meantime we deem it advisable to patiently await the outcome. The trade are not usually buying at this season of the year very large bills of paint, and as our men are practically through for the season it is probably desirable not to disturb existing conditions until the market settles down to a definite basis. Our present prices are none too high, and even though prices on oil remain as now, there would be no justification for reducing them, but we hope not to be compelled to make any further advance, even though linseed oil again advances to abnormal figures.

Suggestions for discussions at the Convention are coming in from our various representatives. If YOU have anything to bring up, send it in promptly. They will be numbered and discussed in the order received.

Which of Our Representatives Will Wear This Hat.

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The members of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons

	QUANTITY SOLD TO DATE
A. R. Barton	
S. J. Olson	
Dale Davies	
O. P. Richmond	
A. S. Dougall	
W. C. Neal	
J. N. Gelderborough	
I. R. Newell	
C. P. Puffer	
S. H. Hart	
A. D. Hagg	
A. R. Kelly	
C. F. McCauley	
Geo. E. Smith	
P. S. Dougall	
M. J. Reynolds	
H. P. Torrance	
M. Taylor	
C. Mohlig	
H. F. Whitaker	
H. C. Coker	
W. F. Wiggins	
R. M. Billings	
R. A. Irvin	
M. G. Smith	
C. F. Elliot	
Herman Schmick	

would be more difficult to answer the query "what has been left undone and wherein have we failed?" Individually and collectively we have learned and taught. The least experienced have presented ideas based upon first impressions that are worthy of careful attention and development, and those who have been longest "in the harness" have compared notes with a fullness and frankness that will result in improved methods of securing business and the prevention of a settled and unvaried method, which in this age of progress is termed "getting into a rut," and which ultimately leads to stagnation, the one thing, next to complete failure, that is most dreaded by the modern progressive representative.

The expressions of confidence in the house, its products and method of doing business, as conveyed to the officers of the company individually by our representatives, and in joint resolution, are not only appreciated, but place us all "upon our metal" not only to continue to merit your perfect confidence, but by constant progress in the right direction, to implant this feeling with you more strongly, if possible, than ever. This feeling of implicit faith in the house by our corps of representatives, we can assure you, is reciprocated most heartily, and are sure that the standard that has been set of a "first-class representative of a first-class house" will be maintained by all concerned, and that at the next convention the knowledge that we have all done our duty well will give each voice strength in proclaiming:

Who are we?
Who are we?
Who are we?
We represent the [illegible]
PAINT.
PAINT.

[illegible]

Echoes.

It makes us feel good natured to hear F. R. Dougall proclaim that he deems it wise to cultivate good nature. In his case the seed certainly fell on fertile soil judging by the harvest.

Did you ever hear "America" sung with more earnestness and patriotic fervor than when the boys and girls made the strains of our country's song ring out beneath the folds of old glory that graced our Convention Hall? That scene will live with us.

"I have long noted a desire on the part of the officers of this Company to so conduct its affairs as to make their employes their co-workers, not only holding them in highest respect, but anxious to put forth every effort to further their interests."—*From S. H. Hart's response to our President's greeting.*

That's right, Mr. Hart.

"Coming, as I do, from the sun kissed shores and golden sands of the Pacific, from the land of sunshine, fruit and flowers, and meeting representatives from the storm tossed coast of the Atlantic, from the balmy silver waters of the Gulf, to the snow capped mountains of our northern neighbor, I can not but be impressed by the marvellous, wonderful work and spirit of commerce annihilating, as it does, all sections, all areas, all climes, all distances, illustrating so truly the motto of our dearly beloved country, "E pluribus unum."—*From Alf. R. Kelly's response to our President's greeting.*

A Happy New Year.

As the last year of the nineteenth century draws to a close, and we look back over the years that have passed since our business was first established, and consider the trials and triumphs, the failures and achievements that have marked the way like milestones on the road to success, we cannot refrain from expressing our appreciation of the manner in which our employes on the road and in the house have stood by us, a large percentage almost from the beginning. We wish you all a happy new year, and may each succeeding year in the new century be brighter and better than the last. Our thoughts are best expressed, perhaps, in the beautiful sentiment that closes Dickens' story of "The Chimes:" "So may the new year be a happy one to you, happy to many more whose happiness depends on you! So may each year be happier than the last, and not the meanest of our brethren or sisterhood debarred their rightful share in what our Great Creator formed them to enjoy."

WM. L. DAVIES.
H. KIRKE WHITE.
A. E. F. WHITE.
THOMAS NEAL.

"NEW ERA."

(Tune—The old oaken bucket.)

By S. H. HART.

How dear to my heart are the shades of New Era
When well painted houses present them to view:
The Olives, the Yellows, the Drabs, Terra Cottas,
And a great many other fine shades that are new.
They wear well, they cover, look better than all others,
They please when our neighbor's paint fade from the view.
Don't fail to impress upon all, the world over,
That New Era shades will be found ever true.

CHORUS.

New Era has merit,
New Era has beauty,
Its covering strength makes White Lead men feel blue.

This talk of White Lead paints being best for consumers,
When mixed by the painter, with oil, is not true.
Zinc Oxide improves it, and none will deny it,
Whose knowledge of paint is not questioned by you:
As for the cheap mixture, with one price fixture
Regardless of cost of material in use,
My advice is, refuse it, it don't pay to use it,
If you've best results and economy in view.

CHORUS.

The cost by the gallon should not be the question
When purchasing paint your fine house to renew,
Yards, years and protection should first be considered
In measuring cost with economy in view.
Lead, Zinc, Oil and Dryer, you need look no higher
To the art of paint making, no better is known,
And such is *New Era*, say to all who inquire,
By chemical tests above facts will be shown

CHORUS.

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figures demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons

	QUANTITY SOLD TO DATE
A. E. Barron	
K. M. Billings	[illegible]
H. C. Cater	[illegible]
Dan Davies	
A. S. Dougall	
F. R. Dougall	
C. F. Elliot	
S. H. Hart	
A. D. Hoagg	[illegible]
R. A. [illegible]	
A. R. Kelly	
C. F. McCauley	[illegible]
C. Mohig	[illegible]
W. C. Neal	
J. R. Newell	[illegible]
S. J. Olson	
C. F. Pulfer	[illegible]
M. J. Reynolds	
O. F. Richmond	[illegible]
Herman Scratch	
Geo. R. Smith	[illegible]
M. G. Smith	
M. Taylor	
H. P. Terrance	[illegible]
H. F. Whitaker	
W. F. Wiggins	

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Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, JANUARY 5, 1901. NO. 13

Pulfer's New Year's Present.

The Stork Leaves Him a Reminder of the Past and a Blessing for the New Century.

GEORGIE BURTON PULFER

Twelve o'clock, midnight, of December 31, 1900. Whistles are blowing and bells ringing. The skies are ablaze with the pyrotechnical display, and the night resounds with booming of cannon, the sharp crack of fire arms and the shouts of the multitude, which all go to make up the expression of joy and exultation in celebration of the birth of the new century.

The wildest ecstacies of joy portrayed in the above, however, are tame and commonplace as compared with the smile that illumines the countenance of the usually placid and sedate features of the manager of our accounting department. It is beyond description and permeates the whole of the six lineal feet that measure his make-up from soles to crown, and radiates in a manner that is dazzling to behold.

No wonder! He has just been presented with his daughter, who is exactly fifteen minutes old!

Certainly the new century is ushered in for him in a blaze of glory, and it is not strange that the ordinary joys of mortals would seem commonplace under such circumstances.

We do not know whether he will look up Dun and Bradstreet for a name for the young lady, or secure a special report to assist in arriving at a proper decision, but our sincere wishes lend confidence to the belief that in accepting this new and desirable business he will be able to arrange terms and conditions that will protect and benefit all parties concerned, and insure a life long connection, that, while growing in volume, will constantly bring added pleasure and happiness.

This is not Mr. Pulfer's first experience. A young man has been deposed as ruler of the family by the arrival of his baby sister, and in the words of Longfellow:

> There are two guests at table now:
> The king, deposed and older grown,
> No longer occupies the throne—
> The crown is on his sister's brow:
> A Princess from the Fairy Isles,
> The very pattern girl of girls,
> All covered and embowered in curls,
> Rose tinted from the tint of flowers,
> And smiling with soft silken wiles
> From far-off Dreamland into ours.

It has been suggested that our representatives send in names that they may think worthy of the new Miss Pulfer, and we are quite certain that a box of *good* cigars will reach the one whose selection is adopted.

Maintaining Prices.

The next two or three weeks will probably be the most critical period of this season as regards the matter of maintaining prices. You will probably be told that this and that manufacturer, and reputable houses too, are selling at lower figures than we advised you they would ask for their goods. Keep your nerve. Recent communications from the best houses state emphatically that they have, and will continue, to ask prices decided upon in November, and if you have absolute proof that this is not being done, it will then be time to worry. One of our representatives has already written us that he is advised that prices are being cut by the very houses who have written us emphatically to the contrary, but we are confident he is mistaken and that they meant just what they said. There will naturally be a struggle on the part of the trade against the advanced figures that were absolutely necessary, but while oil at present is a little unsteady, there is nothing in the outlook for the future that would indicate the possibility, or desirability of a reduction, a view in which all prominent makers of first-class paints are in unison.

Contributions to Thoughts.

Don't forget our talk on this matter while you were at the Convention. You probably learned at that time there was no occasion to fear "going into print" with any ideas or suggestions that you might deem it well to place before your co-workers, and that the fear of criticism was really a drawback to progress that could be made were such matters aired through these columns. In addition to this it keeps you closer in touch with each other, and the acquaintanceships formed, we believe you will agree with us, are well worthy of continuance. THOUGHTS should form the connecting link between that class of our organization, whose duties in widely separated sections, do not enable them to meet, with few exceptions, except at rare intervals. Co-operation, which is working so well among our home people, would be just as beneficial to our travelling representatives, and we wish to afford any means to perfect its accomplishment. Will you help us?

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31st. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons

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A. R. Kelly	
C. F. McCauley	
C. Mehlig	
W. C. Neal	
I. R. Newell	
S. J. Owen	
C. F. Pulfer	
M. J. Reynolds	
O. P. Richmond	
Harman Screech	
Geo. R. Smith	
M. G. Smith	
M. Taylor	
H. P. Torrance	
H. F. Whitaker	
W. F. Wiggins	

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, JANUARY 12, 1901. NO. 14

Convention Sayings.

"It has been stated that the advanced prices, more particularly for House Paint, would restrict consumption, and in consequence, business, but when you consider that after all these advanced prices only mean a difference to the average consumer of, say $3.00 on a job of painting, we cannot feel that this point is well taken."

"Now, sir, do you know what makes the best paint that can be produced regardless of cost? There is only one proper way for the consumer to buy paint, and that is for him to buy the paint that will cover the greatest number of square yards and will wear the greatest number of years."

"Let us all pull together in 1901 to help the jobber and render him all the co-operation we can, both by the factory and its representatives."

OF COURSE YOU REMEMBER IT.

"I will venture the assertion that there is hardly a piece of manufacturing trade business in this country, regardless of location, that cannot, by proper handling, be placed on our books."

"The brands we offer are of uniform quality and we set a fair valuation upon them to dealer and jobber. We must get our price, and the fact that some other maker may offer a brand at a lower price than ours does not render it either necessary or desirable to meet such figure."

"You know the old adage, "laugh, and the world laughs with you; weep, and you weep alone." I think it a very true saying. I have yet to meet the man who is partial to hard luck stories. I try to make friends with the trade I call upon, and although they say there is no friendship in business, I have never been able to see where it hurt a man to stand well in the estimation of his fellows."

Regarding Pure Paint.

If white lead, oxide of zinc, linseed oil, turpentine and turpentine dryer costs a manufacturer an average of 6c per pound, the cost of the paint made by the various pure paint manufacturers will vary in value according to the weight. A paint averaging 17 pounds to the gallon, will cost:

For material alone $1 02
Add the cost of package and packing case 17

Total $1 19

16 lbs. at 6c. 96c. package and packing case 19c ..$1 15
15 " " 6c. 90c. " " " " 19c... 1 09
14 " " 6c. 84c. " " " " 19c... 1 03

Add to the above the factory expenses, cost of selling, advertising, etc., etc., and you can realize that a price of $1.35 per gallon is really too low, and if quality is to be maintained, prices must either advance or materials decline before another season passes over our heads.

Another thing you should note, that we give more actual value for the money than other pure paint makers.

Fortunately we have a fairly good stock of crude materials bought that will, we hope, enable us to maintain our price of $1.25 without further advances for some time to come.

Ready-mixed paints made as we make them are the "sugar" of the paint business.

Regarding First Quality Paints That are Not Pure.

Of course there is no standard of quality when paints are not pure, and manufacturers may vary the quality and quantity of the material whenever the market changes, but even these paints cost something. There are some manufacturers who maintain a fairly even quality. They vary in weight, averaging from 16 to 12 pounds. Let us suppose the materials entering into the better class of these paints cost the manufacturers say 5c per pound and you get this result:

16 lbs at 5c. 80c. can and packing case 19c .. 99
15 " " 5c. 75c. " " " " 19c .. 94
14 " " 5c. 70c. " " " " 19c ... 89
13 " " 5c. 65c. " " " " 19c. .. 08
12 " " 5c. 60c. " " " " 19c. ... 71

So you can see that "first quality" or their best paint can be sold at varying prices below pure paints. The trade is therefore bound to demand of the second quality paint makers who are attempting to sell their wares in competition with pure paint a differential price. New standards are being set up, new methods prevail and the path of the adulterated paint maker will be a rocky one in the future, we predict.

At the same time the better class of those manufacturers are not making much money at current prices, when the cost of making, marketing, advertising, etc., etc., is considered. It is going to cost more to sell an adulterated paint in the future.

Names Suggested for New Varnishes.

Pat-Co ..... Dan Davies
New Era ..... C. F. Silent
Neal's 100th Century Spar Varnish } ..A. E. Barron
Neal's 100th Century Interior Spar Varnish }

Be honest with your trade and don't delude them into the belief that paints are going to be cheaper. Many salesmen for competing houses have constantly and persistently done them in the past. Many paint manufacturers without any standard either to quality or price may be wavering, but we believe it will be only a matter of a short time when they will be making advances. A dealer who knows at the start that prices will rule higher, and in turn begins to advise the consumer that there is no hope for a decline, will the sooner begin to turn over his stock. How foolish it is for salesmen to lead dealers to believe there will be a slump in prices, as a consequence the dealer won't buy and he in turn tells the consumer not to buy just now as prices will be lower. The result is that the dealer will persue a hand-to-mouth policy in buying. As the season advances the manufacturer who wavers now, will some day suddenly realize that he is losing money, then he will advance suddenly and leave the dealer in a very embarrasing position. He had been led to hope he could buy cheaper and has let his stock run down, in turn he has told his customer to wait, later on he comes in and finds he must pay more and probably leaves cussing the dealer. We believe that crude materials will remain firm and in some lines advance. We, therefore, believe it pays to be honest with the dealer. Tell them we can see no hope for a decline, but that there is much more likelyhood of further advances.

Based on the following market reports it would appear that our prediction that higher prices for linseed oil could be expected is likely to be verified. Chicago quotations for flaxseed have ranged as follows:

January 2nd ..... $1 34 per bushel
January 3rd ..... 1 37 " "
January 4th ..... 1 39 " "
January 5th ..... 1 37 " "
January 6th ..... 1 38 " "
January 7th ..... 1 36 " "
January 8th ..... 1 36 " "
January 9th ..... 1 39 " "
January 10th ..... 1 38 " "
January 11th ..... 1 34 " "

A firm market and a steadily advancing one. In the ten days you will notice an advance of just ten cents per bushel. Oil to-day is being sold at a price entirely too low, when price of seed is considered, as the consumption of oil increases it is quite likely to create a firmer tone in the market.

NOTE—Since writing the above, flaxseed has made a further advance of two cents per bushel, a total of twelve cents instead of ten cents.

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st and shall publish the record of sales for each man in every issue of The ... Contest to commence Wednesday, ... 31st. The numbers of our represent... who do not call upon a class of ... whom the goods can be sold are ... obvious reasons:

A. E. Barron ....
R. M. Billings ....
H. C. Cater ....
Dan Davies ....
F. R. Dougall ....
C. F. Elliot ....
S. H. Hart ....
A. D. Hoagg ....
R. A. Irvin ....
A. R. Kelly ....
C. F. McCauley ....
C. Mohlig ....
W. C. Neal ....
J. R. Newell ....
S. J. Olson ....
C. F. Pulfer ....
M. J. Reynolds ....
O. F. Richmond ....
Herman Scratch ....
Geo. R. Smith ....
M. G. Smith ....
M. Taylor ....
H. P. Terrance ....
W. H. Welch ....
H. F. Whitaker ....
W. P. Wiggins ....

Turpentine is stiffening up advance of two cents per gal... this week. We expect a firm... a steadily advancing one ... We predict an advance of ... cents per gallon in the next ...

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, JANUARY 26, 1901. NO. 16

Flaxseed Market.

On November 11th, 1900, flaxseed reached a price of $1.83 per bushel, as against a price of $1.28 on the same date in 1899.

It was when the market reached the high point last November that a certain large interest suddenly withdrew their support. Various reasons have been advanced for this—some said they were short of money, others that they were short of seed and wanted to bear the market down, others that the crop was short and they were on the wrong side. Personally we have been of the opinion all along that there was a shortage of seed and that the price of linseed oil would rule very high this spring. After this large interest withdrew their support from the market, and just at a time when the consumption was the smallest, a natural slump in the market occurred. Flaxseed dropped gradually to $1.54 per bushel, but still 26 cents above the November, 1899, market. It was supposed, without any support, the market would go all to pieces, but it did not, and with the turn of the year and an increasing demand for oil, an improvement was at once noticed, and the market has steadily advanced until today it has reached $1.75 per bushel, or within 8 cents of the high point in November last. Think of it! If this keeps on what will the market be in May? It does look as if the prediction of $2.00 per bushel for flaxseed and $1.00, or more, per gallon for linseed oil would be realized. Oil is steadily advancing and the supply in the crushers hands seems to be gradually disappearing.

First quality paints at ruling prices are too cheap, and it looks to us as if advances are bound to occur and that very soon a dealer who does not take advantage of the present low prices to stock up will only have himself to blame for it. If later on he finds prices advanced to a price even beyond $1.35 per gallon. There was no justification for any decline in prices, and our only excuse is that we felt we were in duty bound to treat our agents with the utmost liberality, and remove from their minds any idea that we were disposed to be arbitrary, even though it reduced the profit on New Era to a vanishing point.

We have no doubt that in a short time that with the co-operation of our salesmen that our trade will soon realize, as our salesmen have done, that we cannot continue to sell New Era in competition with other so-called first quality paints, and that recognizing the superior quality of our product will be willing and glad to pay us a price in keeping with the superior quality of our goods, because they, in turn, will be able to ask and receive a higher price from their trade as well.

Prepare yourself and the trade for higher prices, advise them to ask $1.75, or better, for New Era. It is just as easy, if not easier, for them to sell a good paint at a good price than it is to sell a poor paint, or medium quality paint, at a lower price, and make a better profit too. We have never altered our opinion that there was a shortage of flaxseed and that linseed oil would rule very high this spring.

NOTE—Since writing the above article, flaxseed has made a further advance of 2 cents per bushel.

Now is The Time for Dealers to Buy.

We believe you can conscientiously advise your friends among the trade that they are running considerable risk in holding back orders for New Era at present prices. If we were "in the dealers' shoes," knowing what we do about market conditions of oil, we would not take chances on delaying the placing of good sized stock orders, so as to be on the safe side. We regard the reduction in price that we were forced to meet most unfortunate, coming as it did just before oil and seed have "braced up" in the way they have. Undoubtedly if such action had been considered for a day or two longer, it would not have gone into effect, and we would now have been securing the advance we *ought* to get, and which may come in a very short time.

Prizes to be Awarded During July, 1901.

The following prizes will be given for suggestions that represent a *definite* saving, equal to, or more than the amount specified below:

FIRST PRIZE—Railroad ticket, Detroit to Buffalo (exposition) and return. Tickets of admission to exposition grounds for three days. Allowance for full pay for three days' time. Cash pocket money, $15.00. Suggestion must effect a saving of $200.00 or more in one year.

SECOND PRIZE—Railroad ticket, Detroit to Buffalo (exposition) and return. Tickets of admission to exposition grounds for three days. Allowance of half pay, three days time. Cash pocket money, $10.00. Suggestion must effect a saving of $100.00 or more in one year.

THIRD PRIZE—Railroad ticket, Detroit to Buffalo (exposition) and return. Tickets of admission to exposition grounds for three days. Cash pocket money, $5.00. Suggestion must effect a saving of $50.00 or more in one year.

Cash equivalent will be paid to prize winners not wishing to make above trip.

For above series of prizes, we ask that special thought be given regarding the following

1. Automatic Scraping or Filling Machine, or any thing that will improve our present methods in that direction.
2. A machine to label gallon and half-gallon cans.
3. A machine to label any can not having a bail.
4. Any method that will save labor in the handling of stock, either raw or manufactured.

Prizes for General Suggestions.

For suggestions of value for the improvement or progress of the business upon which a *definite* money value cannot be placed, the following prizes are offered:

First Prize	$25 00	Fourth Prize	$5 00
Second Prize	10 00	Fifth Prize	3 50
Third Prize	7 50	Sixth Prize	2 00

All employes at home works or on the road can compete for above series of prizes, members of executive committee and supervisors excepted.

The executive committee will decide upon the merit of the various suggestions and award the prizes accordingly. No employe can obtain more than one prize. Competition for these prizes will close at 12 p. m., June 30th, 1901.

We sincerely hope that during the period ending above date, we may receive one or more suggestions from each and every employe in our office factories or on the road. Employes should grasp this opportunity to not only win a prize, but should more particularly remember that activity and thought in this direction brings their individuality before the management. If you have any suggestions in mind at present do not delay presenting them through the medium of suggestion boxes.

Traveling representatives will please specify "Suggestion for Prize" when submitting such. Employes are particularly requested to be as specific as possible in writing out suggestions.

EXECUTIVE COMMITTEE.

Names Suggested for New Varnishes.

Pal-Ca	Dan Price
New Era	C F [illegible]
Neal's 1901 Century Spar Varnish	A E Barr
Neal's 1901 Century Interior Spar Varnish	A E Barr
Bulldozing	H V Dow
The New Century Finish	W [illegible]
The New Era Finish	W [illegible]
Neal's Transparent Enamel	H H Hu[illegible]

Flaxseed has advanced 20 cents per bushel, and linseed oil 7 cents per gallon during the last ten days, with the market unsettled and *very strong*. This advance is in accordance with our views of the probable conditions, as frequently expressed by us to you during the past six or eight weeks. We have been very firm believers that the weakness in the seed and linseed oil market was only temporary, and that we should see a much firmer market, with considerable advances during the spring months. This opinion was the reason why we felt, as stated in our Bulletin No. 22, announcing our reduction of 10 cents per gallon in the price of "New Era" High-Grade Prepared Paint, that we did not think existing conditions warranted the decline, and that in consequence of our "New Era" *standard* of quality, and our determination to *absolutely maintain same* at all hazards, and under all circumstances, that the reduction made by us (which was made solely on account of the Sherwin-Williams Company's reduction) was one which, based upon *quality* and consequent *cost*, we could not afford to make, and that we did so with great reluctance. If the oil market continues to advance, we do not see how the makers of the better qualities of house paint can consistently maintain present prices. Our reduction was necessarily made subject to change without notice, and we shall certainly advance the price of "New Era" Paint as soon as the market conditions permit us to do so.

In this connection we quote from the Sherwin-Williams Co. circular announcing reduction, as follows:

"It is impossible, under present conditions, to guarantee prices for any length of time, and all our prices are as they have always been, subject to change without notice."

Under these conditions we should advise the trade to take advantage of present prices.

Price of New Era.

DU BOIS, PA., Jan. 19, 1901.

Your telegram received in regards to lowering price of New Era from $1.35 per gallon to $1.25.

I have written to the trade I have called upon, advising them of this change. I am sorry to see the price drop, as I find people are expecting to pay a good price for a good paint. Yours very truly, H. S.

That's about what all the boys say, and expresses our own sentiments.—ED.

SAULT STE. MARIE, MICH., Jan. 20, 1901.

Editor THOUGHTS:

I was greatly surprised to receive your telegram yesterday, announcing the drop of ten cents per gallon on our mixed paint to meet Sherwin-Williams & Co. price. I certainly cannot understand what they mean by making this drop, and, of course, see the position you were placed in and suppose you could do nothing else but drop with them. I am almost confident that the price could have been retained, as the paint salesmen of the different firms were just getting the trade convinced that paint could not be any cheaper according to the price of raw material at the present time. It certainly paralizes the market of these goods with the tendency of the up and down market, as it has been since last fall. I am going out to the trade telling them to buy, as I am most certain the price will be put back in a very short time. It certainly seems funny that this has happened from what we were told at our convention and what we read in paint magazines and other sources which we get hold of. Vilas Bros'. man is here to-day with me and is holding his best paint at $1.30 in 1's, and has as yet received no notice of any decline. I went to work and wrote the parties whom I sold New Era on my trip north, telling them of the drop and saying we would give them credit for goods that had been shipped, and those that had not would be billed at the new price.

Yours truly, H. F. W.

DURAND, MICH., Jan. 16, 1901.

Editor THOUGHTS:

I find another customer here to-day who was badly neglected last year as to advertising matter for New Era Paint. He did not get a single sample card during the season. He had a three year old rack, and letters for sample cards brought him booklets, which are *next to nothing* in a man's store. While we furnish more than enough advertising for specialties, I think our managers have never appreciated the importance of having our customers properly supplied with house paint sample cards. However, I think the fault is very largely with the salesmen. If we, who sell the goods, fail to see how important it is that every merchant handling New Era Paint should be equipped in the best possible manner to show the goods, we must not grumble at small sales, nor must we expect that the office force will think of it. We are assured that all the help we can ask within reason will be granted us, and I think since our convention, none of us doubt the ability of the Acme White Lead and Color Works to grant the same. We have taken a high position in the paint world and we should not be satisfied with anything that looks cheap in connection with New Era High-Grade Paint. S. H. H.

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31 1900. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	QUANTITY SOLD TO DATE
A E Barton	4300 lbs
H M. Billings	4200 lbs
H C. Cater	800 lbs
Dan Davies	
F B. Dougall	1340 lbs
C. F Flint	
S. H Hart	
A D Hoagg	500 lbs
S. A Hunter	0 lbs
R. A Irvin	
A R Kelly	1600 lbs
C P McCauley	400 lbs
C Mehlig	1200 lbs
W. C. Neal	2000 lbs
I. R Newell	1200 lbs
S. J. Olson	
C. F. Pfifer	700 lbs
M. J. Reynolds	
D. F. Richmond	3000 lbs
Herman Scratch	
Geo. R. Smith	2400 lbs
M. G Smith	
M. Taylor	
H. P. Terrance	5400 lbs
W. H Welch	2400 lbs
H. P. Whitaker	
W. P. Wiggins	2000 lbs

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, FEBRUARY 23, 1901. NO. 17

Advantages of New Era High-Grade Prepared Paint over Hand-Mixed White Lead and Oil Paint.

I have been asked to write an article that could be used in a circular for distribution among the trade and consumers, showing the advantages of New Era High-Grade Prepared Paint over hand-mixed white lead and oil paint. Before publishing it we submit it below for your criticism. We want you, each and every one to look it over carefully and then let us have your views promptly. Yours truly,

THOMAS NEAL.

It is less expensive for a consumer to use New Era High-Grade Prepared Paint, which is a pure white lead, zinc oxide, linseed oil and turpentine dryer paint, at $1.75 per gallon, than white lead and oil paint, mixed by hand, at current prices. Why? Because figures don't lie.

Cost of white lead paint mixed by hand		Cost of New Era High-Grade Prepared Paint to the consumer, as usually applied	
50 lbs. pure white lead (and you pay for 100 lbs. at 5c.)	$ 2 00	4 gals. New Era High-Grade Prepared Paint, at $1.75	$ 7 00
If you buy a can the kind you get 98 lbs. net. If you buy over it the kind you only get 50 lbs. net		1 gal. linseed oil (an average reduction) the amount of oil to be used varies with the different conditions	75
3 gals. linseed oil, allow 4 gals. at 75c. per gal	3 00		
1 lbs. turpentine and dryer, allow 1 gal	50	Makes 5 gals. of paint ready for use.	$7 75
Painters time mixing paint	50	At a cost per gal. when ready for use	$1 55
This makes of paint exactly 128 lbs.	$5 00	Or 45c per gal. less than lead and oil paint.	
Costing per lb.	3 9-16c		
A gallon of this paint weighs 12½ lbs. at 3 9-16c. or $1 50 per gallon			
This white lead paint will not stand any further reducing			
White lead paint will not cover more than 200 square feet two coats, but New Era will			

In addition to the above comparison, consider the following:

White lead and oil paint will only cover 200 square feet, two coats. But the surface must be an exceptionally good one.

New Era High-Grade Prepared Paint will cover 200 square feet, two coats, on any surface that white lead and oil will cover 200 square feet.

New Era High-Grade Prepared Paint will therefore cover at least 50 per cent. more surface than lead and oil paint.

Then the question of durability must also be considered. If, as it is claimed, white lead and oil paint will last three years, then the cost per year would be 53 cents per gallon.

New Era High-Grade Prepared Paint will last *five years, or more,* on account of the fact that it contains, in addition to the carbonate of lead, just the right proportion of oxide of zinc. The zinc oxide admits of the use of a larger volume of linseed oil, which is the life of paint, that is why it will last longer, and the first cost, therefore, to the consumer, is but 35 cents per gallon per year.

But there is still another reason why New Era High-Grade Prepared Paint is cheaper than white lead and oil paint. It's this: The cost of labor is a prime factor in painting a house. Suppose you had two houses to paint, of exactly the same size, and you intended painting one with white lead paint, and the other with New Era High-Grade Prepared Paint, you would find the results would be about thus:

25 gals. mixed-by-hand white lead and oil paint, at $2.00 per gal	$50 00	8 gals. New Era High-Grade Prepared Paint, at $1 75 per gal	$14 00
10 days' labor to apply it, at $2.00 per day	20 00	1 gals. Linseed Oil (an average reduction), at 75c. per gal	1 00
Total cost	$70 00	The amount of reducing varies on the different coats. See directions on cans.	
		6½ days' labor to apply it, at $2.00 per day	13 00
		Total cost	$28 00

A saving in the cost of labor and material of $15.01 in favor of New Era High-Grade Prepared Paint.

New Era High-Grade Prepared Paint is an absolutely pure white lead, zinc oxide, linseed oil and turpentine dryer paint.

Weak-Kneed Protection of Price.

An instance which has come to our attention this week suggested the heading to this item.

One of our representatives sent in an order from a jobber for New Era to be shipped to the jobber's customer. The price to the jobber was right, *but* attached to the order was the copy of an agreement made by the jobber, guaranteeing to protect a price to his customer, representing a cut of five cents per gallon for the entire year of 1901 and the only reservation made by the jobber is that if oil goes up to seventy cents, price will be advanced five cents per gallon which, of course, would still mean a cut price, as our figures would have to advance at least ten cents. The representative also asks if we cannot allow the jobber a rebate of five cents per gallon to help him out on goods sold his customer *last year* under a guarantee of protection.

We have refused to make the allowance and would like to know how any jobber can have the temerity to guarantee *any price* for the balance of this year, especially as we have not guaranteed prices to jobbers, or any one else.

Our representative, we trust, told the jobber very plainly that his course in guaranteeing *any* price for a year was wrong and that selling New Era at a cut price was still worse. Our representative does not advise us on this point. The fact, however, that he asks if we cannot allow five cents per gallon to aid the jobber to suffer less for his mistake in guaranteeing price last year indicates that he has not taken the determined stand that he should. He should have told the jobber that his house would not allow a cent under the circumstances and should not have even submitted the matter to us.

Protecting prices means more than getting the right figures for goods you sell personally, it means that you must educate others to do the same. You cannot do this by even considering the making of an allowance permit a jobber to cover up his mistakes cutting prices. If we did, he would be justified in "taking chances" on further mistakes of the same kind, which, in fact has been done in this case by guaranteeing prices 1901. If oil goes up much higher the jobber will have to break his agreement, lose a considerable amount before December 31st. *If advanced prices on our goods are restored—as they ought to be,*

In addition to this it is the duty of representatives to see that their jobber trade do not cut prices. If the jobber is permitted to sell at a lower price than we means that we cannot establish a set figure for our goods, as the dealer naturally go to the jobber, and especially as he can buy for less money. The result is that jobbers will compete for business at prices, and in the end complain that there is not enough margin in the goods to interest them or ask us to reduce our prices. *Don't fool with prices, or permit others to do so.*

A. M.

The Dealers' Opportunity.

Now is the time for the dealer to lay in a stock of New Era and specialties. The prices asked today are entirely out of proportion to market conditions affecting linseed oil and raw materials. Linseed oil is very close to the 70 cent mark and manufacturers are realizing more and more every day that the recent declines were mistakes, and are chafing under existing conditions. It needs very little to restore the advance, and it may come any day. Dealers are really getting more than they pay for under present conditions. The campaign, however, seems to be conducted along the line of a scramble for as much business as can be secured on the basis of offering dealers unusual value with the certainty of having present conditions withdrawn as soon as the manufacturers can correct the former mistake by advancing figures to the proper point. As a matter of self protection, therefore, we urge you to make the best of the present situation by securing stock orders from all your customers to be shipped, say, March 1st, or on any date prior to then that advance may take place. Take a day to write your customers and prospective customers a proposition as above outlined, and in this way retain your old customers and increase your list as much as possible. It ought to be easy to convince any dealer that New Era, at present price, is more than a safe investment and that it will be good policy to arrange for his spring requirements on such basis.

A. M. W.

Chicago Heights, Jan. 23, 1901.

Acme White Lead and Color Works,
Detroit, Mich.

Gentlemen:—Enclosed find settlement of your invoice of the 15th. We note the advance in the cost of this paint to 75 cents per gallon. Would you kindly send us by return mail your best quotation on the paint we purchase of you as follows:

No. 312 Red Iron Enamel.
No. 313 Blue Steel Enamel.
No. 333 Blue Enamel.
No. 636 Red Primer.
No. 42 Light Steel Wayne Machine Paint.
Agricultural Black "A."

We have been very well pleased indeed with both the paint received from you and the courteous treatment at all times, and because of this reason we have paid little or no attention to other concerns who solicit us almost daily for our paint orders. We realize that we are not very heavy buyers, but the demands upon us for the purchase of our product is one continual cry for lower prices. It is an absolute impossibility for us to advance our product one cent; this, of course, makes it necessary that we buy as carefully as possible. We have in our possession a number of samples that have been sent us recently, the idea being to duplicate your paint and get our orders. All things being equal we would not think of such a thing, but if there is going to be too much of an advance along on the line, it is barely possible that we will at least have to look out for ourselves.

Thanking you for past favors, we remain.

Yours very truly,
Canedy-Otto M'f'g. Co.

We would like samples of letters from our salesmen denoting their ideas of a correct response to above communication.

The American Linseed Company's Detroit agent has just advised us that his instructions, as just received from his company, is not to sell any linseed oil at less than 65 cents in barrels, carload lots. This information is accompanied with the fact that the market is very uneasy and further advances may come any time.

The Independent Oil Companies have practically all withdrawn from the market, evidently having no oil to offer.

New Era High-Grade Prepared Paint at present prices is a good buy. We are not urging our customers to over-buy, but we caution them that a possible advance under existing conditions is liable to come suddenly.

We have several times requested our representatives to state the "approximate amount of order" in the upper left-hand corner of the order sheet. A few of the men have failed to comply with our wishes. We desire that this information be given us in future on each order. Kindly do not forget about it.

G. B. P.

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901 and shall publish the record of sales for each man in every issue of Thoughts. Contest to commence Wednesday, October 31, 1900. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	QUANTITY SOLD TO DATE
A. E. Barton	[illegible] lbs.
R. M. Billings	42 [illegible] lbs.
H. C. Cater	[illegible] lbs.
Dan Davies	
F. R. Dougall	33 [illegible] lbs.
C. F. Elliot	[illegible] lbs.
S. H. Hart	[illegible] lbs.
A. D. Hoagg	[illegible] lbs.
S. A. Hunter	[illegible] lbs.
R. A. [illegible]	
A. R. Kelly	[illegible]
C. F. McCauley	
C. Mehlig	
W. C. Neal	
J. R. Newell	
S. J. Olson	
C. W. Puller	
M. J. Reynolds	
O. F. Richmond	
Herman Scratch	
Geo. R. Smith	
M. G. Smith	
M. Taylor	
H. P. Torrance	
W. H. Welch	
H. F. Whitaker	
W. P. Wiggins	

Names Suggested for New Varnishes.

Pal-Co	[illegible]
New Era	C [illegible]
Neal's 20th Century Spar Varnish / Neal's 20th Century Interior Spar Varnish	A [illegible]
Brilliantine	H [illegible]
The New Century Finish	[illegible]
The New Era Finish	[illegible]
Neal's Transparent Enamel	H [illegible]
Orient	[illegible]
Mars	[illegible]
Belgor Suite	W [illegible]
Neal's Adamantine Interior Finish / Neal's Adamantine Exterior Finish	[illegible]

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, FEBRUARY 9, 1901. NO. 18

Odds and Ends.

We would like the following "Odds and Ends" disposed of quickly. Sell the entire lot or part of the goods at from 10 to 20 per cent better than jobbing prices, if necessary. Be careful to explain that price is f. o. b. Detroit, and make terms cash on delivery, if possible, and certainly not better than 30 days, net.

The lines represented have been discontinued and we wish to close them out at once.

Lye	..75 6-10 dozen	
Wall-Kalsomine	.. [illegible]	
Wennvene	.. 03	
Cycle Oil	11-17	
Aluminum Gold Paint	... 01	
Liquid Glue	8	

[illegible] VARNISH STAINS

	½ pints	1-6-pints
Bog Mines	117	148
Cherry	40	48
Oak	240	278
Walnut	00C	101

You can go as low as four cents an inch in order to close out promptly the following stock of brushes. They are the same character and quality exactly as the Neal's Carriage Paint goods, but larger in size:

24 dozen 2½ inch brushes
10½ dozen 3 inch brushes

Stands of Color Plates.

BENNINGTON, KAN., Feb. 4, 1901.

Editor THOUGHTS:

I suggest that we still continue to make these plates on paper, for the purpose of giving to painters who are recommending New Era. In conversation with a painter yesterday he said if he could have one in his shop it would enable him to get more contracts and thereby sell more New Era for our agents. I had two with me and gave him one. I do not mean to give them to every "Jack leg" dauber on the territory, but where we find a good mechanic who is working with our agents in connection with New Era, I believe he should be supplied with one. The panoramas are all O. K. for the dealer, and if the painter had one of the paper stands he could roll it up and carry with him.

Yours truly, O. F. R.

Editor THOUGHTS:

I wonder if there were any *harsh words spoken* while putting new leaves in catalogue?

C. F. E.

Were there? Please speak out.—ED.

Editor THOUGHTS:

Regarding coupon and credential mileage. Wherever this class of mileage is used, the representatives have discovered in getting their rebates that there was always a shortage of from $1.00 to $3.00 in the returns, in comparison with the amount of coupons sent in by them.

In conversation with one of our representatives, he made the claim that he always received, as a rebate, what he claimed, and it appears that it is his custom, when he goes up to the ticket window and exchanges mileage for coupons that they issue, to inquire as to the number of miles torn off, and in such cases the gentleman always informs him of the amount of bridge toll or other arbitraries. The representative can therefore determine the actual value of the coupon (one cent) per mile and note it on the back of same, charging expenses, covering the difference between one cent per mile and what he has paid out in cash. In other words, it is not always safe to assume that the coupons have a rebate value of one-third of the amount shown on their face. Representatives who use this mileage are requested to watch this closely in future.

Yours truly, G. B. P.

Our General Distributors.

Bohan Paint Co.,	Los Angeles, Cal.
Humphrey-Jones Merc. Co.,	Denver, Colo.
Sickels, Preston & Nutting Co.,	Davenport, Ia.
Colburn, Birks & Co.,	Peoria, Ill.
Geo. E. Watson Co.,	Chicago, Ill.
Johnson-Woodbridge Co.,	Indianapolis, Ind.
L. N. Brunswig & Co.,	New Orleans, La.
C. W. Hackett Hardware Co.,	St. Paul, Minn.
Canter Bros.,	Butte, Mont.
Buffalo Glass Co.,	Buffalo, N. Y.
Burhans & Black Co.,	Syracuse, N. Y.
Jno. L. Thompson, Sons & Co.,	Troy, N. Y.
Louw Fitter Co.,	Cleveland, Ohio.
Stein-Vogeler Drug Co.,	Cincinnati, Ohio
Alexander Drug Co.,	Okl'h ma City, O. T.
Fritts & Wiehl,	Chattanooga, Tenn.
Van Vleet-Mansfield Drug Co.,	Memphis, Tenn.
Greiner-Kelly Drug Co.,	Sherman, Texas.
Houston Drug Co.,	Houston, Texas.
Bonn & Co.,	Spokane, Wash.
W. H. Chapman & Sons,	Wheeling, W. Va.

INDIANAPOLIS, IND., Feb. 3, 1901.

Editor THOUGHTS:

I just received a wire from Topeka, Kansas, stating that Mrs. Carrie Nation says the congressional investigation at West Point is all on account of Booze. Please have this confirmed by our Kansas correspondent.

Yours truly, W. C. N.

New Era Figures.

YPSILANTI, MICH., Feb. 6, 1901.

Editor THOUGHTS:

Recently I called on a large concern who handle Hammar paint and in our conversation relative to their putting in New Era they stated if I could show them figures that would prove New Era as cheap as Hammar and the dealer make as much profit they would talk business. Below are the figures I used and secured an order for [illegible] gallons of New Era:

COST TO DEALER

2 gals. New Era ready mixed paint making 24 lbs. at about ...7½c lb	1 gal. Hammar paint at $1.50 and 1 gal. linseed oil at [illegible], make 2 gallons paint weighing [illegible] lbs. and costing [illegible]

I asked them which they would use on their own house, New Era (lead and oil) at 7½ cents per pound, or Hammar (barytes, whiting, water and linseed oil) at 7⅛ cents per pound. They answered New Era, but said the dealer made more on Hammar paint, and I asked them to take out their pencil again.

Supposing the dealer was to furnish paint for a house requiring 20 gallons pa[illegible]

Profit on 20 gals. New Era at 40c per gal
Profit on 10 gals. Hammar at 40c per gal
Profit on 10 gals. linseed oil at [illegible] per gal ....

A difference in favor of New Era of

You see the dealer makes [illegible] *profit* on the same job, to say [illegible] quality of goods furnished and [illegible]tion in knowing he gives [illegible] strictly pure paint, and the be[illegible] make, and something that [illegible] hold his trade. Yours tru[ly],

High-Grade Shade, No. 23, S[illegible]

SALT LAKE CITY, UTAH, F[illegible]

Editor THOUGHTS:

I think you have made a [mistake in] dropping shade No. 23 from [the] card—High-Grade. I think [it well] to insert same on the twenty f[...] and drop one of the light sha[des].

Respectf[ully],

0007-SWP-037295

Advantages of New Era High-Grade Prepared Paint over Hand-Mixed White Lead and Oil Paint

I have been asked to write an article that could be used in a circular for distribution among the trade and consumers, showing the advantages of New Era High-Grade Prepared Paint over hand-mixed white lead and oil paint. Before publishing it we submit it below for your criticism. We want you, each and every one to look it over carefully and then let us have your views promptly.

Yours truly.

THOMAS NEAL.

It is less expensive for a consumer to use New Era High-Grade Prepared Paint, which is a pure white lead, zinc oxide, linseed oil and turpentine dryer paint, at $1.75 per gallon, than white lead and oil paint, mixed by hand, at current prices. Why? Because figures don't lie.

Cost of white lead paint mixed by hand		Cost of New Era High-Grade Prepared Paint to the consumer, as usually applied	
100 lbs. net of white lead in oil (we pay for 100 lbs. at [illegible]	$ 7 00	5 gals. New Era High-Grade Prepared Paint, at $1.75	$ [illegible] 00
If you buy a 100 lb. keg you get 94 lbs. net. If you buy four 25 lb. kegs you will get 90 lbs. net		1 gal. linseed oil (an average reduction) the amount of oil to be used varies with the different coats	[illegible]
20 lbs. linseed oil or 2 gals. at [illegible] per gal.	1 00	Makes 6 gals. of paint ready for use,	$7 75
4 lbs. turpentine and dryer about ½ gal.	[illegible]	At a cost per gal. when ready for use	$1 [illegible]
Painters time mixing paint	[illegible]	Or [illegible] per gal. less than lead and oil paint.	
This makes of paint exactly 128 lbs.	$[illegible] 00		
Costing per lb.	$ [illegible]		

A gallon of this paint weighs [illegible] lbs. at [illegible] or [illegible] per gallon.

This white lead paint will not stand any further reducing.

White lead paint will not cover over 200 square feet two coats. But New Era will.

In addition to the above comparison, consider the following

White lead and oil paint will only cover 200 square feet, two coats. But the surface must be an exceptionally good one.

New Era High-Grade Prepared Paint will cover 300 square feet, two coats, on any surface that white lead and oil will cover 200 square feet.

New Era High-Grade Prepared Paint will therefore cover at least 50 per cent. more surface than lead and oil paint.

Then the question of durability must also be considered. If, as it is claimed, white lead and oil paint will last three years, then the cost per year would be 53 cents per gallon.

New Era High-Grade Prepared Paint will last five years, or more, on account of the fact that it contains, in addition to the carbonate of lead, just the right proportion of oxide of zinc. The zinc oxide admits of the use of a larger volume of linseed oil, which is the life of paint, that is why it will last longer, and the first cost, therefore, to the consumer, is but 35 cents per gallon per year.

But there is still another reason why New Era High-Grade Prepared Paint is cheaper than white lead and oil paint. It's this: The cost of labor is a prime factor in painting a house. Suppose you had two houses to paint, of exactly the same size, and you intended painting one with white lead paint, and the other with New Era High-Grade Prepared Paint, you would find the results would be about this.

15 gals. mixed-by-hand white lead and oil paint, at $1 [illegible] per gal.	$23 85	10 gals. New Era High-Grade Prepared Paint, at $1.75 per gal.	$[illegible]
10 days' labor to apply it, at $[illegible] per day	[illegible]	2 gals. Linseed Oil (an average reduction), at [illegible] per gal.	1 [illegible]
		The amount of reducing varies on the different coats. See directions on cans.	
		6⅔ days' labor to apply it, at $[illegible] per day	[illegible]
Total cost	$[illegible] 85	Total cost	$[illegible]

It stands to reason, does it not, that if a painter can spread, on an average, one and one-half gallons of paint per day and it requires fifteen gallons of white lead and oil paint and only ten gallons of New Era, that the expense of application will be 50 per cent. more for the white lead paint than for the New Era.

A saving in the cost of labor and material of $15.01 in favor of New Era High-Grade Prepared Paint.

New Era High-Grade Prepared Paint is an absolutely pure white lead, zinc oxide, linseed oil and turpentine dryer paint.

Names Suggested for New Varnishes.

Name	Suggested by
Pal Co	Dan Davies
New Era	C. F. Elliott
Neal's 20th Century Spar Varnish; Neal's 20th Century Interior Spar Varnish	A. E. Barron
Brilliantine	H. V. Deming
The New Century Finish; The New Era Finish	W. C. Neal
Neal's Transparent Enamel	H. H. Halladay
Orient; Moro	S. H. Hart
Ridger State	W. P. Wiggins
Neal's Adamantine Interior Finish; Neal's Adamantine Exterior Finish	M. R. Kelly
Pan American Varnishes; New Century Varnishes; Neal's Crystal Finish, or Varnishes	R. A. Irwin

Editor THOUGHTS:

I owe order from Conley, Clague & Collins, Anaconda, Mont., to series of letters you have been sending them in regard to New Era. Keep up good work.

Respectfully, A. R. K.

P. S.—They promise to put in High-Grade later in year, as they are trying to close out stock on hand.

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead and want our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figures demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, [illegible] and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 3[illegible] 19[illegible]0. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	[illegible]
A. E. Barron	[illegible]
R. M. Billings	[illegible]
H. C. Cater	[illegible]
Dan Davies	
F. R. Dougall	[illegible]
C. F. Elliott	
S. H. Hart	[illegible]
A. D. Hoagg	[illegible]
S. A. Hunter	[illegible]
R. A. Irwin	
A. R. Kelly	[illegible]
C. F. McCauley	[illegible]
C. Mehlig	[illegible]
W. C. Neal	
I. R. Newell	
S. J. Olson	[illegible]
C. F. Pulfer	[illegible]
M. J. Reynolds	
O. F. Richmond	[illegible]
Herman Scratch	
Geo. R. Smith	
M. G. Smith	
M. Taylor	
H. F. Torrance	[illegible]
W. H. Welch	
H. F. Whitaker	
W. P. Wiggins	

Editor THOUGHTS

I read Mr. Hart's article [illegible] wish to state that I agree with [illegible] subject. I have had more [illegible] not having sample cards for [illegible] than most anything else. [illegible] send the trade fifty where we furnish [illegible] is as much to our interest to furnish [illegible] tomer enough cards as it is to the [illegible] have them, in fact more so.

Yours truly, [illegible]

0007-SWP-037296

0007-SWP-000118212

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS. DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, FEBRUARY 16, 1901. NO. 10

Sending Notices to Jobbers.

How many of our representatives are sending notices regularly to the jobbers on their territory regarding opportunities to do business in one or more of our line of "Rapid-Sellers?" Don't you realize that by keeping the name of our goods before them constantly you are doing the very best kind of advertising and building up business in your territory by securing the active co-operation of your jobbers salesmen, as well as their good will and continued efforts in your behalf? Too much stress cannot be laid upon the advisability of following out this plan. Jobbers *cannot* continue to receive such notices regularly without being interested in your goods, and if this is properly backed up by turning in orders for the goods (preferably by giving same to their salesmen) the result you are working for is certain. Send in your requests for these notification cards. There are not a quarter as many being used as we should like.

S. N. H.

Odds and Ends.

We would like the following "Odds and Ends" disposed of quickly. Sell the entire lot or part of the goods at, from 10 to 20 per cent better than jobbing prices. If necessary. Be careful to explain that price is f. o. b. Detroit, and make terms cash on delivery, if possible, and certainly not better than 30 days, net

The lines represented have been discontinued and we wish to close them out at once.

Lye	14	dozen
Wal-Kleen	[illegible]	"
Nomorene	39	"
Cycle Oil	[illegible]	"
Alpha Gold Paint	25	"
Liquid Glue	8	"

WOOD AND VARNISH STAINS.

	½-pints	1-6-pints
Bug Wood	307	146
Cherry	90	58
Oak	200	118
Walnut	202	63
Deep Cherry		55

You can go as low as four cents an inch in order to close out promptly the following stock of brushes. They are the same character and quality exactly as the Neal's Carriage Paint goods, but larger in size:

14 dozen 2½-inch brushes
10½ dozen 3-inch brushes

(From the Detroit Legal News, February, 1901.)

George B. Pulfer, President.

George B. Pulfer, the new president of the Detroit Credit Men's Association, is a young man—perhaps the youngest that has ever been placed at the head of a credit men's association. He won his position by intelligent and active work in the ranks, and as a committeeman in behalf of the association, national and local. He has attended all of the conventions of the National association, and has never failed to be present at local meetings, taking an active part on all occasions. He belongs to one of the *most enterprising of Detroit's manufacturing establishments*, being credit and collection manager. He is one of the growing young business men of this city, holding the esteem of his employers and his associates.

We predict for the Detroit Association during the coming year a vigorous campaign along the lines for which it was organized.

MINNEAPOLIS, KAN., Feb. 5, 1901.

Editor THOUGHTS:

Mrs. Carrie Nation, the famous woman who is terrorizing the saloons of Kansas with a hatchet, came out of a saloon the other day, in Topeka, with a jug of whisky in one hand and a hatchet in the other, and holding the aforesaid jug aloft, shouted "men of Kansas, behold the *New Era* has come to our state." When Kansas people hear the word New Era they immediately think of our famous prepared paint, and I had hard work convincing the people that we were not putting up New Era in jugs.

Yours truly, O. F. R.

Editor THOUGHTS:

The Ohio Valley Buggy Company, Cincinnati, Ohio, say they do not like us and would not do business with us at all only they cannot duplicate our Body Black Roc-Varno (pretty good recommend for it). I told them we were not a mean house to do business with at all, but one of the best but we did insist that every customer, whether large or small, pay their bills promptly when due, and that if they did this in the future they would not have any cause for complaint. They say they are going to move soon to a larger plant and will increase their business largely. He told the book-keeper that in the future to "discount" Acme bills. I trust they will do so. Respectfully, R. S. B.

OHIO VALLEY BUGGY CO.,
Cincinnati, Ohio.

Gentlemen—We have a letter from our Mr. R. S. Brown for twenty-five gallons Roc-Varno Body Black to be shipped March 1st for which please accept our thanks. In connection with the order our Mr. Brown writes that you are not altogether satisfied with the way we handled your account. Now, we simply wish to say that we desire to not only please you on our goods, but also in every other way, so that our dealings may be increased and prove mutually satisfactory. Wherever there is a disposition on the part of the buyer and seller to be considerate with each other, the best of feeling should always prevail. If we have been a little insistent as regards payment of bills past due, you of course cannot blame us for being so. On the other hand, if occasionally you have found it inconvenient to meet your bills as they fall due, we are quite sure if you had written us prior to the date we made draft, asking for a little consideration it would have been cheerfully granted. We hope you will not hesitate in the future to write us about such matters.

Thanking you for past favors, and awaiting your further commands, we remain

Yours truly,
ACME WHITE LEAD AND COLOR WORKS.

Color Cards.

I have had customers complain about not getting enough color cards with the [illegible]

Yours truly, C. [illegible]

0007-SWP-037297

0007-SWP-000118213

Advantages of New Era High-Grade Prepared Paint over Hand-Mixed White Lead and Oil Paint

I have been asked to write an article that could be used in a circular for distribution among the trade and consumers, showing the advantages of New Era High-Grade Prepared Paint over hand-mixed white lead and oil paint. Before publishing it we submit it below for your criticism. We want you, each and every one to look it over carefully and then let us have your views promptly.

Yours truly,

THOMAS NEAL.

It is less expensive for a consumer to use New Era High-Grade Prepared Paint, which is a pure white lead, zinc oxide, linseed oil and turpentine dryer paint, at $1.75 per gallon, than white lead and oil paint, mixed by hand, at current prices. Why? Because figures don't lie.

Cost of white lead paint, mixed by hand:

25 lbs. pure white lead in oil, you pay for 100 lbs. at 2c.	$ 2 00
If you buy a 100 lb. keg you get 25 lbs. free. If you buy four 25 lb. kegs you only get 100 lbs. net	
3 lbs. linseed oil, or 3 gals. at 75c. per gal.	2 25
1 lbs. turpentine and dryer, about 1/2 gal	50
Painters time mixing paint	50
This makes 6 gals. paint exactly 125 lbs. at	$5 25
Costing per lb.	4 1/2c.

A gallon of this paint weighs 18½ lbs. at 4½c. is $1.50 per gallon.

This white lead paint will not stand any further reducing.

White lead paint will not cover over 200 square feet two coats, but New Era will.

Cost of New Era High-Grade Prepared Paint to the consumer, as usually applied:

4 gals. New Era High-Grade Prepared Paint, at $2.75	$ 11 00
2 gals. linseed oil (an average reduction) the amount of oil to be used varies with the different tints	1 75
Makes 6 gals. of paint ready for use, $2.75	
At a cost per gal when ready for use	$ 2 12
Or 4c. per gal. less than lead and oil paint.	

In addition to the above comparison, consider the following:

White lead and oil paint will only cover 200 square feet, two coats. But the surface must be an exceptionally good one.

New Era High-Grade Prepared Paint will cover 300 square feet, two coats, on any surface that white lead and oil will cover 200 square feet.

New Era High Grade Prepared Paint will therefore cover at least 50 per cent. more surface than lead and oil paint.

Then the question of durability must also be considered. If, as it is claimed, white lead and oil paint will last three years, then the cost per year would be 53 cents per gallon.

New Era High-Grade Prepared Paint will last five years, or more, on account of the fact that it contains, in addition to the carbonate of lead, just the right proportion of oxide of zinc. The zinc oxide admits of the use of a larger volume of linseed oil, which is the life of paint, that is why it will last longer, and the first cost, therefore, to the consumer, is but 31 cents per gallon per year.

But there is still another reason why New Era High-Grade Prepared Paint is cheaper than white lead and oil paint. It's this: The cost of labor is a prime factor in painting a house. Suppose you had two houses to paint, of exactly the same size, and you intended painting one with white lead paint, and the other with New Era High-Grade Prepared Paint, you would find the results would be about this:

25 gals. mixed-by-hand white lead and oil paint, at $1.10 per gal	$27 50
10 days' labor to apply it, at $2.00 per day	20 00
Total cost	$47 50

6 gals. New Era High-Grade Prepared Paint, at $2.75 per gal	$16 50
2 gals. Linseed Oil (an average reduction), at 75c. per gal	1 50
The amount of reducing varies on the different tints. See directions on cans.	
2½ days' labor to apply it, at $2.00 per day	5 00
Total cost	$23 00

It stands to reason, does it not, that if a painter can spread, on an average, one and one-half gallons of paint per day and it requires fifteen gallons of white lead and oil paint and only ten gallons of New Era, that the expense of application will be 50 per cent. more for the white lead paint than for the New Era.

A saving in the cost of labor and material of $15.01 in favor of New Era High-Grade Prepared Paint.

New Era High-Grade Prepared Paint is an absolutely pure white lead, zinc oxide, linseed oil and turpentine dryer paint.

Our General Distributors.

California	Buhne Paint Co.,	Los Angeles
Colorado	Humphrey-Jones Merc. Co.,	Denver
Illinois	Gen. E. Watson Co.,	Chicago
	Colburn Burke & Co.,	Peoria
Indiana	Johnson-Woodbridge Co.,	Indianapolis
Iowa	Sickels, Preston & Nutting Co.,	Davenport
	J. W. Liggett & Co.,	Ottumwa
	Hornick, Ross & More,	Sioux City
Kansas	A. B. Whiting Paint & Glass Co.,	Topeka
Louisiana	L. N. Brunswig & Co.,	New Orleans
Massachusetts	E. & F. King & Co.,	Boston
Minnesota	C. W. Hackett Hardware Co.,	St. Paul
Montana	Carder Bros.	Butte
New York	Buffalo Glass Co.,	Buffalo
	Burhans & Black Co.,	Syracuse
	Jno. L. Thompson, Sons & Co.,	Troy
Ohio	Lowe Fixer & Mfg. Co.,	Cleveland
	Stein-Vogeler Drug Co.,	Cincinnati
	Alexander Drug Co.,	Oklahoma City
Pennsylvania	Baird-Schlen & Co.,	Reading
Tennessee	Fritts & Wiehl	Chattanooga
	Van Vleet-Mansfield Drug Co.,	Memphis
Texas	Greiner-Kelly Drug Co.,	Sherman
	Houston Drug Co.,	Houston
Washington	Bean & Co.,	Spokane
Virginia	Barker-Jennings Hdwe Co.,	Lynchburg
West Virginia	W. H. Chapman & Sons,	Wheeling

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, 1901, and shall publish the record of sales for each man in every issue of THOUGHTS Carries to commence Wednesday October 31 1900. The numbers of our representatives who do not call upon a class of trade to whom the goods can be sold are omitted for obvious reasons:

	SOLD TO DATE
A. E. Barton	[illegible]
R. M. Billings	[illegible]
H. C. Cater	[illegible]
Dan Davies	[illegible]
F. R. Dougall	[illegible]
C. P. Elliot	[illegible]
S. M. Hart	[illegible]
A. D. Hoag	[illegible]
S. A. Hunter	[illegible]
R. A. Irvine	[illegible]
A. R. Kelly	[illegible]
C. F. McCauley	[illegible]
C. Mehlig	[illegible]
W. C. Neal	[illegible]
J. R. Newell	[illegible]
S. J. Olson	[illegible]
C. F. Pulfer	[illegible]
M. J. Reynolds	[illegible]
H. F. Richmond	[illegible]
Herman Scratch	[illegible]
Geo. R. Smith	[illegible]
M. Taylor	[illegible]
H. F. Torrance	[illegible]
W. H. Welch	[illegible]
H. F. Wheaker	[illegible]
W. F. Wiggins	[illegible]

Names Suggested for New Varnishes

Pal-Co	[illegible]
New Era	[illegible]
Neal's 20th Century Spar Varnish	[illegible]
Neal's 20th Century Interior Spar Varnish	[illegible]
Brilliantine	[illegible]
The New Century Finish	[illegible]
The New Era Finish	[illegible]
Neal's Transparent Enamel	[illegible]
Orient	[illegible]
Mure	[illegible]
Badger State	[illegible]
Neal's Adamantine Interior Finish	[illegible]
Neal's Adamantine Exterior Finish	[illegible]
Pan American Varnishes	[illegible]
New Century Varnishes	[illegible]
Neal's Crystal Finish, or Varnishes	[illegible]
Zoo-Lak	[illegible]

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, FEBRUARY 23, 1901. NO. 20

This is What We Like to See.

Below is a list of items in a batch of orders recently received from one of our representatives. We direct attention to it on account of the variety of goods specified, which, it seems to us, denotes that this man is *working the whole time*, which is proper. It is easy to get into the habit of selling certain lines, and overlooking others. If our salesmen will keep our full line in mind at all times, there are very few places in which they cannot sell something.

February 6, 1901—
(1) New Era High-Grade.
Neal's Family Paint.
Acme Household Paint.
Neal's Cycle Enamel.
Granite Floor Paint.
Florentine Enamel.
(2) New Era High-Grade.
Neal's Aluminum Enamel.
Acme Household.
(3) Granite Floor Paint.
Assorted Dry Colors.
Improved Japan Dryer.

February 7, 1901.
(1) Neal's Carriage Paint.
New Era High-Grade Paint.
Handy Family Paint.
Acme Household Paint
Wagon and Implement Paint.
Neal's Enamels.
Neal's Bath-Tub Enamels.
Neal's Florentine Black Enamel.
Neal's Cycle Enamels.
Dry Colors.
Gold Paint.
(2) Acme Varnishes.
New Era High-Grade Paint.
Michigan Seal Lead.
Dry Colors.
Master Painter Colors
Specialty Brushes.
Gold Paint.

February 8, 1901—
(1) Divine Varnish Stain
Neal's Cycle Enamel.
Acme Household Paint
Strictly Pure White Lead
Michigan Seal White Lead.
Globe White Lead.
New Era High-Grade Paint.
Silver Paint.
Specialty Brushes.
(2) Granite Floor Paint.
Acme Wagon and Implement Paint.
Neal's Carriage Paint
Neal's Carriage Top Dressing.
Davies' Varnish Stains.
Neal's Bath-Tub Enamels.
New Era High-Grade Paint.
Neal's Screen Enamels
Gold and Silver Paint.
Chromate of Lime
Aluminum Enamel.
Varnishes.
(3) New Era High Grade Paint.
Granite Floor Paint
Neal's Carriage Paint.
Globe White Lead.

February 9, 1901—
(1) New Era High Grade Paint.
(2) New Era High-Grade Paint.
Neal's Radiator Enamels.
Discs in Oil, Dry Colors
Neal's Enamels and Varnishes
(3) Neal's Cycle Baking Enamel.
Neal's Aluminum Enamel

Various of our office force and salesmen question the accuracy of my article in THOUGHTS *on the "Comparative Cost of New Era and White Lead and Oil Paint." They say in their judgment that it is takes a man a day to spread a gallon and one-half of lead and oil paint, and he covers say 600 square feet, one coat, that it will require much longer than one day to spread a gallon and one-half of New Era, because the painter would have to cover at least 900 square feet of surface. Who is right?*

The following from Mr. Olson is explanatory. The letter contains many good points which our corresponding department will be glad to absorb for use in future correspondence:

WATERTOWN, S. D., Feb. 10, 1901.

Editor THOUGHTS:

I do not consider this a correct answer to Canady-Otto Manufacturing Company's letter, nevertheless it's the best I can do:

CANADY-OTTO M'F'G CO.,
Chicago Heights, Ill.

Gentlemen—Yours of the 23rd ult. at hand and contents carefully noted in regard to prices of goods mentioned. Would state, that owing to the heavy advance in raw material, we are compelled to ask a slight advance on such goods as mentioned below.

312 Red Iron Enamel.
313 Blue Steel Enamel, etc.

They are goods well worth the price asked for. We make prices to suit the paint, we do not make paint to suit the prices: our motto is quality first in consideration. Quality is our success. Just sixteen years ago we commenced manufacturing paint, the beginning was small and the growth was slow, but sure. Since that time we have given it our whole time and attention, and by hard, honest, conscientious work and worry, day and night, for all these years we have established one of the largest paint houses in the United States. We feel proud of what we have done, for we can truthfully say that every day of these long years we have conducted our business on good honest business principles. First, we considered quality and then put a price on our goods that we thought would be right for the consumer, the retail and the wholesale dealers. We have labored constantly during all that time and at an expense of thousands of dollars to improve the quality of our goods. How well we have succeeded. We have always felt grateful to the dealer who just took our goods on trial and helped us when we needed help. We have always worked for the good will and friendship of all our customers, and have labored to increase their sales of paint by good, honest, legitimate advertising. Believing that you understand and appreciate what we have done in the paint business, and believing you to be a friend of the Acme White Lead and Color Works we ask as a special favor to compare our quality with other makes of goods, and then give us your opinion. We have been in the paint business ever since we were boys. We don't know everything about it, but we want to. Can you make any suggestions which may aid us in increasing our trade with you? Appreciating your kind letter.

Respectfully yours
ACME WHITE LEAD AND COLOR WORKS.

Odds and Ends.

We would like the following "Odds and Ends" disposed of quickly. Sell the entire lot, or part of the goods at, from [illegible] 20 per cent. better than jobbing prices if necessary. Be careful to explain that price is f. o. b. Detroit, and make terms cash on delivery, if possible, and certainly not more than 30 days, net.

The lines represented have been discontinued and we wish to close them out once.

Wal-Klean [illegible]
Rock-ene [illegible]
Alpha Gold Paint [illegible]
Liquid Glue [illegible]

WOOD AND VARNISH STAINS.

	½ pints	pints
Rose Wood	[illegible]	[illegible]
Cherry	50	[illegible]
Oak	200	[illegible]
Walnut	200	[illegible]
Deep Cherry	[illegible]	[illegible]

You can go as low as four cents and in order to close out promptly the following stock of brushes. They are the same character and quality exactly as the Neal's Carriage Paint goods, but larger in size:

[illegible] dozen 2½-inch brushes
[illegible] dozen 1 inch brushes

Advantages of New Era High-Grade Prepared Paint over Hand-Mixed White Lead and Oil Paint.

Mr. Neal's letter in regard to the above in THOUGHTS of February 2nd has been carefully looked over by me, and in my judgment it could not be improved on. It certainly fills the bill in every particular and it is knock-down argument on the superiority of New Era over white lead and oil paint.

Yours very truly, C. F. M.

PHILADELPHIA, PA., Feb. 12, 1901.

Editor THOUGHTS:

I wish to say a few words in regard to article in THOUGHTS of February 9, headed "Advantages of New Era High-Grade Prepared Paint over Hand-Mixed White Lead and Oil Paint," written by Mr. Thomas Neal. I will only take up the last part of his argument now. He says "it stands to reason, does it not, that if a painter can spread on an average one and one-half gallons of paint per day and it requires fifteen gallons of white lead and oil paint and only ten gallons of New Era, that the expense of application will be 50 per cent. more for the white lead paint than for New Era." I cannot say that I think the argument a good one. If New Era will cover 50 per cent. more surface than lead and oil paint, I think it will take a painter just as long to spread ten gallons of New Era as it will to spread fifteen gallons lead and oil paint, if he spreads it properly, and especially in view of the fact that we advise and want the painters to brush out New Era even more than they brush out lead and oil paint. It looks to me as though it were not a question of how much paint a man could spread a day, but how much surface he can cover and do it properly. I would like to hear from the boys along these lines.

Yours truly, F. R. D.

WINCHENDON, MASS., Feb. 5, 1901.

Editor THOUGHTS.

I made a test to-day in L. P. Ball's store with Monarch, S. P. S., Heath & Milligan and New Era on a black board, and am glad to say ours out-classed them all in every way. This concern handles Heath & Milligan a lot, but I think you will see New Era on his shelves this spring. He told me that he never in all his life saw a paint like New Era in every respect, working qualities, covering capacity and the fineness of which it is ground. The other brands all mixed up like mud; but New Era required a little more elbow grease, and he remarked "that is the way to tell when it contains white lead." He is going to try these few gallons that he has ordered, and if they prove the same as the sample, why we will make Heath & Milligan feel sore.

Yours truly, H. C. C.

PHILADELPHIA, PA., Feb. 14, 1901.

Editor THOUGHTS:

Sending the convention number of "Spatters" broad-cast among the trade was a splendid *ad.* for the Acme White Lead and Color Works. You have no idea how interested the trade is on my territory. Mr. Chas. B. Stern, manager of the Columbia Shade Cloth Co., of Philadelphia, was very much interested, so much so in fact that he sent "Spatters" over to the head office in New York City. Another customer called me across the street to compliment me upon the enterprise of the firm I represented. I have not gone into a customers store since they were sent out, that there has not been a favorable comment upon it. Keep up the good work.

Yours truly, F. R. D.

PHILADELPHIA, PA., Feb. 8, 1901.

Editor THOUGHTS:

Mr. Marquis' poem on Dan's big fish has caught on in good shape and is proving a good advertisement for us. I was told by Mr. G. B. Heckel, publisher of Drugs, Oils and Paints, that he saw it in the New York *Sun*, February 5, clipped it out and will have it in next issue of his paper. All this comes from the fact that the Evening News published it, and it has undoubtedly been largely copied. The New York Sun mentioned our name.

Yours, T. N.

Our General Distributors.

California		
	Baham Paint Co.,	Los Angeles
Colorado		
	Humphrey-Jones Merc. Co.,	Denver
Illinois		
	Gen. E. Watson Co.,	Chicago
	Colburn, Bleler & Co.,	Peoria
Indiana		
	Johnson-Wendebridge Co.,	Indianapolis
Iowa		
	Sickels, Preston & Nuening Co.,	Davenport
	J. W. Elliott & Co.,	Cherokee
	Hornick, Hess & Morr,	Sioux City
Kansas		
	A. E. Whiting Paint & Glass Co.,	Topeka
Louisiana		
	L. N. Brunswig & Co.,	New Orleans
Massachusetts		
	E. & F. King & Co.,	Boston
Minnesota		
	C. W. Hackett Hardware Co.,	St. Paul
Montana		
	Carder Bros.,	Butte
New York		
	Buffalo Glass Co.,	Buffalo
	Barhans & Black Co.,	Syracuse
	Jas. L. Thompson, Sons & Co.,	Troy
Ohio		
	Lowe Fiber & Mfg. Co.,	Cleveland
	Sodo-Vegolor Drug Co.,	Cincinnati
	Alexander Drug Co.,	Oklahoma City
Pennsylvania		
	Du Bois Hardware Co.,	Du Bois
	Earl, Schoen & Co.,	Reading
Tennessee		
	Frine & Wiehl,	Chattanooga
	Van Vleet-Mansfield Drug Co.,	Memphis
Texas		
	Greiner-Kelly Drug Co.,	Sherman
	Houston Drug Co.,	Houston
Virginia		
	Barker-Jennings Hdwe Co.,	Lynchburg
Washington		
	Bean & Co.,	Spokane
West Virginia		
	W. H. Chapman & Sons,	Wheeling

Which of Our Representatives Will Wear This Hat?

We are particularly desirous of pushing sales of Michigan Seal White Lead, and wish our representatives to make an especially active effort in this direction. It should not be difficult to place a line of the quality of our Michigan Seal at the difference in price in favor of the goods as compared with figure demanded for standard brands upon the market. Michigan Seal as now presented is an article that is certain to give perfect satisfaction in every particular—working properties, covering capacity and durability. In order to secure an interesting contest among our representatives we offer a silk hat to the salesman who places the largest quantity of the goods before March 1st, and shall publish the record of sales for each man in every issue of THOUGHTS. Contest to commence Wednesday, October 31 [illegible]. The numbers of our representatives who do not call upon a class of trade to whom our goods can be sold are omitted for the following reasons:

A. G. Barnes	[illegible]
H. M. Billings	[illegible]
H. C. Coler	[illegible]
Dan Davies	[illegible]
F. E. Dengall	[illegible]
C. W. Elliot	[illegible]
S. H. Hart	[illegible]
A. D. Hoagg	[illegible]
S. A. Hostler	[illegible]
R. A. Irvin	[illegible]
A. H. Kelly	[illegible]
[illegible] P. McCauley	[illegible]
C. Meking	[illegible]
W. C. Neal	[illegible]
I. R. Newell	[illegible]
S. J. Olson	[illegible]
C. P. Puller	[illegible]
M. J. Reynolds	[illegible]
O. P. Richmond	[illegible]
Herman Schaich	[illegible]
Geo. E. Smith	[illegible]
M. Taylor	[illegible]
H. P. Torrance	[illegible]
W. H. Welch	[illegible]
H. F. Whitaker	[illegible]
W. P. Wiggins	[illegible]

Names Suggested for New Va[illegible]

Pat-Ce	[illegible]
New Era	[illegible]
Neal's 1-coat Century Spar Varnish	
Neal's 2-coat Century Interior Spar Varnish	
Brilliancine	[illegible]
The New Century Finish	[illegible]
The New Era Finish	[illegible]
Neal's Transparent Enamel	[illegible]
Orient	[illegible]
Moro	[illegible]
Badger State	[illegible]
Neal's Adamantine Interior Finish	
Neal's Adamantine Exterior Finish	
Ban American Varnishes	
New Century Varnishes	
Neal's Crystal Finish, or Varnishes	
Zoo-Lah	[illegible]
Lee	[illegible]
We-Lik-It	[illegible]
Neal's Interior Finish	
Neal's Exterior Finish	
Neal's Japan Dryer	
Neal's Satin Finish	[illegible]

Thoughts

PUBLISHED WEEKLY BY THE ACME WHITE LEAD AND COLOR WORKS, DETROIT, MICH.

Devoted to Matters of Interest to Our Representatives.

VOL. II. DETROIT, MICHIGAN, MARCH 2, 1901. NO. 21

Kelly Gets The Hat.

Twenty-one thousand, five hundred and forty-eight pounds of Michigan Seal Lead is the record that brings Mr. Kelly and the plug hat "in touch." Those of you who have listened to the modulated tones of the suave Mr. Kelly when, amidst the breathless silence of a spellbound audience, he has gently, but firmly, pressed home the point of some well tuned argument, those of you who have heard his voice ring out in stirring rhetoric that would arouse the enthusiasm

those of you who have watched the graceful gestures that emphasized the flight of fancy that led our thoughts

and those of you who have stood up against his seductive smile and winning ways, fully realize that

as practiced by our own Kelly are much too many for the ordinary dealer to withstand and will recognize the "secret of success" in the competition that has just closed.

New Leaves for Catalogues.

I had no trouble whatever in putting new leaves in. The trade think the idea a fine one. Very truly, I. O. W.

About a year ago Mr. Frank Dougall and the writer were walking along the streets of New York, we noticed an ice wagon newly painted—yellow gear and light upper parts. During the conversation that followed the thought was developed, why would it not be a good idea to get out a little booklet suggesting to new salesmen the lines of trade that could be canvassed and business developed? Many large enterprises employ a corps of painters and buy their material and re-paint or re-varnish their utensils. Are we looking after all this trade? Hotels are large users of our materials, especially enamels. Could we not get a firm grip on this trade if our salesmen made a little more of an effort? You are in the hotels every day. Why would it not be a good idea for each of our men to send in some suggestions along this line to publish in THOUGHTS and be eventually compiled as useful and instructive information. Let us hear a little from each and every salesman on the subject. You all must have ideas, but it is really astonishing how seldom we see a contribution from our representatives to THOUGHTS.

T. N.

Regarding analyses of other brands of paint. All our men having responded with lists, we have assigned to a few of our men the task of securing samples. We have concluded to analyze outside white this time instead of a tint. It will require some weeks to finish the work after all samples are in. The man assigned the task of securing samples must, whenever possible, weigh and measure a gallon can. We cannot proceed with the work until we have that information. In order to help us out we want all our men to weigh and measure a gallon can of every brand of white paint they come across, note it down in their note book, then if we make an inquiry through the columns of THOUGHTS for information it can be answered quickly.

I agree with Mr. Kelly's suggestion, to drop one of the light shades on your New Era High-Grade Prepared Paint sample cards and add No. 23 in its place. I would go further, and would suggest your dropping Nos. 51 and 3 and add No. 23 and 24. There are too many light shades.

Yours truly, A. E. B.

Ben Is With Us Again.

MR. BENSON E. BROWN

Our representatives will all be glad to welcome the return of "Ben" to the "Acme *Family*." He will act in the capacity of a general man to the railroad and other special lines of trade, co operating particularly with our representatives in adding to the railroad business, by working with them, and also in the development of new lines of goods. Ben has had a practical experience in making, using and selling goods for the railroad trade that makes his assistance particularly valuable. He says he does not want to "talk before all the boys" at our next convention and we trust, *therefore*, you will all bring up questions which, to be answered properly will demand a special address at that time and in the meantime do not forget that "Brownie's" advice and assistance is always "on tap."

Stands of Color Plates.

I fully agree with Mr. [illegible] regards our having them for the [illegible] of painters who push New Era [illegible] would suggest putting them on a [illegible] cases, so they won't be so easily [illegible] from constant handling.

Yours truly W. [illegible]

I agree with O. F. R. in regard [illegible] of color plates. They are a great [illegible] ment for us with the painters [illegible] will continue to put them out.

Yours truly [illegible]