

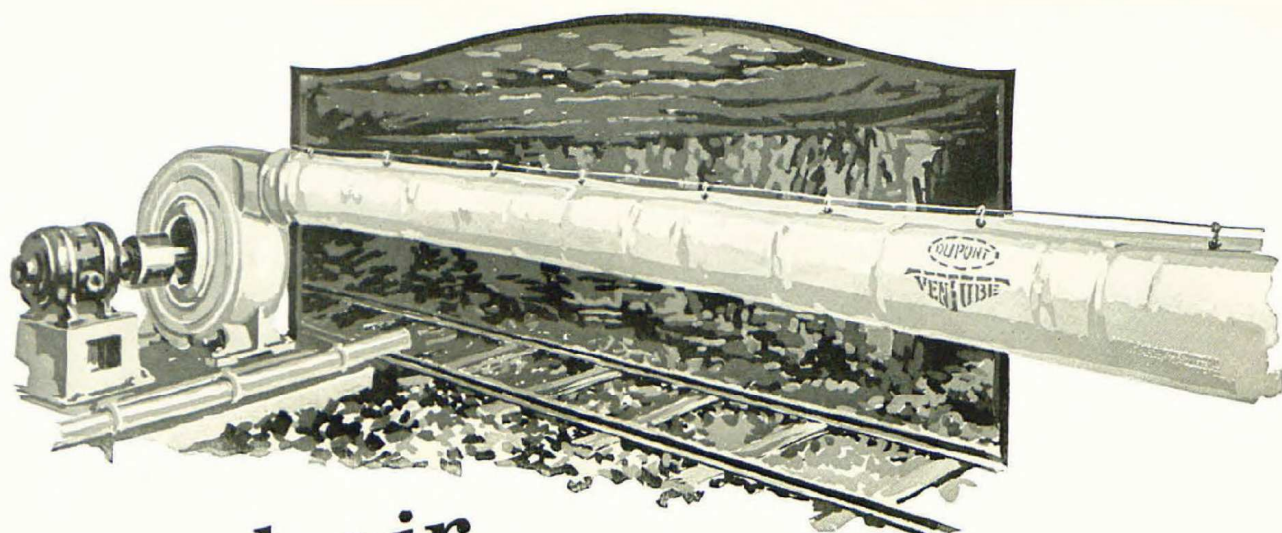
The Du Pont Magazine



Painted for the Du Pont Magazine by S. M. Arthurs

Blowing up Gamboa Dike in the Panama Canal, October 10, 1913. President Woodrow Wilson set off this epoch-making shot when he pressed a button in the White House at Washington

April, 1927



Good air anywhere at a fraction the cost!

CUT down the cost of your ventilation by installing a system of Du Pont Ventube and blowers. Ventube can be installed quickly, easily and at an extremely low cost.

Ventube is not only low in initial cost but low in ultimate costs, too. Due to its capacity to resist rough treatment, acid conditions, dampness and fungous growth, Ventube can be used again and again. When you've used it for one job, roll it up and save it for the next.

Run a line of Ventube deep into your mine — ventilate

your dead ends and tunnels. Use Ventube to drive out the smoke and powder fumes after a shot.

And the better working conditions made possible by good, fresh air everywhere heightens the working capacity of your men, assures greater contentment and increased production.

GET the facts about the lower ventilating costs and big advantages of the Ventube System for your mine. Full particulars will reach you by return mail.



Plenty of good air at the face



Installed and re-installed quickly and economically

E. I. du Pont de Nemours & Co., Inc.
Fairfield, Conn.

Branch Offices:
Denver, Colo.
Duluth, Minn.

Canadian Distributors:
Canadian Explosives,
Ltd., Montreal.
Canadian Giant, Ltd.,
Vancouver.



The DU PONT MAGAZINE

VOL. XXI

APRIL, 1927

No. 4

THE EXPLOSIVES BUSINESS IN REVIEW

Last year's sales of high explosives within the United States exceeded all previous records in the history of the industry

By H. W. HOBSON

MANY factory products enjoy an amazing popularity — automobiles, for instance. Others, and especially the basic products, are not so fortunate in that respect, yet without them our nation could not conceivably get along. Commercial explosives are not popular demand products; their claims for attention are based on utility alone, yet they are absolutely indispensable factors in the industrial scheme, so much so that their use furnishes a fairly accurate barometer of business in general. Increased consumption of explosives indicates that coal and metal mining, quarrying, construction and other work are active, while a decrease in explosives consumption reflects a trend in the opposite direction.

In these days business men study trends more carefully than ever before. Accordingly, it may be of some interest to set forth here a brief survey of the explosives business during the past eight years and to indicate in a general way the consumption by industries.

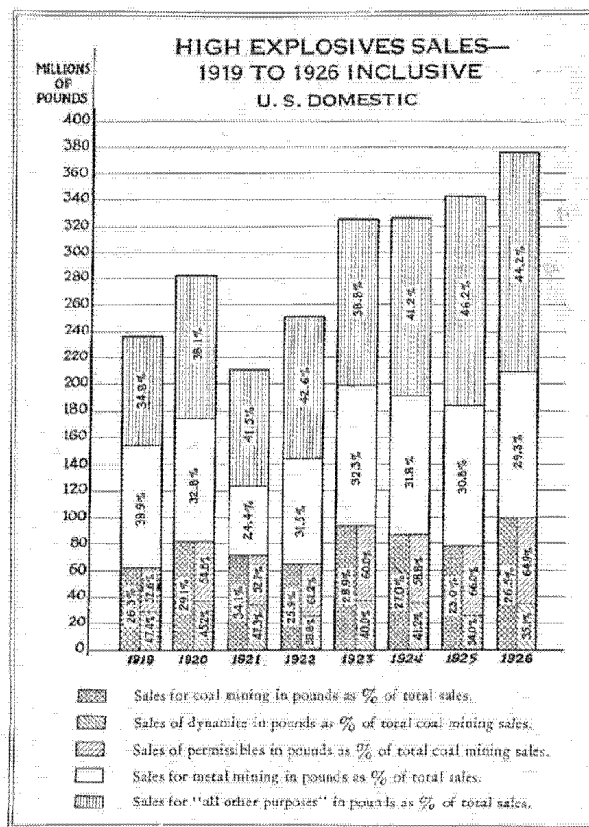
Prior to the World War we were accustomed to think of high explosives sales for domestic use in a normal year as representing a total of approximately 250,000,000

pounds. During the war period, when there was an abnormal demand for nearly everything, the average annual sales total for high explosives reached 275,000,000 pounds; and in 1917, when 307,000,000 pounds were sold, a new high record point was reached in explosives history. At that time it was

quite common to hear the prediction made, even by men well versed in the business, that this sales record would stand for many years.

During the readjustment period following the Armistice, the explosives business dropped off alarmingly, reaching the bottom in 1921, when total sales slumped to 212,000,000 pounds, the lowest recorded volume of any year since 1908. But the tide turned in the early summer of 1922. Since then the explosives industry has enjoyed a continuously increasing volume. Sales in 1923 broke the 1917 record by more than 20,000,000 pounds, and each succeeding year's total has overtopped the previous one. Last year the total sales reached the unprecedented volume of 378,000,000 pounds.

The accompanying graph presents the picture of growth year by year for easy comparison. The figures in the

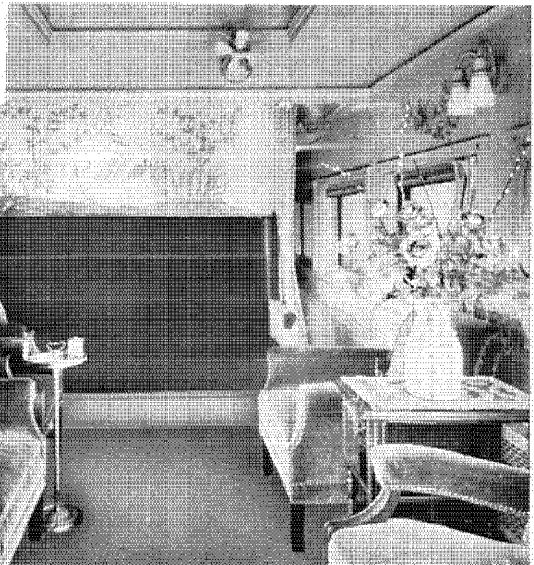


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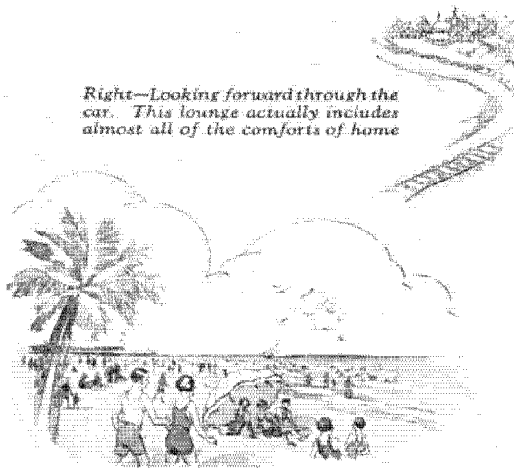
The dining room aboard the "Pheasant" is finished in cheerful color tones and is handsomely appointed

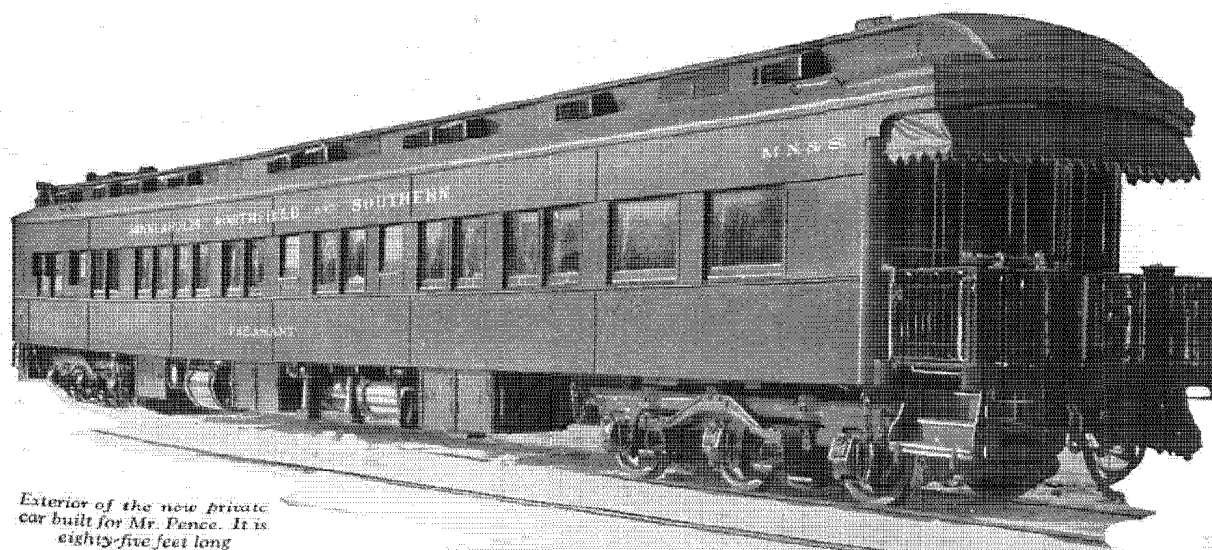


Left—Every available inch of space has been utilized in outfitting this stateroom without giving it a jumbled appearance



Right—Looking forward through the car. This lounge actually includes almost all of the comforts of home





Exterior of the new private car built for Mr. Pence. It is eighty-five feet long

IT'S ALWAYS FAIR WEATHER

At least, that's how you feel aboard the "Pheasant," a self-contained and self-functioning home on wheels

Now let's have it out with our secret wishes regarding private cars and, for a few minutes, be imaginary guests aboard the new railway home of Harry E. Pence, president of the Minneapolis, Northfield and Southern Railway, and a regular commuter between Minneapolis and Daytona Beach, Florida.

We are on the "Pheasant," one of the finest private coaches ever built. Within are four staterooms, a spacious lounge room, a dining room, pantry, kitchen, bath, and servants' quarters. In the short time we have, however, we cannot see everything—so let's inspect just one or two rooms.

From the observation platform we enter the lounge. It is a colorful room done in jade green Duco, save for the ceiling, which is in a parchment tint. The walls carry the pheasant motif in a pleasing manner. We see thick rugs, bronze lighting fixtures, deep roomy chairs of Duco-finished walnut, upholstered in mohair. Everything seems soft and "homey." It is a place where one can smoke and read and sprawl to his heart's content.

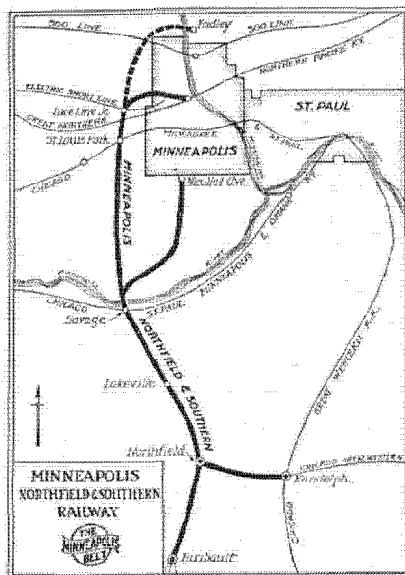
The staterooms are individual in color schemes and draperies. In the nearest one, we find a roomy bed and

an auxiliary fold-in berth; a chair, a dresser, three mirrors—one of them full-length; easy access to a combination tub and shower bath; a five-drawer locker with plenty of hangers; dome, side and reading lamps and a thermos bottle. All in one room—but it doesn't look crowded.

Compactness, efficiency and beauty characterize the "Pheasant." We note, too, that the new Pence "home" is finished inside and out with Duco.

While strolling in and around the "Pheasant," other things attract our attention—a radio, for instance; an electric ice box and oil-burning kitchen stove; a vapor heating system; attachments for city telephone circuits, immense storage batteries, water tanks holding 600 gallons—and, by all means, the ship's bell clock in the lounge room!

Our time is up now and the imaginary visit ends. There may be another chance to see this car, however, for the owner and his family are now traveling through the South and West aboard the "Pheasant" and some of you may enjoy a visit in fact, not in fancy, before they return to Minneapolis.



The M. N. & S., 123 miles long, will eventually encircle the Twin Cities to relieve freight congestion

THE DU PONT SEMESAN FAMILY

This article tells how its members are waging a successful campaign against plant diseases that have been costing the nation more than \$700,000,000 yearly

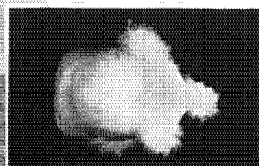
THE people of the United States and their Federal and State Governments are thoroughly aroused to the necessity of eliminating another industrial waste that is fast becoming an economic crime. America, the healthiest and cleanest nation in the world, educated to the highest existing standards of public sanitation and personal hygiene and trained to super-efficiency in the production of all fabricated commodities, is fast realizing the importance of protecting agriculture from the bacterial diseases, para-

By J. WARREN KINSMAN

It is not infrequent that diseases and fungi wipe out as much as 50 per cent or more of a crop. For example, over the past six or seven years nearly 10 per cent of America's corn crop has been lost from such causes. Ten per cent of a three-billion bushel crop is three hundred million bushels of wasted corn. It requires a princely investment in land, carloads of seeds and fertilizers, and many days of labor for planting, cultivation and clearing the fields of these non-productive, rotted corn-stalks to carry on this hopeless effort as a

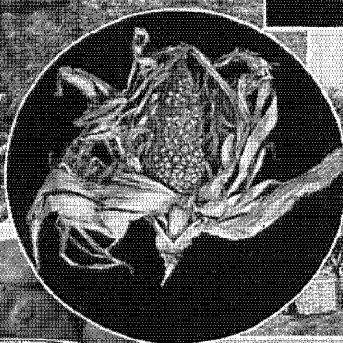


Above—Harvesting an Idaho bumper crop of potatoes grown from seed treated with Semesan Bel



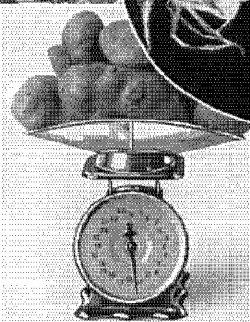
Left—A kernel of seed corn in the early stages of disease development

Below—Semesan Jr. increases corn yields from average quality seeds by twenty to forty per cent



In circle—The effect of stalk and ear rots on an ear of sweet corn

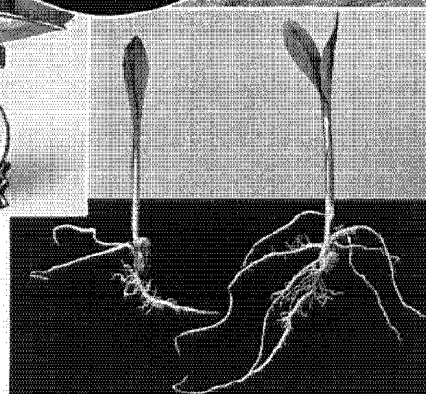
Right—Semesan Bel helped one plant produce eleven pounds and nine ounces of potatoes



Left—The corn seedling on the right grew from a Semesan Jr. treated seed, the other from an undisinfected seed. Both were planted the same day in the same box and photographed nine days later. Note the superior root system of the seedling treated with Semesan Jr.

sitic fungi and saprophytic organisms that annually lay waste to an extraordinarily large percentage of our crops.

No system of statistics yet devised shows the true total of the staggering losses which are known to occur, but authorities best in position to know place the yearly damage to our grain, field, forage, vegetable, flower and nursery plantings at more than \$700,000,000. The causes and effects of these agricultural diseases, infections and contaminations are now well understood and it has also been proved that a majority of them can be prevented or even controlled within practically harmless limits.



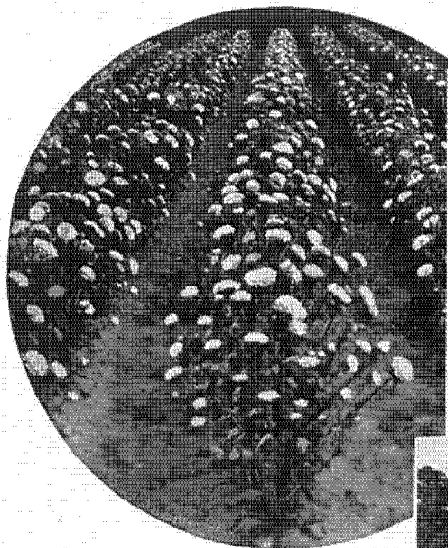
tribute solely to agricultural diseases. Seed disinfection will save most of these three hundred million bushels and thereby reduce the production cost of the entire crop by almost ten per cent with an insignificant expense for the

seed treatment. During the past fifty years medical science has advanced by such notable strides that even major operations and loathsome diseases no longer result in the staggering mortality of the previous century. This progress of the medical profession has been due in a large measure to the development by the organic chemist and biologist of superior antiseptics, serums, antitoxins,

pharmaceuticals and other therapeutic agents that possess remarkable curative properties. But until recent years, the combating of seed, plant and soil diseases has had to depend upon ineffectual substances such as copper sulfate, bichloride of mercury, formaldehyde and a few other chemicals that frequently caused as much injury

June because of the "failure" of his flower and vegetable plants, to the farmer whose livelihood depends upon the success of his crops, the development of the Semesan disinfectants holds enormous interest and significance. The parent product, Semesan, is the most versatile and efficient antiseptic that science has yet been able to devise for

Below—The grower of these asters said that Semesan seed treatment controlled disease and produced his first successful crop in five years



Top center—The three L'Innocence hyacinths on the right were soaked in normal liquid Semesan for two hours and placed in a water sprouting jar. The three on the left were untreated but similarly planted at the same time. Observe the remarkable growth-stimulating effect of the Semesan treatment

Right—Demonstrating the application of Semesan to prevent and cure "broken patch" of grasses at the Algonquin Golf Club course in St. Louis



Above—Of the three untreated cotton seeds planted in the same box with the three Semesan-treated seeds, one failed to germinate and "damping-off" killed another, producing a stand of only 33 per cent as compared with 100 per cent for the Semesan disinfected seeds

Center—These prize-winning gladioli were grown by the Prentice Nursery, Kent, Washington, from disease-infested corms that had been discarded but which were recovered and rejuvenated by the Semesan treatment

to the crops treated as their questionable action against bacterial and fungoid growths corrected. A drug is worthless if in curing a disease it also poisons the patient.

Scientific research during the past ten or twelve years has culminated in the development of a new series of seed, plant and soil antiseptics which the du Pont Company has introduced to the agricultural industry as the Semesan Seed Disinfectants. The trade name Semesan is derived from two Latin roots, namely, *semen*, a seed, and *sanus*, meaning clean, sound or healthy. Hence, the word Semesan means "healthy seeds" and typifies the amazing qualities of these compounds for effectively destroying the germs, spores and other micro-organisms which may be carried on the surface of seeds and plants, or which may in some cases exist internally. In accomplishing this result Semesan is in no way harmful to the seed embryo or plant tissue.

From the amateur whose unbounded enthusiasm in March, April and May to "make a garden" collapses in

general agricultural purposes. It may be easily applied in either the liquid solution or convenient dust forms to prevent or control the common diseases of a most astonishing array of seeds and plants. From this primary substance have been prepared two modified forms, the first called Semesan Jr., and the second Semesan Bel. Semesan Jr. is exclusively a dust disinfectant made primarily for the disinfection of field and sweet seed corn against the ear, root and stalk diseases, but it has also been successfully employed for the treatment of grain and vegetable plantings. Semesan Bel is chiefly an instantaneous dip treatment for white and sweet potatoes, as well as other similar roots and tubers of flowers and edible plants.

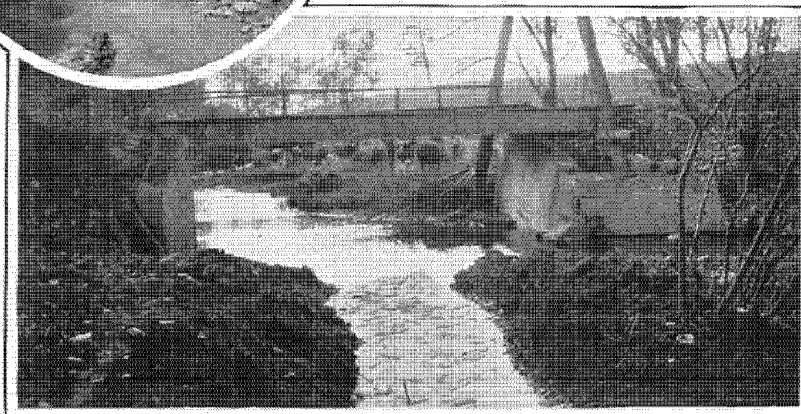
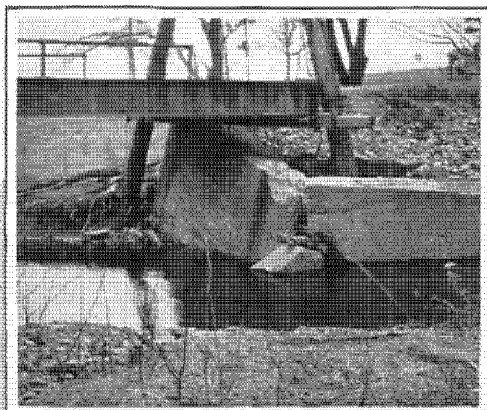
Not only do Semesan disinfectants prevent or control diseases and fungoid growths, thereby permitting the seed and plant to grow vigorously, unhampered by the ravages of parasites, but they also appear to have a stimulatory action, not of a fertilization nature, because they are in no sense a plant food, but rather characteristic of tonics. As an obvious result, Semesan-treated seeds and plants generally germinate or grow faster, reach maturity earlier and bear heavier than can those which do not have

(Continued on page 24)

MAKING THE CASCADILLA BEHAVE

Streams, like folks, have to be "straightened out" sometimes. The discipline is drastic but effective when dynamite is used

By F. T. RANSOM



Showing the bridge partially undermined and the new channel after the blasting

THE fact that water seeks the lowest level, along the path of least resistance, explains why few streams follow a straight and narrow course. Ordinarily, they may be trusted to follow their own inclinations, but occasionally one shows a disposition to destroy valuable property, and then corrective treatment is in order to put things to rights.

Take the Cascadilla Creek in New York State, for instance. On the road between Ithaca and Dryden, in Tompkins County, is a steel and concrete bridge spanning this creek. It was built in 1909 at a cost of \$20,000. Now the Cascadilla should not have nursed any particular grievance because the bridge was built there, but if you will glance at one of the accompanying pictures it will give you some idea of what this ill-tempered stream did to a perfectly good bridge.

Nature set the stage for its downfall by throwing out a point of land a short distance upstream, and the water sweeping around the obstruction cut into the banks and eventually undermined one of the bridge foundations, so that \$5,000 had to be spent in reconstructing it.

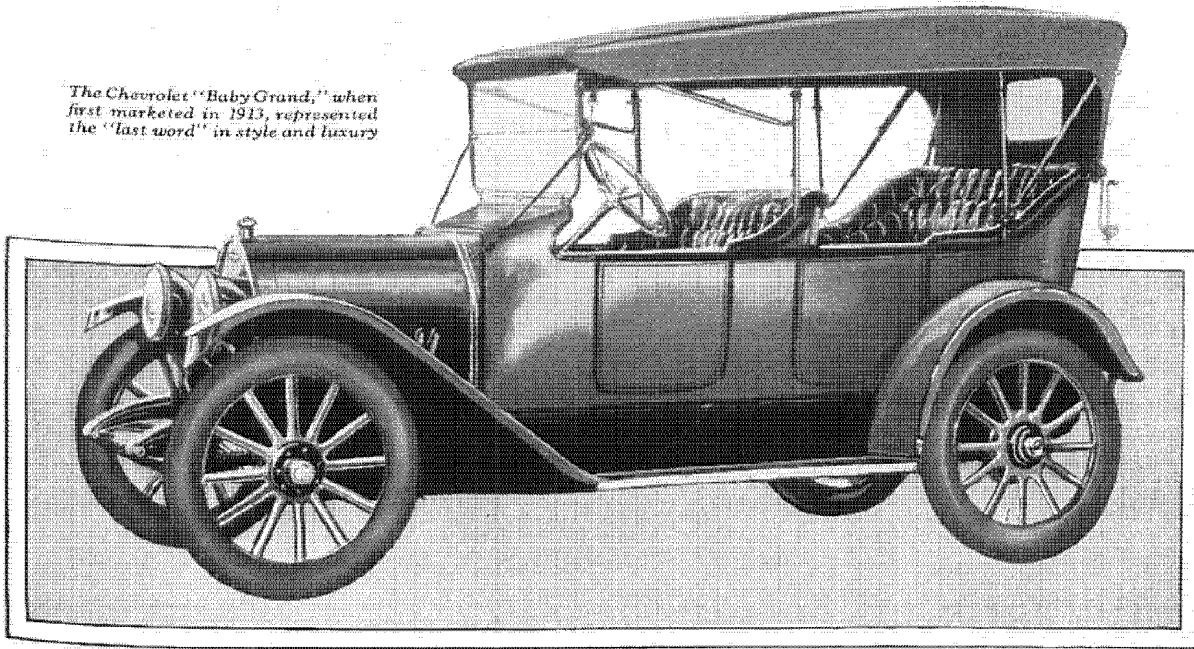
The highway authorities realized that something must be done to prevent a recurrence of the trouble. They asked a du Pont representative to "straighten out" the stream, and this is the story of how the work was done under his supervision. It was a quick, inexpensive ditching job, of interest here because similar conditions may be found in

many other localities where streams are causing trouble.

First, a ditch line was laid out across the projecting strip of land for a distance of 120 feet, with a 60-foot extension into the main creek channel. At spaced intervals along this line, charges of 60 per cent du Pont dynamite were loaded in holes, each charge being primed with an electric blasting cap. The blast was set off, and the result was a new, straight channel ten feet wide at the top, four feet wide at the bottom, and four feet deep.

This work was done by four men in eight hours' time. The total cost for labor, explosives and all accessories amounted to \$56.30, or about thirty cents per cubic yard. The Cascadilla, properly chastened and re-directed, now flows in a straight course under the bridge, and the foundations are no longer menaced by its waters. All of which goes to prove that a little dynamite properly placed and exploded will "straighten out" many a trouble-making stream if it is given the opportunity.

The Chevrolet "Baby Grand," when first marketed in 1913, represented the "last word" in style and luxury



FIFTEEN YEARS WITH CHEVROLET

Wherein is briefly recorded the year-by-year expansion which has lifted this motor car from comparative obscurity to an enviable position in the low-priced field

IN a modest shop on Grand River Avenue, Detroit, in 1909, a Frenchman was tinkering with a noisy little gasoline motor. Although a racing driver by profession, and a famous one, he had visualized and was now building a car for the people—one that he hoped would be a credit to the automobile industry, then emerging from its "awkward age."

The Frenchman was Louis Chevrolet. Two years later he built four cars of purely experimental type and in 1912 the Chevrolet Motor Company of Michigan was organized. The name was given in recognition of Chevrolet's mechanical genius and because of his popularity as a daring, fearless driver.

Chevrolet it was and Chevrolet it still is—an automobile whose rise to an important position in the small-car field has been speedy and sure. From 1911, when production first started, until the beginning of the current year, nearly 3,000,000 complete cars have been built—an amazing record in an industry quite accustomed to large totals.

When it was announced that 732,147 cars were built in 1926, many declared that the saturation point for even so popular a car as the Chevrolet had been reached. However, export markets and domestic requirements have been carefully studied with particular regard for two major influences: first, the increased demand for American cars abroad and, second, the growing tendency in America

toward the ownership of two or more cars in the same family. With such data at hand and as an answer to skeptics, officials of the company have set their 1927 schedule at 2,100,000 cars each week, or about one million for the year.

YEAR-BY-YEAR HISTORY

To reach its present production capacity, the company built up a great organization within a relatively short period of time. But it was not always great. Manufacturing standards were constantly raised, new sales promotion methods were employed, "zones" for more efficient distribution were established and other practices almost unheard of in the early days of the industry were instituted. In order to see more clearly how these policies influenced the growth of the organization, let us start from the beginning of Chevrolet history and follow the year-by-year progress.

The Chevrolet Motor Company of Michigan was organized November 3, 1911, following the completion of Louis Chevrolet's first models. A year later sales offices were opened in Chicago, Boston and Philadelphia, the first of a chain of retail stores that was destined to extend all over the country. In August, 1913, the company discontinued production at Detroit and moved the plant to Flint, Michigan. A plant was also rented in New York City and a few cars made there during the same year. The

"Baby Grand" touring and "Royal Mail" roadster models were brought out in August, 1913, and both proved very popular. A fourth sales office was opened in Oakland, California.

"ZONES" ESTABLISHED

The first real "production" car, however, was built in 1915—the model 490. In this year, the company introduced its "zone" system of distribution. Two zones, one centralized in Atlanta, Georgia, and the other in Kansas City, Missouri, were established. In later years, zoning became an almost universal sales practice in the automobile industry.

The original company, which had been functioning for over four years with remarkable success, was replaced in 1915 by the Chevrolet Motor Company, a holding company chartered under the laws of Delaware. This new organization took over all Chevrolet interests and shortly after bought the Maxwell Motor Company's plant at Tarrytown, New York, for the production of the model 490. The New York City plant continued to build the Baby Grand and Royal Mail models, raising the number of large plants to three.

The year 1916 was one of general expansion. Wholesale

offices were opened in Minneapolis, Minnesota, and Dallas, Texas. Plants of the National Cycle Company, the National Motor Truck Company and the Warner Gear Company were purchased and put in operation, supplying parts for Chevrolet. Retail stores were opened in many cities, principally in the East. This was perhaps the largest development year in the company's history up to that time. During the following year the executive offices were moved to New York.



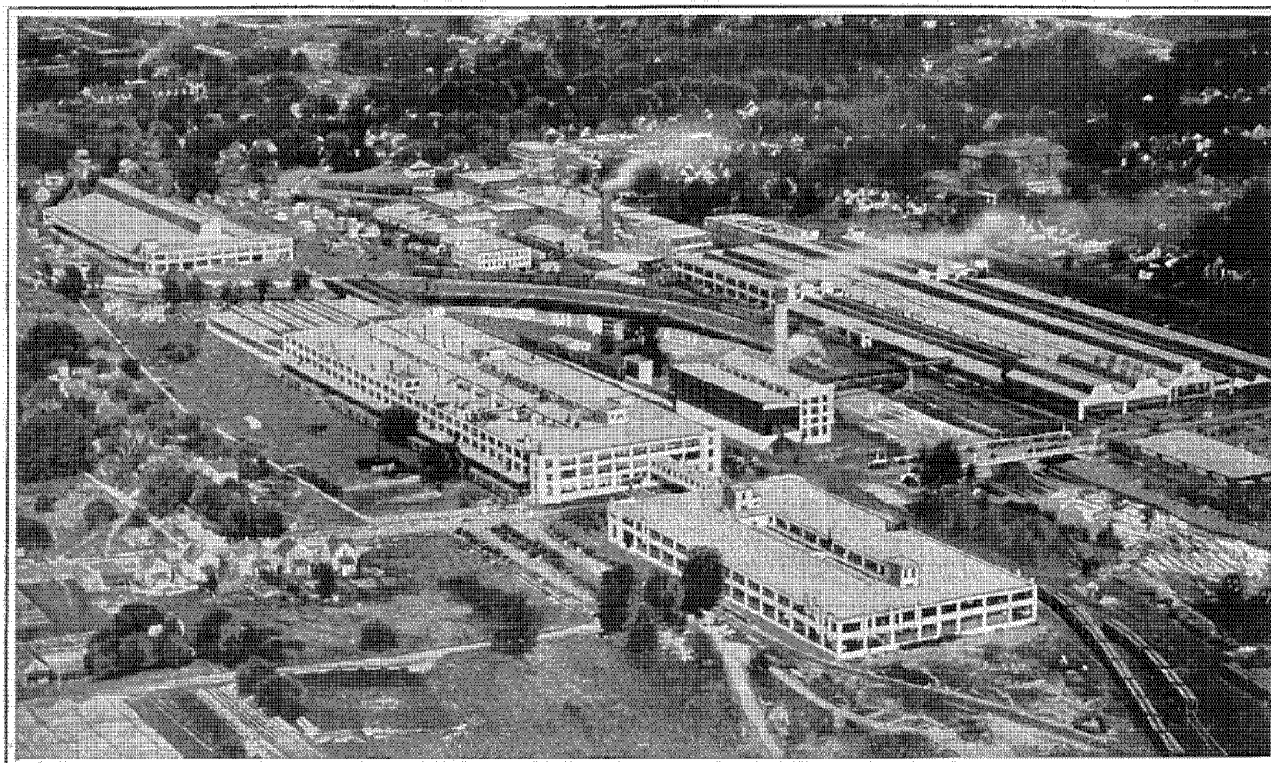
W. S. Knudsen, president of the Chevrolet Motor Company.

GENERAL MOTORS STEPS IN

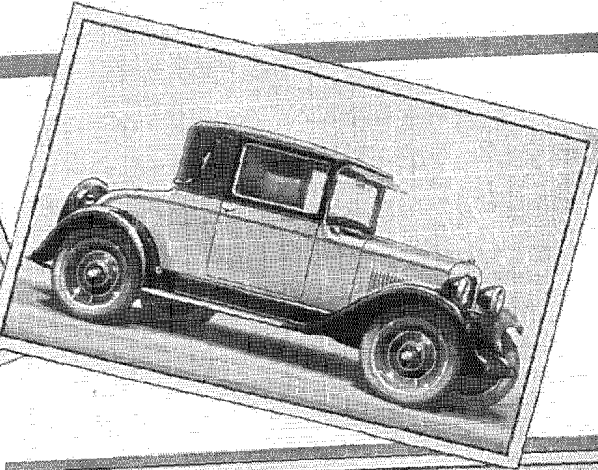
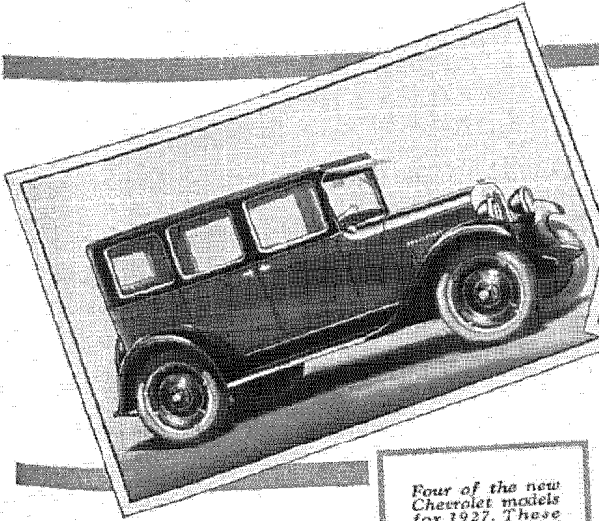
With the purchase by General Motors Corporation of all Chevrolet interests on May 2, 1918, a significant chapter in Chevrolet history opened.

Under the new management, the expansion program went into high speed. Ten new wholesale offices were opened, and General Motors of Canada was formed. Progress became swift and sure.

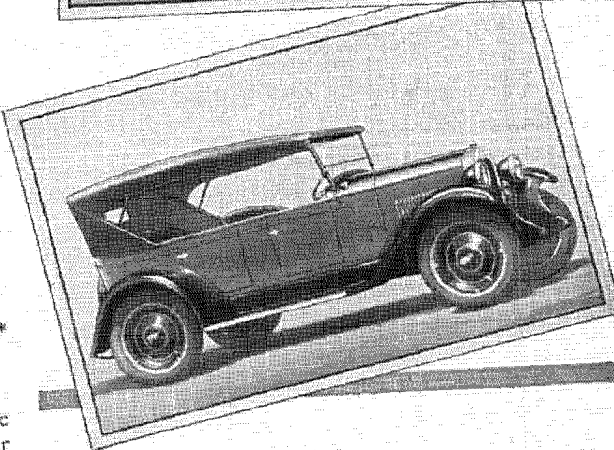
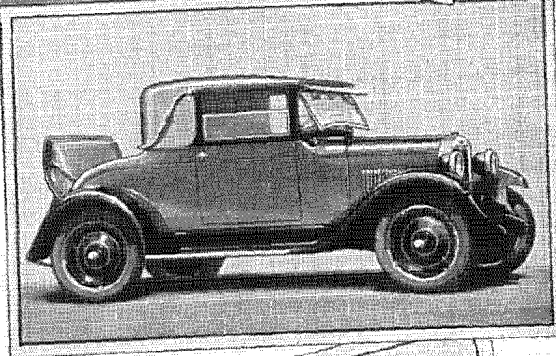
The year 1922 saw more additions to the list of controlled parts companies, the "Superior" replaced the old 490 model, and new assembly plants were opened in Buffalo, New York, and Norwood, Ohio. By 1924 seven complete plants were in operation—at Flint, Tarrytown, St. Louis, Oakland, Buffalo, Janesville, Wisconsin; and



The present Chevrolet plant at Flint, Michigan, showing in the foreground the machine shops and parts assembly units



Four of the new Chevrolet models for 1927. These cars, by reason of their beauty of design and their mechanical excellence, have attracted widespread attention among motorists. Three du Pont products—Duco, Fabrikoid, and Pontop—have been included as standard features of the Chevrolet



Norwood, Ohio, respectively. Distribution was handled through twenty-three "zones," scattered all over the country.

In 1925, the Model K appeared, bearing a Fisher body finished in Duco. The resultant jump in sales sent production over the half-million mark—the biggest year in Chevrolet history up to that time.

The following table, prepared by the Chevrolet Motor Company, shows production figures for each of the fifteen years its cars have been on the market:

Year	Production	Year	Production
1912	2,999	1920	150,619
1913	5,987	1921	77,565
1914	5,005	1922	247,268
1915	13,605	1923	483,274
1916	69,702	1924	309,724
1917	125,881	1925	519,060
1918	97,563	1926	732,147
1919	148,905	1927	1,000,000*

*—Estimated

BETTER CARS EACH YEAR

Needless to say, this remarkable expansion was made possible by the year-by-year improvement in the car itself. It would be difficult indeed to associate the Chevrolet of 1926 with the ungainly model first introduced on Grand River Avenue in 1911. Beauty and refinement of design, pleasing appointments, and a smooth-running, sturdy motor are Chevrolet features that have set a new standard in the low-priced field.

Du Pont products are prominently identified with the later development of Chevrolet. Du Pont Duco, Du Pont Fabrikoid and Du Pont Pontop are three standard materials on the new models. Duco has uncovered a host of

beautiful color effects in addition to providing a durable finish for all kinds of weather. Fabrikoid and Pontop, for upholstery and top covering respectively, while not as prominently displayed as Duco, nevertheless have been chosen by Chevrolet because they are products combining good taste with wearing qualities that have met every test. That these three products are integral parts in an automobile that today is sweeping the country seems to be proof conclusive of their separate merits.

PERMANENT REMINDERS

Useful advertising novelties made of Pyralin are friendly messengers of good will—always welcome and long remembered

By L. B. GILLIE

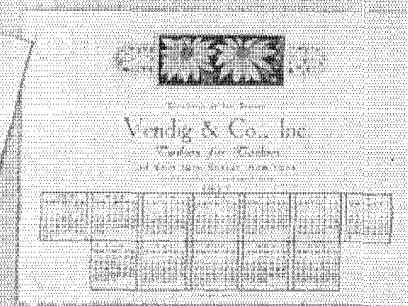
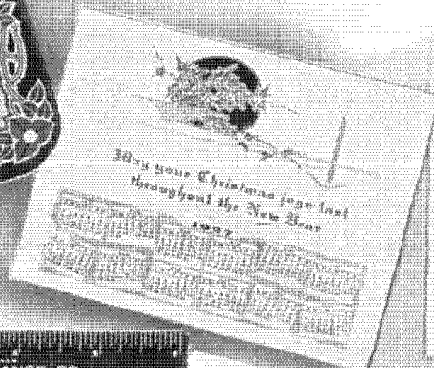
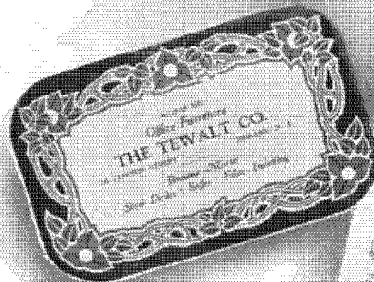
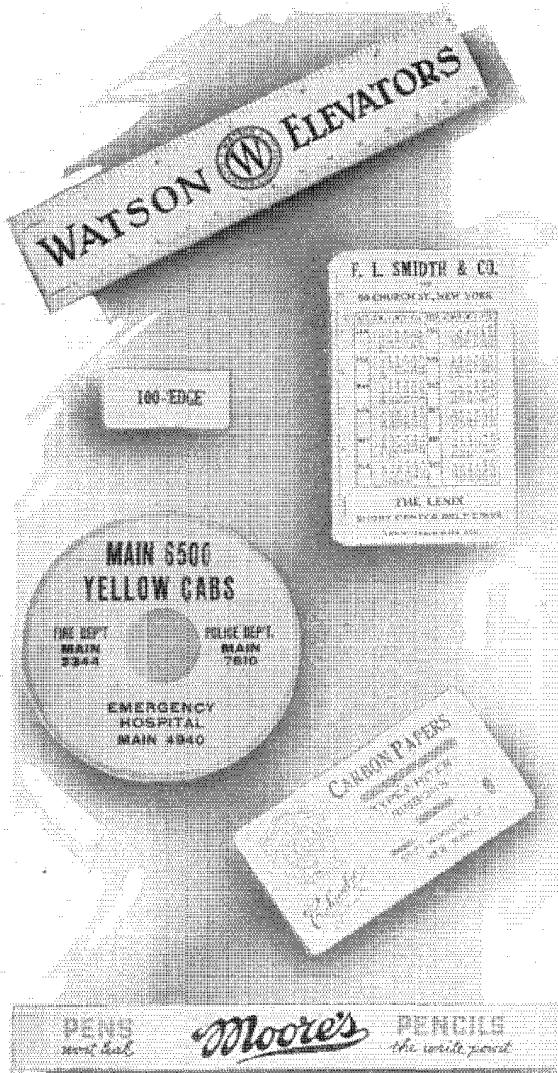
“DOES September 1st come on a Monday? Well, let's see—who has a calendar?”

At countless times and in countless places comes the need for a calendar. This universal desire for compact, permanent pocket calendars has made them very effective advertising mediums. Permanency being a virtue, the makers naturally turned to a permanent material—a pyroxylin plastic such as Pyralin. Today, Pyralin pocket calendars, bearing some firm's advertising imprint, are carried in the pockets of thousands of people.

The same popularity holds true with other advertising novelties such as blotters, rulers, decimal and temperature equivalents and conversion tables, telephone mouth-piece covers, mirrors, erasing shields, paper weights and numerous other popular and useful articles made from this material of many adaptations—Pyralin. In the office, in the factory, at school and in the home, we find them in daily use, flashing their advertising message to the user.

The fact that the novelties are useful and permanently attractive makes recipients extremely reluctant to throw them away, as is the fate of many others of a less substantial character. Because of the proved effectiveness of this type of advertising, a large percentage of the country's leading national advertisers is spending a substantial sum on novelties of this kind.

(Continued on page 22)



Many firms have seen the value of Pyralin novelties as advertising mediums—and are cashing in on the opportunity

HOW IT'S DONE IN LOUISIANA

The business of constructing a quarter-mile ditch through a cypress swamp called for something more than hand labor. That "something" was dynamite

ONE of the latest major improvements in southern Louisiana is the Behrman Highway. This road, named in honor of a late mayor of New Orleans, traverses for a part of its length a hitherto undeveloped section known as Algiers, lying west of the city but included within its limits.

The highway at this point is hemmed in by heavily timbered swamp land and, despite early precautions, seepage from the swamp soon filled the ditches along the roadside and prevented proper drainage. When John J. Mundenger, a state highway department engineer, saw the situation, he recalled a visit made in 1924 to Patterson, Louisiana, where he attended a ditch-blasting demonstration arranged by the du Pont Company. Believing that dynamite would also prove helpful at Algiers, he called on the writer for assistance.

To drain not only the highway itself but also a large tract adjacent to it, it was decided to blast a 1460-foot ditch straight through the jungle to a canal running somewhat parallel to the road. The drained land fronting on the road would thus be rendered desirable either for small farms or residences.

Five men were soon at work clearing a right of way. All trees in a path twenty feet wide and extending the entire length of the proposed ditch line were cut down and sawed into short sections. More than a hundred stumps and scores of logs and branches remained after the lighter underbrush had been removed. Six days were required for this preliminary work.

The next job was to punch the holes. A definite plan, calling for holes spaced 18 inches apart in two long rows, was followed on this project. With a sharp punch-bar, no trouble was encountered in getting them down through the stiff, black soil. In fact, all of them stayed open—some for more than three hours—awaiting the charges.

By W. B. ALFORD

A uniform depth of three feet was specified all along the line.

During the same day, another crew was busy loading du Pont 50 per cent N. G. dynamite. Two sticks were used in each hole, except in stumps, where the charges were varied in proportion to the size of these obstacles. A total of 2,975 pounds of the explosive was used on this job—about a pound and a quarter per lineal foot, excluding

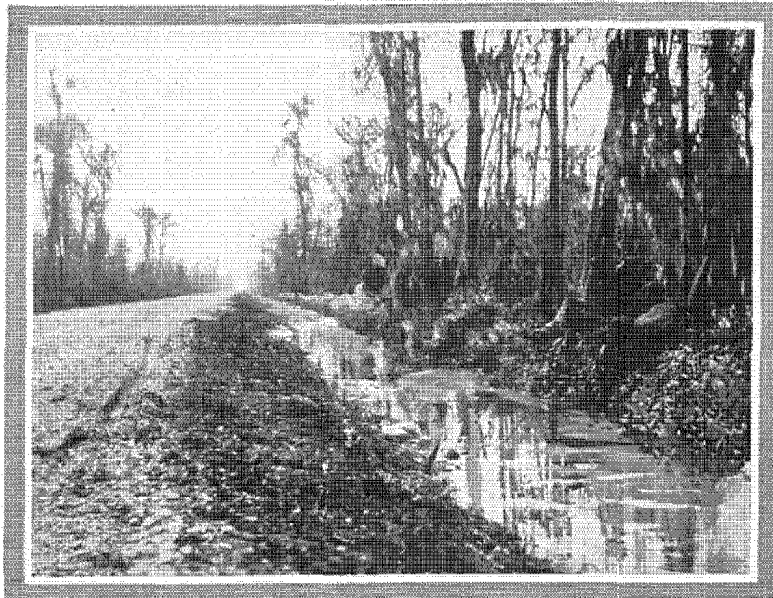
the extra stump loads. The punching and loading operations kept eight men busy from six-thirty in the morning until two in the afternoon on the day of the blast.

An interesting method of priming was used for shooting the Behrman Highway ditch. By means of Cordeau fuse, large stumps were connected direct to the double line of loaded holes at the nearest points in order to insure removal of the stumps simultaneously with the blowing of the ditch. Finally,

the primed charges were connected with a du Pont No. 3 blasting machine with duplex leading wire. Two electric blasting caps were used—one for a fifty-foot test shot and one for the main blast.

The main blast was blown at two o'clock on the afternoon of December 18 last. A few minutes later, water found its way into the ditch. As the pictures on the next pages indicate, the long channel was blown clean and required no further attention. It measures eighteen feet across the top and six feet across the bottom and is five and one-half feet deep.

Approximately 3,000 cubic yards of material were lifted by the blast at a cost of but twenty-four cents a yard. The ditch was completed by dynamite for \$732.40. Had mechanical or hand labor been used, this work would have cost many times that amount. However, du Pont dynamite did the trick, the road was drained, and real estate men are now developing a new addition to New Orleans.



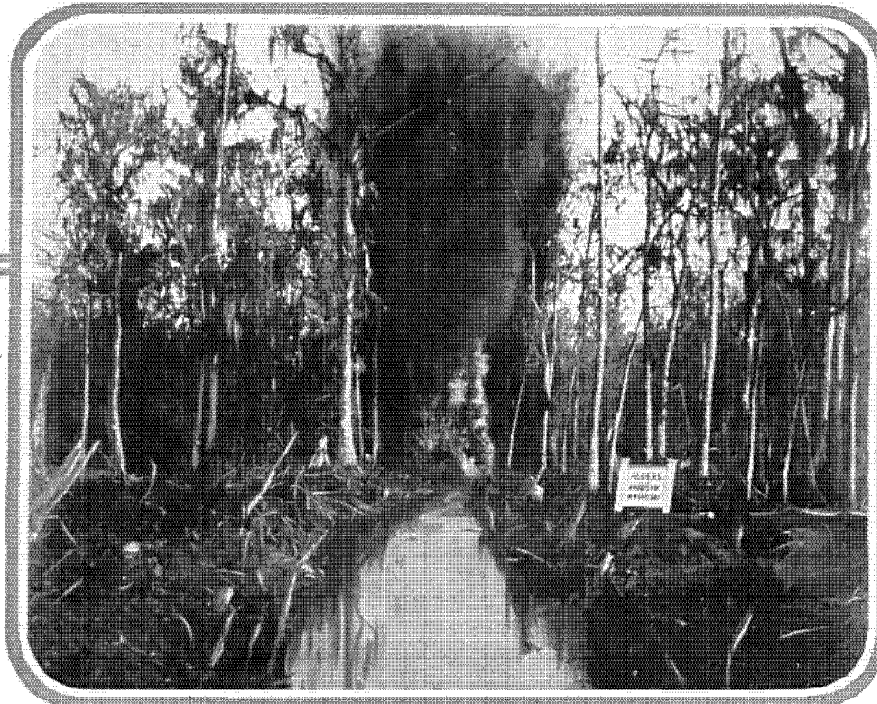
A water-filled ditch along the new Behrman Highway near New Orleans. To remedy this condition, a long drainage channel was blasted through the nearby jungle



The ditch line after all trees had been cut down and the brush taken away. Logs and stumps shown here were lifted clear by the blast



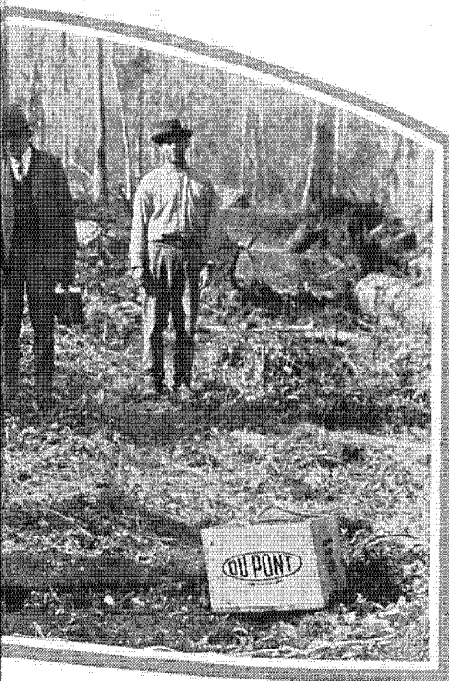
SCENES 4 THE ALGIE



A close-up view of the blast, taken at the instant it was fired. In the foreground, note the results of a fifty-foot test shot

Above—J. B. Castel, a blaster, starting the work of putting down the holes with a special punch bar





ALONG RS DITCH



Loading du Pont dynamite along the right of way. The blaster is using a tamping stick, marked to insure uniform hole depth

Below—Mr. Alford making the final Cordeau connection just before the 1460-foot blast was fired



Water flowed through the new ditch a few moments after the blast. Note the absence of stumps and debris in the channel

THE WORLD BOUND IN FABRIKOID

While a pretty broad statement, it nevertheless applies in fact to the Literary Digest Atlas and Gazetteer, a 1927 "best seller"

"MOTHER, by what ocean and bays is Canada bounded on the north? And which way does the Mackenzie River flow?" "I don't know, dear; get the *Literary Digest Atlas* and see."

How many times have you heard conversations like this one and how many times has this household book settled some momentous question?

Ever-increasing populations, war, the ultra-progressiveness of some nations and general evolution—all have to do with the metamorphoses which the various countries of the world experience. Never a year passes but that numerous changes become necessary in maps and population figures of cities and countries.

To appreciate how vitally interested the American people are in changes and statistics of this kind, one has but to glance at the sales figures of the *Literary Digest 1927 Atlas of the World and Gazetteer*. This year's sales will probably exceed a quarter million copies. Over a half-million copies were sold during the last few years, all proving the fact that people desire to keep up to date on current, educational world data. Is there any reason why it should not be called one of the most popular books of 1927? When a publisher runs 200,000 of a new novel by Harold Bell Wright, Fannie Hurst, or Edna Ferber, he considers his sales extremely satisfactory—a huge success.

You will find the *Literary Digest Atlas* on your leading dentist's table. Children carry it to school or refer to it at night when doing their home work. Sales offices use it to trace inquiries or map out territories, and people in general refer to it when a bit of news appears in a paper relative to "that new province which was recently created by Italy." A thousand-and-one men and women in all walks of life gain both knowledge and enjoyment from reading its pages, and it requires little or no imagination to appreciate why it is one of the most popular

By R. A. APPLEGATE

books of the day. A general summary of just what this new 1927 *Literary Digest Atlas of the World and Gazetteer* contains may be briefly stated as follows:

Sixty pages of new maps of foreign countries, beautifully printed in four colors; sixty-four pages of new maps

of the United States and Canada, printed in three colors; fifty-nine pages of indexed and new descriptive text matter; a large colored map of the world; and another of North America.

A full-page map showing the airplane and dirigible routes taken to the North Pole by Byrd and Amundsen.

A two-page map showing the principal automobile trails of the United States.

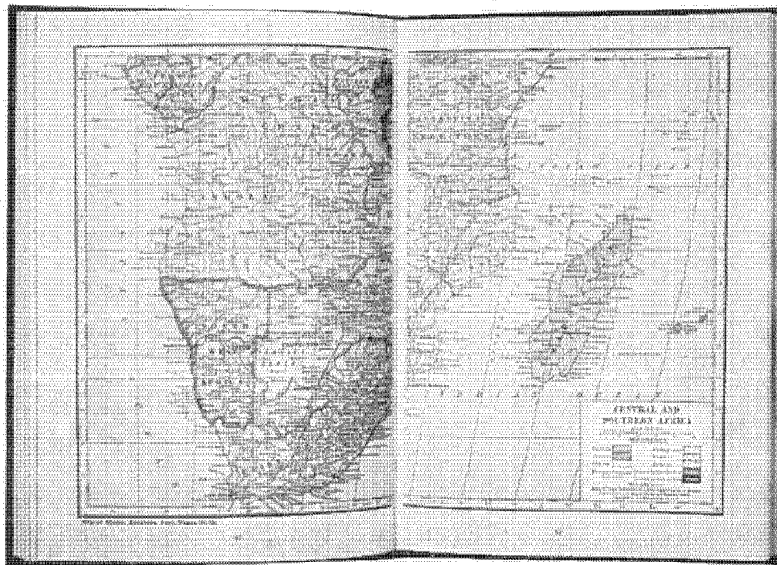
A two-page table of air-line distances in statute miles between the principal cities of the United States.

An entire page giving the origin of the names of the states and territories of the United States of America.

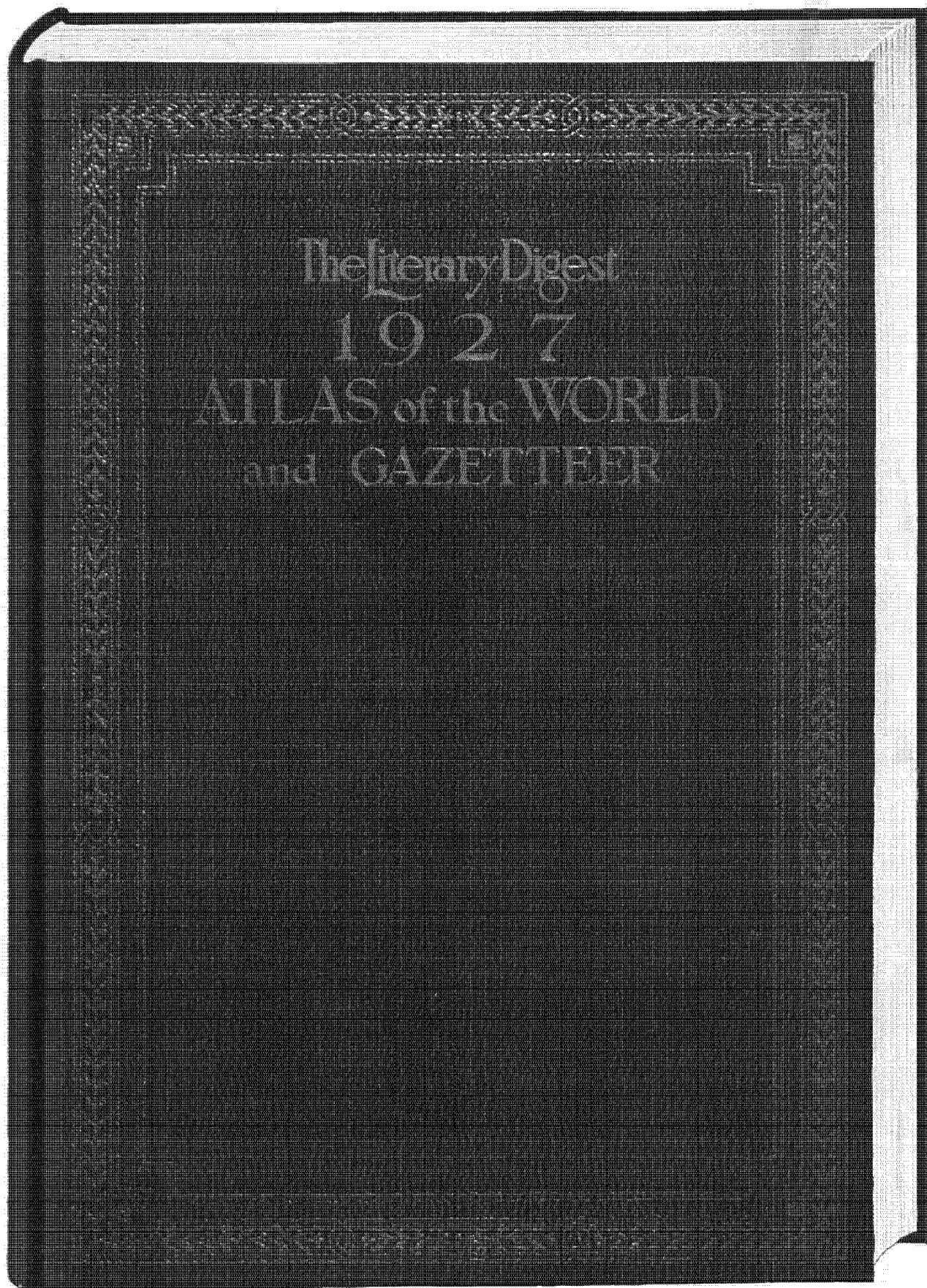
The latest census of the United States and of other civilized countries; latest information as to principal countries; cities and towns; rivers; climates; governments; peoples; religions; products; details of manufactures; means of communication, as transportation, telegraph, telephone lines, cables; characteristics of chief cities, and important institutions.

As has been the case for a number of years, the *Literary Digest 1927 Atlas of the World and Gazetteer* is stamped in gold and bound in a beautiful, rich grain of genuine Du Pont Fabrikoid in Royal Scarlet. (See insert for reproduction.) Fabrikoid has been chosen again this year because it is the most durable and practical material known for bookbinding. It is washable, waterproof, scuff-proof, wear-resisting and is immune to changes in climatic conditions as well as to attacks of mold, parasites or insects.

If you are interested in this beautiful Atlas, write to the *Literary Digest*, 354 Fourth Avenue, New York.



A double-page map in the 1927 Atlas and Gazetteer. These maps are carefully prepared and arranged for handy reference



Shows in its exact size the Deluxe Edition of The Literary Digest 1927 Atlas of the World and Gazetteer in the beautiful Royal Scarlet Semi-Flexible Fabrioid Binding. The lettering and ornamentation are in gold. Fabrioid is indistinguishable in appearance from the richest leather but in many particulars it excels it as a binding for books. It resists wear and retains its beauty for years. It is waterproof, grease-proof, non-staining, non-fading. It is practically scuff-proof and resists hard usage to a remarkable degree. It is not attacked by mildew or mold, parasites or insects. Fabrioid has, indeed, the feel, the finish and dignity and deluxe character which the booklover admires.

FASHION'S LATEST VOGUE

The alligator motif, embodied in a new Fairfield Fabric, makes its bow in the realm of rainy-day apparel

By F. W. HOTCHKISS

ONE of Dame Fashion's most interesting whims is reflected in the present tremendous vogue for reptilian patterns in women's wear. Many designers of shoes, bags, purses and trimmings have turned to these patterns to add smart touches to the present-day feminine wardrobe.

Of all reptilian grains, none has been received with more favor than alligator. Now it has invaded a field heretofore dominated by plainer and more somber effects; this new use is in the creation of modish raincoats through the medium of the new alligator designs in du Pont Fairfield Fabric, developed by the Rubber Products Section of the du Pont Company.

This material is made by treating selected fabrics with a high-grade rubber coating. The surface is then embossed in the alligator grain and toned with contrasting colors, and the result is a pleasing and unusual design. Du Pont Fairfield Fabric in alligator design is the first embossed rubber cloth perfected for raincoats.

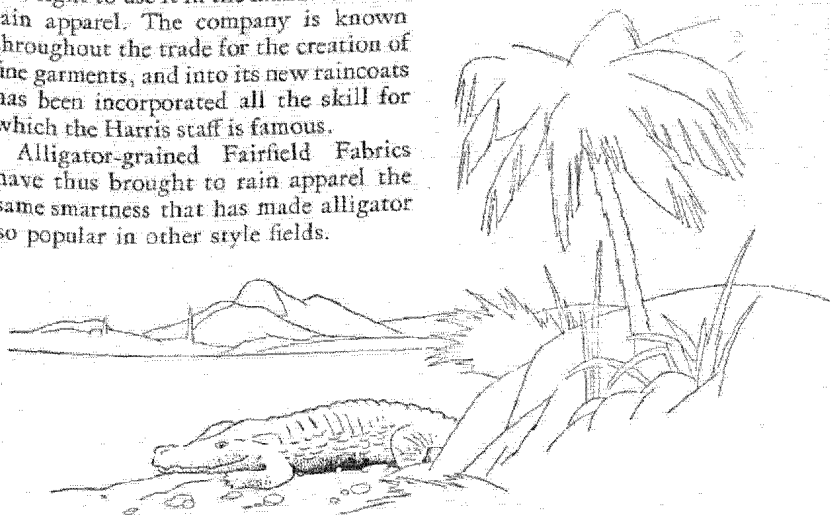
Garments made from this fabric are available in men's, women's and children's models and are supplied in exquisite shades of blue, green, red, brown, tan, and gray. In all of them the delicate tracery of the grain harmonizes perfectly with the base colors. The material, of course, is absolutely waterproof. To complete the ensemble for women, attractive rainy-day hats are made to match any chosen coat.

This new fabric has been adopted by the Harris Raincoat Company, 525 Seventh Avenue, New York City, as its leader for 1927, with the sole right to use it in the manufacture of rain apparel. The company is known throughout the trade for the creation of fine garments, and into its new raincoats has been incorporated all the skill for which the Harris staff is famous.

Alligator-grained Fairfield Fabrics have thus brought to rain apparel the same smartness that has made alligator so popular in other style fields.



A stylish rainy-day garment made from du Pont Fairfield Fabric in the popular alligator design



The DU PONT MAGAZINE

Published and copyrighted by
E. I. DU PONT DE NEMOURS & COMPANY, Inc.
WILMINGTON, DELAWARE

Subscription, \$1.00 the year
E. R. MANCHESTER, Editor

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Vol. XXI

APRIL, 1927

No. 4

AN EXCELLENT RECORD

THE annual report of the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles for 1926, recently published, points out that millions of tons of explosives classed as "dangerous" were transported over American and Canadian railroads last year without the loss of a single life, and with property losses from fires and explosions amounting to only \$46,011.

Two accidents accounted for \$25,000 of loss, and both were fires following derailments. One car of T. N. T. simply burned. Another car of black powder exploded when a fire reached it. Neither case was attributed to violations of the regulations, and both were classed as unavoidable. The remaining \$21,011 of loss was principally divided among two rather serious explosions of toy torpedoes and a roughly-handled shipment of railway torpedoes. The sixteen other cases were minor explosions of toy torpedoes, causing but little damage.

Considering the large tonnage of explosives shipped last year, it is gratifying to note that dynamite was transported without any loss from fires and explosions.

THE EXPLOSIVES BUSINESS IN REVIEW

(Continued from page 1)

columns show percentage totals of explosives sold in the United States for use in coal mining, metal mining and "all other purposes." This last-named classification is necessarily broad, because prior to 1925 even approximate figures were not available in sufficient detail to make a more specific grouping possible. It is, however, safe to assume that at least 45 per cent is used for quarrying and non-metallic mining, and 25 per cent for construction.

You will note that the coal-mining industry consumed a relatively large percentage of the total for 1921, which was a particularly poor year. This reflects the inactivity of other industries, especially metal mining, which registered a decline in explosive purchases of nearly 45 per cent. On the other hand, the decrease in explosives sales to the coal trade in 1925 was due to the anthracite strike, when other industries were operating full time.

Coal mining, you will observe, has been subdivided into two classes—dynamite and permissibles—the respective figures showing percentages of the total for that industry alone. Dynamite, during the eight-year period, shows a decrease of about 12 per cent, with a corresponding increase in permissibles. Incidentally, sales of permissible explosives have increased from 2,000,000 pounds in 1907 to nearly 68,000,000 pounds in 1926. Over 96 per cent of this amount was used in coal mining.

SURPLUS WAR MATERIAL

It should be remembered that large quantities of picric acid, T. N. T., smokeless powder, Sodarol—a mixture of T. N. T. and nitrate of soda, and Pyrotol—a mixture of smokeless powder, nitrate of soda and a sensitizer, have been released each year since early in 1920. These products have been distributed by the Bureau of Public Roads, U. S. Department of Agriculture. They have been used on government and state-aid road-building projects, and by other governmental agencies, as well as by farmers for land-clearing purposes. Just what volume has been disposed of cannot be stated definitely, but sales during the past three years have averaged 17,825,000 pounds per year. The chart does not reflect this distribution.

OTHER CONSIDERATIONS

Paradoxical as it may seem, while the sales volume of high explosives has increased markedly during the past few years, developments within and without the industry have tended to reduce explosives sales during the period under consideration. Three influences have been potent.

First, intensive chemical research has been rewarded by discoveries that have made possible manufacturing several explosives of lower density than heretofore, the practical advantage of which is a larger stick count to the case. This is especially true of permissible powders. Those of low density have in many instances displaced the higher density powders after competitive tests in shooting stick for stick. In many cases customers' savings have amounted to at least 20 per cent, because of the increased stick count. With more sticks per pound, the same amount of work has been accomplished with fewer pounds.

Second, coal-cutting machines, coal-loading machines and other heavy-duty machinery in other lines of mining and quarrying operations, such as huge steam shovels, crushers and the like, have come into more general use in recent years and have operated to reduce appreciably the volume of explosives required for industrial work.

Third, in recent years explosives have been more carefully chosen for adaptability to work needs than heretofore, with resultant economies both in purchasing and use. Technical experts and explosives salesmen have rendered valuable service by demonstrating to operators how to save money by choosing the proper kinds and grades of explosives, and how to use them most economically. As a result many wasteful practices have been corrected with a saving to consumers of very large sums of money. This work has tended to reduce the volume of explosives sold, but even so, the industry has forged ahead.

CRUSADING WITH DUCO

A woman longed for brightness and color in her office. She tells here, in her own words, how she attained them with this wonderful finishing material.

FOR ten years I have done my writing for *Hardware Dealers' Magazine* and other publications in a roomy old office about thirty feet square. It was fitted up with dark oak wood filing cabinets, a big roll-top desk which was a discard from hubby's show-rooms, and a patchwork of chairs, large, small and assorted styles. Yes, it was comfortable, but if ever there was a room that seemed heavy, dark and dingy, it was my office! Perhaps I felt that way about it because I spent about six hours a day in it, more than I did in my parlor or any room in the house. For years I had been craving color, light and decoration in my work surroundings. Half a dozen times I had decided to paint the furniture, but when I faced the job of tackling those dark files and thought of the work it would mean to scrape each of them down with sandpaper before I could apply a new finish, I stalled. Not even the most enticing paint catalog or color card could win me to the job.

"But last summer I began to hear a lot about the newly perfected 'brushing lacquer,' the remarkable finish which could be applied directly over old paint, varnish or stain, and which, still more magically, 'dried while you wait.' Indeed, it sounded too good to be true. But I determined to experiment with it on the office. I went and bought two cans, one, lawn green, and the other, delft blue. Then I started in on those scratched and dingy files. I filled the brush up full, drew it swiftly across the front of each drawer and, Oh boy, what a miraculous change! The dingy grained oak disappeared, and in its place was a satin-smooth enameled surface, dry before I finished the handle of the drawer. When I saw such a rapid and beautiful change, I couldn't work fast enough. I pulled out drawer after drawer, and don't forget that there are twenty of them, loaded with heavy papers. Yes, boys, will you believe that I finished those twenty drawers, fronts, bases, sides, and top, in a single day?

AN OFFICE TRANSFORMED

"From that evening I worked with the passion of a gold-digger striking his first pay dirt. I'd tackle the dingy old desk, of course! Its top was ink-scarred from many an editorial battle with the pen, and tattoo pen-knife scratchings disfigured its whole surface. Moving my can of Duco to a convenient stool, I gave the entire desk

By CHRISTINE FREDERICK

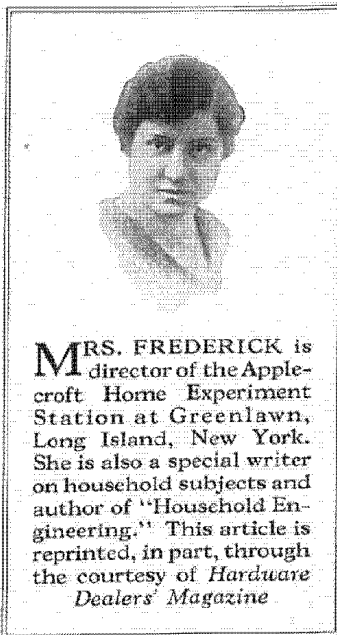
top a quick instant coat of jade Duco. Marvelous—not an inkstain remained, not a scratch was left—the entire surface looked like a restful green blotter. A few more quick swabs with my brush and the old desk looked like a million dollars. Next came the chairs. Each and every one was treated to a lacquer bath, which caused them to assume the appearance of a well-matched painted suite. The waste basket then caught my eye. I had been looking at it for five years, knowing that its bronze black slats were the height of ugliness. More green slapped on, it dried as I painted it, upside down over my left hand, and was used to hold waste papers again within half an hour of being painted!

"Then I turned to the small accessories. If this were to be a really truly 'new' office, I would not let a single detail escape my brush. There was the office mirror, with its dingy oak frame, and the office wash bowl with its hideous purple porcelain underside. They too must go! My eye caught the brown letter files, and the odd glass and metal necessities of any average desk. Would Duco do on metal? On glass? I would see. So I experimented on the black tin cashbox, the woven wire letter baskets, the fiber backs of books, the china paste pot. And after just about

an hour's work, my brush resulted in a complete-matching jade enamel desk set!

"But there is one more item which must be mentioned in my office transformation. And that is the rugs. What, lacquer them? Yes, because they were the familiar grass or rush rugs with a colored border now much faded. Why couldn't they be 'touched up' with a few dabs? And that is just what I did! Or, rather, what I taught my small eight-year-old girl to do, to give the edges of all the grass rugs a nice neat border of green. New rugs for old! I know I do seem super-enthusiastic. But if you boys have ever waited ten years for something and then finally given to yourself a gift which entirely altered your daily surroundings, well, perhaps you could imagine how I feel toward the Christmas present I gave myself. My office now looks like the work of a smart and expensive Madison Avenue, New York City, interior decorator—but I did the work myself!

"Next I tackled the kitchen. When I first became interested in brushing lacquers, I hadn't thought that our



MRS. FREDERICK is director of the Applecroft Home Experiment Station at Greenlawn, Long Island, New York. She is also a special writer on household subjects and author of "Household Engineering." This article is reprinted, in part, through the courtesy of *Hardware Dealers' Magazine*

nationally known efficiency kitchen, where we test and display household devices, really required a new coat of paint. But when I saw the marvelous results in my office, I knew at once that I wanted a new finish on the kitchen as well. So, since ceilings seemed to be a job for a real he-painter, I arranged to have painters do the work. I chose pale cream for the walls, and a light apple, or lettuce green, for all the trim. But even when I had given the order I felt like backing out. Is there a woman, or man either, who doesn't know what it means to 'paint the kitchen?' It means that a hundred small articles and dishes have to be moved, that the stove can't be used, and that the family will eat cold ham and canned beans off the side of the dining table for about a week until the paint has had time to dry.

"But this time it was different. The two painters arrived late Tuesday, said they would start work early Wednesday, and that they wouldn't have to move a thing. Their first step was to wipe down every inch of the surface with a cloth dipped in gasoline. This removes all grease and soil, insuring a cleansed surface for the new finish. It took two hours to wipe down the kitchen. By noon, another two hours later, they had all of the ceiling painted and most of the walls. By five of the same night, the entire kitchen was completely painted, and yet the Efficiency Kitchen has three doors, seven casement windows, four chairs and a large table.

"I may say in passing that our cook is a lady of color and not always too good natured in the face of domestic upheavals such as painting. I had been afraid that Delia might annex a black grouch with two painters swabbing around in her 19 by 12 kingdom. But it happened that when she saw them using black Duco to paint off the base-board, she said to them: 'Kin you-all use dat stuff on a suit-case to mak it mo' shiny?' The painters good naturedly said that if she trotted out her suit-case they would make it as shiny as her own face. At which Delia appeared with three much-battered suit-cases which had long seen the best of their paper 'near leather' days. And blackened

those valises, they did!—making them indeed fair equals of likelier luggage, and as resplendent as a newly blacked stove.

OLD ROOMS WITH NEW CHARM

"When I looked around at my office, or worked happily in my gay kitchen, I knew that the Christmas present I had given myself was the best I ever received. But the success and daily dividend they paid in cheer and charm only made me more determined to carry out another secret plan I had been contemplating for a long time.

"I had wanted to do over the furnishings of the three rooms and bath suite or annex which my household and office help occupy. Since the girls preferred cots to large beds, I had several years previously fitted up each room with an army cot, as well as golden oak chiffonier, small chair and center table. 'Neat but not gaudy' would have exactly expressed those rooms. Now I saw those rooms in my mind's eye as they would be painted.

"And so, mixing up another pleasing shade of old blue, and armed with a little gas, and my trusty brush, I started to do these three rooms and bath.

About 2 P. M. of a cool summer afternoon, I began on the first bedroom. By five of the same evening, the bed, bureau, chair and table were a symphony in blue lacquer. And the three remaining rooms consumed just three more afternoons. I should say that they gained 20 per cent in spaciousness, and 50 per cent in charm by being blue enamel instead of golden oak.

"We have become accustomed to, and even demand, the American ideal of a glistening, china-white glassiness in the bathroom. But why? Is there any twenty-fifth amendment that prohibits color in the bathroom background? Personally, I have always felt that the dead, all-white, operating-type bathroom is too chilly and far too uninteresting. The sea or any water is blue, green, gray, or gold. Why not bring warmth and color into the morning shower? So again, armed with my can of lacquer, I began on the bathroom fixtures. The mirror frame and medicine cabinet, the glass-holder, the towel-racks, why



A homemade tea wagon which Mrs. Frederick finished with Duco to match her dishes. It makes an attractive carrier for good things to eat.

not colored instead of white? As soon as each piece was treated with my brush, a feeling of individuality, brightness and glow pervaded the bathroom. Then I set to work on the children's mugs, the faucets, even the soap-dish and wire sponge basket. Laugh if you like. But the bathroom, which had been previously dull and even clammy, became gay and cheerful. Yet it took only a pint of lacquer to make the change.

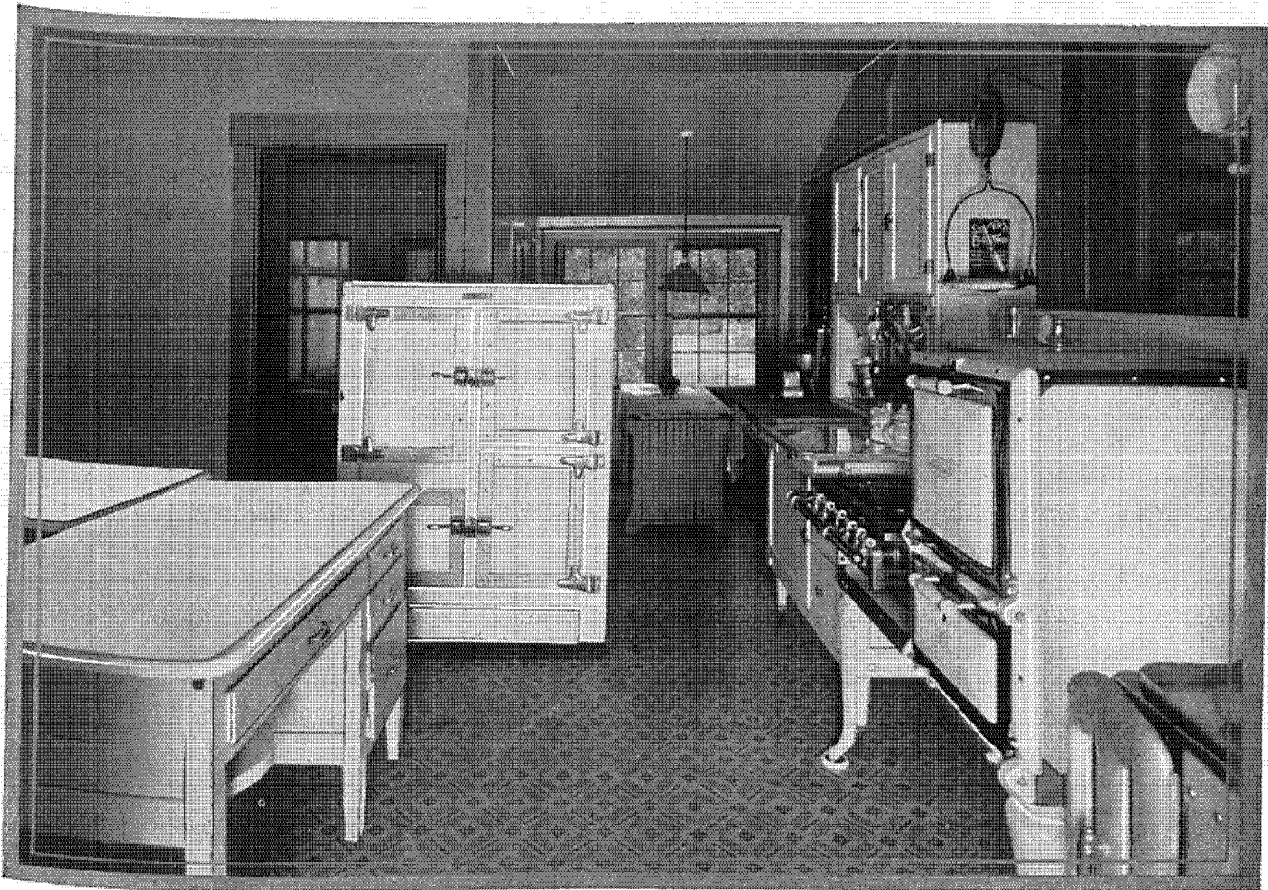
"By this time, when I was almost daily punching the clock like a regular painter, Friend Husband swore that he would not come home for fear that he too would be finished with Duco! And indeed it did seem as if there was nothing in the house which escaped some touch of the new finish.

CONCERNING UNFINISHED FURNITURE

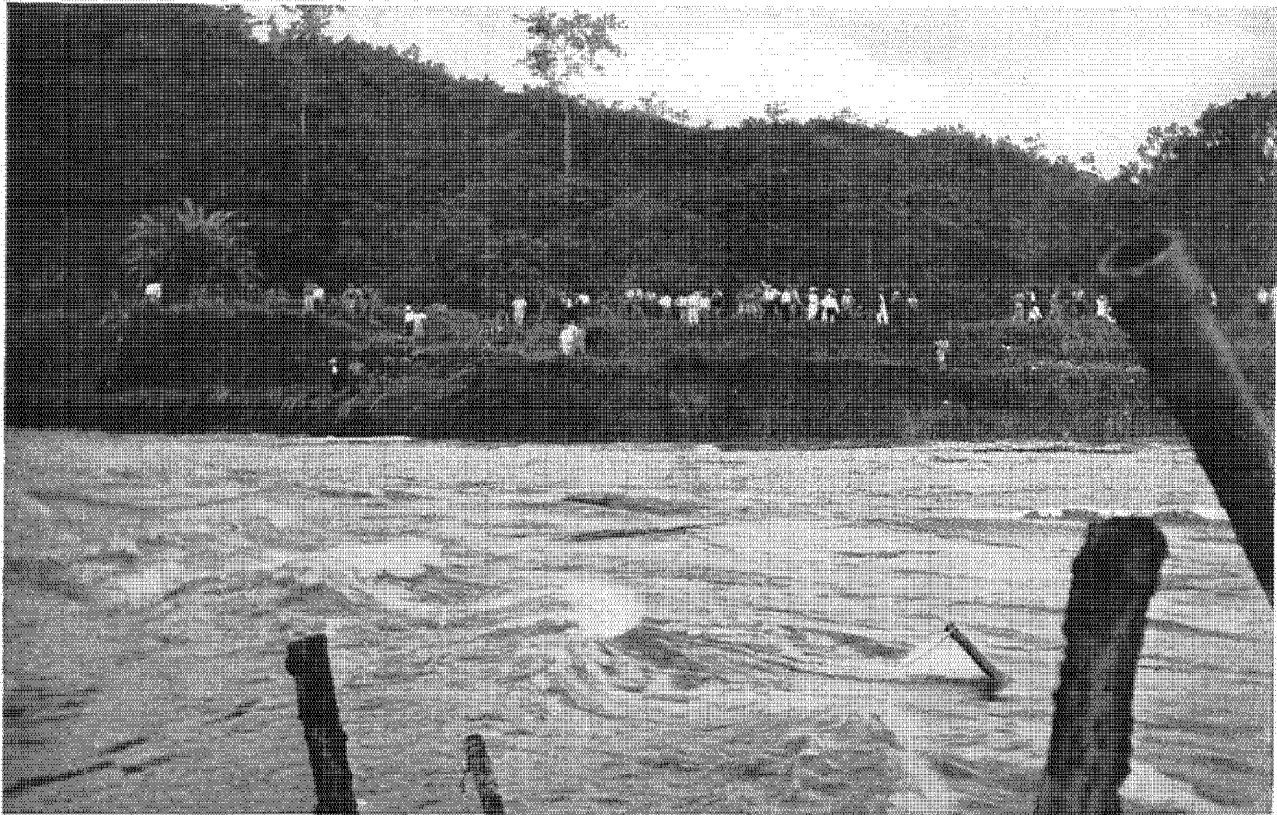
"After my intensive experience with this magic brushing lacquer, one of my conclusions was that many a homeowner can investigate departments of unfinished furniture, with much profit. Sometimes such pieces are kept in the basement of a house-furnishing store, or there are special shops which carry such 'raw' pieces. I found that chairs of good construction and style could be bought for as low as \$3.50 or \$5, unfinished. A duplicate, in enamel finish, would cost from \$12 to \$15 on the sales floor. Or,

again, a small drop-leaf breakfast table could be purchased for about \$8, in unfinished wood, which would bring nearly \$30 if painted. Here the possibilities of Duco can easily be seen. For any such unfinished pieces will readily and rapidly acquire the perfect satin finish of high-grade enameled wood with one or two coats of lacquer. It might be an idea for some hardware dealer to purchase such an unfinished breakfast set and chairs, and make a window display of them, showing them half-painted in an attractive shade of lacquer. If a bill of costs of the pieces and the paint were clearly shown, many a prospective purchaser of the usual finished suite would be interested.

"I must close this story of the present I gave myself by saying that I was so pleased at my own work that I was brave enough to invite several of the leading men in the Duco organization to come over and see what I had done. Just to put the last touch to my luncheon, I planned to arrange a flower and candlestick centerpiece. And I bought them of cheap glass at the 10-cent store, and then gave them a coat of Duco! At each place I laid an ash tray, also Duco-painted. And those clever men looked right at the candlesticks and used the ash trays and thought that all the pieces were regular fire-kilned china!"



The interior of the kitchen at the Greenlawn testing laboratories after it had been completely done over with Duco



A few moments after the blast: water from Gatun Lake rushing down into Culebra Cut through the gap in the dike.

WHEN GAMBOA DIKE WAS BLOWN

The cover illustration this month serves to recall the great interest both in this country and abroad which was attached to the big blast in Panama

AT exactly two o'clock on the afternoon of October 10, 1913, President Wilson stepped to a desk in the White House, pressed a button and turned to a group of officials.

"Well, that's all there is to it," he remarked with a smile, "Gamboa is 'busted'."

The story of the Panama Canal has been told many times and is no doubt familiar to everyone. However, in commenting upon our cover illustration this month, a review of the blast at Gamboa fourteen years ago may prove interesting not only because of the bearing it had upon the canal, but also because of the international interest attached to the incident.

Gamboa Dike was built in 1908, near the little town of Gamboa, at a point where Gatun Lake narrows down into Culebra Cut. It was erected to keep the waters of the Chagres River, which forms Gatun Lake, out of the nine-mile cut as long as it was necessary to carry on steam shovel excavations in that troublesome sector.

Twenty-four miles to the north lay Gatun Dam, shutting

off the lake from escape to the sea. Here, then, were the two great barriers in the canal: one a dam, the other a low ridge of earth and rock. With Gamboa Dike gone, water for the first time gained entrance to the canal bed from Gatun Locks on the north to Pedro Miguel Locks on the south—a distance of thirty-three miles, or about two-thirds of the total length of the waterway. The importance of the dike was principally that of location. It afforded complete protection to operations in Culebra Cut, the key to the entire undertaking.

The work of drilling holes and planting dynamite in the embankment started in September, 1913. Foreseeing the danger in allowing a full head of dammed-up water to rush into the narrow cut, the lake level at Gamboa had been reduced little by little through sluices, so that on the day of the big blast there remained a difference of but six feet between the water levels below and above the barrier.

To get an eye-witness account of events of the 10th, let us turn to parts of a despatch from the correspondent of the New York *Tribune*, one of the many newspapers

represented at the blast. "The spectators were early on the ground," he writes. "They lined the banks of the cut, well outside the danger zone, occupying the slopes of nearby hills, tops of cars and every available vantage point. As the hour approached when President Wilson . . . was to press the button at Washington, a hush of expectancy fell over all.

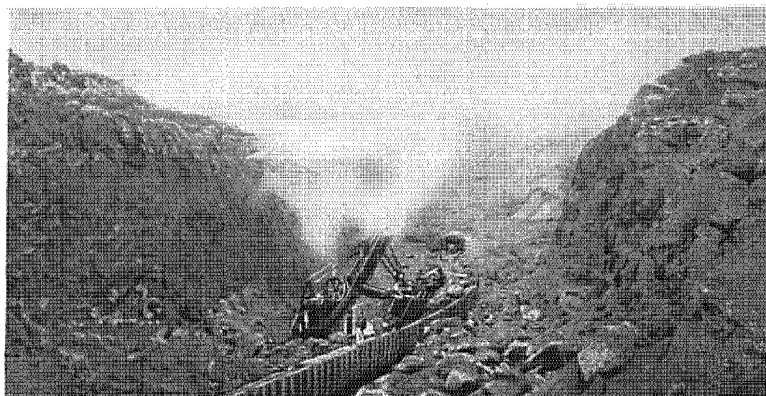
"Then suddenly came a muffled roar of the discharge of 1,600 pounds of dynamite which sent a shower of rocks and water high into the air, spreading out as it went upward, the whole heavily veiled in a cloud of smoke . . . A section of the dike fifty feet wide was lifted bodily from its bed . . . small stones rattled a noisy accompaniment on the tin roofs of nearby buildings, but none flew outside the danger zone . . . It was considered by experts as a remarkably clean explosion . . . The first boat to enter the cut from the lake was a native canoe, manned by Americans. Shortly afterward, three launches successfully negotiated the rapid waters over the gap . . . As water began to pour through the rent made by the explosion, whistles were tied down and the crowd sent up a great cheer."

The *Tribune's* correspondent added that Major Goethals, the engineer in charge of canal construction, occupied a post well out in front of the main body of spectators. He stood alone and motionless, seemingly wrapped in thought. Destruction of the dike probably meant to him the end of a long, hard struggle, involving many hardships and discouragements.

While official Washington remained calm, news of the blast at Gamboa created great enthusiasm in other

sections of the country, particularly along the Pacific Coast where impromptu parades and mass meetings were held. At the American Luncheon Club in London, members and their guests drank a "Panama toast" at the hour of the blast. The blowing up of Gamboa Dike by no means

marked the end of work in the canal; it did, however, bring to a close the dry excavation work in the central division, of which Culebra Cut was the dominant feature. From October, 1913, on through the final stages of the undertaking, dredges superseded dynamite and steam shovels, which up to that time had been the most valuable tools in the hands of



A bit of rough work in Culebra Cut: a steam shovel digging out earth and rock which had been previously loosened with dynamite

the canal builders. An enormous quantity of explosives and blasting supplies was required for the rough work in the canal. During the years from 1905 to 1912, the du Pont Company alone supplied 33,000,000 pounds of explosives, 3,570,000 electric blasting caps, 2,800,000 blasting caps, 4,200,000 feet of fuse and 230 blasting machines.

The severe conditions imposed upon explosives during this construction work were helpful to the manufacturers not only from the viewpoint of improving the keeping qualities of explosives, but also in respect to blasting efficiency, and contributed much to the tremendous forward strides that have been made by the du Pont Company in explosives manufacture during the past fifteen years.



A trainload of spectators arriving on the scene of the Gamboa blast before it was fired. A section of the dike may be seen at the extreme left of the picture

THE PYRALIN SPRING SALE

Some new combination toilettware sets, embodying the popular Mayflower pattern, will be featured early next month

MAYFLOWER Pyralin, the largest selling pattern in the toilettware field during the past year, will be featured during a nationally advertised special Pyralin sale to be held May 6 to May 14 inclusive, according to a recent announcement made by sales executives of the Du Pont Viscoloid Company.

In order to bring this popular design to the attention of an even greater number of purchasers, four special Mayflower sets will be offered them for the spring sale at substantially reduced prices so that they may capitalize on the remarkable popularity which the new pattern is enjoying.

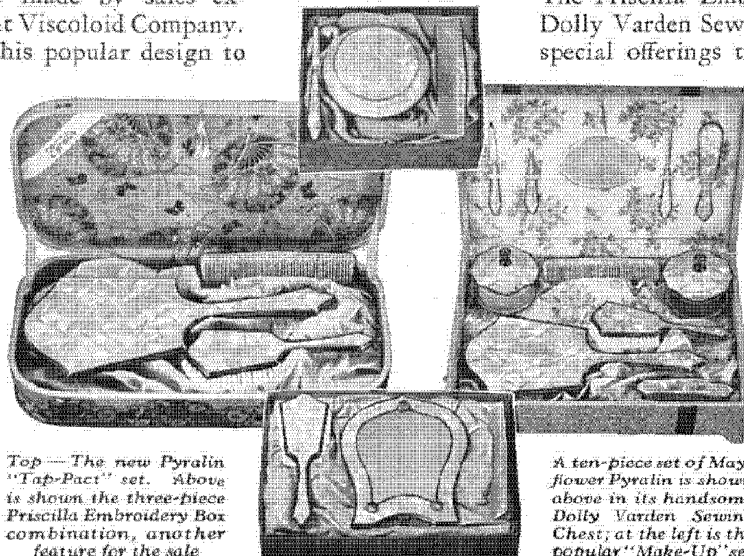
The new three-piece "Tap-Pact" set will be introduced for the first time during the sale next month. Its feature is a patented dresser compact which releases just the right amount of powder with each tap of Milady's finger. The set also includes a comb and nail file and is attractively boxed. The Pyralin "Make-Up" set, another special combination,

includes, in addition to a brush and comb, a new easel mirror which permits close inspection of the face, at the same time allowing the free use of both hands. This set is exceedingly popular with stage and screen stars.

The Priscilla Embroidery Box set and the Dolly Varden Sewing Chest set complete the special offerings to merchants for this sale.

The former consists of a Pyralin three-piece set—brush, comb and mirror—all placed in a beautiful embroidery box, lined with figured sateen and fitted with useful accessories. The Dolly Varden is a ten-piece Pyralin set fitted in a roomy sewing cabinet lined with padded satin instead of in the usual gift box, and, like the Priscilla, really combines two worth-while gifts for the price of one.

All four of the combination sets, briefly described here, may be had in a variety of the popular pearl colors. They will be prominently displayed in well-known department stores and shops throughout the country during the special sale next month.



Top—The new Pyralin "Tap-Pact" set. Above is shown the three-piece Priscilla Embroidery Box combination, another feature for the sale

A ten-piece set of Mayflower Pyralin is shown above in its handsome Dolly Varden Sewing Chest; at the left is the popular "Make-Up" set

PERMANENT REMINDERS

(Continued from page 16)

One interesting indication of the growth of advertising novelties was the formation last year of a large corporation known as the Short & Roehm Company, of 372 Orange Street, Newark, New Jersey. This company is headed by two men who are leading authorities in this field: J. B. Short, for many years sales manager of one of the largest firms in the business, and Richard Roehm, production engineer for the past thirty years and the pioneer in the field of lithographing of pyroxylin plastics in this country.

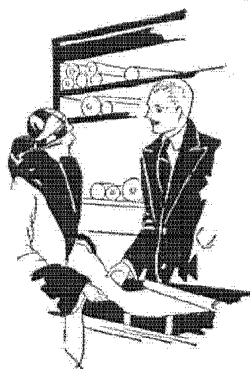
This company, with years of experience back of its members, decided to concentrate on Pyralin for the various articles which it plans to produce. This decision was made after mature consideration; first, because Pyralin

stock met the exacting requirements satisfactorily; second, because the Du Pont Viscoloid Company staff of industrial engineers is available for consultation in solving special problems; third, because the Du Pont Viscoloid Company has two large plants to assure dependable service; fourth, because of the unusual sales cooperation afforded through the opportunity to present the Pyralin-made articles at the Du Pont Products Exhibit on the Boardwalk at Atlantic City, which is visited each year by thousands of people from all over the country.

The Short & Roehm Company will be very glad to furnish samples to any concerns who are planning to produce advertising novelties of any kind. Interested readers can obtain these upon request.

TONTINE IN "THE SMOKY CITY"

One of Pittsburgh's leading stores maintains a window shade department that is profiting by some excellent sales promotion work



THE nationally-known store of Kaufman & Baer in Pittsburgh has for years stocked and sold Tontine window shades. The firm realizes that in so doing, it is providing the type of high-grade merchandise expected in a store of such standing.

How Kaufman & Baer decided on Tontine as the best shade material they could handle in smoke-filled Pittsburgh, and how they emphasize its

waterproof, washable and durable qualities in novel sales promotion plans is told in the following article, reprinted from the Home Furnishings Section of the *Dry Goods Economist* of January 8, 1927.

"If you are doing business in a town or city where the smoke problem has always to be contended with, you know what a difficult thing it is to build up a satisfied trade in window shades. And you may also find it interesting to know that in spite of the difficult situation which such a smoky town as Pittsburgh presents to the window shade retailer, Kaufman & Baer has built up such a large trade in this line that it can rightly claim a place among the leading retailers of window shades in this country. Mr. M. Herwitt, the shade buyer at this store, has been in the shade business for about twenty-five years. During the long time he has been connected with Kaufman & Baer's, he has learned from hard experience that the only way to build up a lasting window shade business in a smoky town is through handling high-quality merchandise which will stand up under extraordinary wear.

"So, about thirteen years ago, when he took charge of this department he saw to it that he stocked the right kind of merchandise and then he sold the quality idea to his trade.

"He carried home to the housewives of Pittsburgh that nothing rots a window shade quicker than the combined action of sunlight and the various chemicals and acids contained in the smoke that pours

out of the blast furnaces and other manufacturing plants of Pittsburgh, to say nothing of the chemical action of soap and water whenever a shade has to be cleaned.

"He knew, of course, that the average housewife cannot afford to change her shades very often and that in cases where the landlord furnished the shades in a rented house, the shades would have to stay there for months and even years to come, whether they failed in the meanwhile or not. This gave him the chance to argue that it is not the first cost that counts but the upkeep, and that the greater economy would lie in buying good shades.

"After stocking a quality of shades that was especially fitted to Pittsburgh conditions, he hit upon the novel idea of sending through the mail samples of this shade cloth to a large list of possible shade users. The first mailing list was composed of the charge customers of the store, but in addition to these he shortly thereafter sent out a few hundred additional letters to other names.

"He backed up this promotion work with some attractive displays in his department. The shades were hung in the same manner as they would appear in a home and around them he used a good-looking mahogany frame as a background. He illuminated this display with electric lamps placed about twelve feet apart.

"Immediately in front of this display he put six tables partitioned into bins for new shades, where the various stock sizes are displayed. Each year has seen an increase in sales since this policy was inaugurated."



The window shade department of the Kaufman & Baer store in Pittsburgh. Attractive displays of Tontine shades may be seen in the background

LEADS ON SELLING LEADERS

THE Shakespeare Company, of Kalamazoo, Michigan, manufactures fine tackle. Although this concern does not come in direct contact with consumers—its products are sold wholesale only—it does not forget the individual fisherman when making and selling its "Honor Built—Honor Sold" line. The very best materials and workmanship go into each rod, line, lure, leader and other equipment. The needs of the angler are studied by expert fishermen on the staff, and their recommendations are tested and proved on the streams, before new equipment is manufactured and placed on the market.

Officials of the company firmly believe in the policy of helping the dealer turn over his stock. Extensive direct mail campaigns, circulars and catalogues for distribution from retail stores, and counter helps are included in the advertising program. The company also knows the appeal of attractive merchandise, attractively displayed. It was quite natural, therefore, that the Shakespeare Company should become interested in Du Pont Cellophane as a sales aid. After thorough tests were made, this product was adopted in envelope form for packaging the company's high-grade silkworm gut leaders. Dealers were notified of the new package in order that they could take full advantage of the display value that Cellophane affords.

By J. C. PICKARD



When an angler sees one of these leaders in its Cellophane envelope, he knows that it's fresh and "springy"—and the dealer profits by this sales aid

An article published in *Tackle*, the monthly magazine of the Shakespeare Company, explains why Cellophane is used. The following paragraphs speak for themselves:

"We were attracted to Cellophane as soon as it made its appearance on the market because we feel that in this new super-wrap we have at last found a container that is worthy to hold Shakespeare leaders. We feel sure that our dealer friends will agree with us for many reasons, among which are the following:

"Being transparent, it displays the quality and workmanship of the leader to perfection, and is attractive to the customer.

"Being germ-proof and sealed, it retains the freshness of the gut and assures the angler of always having a new leader, full of life and vitality.

"As the wrapping does not fade or decompose, it will retain its smart distinctive appearance even after being used as a counter or window display, and you will now have no loss through shop-worn goods.

"It is estimated that ninety per cent of all merchandise in retail stores is bought through the appeal to the eye, and this appealing, attractive package will go far to stimulate and increase your sales of leaders and will keep your stock new and salable."

Cellophane may meet your sales requirements equally well.

THE DU PONT SEMESAN FAMILY

(Continued from page 5)

the advantage of its beneficial action in these respects.

The usefulness of the Semesan Seed Disinfectants runs the whole range of agriculture. For the grower of cereals, Semesan will prevent the losses so common with untreated plantings of wheat, barley, rye and oats, and for the cotton planter Semesan appears to hold the key to success by making it possible to reduce his production costs through the growing of more cotton per acre. In Semesan, the nurseryman, tree surgeon and landscape gardener will find a means of preventing such costly infections as the "crown gall" of tree grafts, while the florist and truck gardener can utilize Semesan to their tremendous profit in eliminating the disastrous growth of molds and parasites that commonly flourish under glass or hothouse conditions. The canner of vegetables can effectively insure the quality

of his crop by seed treatment with Semesan, as a result of which he is fairly certain of harvesting luscious and perfect produce of an uncommonly high grade. Even the golf clubs, home gardeners, and flower enthusiasts find greater joy in the pursuit of their hobbies by the use of Semesan, because it removes or holds in check the detrimental influences which so often frustrate their pride in a beautiful putting green, in tempting fruit or vegetables and in the profuse blooming of magnificent flowers.

The retail distribution of the Semesan Seed Disinfectants throughout the United States has reached an advanced stage, and they may now be obtained at most of the reliable seed stores and at many drug and hardware stores. Booklets and pamphlets describing their uses and the extremely simple methods of application are also available from those merchants or may be obtained upon request from the editor of this magazine.



E. I. DU PONT DE NEMOURS & Co., Inc.

General Executive Offices

WILMINGTON DELAWARE

All Inquiries Regarding du Pont Products Should Be Addressed to the Company—the Nearest Office

ACIDS AND HEAVY CHEMICALS

*Acids, alums and miscellaneous
heavy chemical products.*

Philadelphia, Pa.
35th & Gray's Ferry Rd.
Newark, N. J., 256 Vanderpool St.

AMMONIA

Anhydrous and Aqua Ammonia.

Lazote, Incorporated
Du Pont Bldg., Wilmington

CELLOPHANE

Du Pont Cellophane Company, Inc.
New York, N. Y., 40 W. 40th St.
Chicago, Ill., Railway Exchange Bldg.
Michigan Ave. and Jackson Blvd.
San Francisco, Calif.
Balfour Bldg., 351 California St.

CHEMICAL PRODUCTS

*Bronze powders, collodion, household
cement, leather belting cements, Duco,
No. 7 Duco Polish, pyroxylin lacquers
and enamels, split and patent leather so-
lutions and other pyroxylin preparations
and solvents.*

Boston, Mass., Everett Station 49
Chicago, Ill., 2100 Elston Ave.
Detroit, Mich., General Motors Bldg.
Flint, Mich.
Parlin, N. J.
San Francisco, Calif., 569 Mission St.

DYESTUFFS

*Dyestuffs and dyestuff intermediates.
Rubber chemicals and seed disinfectants.*

Boston, Mass., 274 Franklin St.
Charlotte, N. C., 232 W. First St.
Chicago, Ill., 1114 Union Trust Bldg.
New York, N. Y., 8 Thomas St.
Philadelphia, Pa., 126 S. Front St.
Providence, R. I.
709 Hospital Trust Bldg.

San Francisco, Calif., 569 Mission St.
Bombay, India, Jacob Sassoon Bldg.
Rampart Row, P. O. Box No. 1010

Kobe, Japan
No. 88 Nakamachi-Dori
P. O. Box No. 384

Hankow, China
No. 23 Tung Ting Road

Shanghai, China
Robert Dollar Bldg.
3 Canton Rd., P. O. Box No. 393

Tientsin, China, 52 Taku Road

MOTION PICTURE FILM

Positive and Negative.

Du Pont-Pathé Film
Manufacturing Corp.
New York City, 35 West 45th St.

EXPLOSIVES

*Explosives for all industrial, agricultural,
military and sporting uses.*

Birmingham, Ala.
601 Brown-Marx Bldg.
Boston, Mass., Harvey Building,
Chauncey & Bedford Sts.
Buffalo, N. Y., Prudential Bldg.
Chicago, Ill., 1814 McCormick Bldg.
Denver, Colo., 406 Ideal Bldg.
Duluth, Minn., Hartley Bldg.
742 E. Superior St.

Huntington, W. Va.
Suite 1004 Union Bank Bldg.

Joplin, Mo., 816 Joplin Nat'l Bank
Bldg.

Juneau, Alaska, P. O. Box No. 231

Kansas City, Mo., 225 Scarritt Bldg.
Miami, Florida, 305 Clark Bldg.
343 S. W. North River Drive

New York, N. Y., 120 Broadway

Pittsburgh, Pa., Fulton Bldg.

Portland, Ore.
Northwestern National Bank Bldg.

St. Louis, Mo.
17th Floor, Arcade Bldg.

San Francisco, Calif.
Suite 403 Balfour Bldg.
351 California St.

Seattle, Wash.
Hoge Bldg., 2d Ave. & Cherry St.

Scranton, Pa., 710 Traders Bank Bldg.

Spokane, Wash.
721-22 Old National Bank Bldg.
Riverside Ave. & Stevens St.

Springfield, Ill., 716 Reisch Bldg.

Wilkes-Barre, Pa.
728 Second National Bank Bldg.

FABRIKOID

*Fabrikoid for auto and furniture uphol-
stery; auto topping, bookbinding, luggage,
novelties, etc. Tontine Window Shade
Cloth.*

Newburgh, N. Y.
San Francisco, Calif., 569 Mission St.

RUBBER PRODUCTS

*Pontop for auto tops and curtains. Rain-
coat fabrics, gum rubber, Rug Anchor,
Ventube for mine ventilation. All kinds
of rubberproofing.*

Fairfield, Conn.
San Francisco, Calif., 569 Mission St.

RAYON

Du Pont Rayon Company, Inc.
P. O. Station B, Buffalo, N. Y.

Greensboro, N. C.
708 Jefferson-Standard Bldg.

Greenville, S. C., 408 Woodside Bldg.
New York, N. Y., 132 Madison Ave.

Old Hickory, Davidson Co., Tenn.
Philadelphia, Pa.
1209 Land Title Bldg.

Providence, R. I., 937 Rhode Island
Hospital Trust Building

Reading, Pa., 31 N. 6th St.
San Francisco, Calif., 569 Mission St.

LITHOPONE, DRY

COLORS & PIGMENTS

*Products for paint, ink, oilcloth, linoleum,
rubber and other industries.*

Boston, Mass., Everett Station 49
Chicago, Ill., 2100 Elston Ave.

Los Angeles, Calif.
Citizens' Warehouse
1904 Atlantic St.

Newark, N. J., 256 Vanderpool St.
Philadelphia, Pa.

3500 Gray's Ferry Rd.

PAINTS AND VARNISHES

*A complete line of paint and varnish prod-
ucts for all home and industrial uses.*

Boston, Mass., Everett Station 49
Chicago, Ill., 2100 Elston Ave.

Newark, N. J., 256 Vanderpool St.
New York, N. Y., 21 E. 40th St.

Philadelphia, Pa.
35th & Gray's Ferry Rd.

San Francisco, Calif., 569 Mission St.

PYRALIN AND VISCOLOID

Pyralin—Arlington, N. J.

Viscoloid—Leominster, Mass.

*Pyralin toileware of Amber, Pearl, Shell
and Ivory and combinations of these colors.
Novelty and transparent sheeting, rods,
tubes and beading. Also Cleanable Collars.*

Boston, Mass., Harvey Bldg.

52 Chauncey St.

Chicago, Ill., North American Bldg.

New York, N. Y., 330 5th Ave.

San Francisco, Calif., 569 Mission St.

PACIFIC NOVELTY DIVISION

Toys, rattles, infant sets, hair ornaments.
New York, N. Y., 330 5th Ave.

*When you are in Atlantic City, New Jersey,
Visit the Du Pont Products Exhibit, at 1121 Boardwalk*



*"Don't fuss, John —
rain can't hurt it —
it's Tontine!"*

WHERE shades of yesterday (still used in many households) leave off, Tontine shades *begin*. Tontine is impregnated with imperishable pyroxylin—the same material as DUCO—enabling it to survive, unharmed, normal daily use and the abnormal abuse of wind and rain. It cannot chip or crack or flake. And no matter how great the soil of a season's service, *the original freshness and beauty are easily restored with soap and water*. Ask for Tontine by name if you wish shades of enduring beauty—shades that are really economical.

*A folder of actual Tontine swatches in beautiful colors is available to you—FREE.
You can test Tontine's washability yourself. Just sign and send the coupon below.*

DU PONT
TONTINE
WASHABLE
WINDOW SHADES

—they outlast in wear and beauty

E. I. DU PONT DE NEMOURS & CO., Inc., Tontine Sales, Newburgh, N. Y.
Please send (without obligation) Folder of Tontine Swatches. D. M. Apr.

Name.....
Address.....
City.....State.....

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