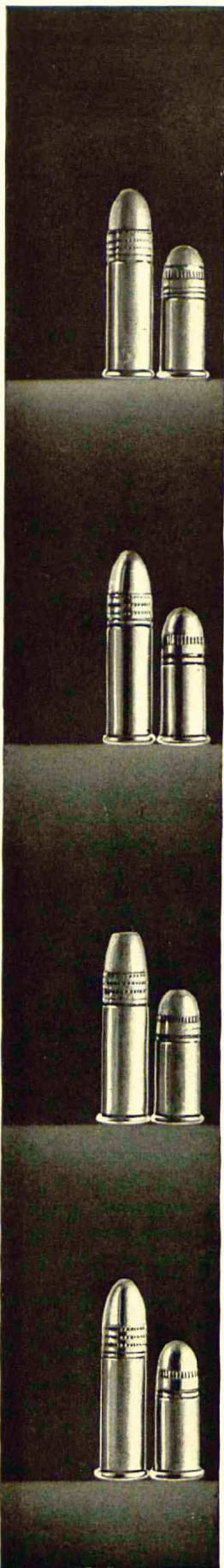


THE DU PONT MAGAZINE



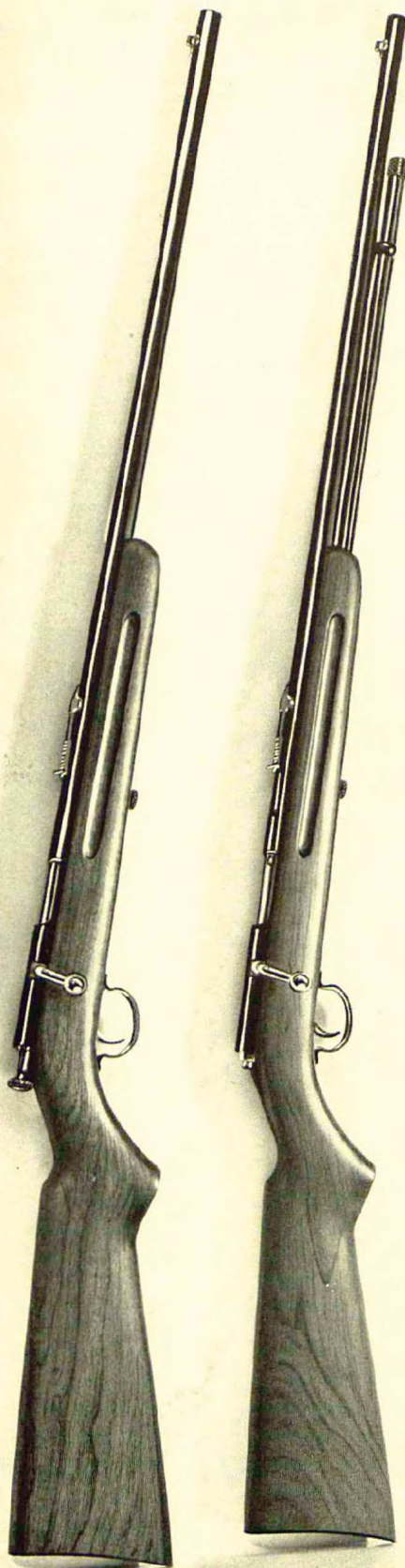


.22 REGULAR LEAD LUBRICATED

.22 HI-SPEED SILVADRY

.22 REGULAR HOLLOW-POINT LEAD LUB.

.22 REGULAR SILVADRY



MODEL 33

MODEL 34

Which

DO YOU WANT?

YES SIR, you can't go wrong when you pick your .22 from these two winners. For accuracy, strength, safety, and easy handling they're unbeatable. Both are man-sized rifles. Note the finger grooves to help you hold steady. Now look at the bolt, bolt handle and trigger. *All chromium plated!* Rust resisting? You bet! . . . Nor will they balk or jam.

The barrels are beauties in looks . . . and *in action*. Gracefully tapered . . . 24 inches long. Specially bored and rifled to shoot .22 short, long and long rifle regular or Hi-Speed cartridges *where you aim them!* And that goes for any position—prone, kneeling, offhand—for vermin, game or targets.

Proud? Yes, and so will *you* be when you own one of these Remingtons. Just check over the specifications. But *don't* think you'll write a big check. Both these hard-hitters are mighty inexpensive. Both make ideal gifts.

MODEL 33: Single shot, take down. 24 inch tapered barrel. Stock of genuine American walnut. Automatic ejector. Step adjustable rear sight. White metal bead front sight. Safety features include rebounding lock, double locking lugs, bolt safety for unloading. Length overall 42 inches. Weight about 4½ pounds.

MODEL 34: Repeater, take down. 24 inch tapered barrel. Genuine American walnut stock. Tubular magazine holds 22 short, 17 long or 15 long rifle cartridges. White metal bead front sight; step adjustable rear sight. Positive safety. Double locking lugs . . . Length overall 42½ inches. Weight about 5¼ pounds.

A WORD ABOUT AMMUNITION

Remington originated non-corrosive ammunition for which its trademark is Kleanbore. Kleanbore Cartridges positively banish those enemies of accuracy—rust, corrosion and pitting. Your rifle barrel *stays clean* without any attention on your part. Kleanbore can make this promise *and keep it!* All sizes, all types: short, long, long rifle: regular and hollow point; lubricated and silvadry. Drop us a line for the whole Kleanbore story and any other arms or ammunition dope you'd like to have. Remington Arms Co., Inc. Bridgeport, Conn.

KLEANBORE

AMMUNITION



Remington



THE DU PONT MAGAZINE

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No. 12

Chemistry and Agricultural Progress

A résumé of some important advances made by applying
chemical knowledge to farm problems

By DR. W. H. TISDALE

Pathologist and Botanist, E. I. du Pont de Nemours & Co., Inc.

WITHOUT plants man could not live. On this foundation agriculture is built. While animals supply a part of the food requirements and other needs of man, they depend directly or indirectly on plants for their subsistence. Plants can utilize minerals for food; animals cannot. Both are, in a sense, chemical factories that build from nature's elements many remarkable chemical compounds in the form of tissues which supply food, clothing and many other human necessities.

Plant cultivation and animal husbandry have been practised since ancient times. The development of agriculture as a progressive industry, however, has been confined largely to the past century. Its progress has closely paralleled that of many other branches of science and industry. In fact, it is hardly possible for any industry to advance far without the aid of others. Agriculture is no exception. And, if there is any one branch upon which it most depends, that one is, no doubt, chemistry.

The discoveries leading to a knowledge of the chemical elements of the soil, water and air, and how many of

these elements influence the development and behavior of plant and animal life, have furnished the foundation for applied chemistry in agriculture.

By such means the progressive farmer has been able to understand his plants and animals, and treat

"The life and soul of science is its practical application," declared Lord Kelvin, which is particularly true of chemistry in its relation to agricultural progress.

Many chemical products are being used to make farming more scientific, and others are in the development stage. Three major departments of the du Pont Company and two of its affiliated organizations maintain staffs of research workers and technical men who are constantly employed on farm problems. One member of the staff, at our request, has outlined briefly chemistry's service in this field.

Dr. Tisdale has been engaged in experimental work in plant pathology and plant breeding at the Wisconsin Agricultural Experiment Station; at the North Carolina Agricultural and Engineering College, and in the U. S. Department of Agriculture at Washington, D. C. With broad experience both in the laboratory and field, he is well qualified to discuss the subject.

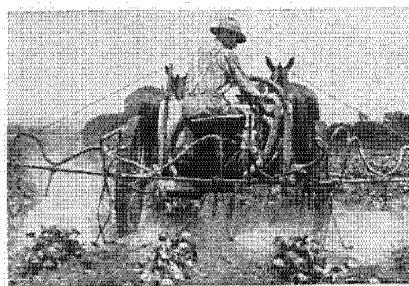
—Editor.

them as living chemical laboratories with certain requirements of food, water and environment necessary for greatest production. Cultural methods, fertilizing, feeding, selecting and breeding, and pest control have advanced rapidly. The farmer has become so efficient that instead of fear of famine he has to deal with a superabundance and possible panic due to ruinous prices. This situation presents future problems—acre reduction, less fluctuation in yields per acre, and greater efficiency in the preservation of surpluses. To meet these requirements, improvements in all phases of agriculture are necessary, including the growing, processing and development of new uses for farm products and the utilization of by-products and waste materials. The importance of chemistry in such a program is obvious.

Only brief mention of some of the more important applications of chemistry in agriculture will be attempted in this article.

EXPLOSIVES

The discovery and adaptations of explosives to practical use have re-



Mexican bean beetles are very destructive to vegetable crops. Here you see a farmer applying a solution of "Dutox" to control the pest. This Grasselli product may be used both as a spray or as a dust

moved a heavy burden from the shoulders of the farmer. By the use of dynamite he clears his land of stumps and rocks with greater ease. Ditches are dug and hard pan broken with greater facility in subsoiling the land and for setting trees. Gunpowder serves a useful purpose in the shooting of game and destructive or undesirable animal life around the farm, and in the slaughter of meat animals.

FUEL AND LIGHT

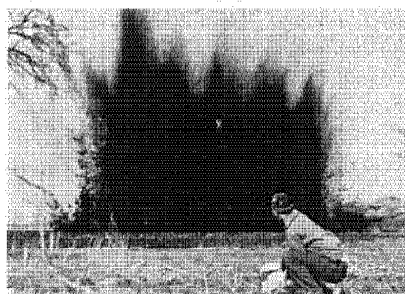
Chemistry has played an important part in the development of power machinery which is so essential to agricultural progress. Chemical processes for cracking and refining of crude oils have made possible the oils and gases which serve as lubricants and fuel for the motors used for transportation and many other farm operations. They also are used extensively for cooking and lighting, and, in a limited way, for heating the farm house.

FERTILIZERS AND FEEDS

Chemical and biological research has developed a tremendous fund of information about soils and their capacity to produce crops of various kinds under the prevailing climatic conditions. The part played by important elements in the nutrition of plants is, to a considerable extent, known. Soil deficiencies can be determined and corrected by the application of fertilizers containing the deficient elements in the proper proportions and in the most available forms. Soils usually contain, in available form, most chemical elements necessary for plant growth. The exceptions are phosphorus, potassium and nitrogen. These are often lacking, especially in over-cropped, improperly cropped and worn-out soils. Phos-

phorus is mined in the form of phosphate rock and treated chemically to render it available for plant food. Potassium, chiefly as potassium sulfate and potassium chloride, is obtained from mines in Europe. A recent chemical discovery indicates that potassium sulfate can be made from a mineral deposit (polyhalite) in Texas and New Mexico cheaper than it can be imported from Europe.

Deficiencies in nitrogen are met by the application of manure and other forms of decayed plant and animal matter, by nitrogen-fixing bacteria, and by the use of nitrate of soda (Chile salt-peter), and nitrogen de-



In farm development work du Pont dynamite is an efficient helper in many practical ways. This view illustrates a ditch blast that resulted in draining a considerable area of farm land

rived from ammonia. Years ago Chile supplied as much as 1,000,000 tons of nitrate of soda per year, a large part of which was used as fertilizer. During the past decade, the synthetic ammonia industry has developed facilities to supply a large part of the farmers' needs for nitrogenous fertilizers at a much lower cost. The Chilean monopoly has been broken. A more recent development is the introduction of liquid ammonia and synthetic urea to the fertilizer industry.

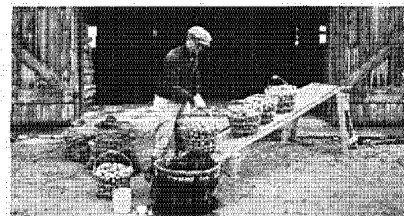
In addition to such plant-food elements as phosphorus, potassium,

calcium, iron, sulfur, magnesium, nitrogen, oxygen, hydrogen and carbon, four others have more recently been found to be essential in very small quantities. These are zinc, manganese, boron and silica. This information is valuable in the advancement of agriculture.

Chemical knowledge of the digestive processes and assimilation of food by different types of farm animals and of the various food materials used has removed the uncertainty of preparing balanced rations, and of feeding them in the proper quantities to get best results. Special feeds are prepared for fattening steers, for feeding dairy cattle, hogs, horses, lambs, poultry for egg production and for meat. Tonics and other vitalizing agents such as vitamins have been discovered and added to assure better results.

SELECTION AND BREEDING

Our best varieties of plants and fancy breeds of farm animals now bear little resemblance to their prototypes of a century ago. The marvelous progress accomplished by the plant and animal breeder has been greatly enhanced by chemistry. The chemist determines through analyses the efficiency of the plant or animal, and what will produce the maximum result desired, whether it be high content of carbohydrate, fat, protein, vitamin, cellulose for fiber or other compounds. Many other factors in the improvement program are under analysis by the chemist, such as the chemical factors underlying growth stimulation, disease and drought resistance in plants, the effect of light rays from the sun and artificial light on the chemical processes in metabolism or food assimilation, and production. Color markings serve as a convenient guide to both plant and animal breeders. A chemical explanation of the composition and behavior



"Du Bay" disinfectants are valuable aids to successful farming. Dipping seed potatoes with a solution of New Improved Semesan Bel is a practical means of controlling scab and other destructive seed-borne diseases

of color pigments is also of value. Thus chemistry is an invaluable tool in the hands of the geneticist.

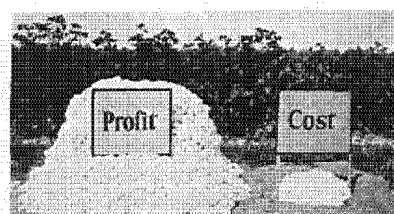
PEST CONTROL

With the rapid increase in population and the growing scarcity of virgin lands suited to cultivation, farming has become more and more intensified. Improved transportation facilities have resulted in wide dissemination of agricultural products. These conditions have resulted in extensive spread of plant and animal diseases, insect pests and weeds. Millions of dollars of damage are caused annually by these pests and by rodents. In the prevention, eradication and control of such pests, chemicals are used extensively. Protection of the plant consists of such chemical measures as treating the soil and seed, dusting and spraying the growing plants to prevent disease and insect attack, and treating the harvested products to preserve them in storage and transit. Chemicals in the form of gases, liquids, pastes and powders are used. Mercury, copper, arsenic, sulfur, zinc, fluorine, formaldehyde, cyanide gas, carbon bisulfide, oils, and such plant products as nicotine, pyrethrum and rotenone (derris) are some of the leading chemicals in use as fungicides and insecticides.

Following are a few of the destructive plant diseases for the control of which chemicals are extensively employed: Grain smuts, seed-borne rots and stalk rots of corn; anthracnose and other seed-borne diseases of cotton; scab and late blight of potatoes; bitter rot and scab of apples; mildew and black spot of roses; melanose of citrus, and brown rot and shot-hole disease of the peach and plum.

A few of the familiar insect pests of plants that are held in check are: Weevils and moths of stored grain, beans and peas; scale insects of growing plants; codling moth; many

Another profit-cost comparison reveals the fact that treating cotton seed with "Ceresan," a Du Boy disinfectant, is well worth while for the cotton grower



species of plant lice or aphids; grasshoppers; Mediterranean fruit fly; cotton boll weevil; Mexican bean beetle and Japanese beetle.

The use of insecticides, disinfectants, serums, or vaccines and antitoxins results in enormous savings to the live stock grower. The control of such dreaded diseases as anthrax, hog cholera, Texas cattle fever, bot-flies, ox-warble, scab of sheep, and many



Du Pont Plant Spray No. 2 is a combined insecticide and fungicide for citrus trees—kills scale insects and white fly, controls melanose and scab, and promotes healthy, vigorous trees

destructive diseases and insect pests of poultry attests the value of chemistry in the control of animal pests.

Chemicals, such as sodium chloride, acids, oils, arsenicals, chlorates, and certain others are used successfully in many sections of the country for the destruction of undesirable plants, including farm weeds, poisonous plants, and others, such as the common barberry which serves as a host for stem rust of wheat, and gooseberry and currant bushes which harbor white pine blister rust. The chemicals now in use are far from ideal in many respects. The chemist

is aware of that and is working to find more satisfactory products.

Fumigation and poison baits are used extensively in the control of rodents and other destructive animals, such as rats, mice, squirrels, rabbits, ground hogs and certain birds.

In addition to the control of diseases and insect pests of plants and animals, the farmer is confronted with the control of many household pests, such as flies, mosquitoes, moths, cockroaches and ants. His wooden structures are attacked by termites (white ants) and wood-rotting fungi in many sections of the country. The care of septic tanks and barn-lot sanitation are also important. Insecticides, disinfectants, deodorants, whitewashes and paints are invaluable for such purposes.

Many of the pest-control compounds contain chemicals which are poisonous to farm animals and to man. Some of them are corrosive; others present fire hazards, so that they have to be used with extreme care. The Federal Government has recently issued more exacting regulations regarding the use of arsenic, lead, and certain fluorine compounds as insecticides on fruit and vegetables, which are handled in interstate shipments. Improved methods of removing these poisons or replacements with less poisonous or non-poisonous compounds are desired. Constituents of some of the so-called "fish poison" plants are valuable in this respect. Red squill for rat baits and pyrethrum and derris (rotenone) for insecticidal purposes are products of this type. They are limited in quantity and are expensive. There is an obvious need for effective synthetic products which could be produced in unlimited quantity at a more reasonable price. The research chemist has accepted the challenge to produce such compounds, and it is possible that in the future



Seed treatment pays. The increased yield of potatoes, left, bulks large in comparison with the cost of Semesan Bel, represented by the partly-filled bag at the right

(Continued on page 16)

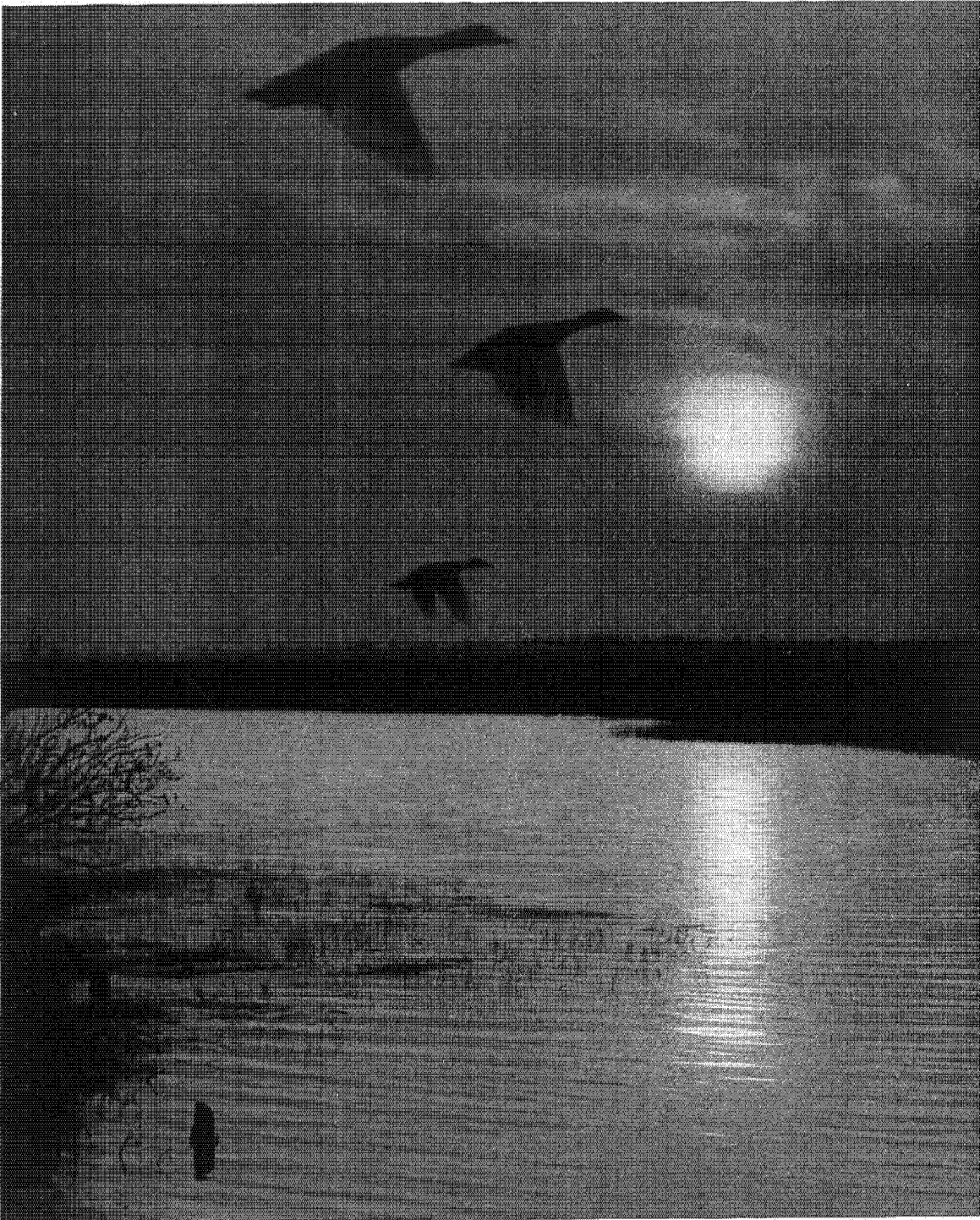


PHOTO BY H. ARMSTRONG ROBERTS

Frost-tinted woodlands . . . crisp air, spiced with odors of molding leaves and marsh grass . . . a light off-shore breeze that stirs the water just enough to make it alive with the reflected rays of the sinking sun! After a perfect day, the sportsman gets a super-thrill in that stage setting as fast-beating wings are heard and familiar figures loom up against the graying sky. What a shot—for a gun or camera!

"Cellophane"...The Magic Cloak of Yuletide

It adds charm to the things you buy and to those you make yourself and wrap attractively for gift giving...

By ROLAND HINTERMEISTER

WITHOUT doubt, Christmas is the greatest gift-giving season of the year. Everywhere one sees expressions of the holiday spirit—gay decorations in holly and evergreen—gifts of every kind and description in the most colorful array.

This year, as we pass by the shop windows, we are more conscious than ever before that manufacturers are competing for our attention through the medium of attractive packaging. They realize that during the Yuletide we pay more attention than usual to the package dress of the gifts we buy, especially since the whole Christmas idea is centered not so much upon the gift but the spirit and manner in which it is given.

"Cellophane" has come as a boon to the manufacturer in lending sparkle and holiday atmosphere to his products. In colored and printed varieties, its possibilities for distinctive packaging are endless. As you do your gift shopping this season notice, as you walk through stores filled with mer-

chandise, how the "Cellophane"-wrapped packages gain and hold your attention and tempt you to buy through the sheer beauty of their holiday dress. But the glamour of Christmas isn't all these package wrappings have to offer. There is perfect protection for your gift, complete assurance that it will be received in immaculate condition.

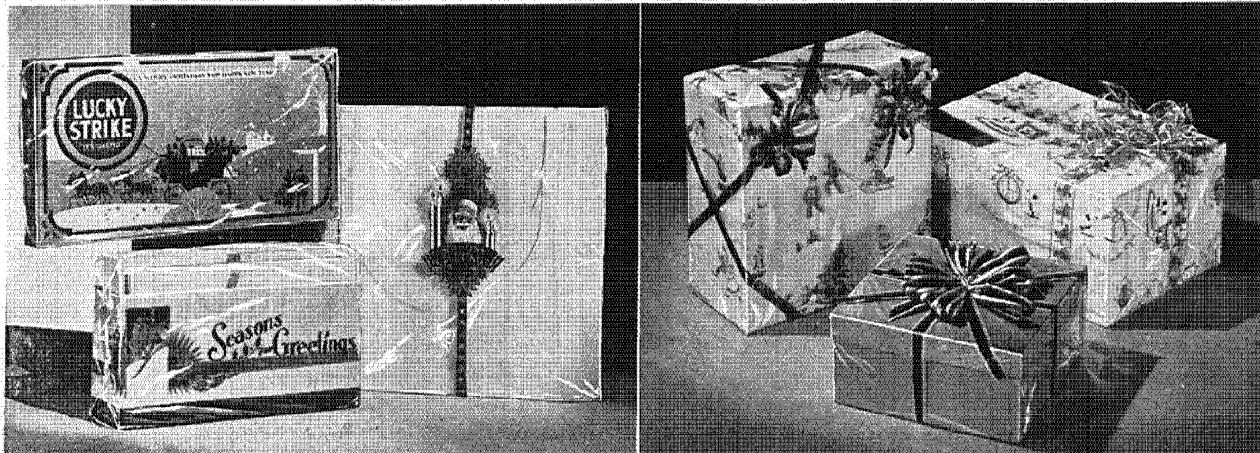
And because of "Cellophane," your gift selection will be wider this year, for many of the simplest, most inexpensive articles which have seemed too plain heretofore for gift giving are now brought into the realm of possibility through the very artful

medium of "Cellophane" adornment.

For your own personal use in wrapping Christmas gifts, "Cellophane" in the "household roll" sizes offers a selection of plain, colored and printed wrappings which is nothing short of gorgeous! There are stunning shades, such as amber and royal blue, for those who seek the unusual, as well as the traditional brilliant reds and greens that always delight children and cheer the grown-ups. "Cellophane" ribbon in a variety of colors is also available for tying your gift packages in a harmonizing manner. The mere sight of these charming materials imbues us with the Christmas spirit and makes us realize how much easier and more interesting the gift-wrapping problem has become today through the aid of "Cellophane." Everything from neckties to refrigerators responds under the magic spell of its gem-like sparkle—everything takes on a new glamour and jolly brightness, symbolic of the season and in character with it.

At the left, below, see how manufacturers are giving life and sparkle to their holiday lines. Interesting, smart packages, they are, in plain and printed "Cellophane"

Again, at the right, "Cellophane," plain or printed in novel Christmas motifs, makes these home-wrapped packages a joy to behold. Note the decorative touch provided by the "Cellophane" ribbon



PX Cloth Goes to School

The new du Pont bookbinding material adds textbooks to its fields of conquest

By PAUL SAMPSON

THIS is news! A Russian scientist, in the course of his explorations of the invisible wonders of the cosmic ray, discovers that the root of an onion gives off a ray that can influence cell growth in a living organism placed near it.

And this, too, is news for the millions who use textbooks and for those who pay for them: Fabrikoid PX Cloth, a comparatively recent development of the du Pont laboratories, will lengthen the life of school books.

The first discovery may not bear fruit and be of service in our generation. The second definitely does, not tomorrow, or next week, but as Maurice Chevalier would say with proper emphasis, "right now."

The story of the research back of PX Cloth was told in these pages some months ago. It is interesting to note the practical application of the new product, and its gradual infiltration into the fields of service chosen for it, which is the story here.

At the July convention of the National Education Association in

Chicago, an important figure in the school field—a man who buys hundreds of thousands of textbooks a year—stopped at the du Pont booth and looked at samples of school books which were bound in Fabrikoid and PX Cloth.

Finally, he said, "Why don't you convince the publisher that he should put a binding material like this on all his textbooks? I have a long-standing quarrel with textbook publishers who put out volumes which are bound in materials that give out long before the pages have been soiled or mutilated."

He had a book with him to prove his point. The binding had been frayed and torn away, exposing the contents of the book. "I should hate to tell you," he went on, "how long this book lasted in the expert hands of an angel of destruction in one of my schools. The body of the book is still in good condition. The inside pages are still good for two or three years, and yet I've got to retire the book from use, and send it away to be rebound."

We asked him, "Do you know that you could have PX Cloth on your books simply by specifying it?" He admitted that until he had stopped at the du Pont booth and had seen the testing machines battering away at PX-bound books, he had had no idea such a revolutionary improve-

ment in binding materials had taken place. The evidence was impressive.

He left, satisfied that he had done his tax-paying public a good turn by attending the Chicago meeting of the N. E. A.

During the period of the convention some thousands of educators who direct the work of the public schools of America also learned about this new material for the first time.

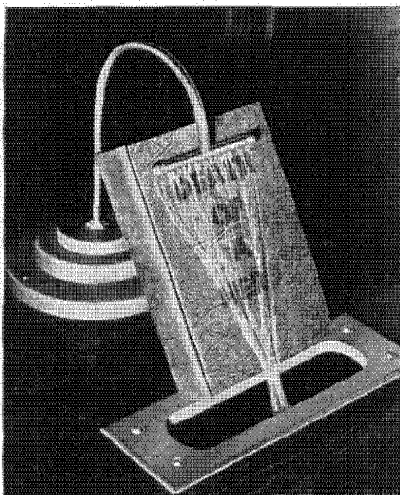
They saw that it was washable, and visioned their September classes sitting down with clean books to study. Testing devices proved that rain or wetting would not harm it. One book had had its cover opened and closed mechanically over 1,000,000 times without showing any signs of cracking at the hinge.

School people, especially those from the South, were interested in a test establishing the fact that vermin will not touch PX Cloth.

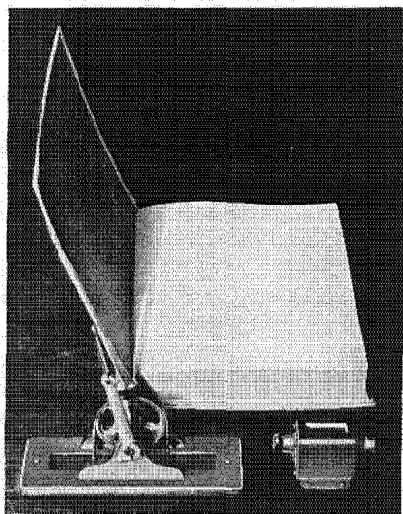
The cockroach loves nothing better than to curl up and feast upon a good book. PX-bound volumes were put into a glass case with cockroaches and other book destroyers, and the bindings were not touched. It may be slightly irrelevant to report that "Archie," patriarch of all cockroaches admitted to this testing pit, died of malnutrition at the Chicago convention, starved in the midst of plenty.

His demise was duly recorded by Bill Crowley, known to "Saturday's millions" as a leading football official, who stopped each morning during the convention at the du Pont exhibit to pass the time of day and to look in at "Archie."

It goes without saying that the people who saw PX Cloth go through the rigorous tests applied to it at the Chicago convention, and thousands

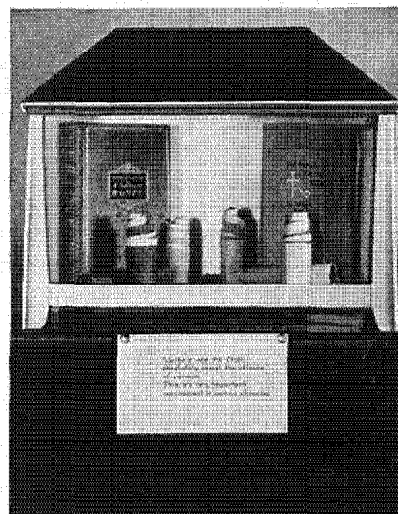


This PX-bound book was kept under a steady jet of water for a week, and the binding was still as dry as a duck's back. The colors used in PX Cloth are permanent, so that a child may carry home a school book in the rain without a fear that the color will bleed off on his hands or clothing



Left—In this flexing machine a PX-bound textbook was opened and closed 1,000,000 times by actual count. Then the book was examined. There were no signs of cracking or break-down at the hinge, which is one of the first places where binding materials show fatigue and wear out

Right—Cockroaches and other book vermin had a fine chance in this glass case to feast upon some books bound in PX Cloth, but they did not touch the material. Southern delegates attending the Chicago meeting of the N. E. A. were pleased to observe that this binding material has no attraction for insect life



more who witnessed a repetition of these tests later on at the du Pont Exhibit at Atlantic City, were greatly impressed by the evident durability of the material, plus its other advantages. And they did not miss the point that PX Cloth could be used for binding textbooks without increasing the cost of the work.

It would be fanciful to say that PX Cloth is a great forward step over all the bookbinding materials the world has known in the past; for some of the exquisitely hand-tooled bindings used to protect the illuminated manuscripts of the Middle Ages are still safeguarding their priceless contents today. But, after all, they were luxuries for the few.

In searching for the perfect binding material, it was not practical to go back to the experience of the Middle Ages, and use substances that had demonstrated their ability to withstand the assault of centuries. The very nature of the materials indicated they would still be a luxury for the few.

The problem was to find something else that would prolong the life of books—and textbooks, in particular—at a price that would make possible an appreciable saving for the taxpayer.

PX Cloth is significant because it has done just that for textbooks, and for trade books as well. And it is almost a natural development from Fabrikoid, inasmuch as it has most of the wearing, washable, waterproof and vermin-proof properties of that material without its weight. Du Pont Fabrikoid has been used for a great many years to bind heavy textbooks, mainly those going into the college and those receiving abnormal use in laboratories.

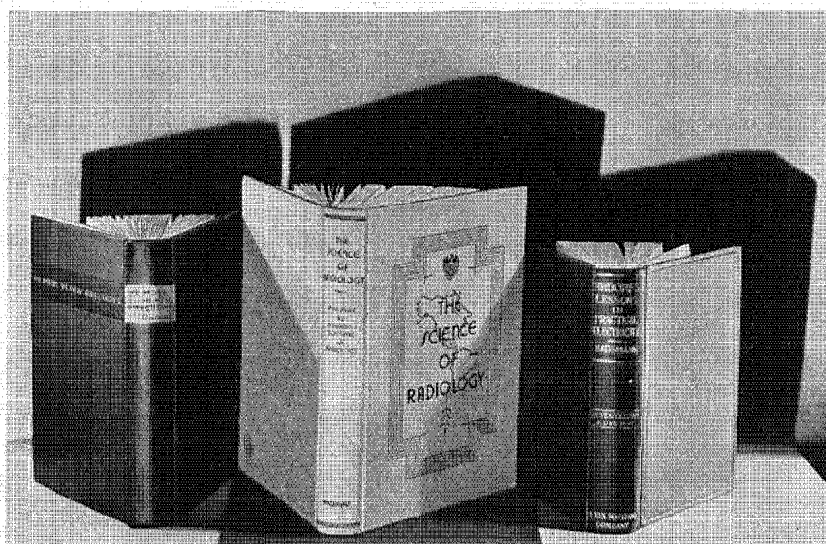
One of the most popular series of grade books published by Macmillan and bound in Fabrikoid has run into millions of copies. While an accurate estimate on the number of textbooks now in use bound in Fabrikoid and Fabrikoid PX Cloth is hard to arrive

at, it is safe to put the figure well in excess of 10,000,000.

These du Pont materials have made it possible for a binding to be as good as the book it protects. Readers know that too many times the pages of a book are still serviceable when the binding has given out, thus exposing the pages to abuse and rapid deterioration.

More significant, perhaps, is the discovery that the living ray from an onion root will influence cell growth. But PX Cloth has definitely added a measure of service to books that will be read and studied by millions of people. That, too, is a significant contribution and is a part of the forward movement of our restless world.

Book publishers are familiar with the advantages of PX Cloth and have adopted it for many of their new offerings. Two of those shown here are textbooks for laboratory use, and the bindings, with liquid-repellent properties, are especially well chosen. A sample of the cloth, with descriptive literature, will be sent to any Du Pont Magazine reader who may be interested in more permanent bindings for school books. Write to the du Pont Company, at Newburgh, New York



New Boudoir Accessories by du Pont

Some notes about current styles and patterns should be of interest particularly at this season of the year

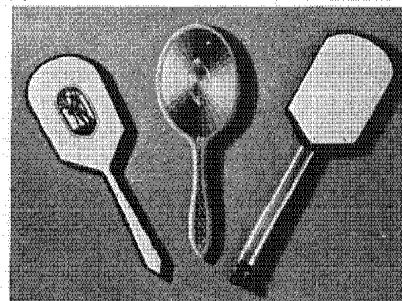
By R. T. ELLIS

EVERY day of the year thousands of American women add charm and distinction to their boudoirs with du Pont toileware. They admire its smartness, its beauty of design and color. They know it fits in easily and perfectly with any modern interior decorative treatment. And they learn that du Pont boudoir accessories are developed with this in mind by some of the most eminent stylists and designers in this country.

Du Pont toileware occupies a distinguished place in the minds of women of good taste who desire to surround their intimate lives with beauty. Today, more than ever before, women are style-conscious, and they demand the newest, smartest fashion merchandise that can be produced.

In styling the 1933-34 line of boudoir accessories, the Du Pont Viscoloid Company, Inc., had this clearly in mind. The designers combined the delicate shades and colors of "Pyralin" with metal and produced a most gorgeous line of dresser sets. One of these metal sets and two others made entirely of "Pyralin" are shown on these pages.

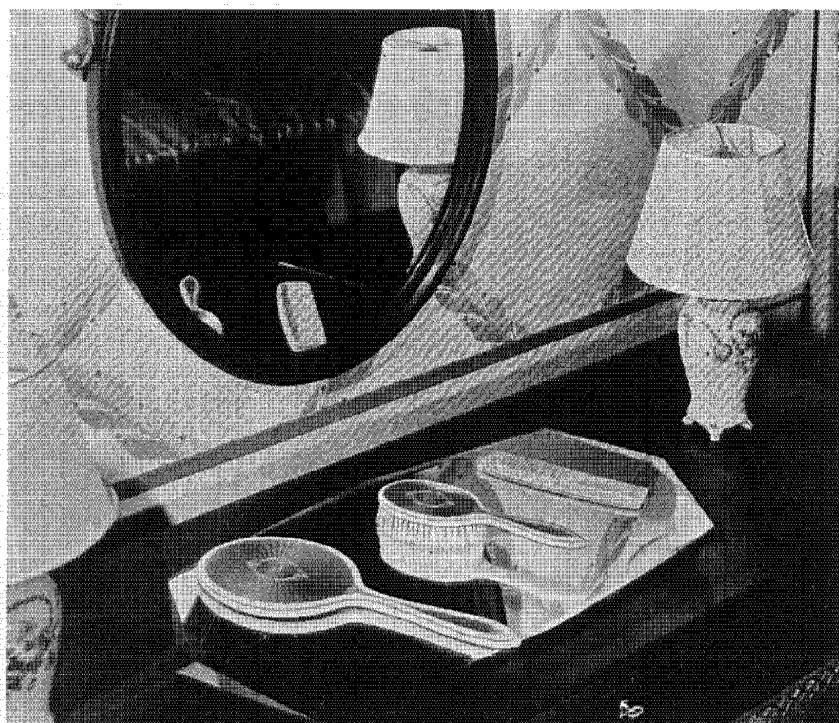
Contemporary design, so-called, which has been attracting more and more public preference during the past year in various fields, is represented by an unusual and impressive conception combining "Pyralin" and metal in a severe but beautiful form. It is an entirely new idea in the use of "Pyralin" in dresser wares. Five articles are included in the set. The



You must see these articles in order to appreciate their beauty, color and decoration. Left to right, the designs are known as "Strolling Minstrel," "Cloisonné" and "Deauville"

mirror presents an ivory-like surface edged with black, with a handle which is a straight shaft of chromium-plated metal. The brush echoes the design of the mirror, having the same chrome handle. The comb is in jet and "Ivory Pyralin," while a mirror-tray and puff-box of crystal glass with "Pyralin" cover complete the set.

Ever since the advent of pyroxylin plastics it has been the dream of manufacturers to offer something in design and construction in connection with medallion work that would achieve a high-art standard and, therefore, be attractive to every buyer of boudoir accessories. It was always regarded, however, that work of this kind could only be produced at prohibitive prices. The Du Pont Viscoloid Company, Inc., has achieved this at a popular price and with a greater degree of brilliancy than could have been imagined. The inspiration of the design is the Spanish strolling minstrel, with his guitar as the central motif in the mirror. This design is carved out of black "Pyralin" and stands in relief on a



In the "Cloisonné" Pyralin set is combined the freshness of pastel colorings and the charm of French Cloisonné artistry. The effect is achieved by a new method of built-in decoration which results in toileware of unusual beauty and utility



Just a touch of romance, belittling the current mode, is suggested in this "Strolling Minstrel" dresser set. The items are designed along new and practical lines in white, and furnish a smart background for the decorative design which is carried out in black with matching black borders

gold-like "Pyralin" maize translucent background. A wide border of maize and a fine white band add to the decoration of this article in the set. In addition to the jet-on-maize color scheme, this same set may be had in a black and white combination. The white "Pyralin" has been given an ivory-like grain effect, and is composited on the front and back sides, with a piece of black "Pyralin" between them. The central motif is in jet and gold colorings standing in relief on an ivory white background. Both color combinations are made in four articles — mirror, brush, comb and powder jar. Each article has a different design, but with all harmonizing. This set is appropriately named "Strolling Minstrel" and is made by a patented process.

These sets have already had an unusual appeal, due to the fact that in smartness, beauty and art work, they combine to illustrate a type of decoration that has always found a persistent appreciation among the public.

The third set is also aimed to reach a great public along established lines of taste and preference. The inspiration leading to the development of this set was the intrinsic worth and beauty of the French Cloisonné articles made with fluxed glass in colors,

resulting in the transparent, hard-baked enamels applied to engine-turned sterling silver—usually gold plated. In designing and developing this set, the company has endeavored to capture the lure of the French Cloisonné and combine it with the freshness of the pastel colorings. Note the simplicity in design, a symmetrical oval, beauty in color and a built-in method of decoration, which, combined with the materials used, results in utility articles of almost indestructible value.

The development program required for the successful production of this

set was the most pretentious ever applied to this type of merchandise, and it involved research work resulting in the development of entirely new processes, practices and methods.

This beautiful set is made in three color combinations: golden maize on translucent maize base, with a gold border; pastel pink or rose on translucent rose base, with pink or rose border and white edging, and turquoise on translucent Wedgwood-blue base, with light blue border and white edging.

By the development of a special patented process, the luster of the hard-baked enamel wares has been retained and the softness and sheen of silk have been emphasized.

Department and jewelry stores throughout the country have stocked these sets for the holiday season.



This new "Pyralin" dresser set, known as "Deauville," is most pleasing in white with trim chromium handle. The pieces may be monogrammed, if desired. Very striking are those with black letters on the white. The set harmonizes very effectively in the modern boudoir

Those Horizontal Drills

• Portable machines of large size have been found to be economical in coal-stripping operations

By T. J. BEARFIELD

NATURE apparently had little regard for man's convenience in placing so much of the world's coal supply deep down in the earth, for it takes real money to sink shafts, construct tunnels and haulageways and to install equipment for development and operating purposes. In some places, however, valuable coal beds are found fairly close to the surface, so that it is practicable to strip off the overburden and obtain the coal by well-known quarrying methods.

Much has been written about the increasing size and efficiency of the power shovels used in modern strip pits, but little publicity has been given to drilling machines. They, too, have been made bigger and better. We have in mind some electrically-operated units with rotary drills that can bore a three-inch or a six-inch hole horizontally through shale, slate or soft sandstone to a depth of fifty feet or more. These mobile machines are capable of drilling a great deal of footage per day. For example, one of them working under fair conditions has established an approximate daily average of 275 feet, and it makes little difference whether three-inch or six-inch drills are used.

If the overburden forms a fairly straight bank consisting of earth or mixed materials at the top and shale

strata above the coal seam, such conditions favor the use of a machine of the type illustrated; for, as one drill manufacturer has pointed out in a pamphlet, the equipment is applicable "where a vertical face of the material to be broken is available and where there are strata in the exposed material in which the drill can work. Heavy bands of rock, such as limestone and sandstone, can be broken when they are not too massive."

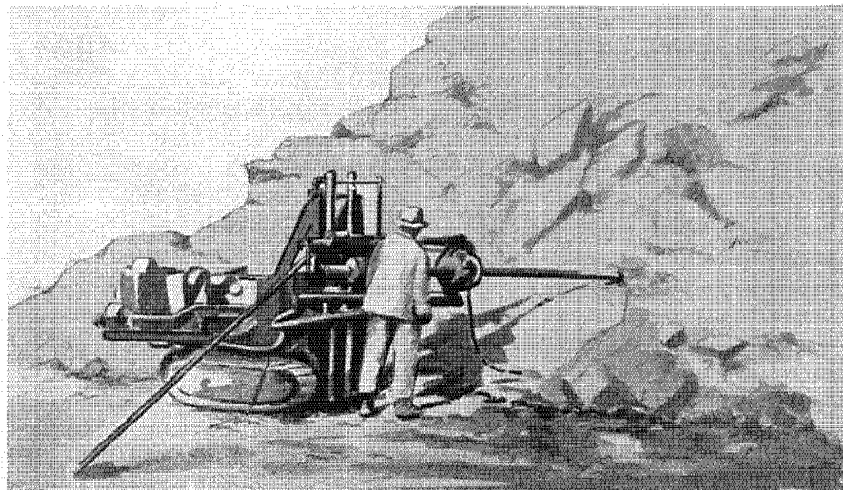
The holes are driven in the shale horizontally, but with a slightly upward trend which insures natural drainage and also simplifies the problem of selecting the proper explosive to use. Spacing of holes depends upon the burden, but the distance usually ranges between eighteen and twenty-three feet.

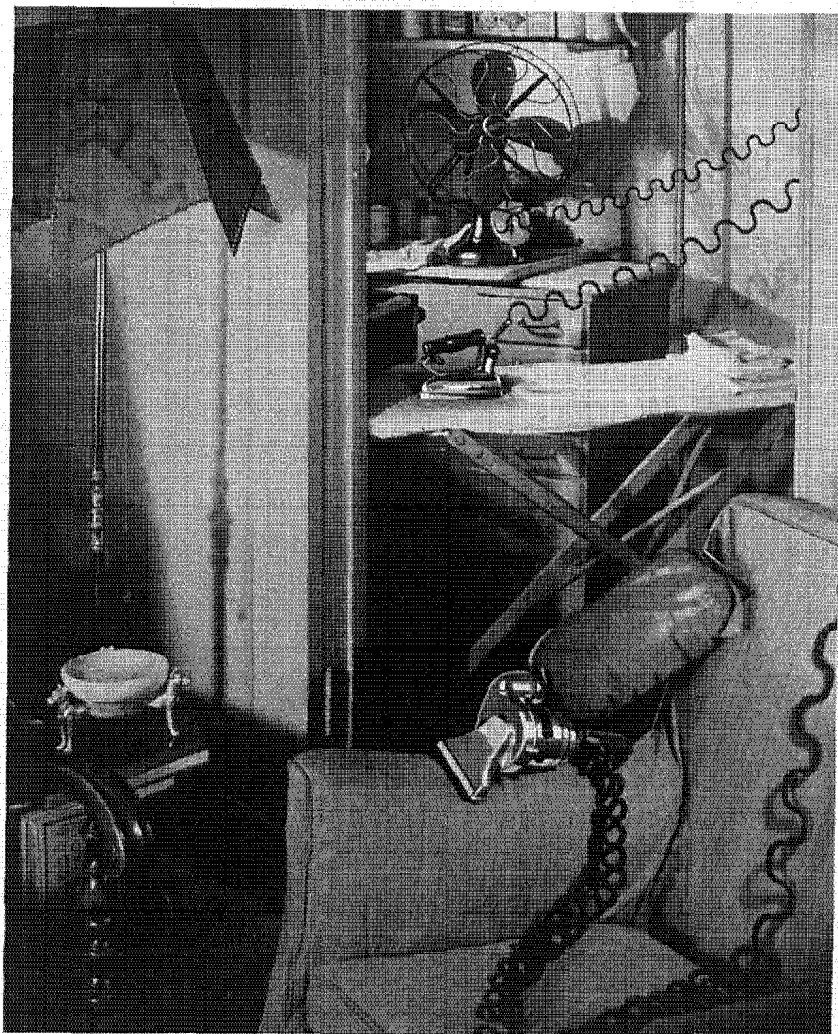
Among the advantages of the horizontal method outlined may be mentioned: (1) Reduced cost of drilling per foot; (2) fewer holes required than

is the case where well drills are used; (3) larger sections of the bank can be moved in one shot; (4) confinement of an explosive charge entirely within the horizontal shale strata increases blasting efficiency, in that the shot lifts the overburden vertically so that it will fall back in place instead of being thrown out into the pit where it may cover an exposed coal seam or a track line; (5) horizontal drills operate without the use of water, so pumps and pipe lines are not required; (6) since the holes are made in uniform material, casings are not necessary; and finally, this method usually makes possible loading less expensive explosives than would be required for well-drill holes.

Coal operators will be interested to know that the du Pont Company has developed several grades of low-density explosives in different strengths for use in strip pits where horizontal drilling machines are used.

Drilling a six-inch hole fifty feet deep in a band of shale rock, preparatory to blasting in a coal-strip mine. These machines are portable, electrically-operated units, that attack overburdens from the side





Here's an electric cord that has within itself the power to function efficiently. The picture tells the story which is developed further in the accompanying text. "Elasticord" is a Du Pont rayon-covered product

its apparent length, for in use this self-folding accessory becomes short or long, just as the need arises.

The rubber that makes it fold is buried deep inside the cord, practically sealed against the two deteriorating agencies, light and air. This novel construction not only prolongs the life of the rubber—to about eight years, the makers say—but it also permits the cord to extend and contract with a remarkably light tension.

When ironing, for example, the cord is suspended above the work where it is out of the operator's way. It cannot drag on the board to wrinkle or soil the garment.

A vacuum cleaner requires a long cord, usually twenty-five feet. The same length of "Elasticord" for this purpose appears to be only six feet long when folded. It extends and resumes its short length as the cleaner is pushed back and forth across the floor, yet it may be suspended from the top hook of the handle when not in use. Attachments for cleaning furniture and curtains may also be used with greater ease, because this cord does not become entangled with arms of chairs or with other objects.

The application of "Elasticord" to the telephone gives promise of reducing cord-maintenance costs for the operating companies and of removing altogether the exasperating, petty annoyance to patrons when extension cords in the office or home get twisted and tangled.

For bridge lamps, this flexible cord is an improvement in appearance, quite aside from its convenience, for the neat, flat folds hug the floor, unfolding only as much as necessary to accommodate each position of the lamp when moved about the room.

Generally speaking, the shorter an electric cord, the longer it will wear. Any excess length of a straight cord will lie in a loop and collect twists

(Continued on page 16)

Introducing "Elasticord"

- This new, self-folding electric cord adjusts itself to varying requirements of use

By E. C. HARRINGTON

FOR many years the patience of housewives and business men has been sorely tried by electric cords. Attached to telephones, flat-irons, toasters, sweepers and other appliances, they have swirled and kinked and tangled, annoyed the user and tripped the passerby. But now a much-needed improvement has been made, for a Massachusetts manufacturer has

perfected a kind of flexible cord that keeps its place, that is literally always the right length.

This product, called "Elasticord," is made by weaving rubber thread (elastic) into a standard electric cord in such a way that the cord normally remains in a series of figure 8 folds as shown in the illustration. But it may be extended easily to four times

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VOL. XXVII HOLIDAY NUMBER, 1933 No. 12

'Twas the Night Before Christmas . . .

THE seasonable theme portrayed on the front cover of this number hardly needs an extended explanation. Obviously, Saint Nicholas, with his sleigh full of toys, is planning to make a landing on the roof of the little house in the foreground, but it's an open question whether he will be able to do so immediately.

You see, "Dasher," "Dancer" and "Prancer"—and even Old Nick himself—had no reason to expect that a photographer with a flashlight was lurking in that vicinity to get a picture, and when the critical moment came, the noise and flare of the powder proved just a bit disconcerting. Perhaps it was fortunate that the other five reindeer were not in harness at the time. In such an emergency three frightened animals are quite enough to handle. But never fear, there's an experienced driver holding the reins and those toys must and will be delivered.

Clement Moore's famous poem, "A Visit from Saint Nicholas," is read and enjoyed by millions of people the world over, and the pictorial allusion to it is especially well timed this year. Moore wrote it for his own children without any idea that it would be published. But just before Christmas, 1823, it appeared in the *Troy Sentinel*. Since then it has been published times without number in books that have gained world-wide circulation. Eleven decades have

passed, and this poem is still as popular with children and grown-ups as ever.

If the picture lacks some of the realism of older portrayals of the subject, it is only because artistic fancies of 1933 are just a little different than was the case a century or more ago. At any rate we hope you will enjoy this cover illustration and that it will refresh memories of your childhood days and kindle within you the Christmas spirit which is so buoyantly expressed in the classic poem.

The time will soon be here for gift giving and sharing in the joys of the Yuletide, and because we shall not have another opportunity to extend greetings to readers of this publication, we do so now.

A Merry Christmas and a Happy, Prosperous New Year to you all!

Be Prepared

A WRITER in *The Literary Digest* once introduced our theme by paraphrasing a familiar sentence in this wise: "Now is the time for all good motorists to come to the aid of their cars with defensive preparations against General January and General February, not to mention Major General December. . . ." The comment is in order again, for cold weather is inimicable to the physical well being of automobiles, their functioning and their good looks.

There is point in getting ready for winter before the fact; and because certain du Pont products are helpful to motorists, we shall make bold to mention them.

For one thing, the water-cooling system must function properly in cold weather, and that suggests the purchase and use of either "Zerone" or Du Pont Anti-Freeze Denatured Alcohol.

If your car is to go through the winter with its beauty safeguarded, you will want to make other defensive preparations. In that connection, here are seven pertinent suggestions:

1. Restore the brilliance of the body finish by cleaning off the "traffic film" with No. 7 Duco Polish. If the finish is badly chalked, it may

be necessary to use No. 7 Pre-Wax Cleaner to remove the dead pigment.

2. Apply a coating of No. 7 Duco-Wax to protect the body finish and to make it easy to keep such surfaces clean in the wintertime.

3. Use No. 7 Touch-up Black on any rust spots before they grow larger and more unsightly.

4. Clean out the radiator thoroughly before filling it with anti-freeze. No. 7 Radiator Cleaner is recommended for this purpose.

5. Inspect the top. If cracks appear around the mouldings, use No. 7 Top Sealer, which is obtainable in tube form for easy application.

6. Give the entire top a new coat of No. 7 Top Finish. For khaki sport tops, you will do well to use No. 7 Clear Waterproof Dressing.

7. If your car needs these attentions, let the work be done promptly so that even the first effects of winter weather may be discounted.

"Dynax" in the Spotlight

THE Outboard Motorboat National Championship Races at the Chicago Century of Progress Exposition, October 7 and 8, furnished the climax of the 1933 season. In this tournament the nation's outstanding drivers competed and it is interesting to note that a large majority of them relied on the power and dependability of "Dynax" to push their boats across the finish line in first position. There were eleven national championship events, and nine of them were won with "Dynax," the speed fuel produced by the Ammonia Department of the du Pont Company.

On the day following these races, mile trials were held at Cedar Lake, Indiana, and nine new world's records were established. Eight of them were won by contestants who used "Dynax." In one case, George Coleman, driving an "F" motor, powered with this fuel, attained a speed of 61.75 miles per hour, which is believed to be the fastest time ever recorded officially for any class of outboard motors anywhere.



Miss Suzanne Caubaye, well-known actress and godchild of Sarah Bernhardt, wearing a boudoir robe of "Acele" satin in the recent revival of "Her Cardboard Lover." The robe was designed by Mlle. Marie, Park Avenue, New York

for this yarn is received from a weaver or knitter, great care is exercised to make sure that the fabric in which it is to be used is one of quality, that will be sold, not because of its price, but because of its superior merit. Due to this precaution, a great many fabrics made from "Acele," ranging from gossamer ninons to heavy, fur-depth velvets, are quality fabrics, sometimes selling at premium prices, but having a superior style value as well as a greater intrinsic worth.

Not satisfied with the production of better fabrics, even greater stress is laid on the selection of the garment manufacturers to whom these fabrics are sold, and these selected "cutters" of dresses and other wearing apparel are encouraged to produce garments having the highest degree of fashion significance.

Thus, two important steps are taken to insure the maintenance of high quality standards to the point where the garments are ready for sale. But even that is not enough. There remains a third step—the selection of responsible retail establishments through which these garments of fashion's finest fabrics are offered to the consumer. The Du Pont Rayon Company assists in choosing these stores and thus insures not only an ethical presentation of "Acele" merchandise to the public, but also secures for the retail consumer a guarantee of satisfaction that would not otherwise be possible.

The net result is that "Acele" appears in the most stylish garments and is sold and sponsored by the most reputable retail stores. It is because of these quality and style safeguards that this product is known as the "Acetate Yarn of Better Fashions," and it also explains why the entire output of "Acele" is in demand for high-style fabrics.

The Yarn of Better Fashions

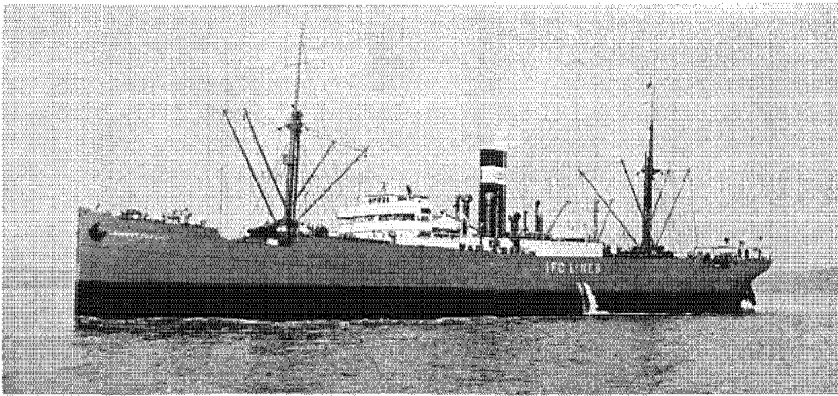
- You will be interested to know why this slogan characterizes "Acele" so well...

By HELEN McCrATH

"ACELE" is the registered trade name used by the Du Pont Rayon Company to designate its cellulose acetate yarn. Due to the improved process of manufacture, "Acele" is considered to be the highest type of yarn on the market, although as far

as its general characteristics are concerned it must, of course, be classed with other brands of cellulose acetate yarn on the market.

It is the unique manner in which "Acele" is merchandised that places it in a class by itself. When an order



The S. S. "Lammot du Pont," leaving the Port of New York after being reconditioned and painted for service in Atlantic and Gulf Coast waters. This cargo boat is owned and operated by the International Freighting Corporation, Inc.

A Service on the Seas

- The International Freighting Corporation, Inc., has added another cargo boat to its fleet... and a little history adds interest to the news

READERS of this publication seem to be interested in new developments pertaining to du Pont products and to the services rendered by the organization. As a rule, stories about products and their application dominate these columns, and so, to vary the theme, let's talk about ships and shipping services, about cargoes and commerce on the high seas.

The subject is brought to mind by the recent announcement that the International Freighting Corporation, Inc., a du Pont subsidiary, has added to its fleet the S. S. "Lammot du Pont," which is 405 feet long, with a dead-weight capacity of 8,500 tons. Completely reconditioned and painted, she put out to sea from New York, October 27, and from now on will make monthly sailings, calling at a number of Atlantic and Gulf ports to be mentioned later.

The du Pont Company's interest in shipping goes back a long way into our nation's industrial and commercial history. To say that nitrate of soda, Chile saltpeter, is an ingredient of gunpowder, du Pont's first product, gives you the key to the story of a shipping service that has been of vital importance to the United States Government, particularly in times of war. For example, the "bridge of ships" that carried American troops

and supplies across the Atlantic during those hectic World War Days was hardly less essential than the fleet of "soda boats" that plied between Chile and the United States carrying a then indispensable raw material for making smokeless powder. German submarines went far out of their way in an effort to sink those ships. Let that stand for a bit of interesting background as we pass on to more recent events.

The I. F. C. organization began functioning in 1926, under the auspices of the du Pont Company's Traffic Department. Prior to that, boats were chartered to carry Chile saltpeter to American ports for use in the manufacture of commercial explosives, and they proceeded south in ballast, picked up their cargoes and returned. It was then a one-way shuttle service so far as freight was concerned. The management corrected that condition by collecting general cargoes for delivery at ports on the east coast of South America and by establishing a new route which followed the Atlantic seaboard all the way down to the tip of Argentina; thence, "around the Horn" to Chilean ports where the saltpeter could be loaded for the homeward trip. True, it was the long way around, but freight revenues obtained by

carrying cargoes to Brazil and the Argentine were in some degree offsetting factors on the cost sheet, even though the ships carried nothing but ballast around the loop.

On account of the upset conditions in Chile, service to the west coast of South America has been temporarily discontinued, but I. F. C. boats still operate to the east coast of South America. They carry flaxseed, coffee, hides, rubber and miscellaneous freight on north-bound trips and du Pont-made products and those of other manufacturing concerns when moving south.

As an outgrowth of this business, a domestic coastwise service was instituted in the summer of 1933, between a number of Atlantic and Gulf ports. Large quantities of raw materials, such as lead, sulphur, cotton linters, wood pulp and the like, are consumed in du Pont plants, and many manufactured chemical products move in volume to various markets of the world. Some of the raw materials are produced in the South, and these together with general cargoes help to fill the holds of I. F. C. boats on their northward trips. Finished products from du Pont plants and from the factories of other manufacturers are sent back.

At present this service requires four ships, three of which are time or trip-chartered vessels. The fourth and latest addition to the fleet is owned and operated by the I. F. C., Inc.

The S. S. "Lammot du Pont," as now reconditioned, is considered to be one of the finest ships of its kind carrying freight along the Atlantic and Gulf coasts. She can develop a speed of thirteen knots an hour and will be a regular visitor at the ports of New York, Philadelphia, Baltimore, Norfolk, New Orleans, Houston and Galveston.

Various du Pont products figured in the reconditioning work. Both the interior and the superstructure are protected with du Pont paints, which add the finishing touch to a truly fine craft as it goes into service.

Some Interesting Relics of the Past

SURELY there is nothing unusual about buildings that are seventy to ninety years old. But sometimes the circumstances of their use in almost forgotten days are interesting enough to be noteworthy, and that is why we are presenting the accompanying sketch. It shows two powder magazines—perhaps it would be more exact to call them depots—which were built on the river front near Edgemoor, Delaware. The plot on which it stands was originally part of a farm adjacent to the Delaware River, and the property was acquired in 1839. Presumably the buildings and a wharf were constructed about that time or during the early forties. Time, tides, wind and waves have reduced the wharf to a state of ruin, but the magazines still remain and they are believed to be the oldest du Pont structures of their kind in existence.

It is interesting to note why they were built. Before the days of trans-continental railroads, gunpowder was carried to market in wagons and in the holds of sailing vessels, and ship captains called at Delaware River

ports to pick up miscellaneous cargoes. Before these magazines were provided, powder shipments were hauled overland to Marcus Hook,



Pennsylvania, and loaded there, but the teamsters did not leave the Brandywine Mills until word was received that a ship was in port ready to receive cargo. Now it happened frequently that bad weather interfered with deliveries and that meanwhile the ship had sailed. The shipper had to haul the powder back to the mill and wait for another opportunity. It was the uncertainty of arrivals and departures that led to the establishment of private shipping facilities at Edgemoor and the building of these distribution magazines.

Orders for delivery to New York, Philadelphia, New England ports or

to the West Coast were made up, transferred to these magazines temporarily, while lookouts stationed there signalled incoming and outgoing boats that powder was ready for shipment. Captains bound for Philadelphia were directed to stop on their return to the sea to pick up cargoes. With the development of railroad facilities throughout the United States, more and more black powder was delivered by rail and eventually the magazines at Edgemoor were abandoned.

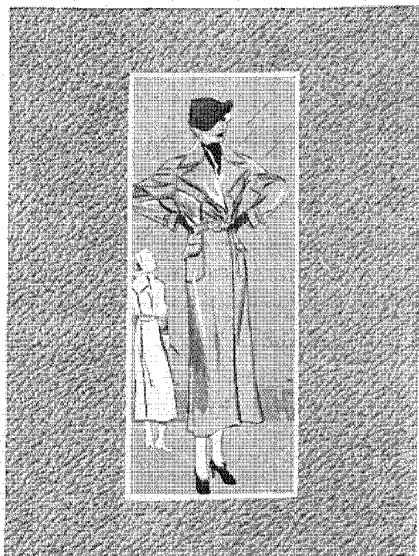
These relics of bygone days are not without interest in themselves. Each building is divided into two compartments by a partition. The floors and woodwork are of oak, secured with wooden dowel pins. The window sills are of marble, and the doors, sheathed with sheet iron, are sturdy units obviously secured with a lock that required a key of ponderous proportions as compared with those in use today. Not for many years has any powder been kept in these magazines, but they have served at least one practical purpose as boathouses for a local recreation club.

A "Cavaltex" Coat for Christmas

WHEN "Cavaltex" was first announced a few years ago, it was designed for use as a rough-wear material to take the shock and thumping a 200-pounder would hand out to it in the course of a day afield with dog and gun. Waterproof, armored against brambles, it found ready favor.

Today, "Cavaltex," in natural pig grain and color, lighter in weight, but still possessing all of its original attributes, has stepped up into the world of fashion. One of the country's leading style factors in this field has made it into a swagger-type sports coat for those discerning women who choose to be smartly dressed even in the rain.

The material simulates pigskin per-



fectly. Designers have graced the line of women's jackets and coats made of it with the present suave lines of fashion. It has been tailored sturdily and is a distinguished coat in any company. One of the styles is shown in the accompanying illustration, which also gives you some idea of the grain effect. But you will have to see "Cavaltex" to appreciate its beauty.

Retailers should write to Sherman Brothers Rainwear Corporation, 205 West 39th Street, New York City, if they wish a Christmas item that is not too expensive and will make sales. DU PONT MAGAZINE readers are also invited to write for the name of the store nearest them handling swagger coats made of this new du Pont material.

Chemistry and Agricultural Progress

(Continued from page 3)

the same type of ingenuity that produced synthetic rubber may produce chemicals that can be used effectively in the control of pests without endangering the lives or health of animals and man.

CHEMICAL INSPECTION AND CONTROL

Restricting the use of certain insecticides is only one of many ways in which the Government chemist is guarding the interest of the farmer. He is protected against misbranded or fraudulent drugs, foods, feeds, fertilizers, insecticides, fungicides and disinfectants. Only the chemist can detect the undesirable chemical and determine if the desirable is present in the proper amount.

UTILIZATION

For many years farm surpluses of perishable products were either discarded or processed for preservation by methods that are now largely obsolete. Not only has the chemical industry led the way to better means of preserving perishable products, but there has been a tremendous advance in the processing of raw agricultural products in general, including those to be used for food, clothing and other purposes. The development of modern refrigerants has made possible the delivery across the continent of fresh fruits, vegetables, eggs, butter and meats for sale in the fancy markets. Efficient cold storage is assured. Chemistry also has discovered many uses for farm by-products both of plant and animal origin. Wall board from bagasse; celluloid and rayon from cotton linters; paper from corn-stalks; furfural from corn-cobs and oat hulls; fruit drinks, jellies and preserves from cull fruits and fruit peels; glue from animal hoofs; gelatin and bone meal from animal waste are examples.

Many processes that were originally confined to the farm have now become industries dependent on agriculture for raw materials. Chemists are constantly developing improved processes

The du Pont organization supplies a variety of chemical products for agricultural use. Some raw materials, such as anhydrous ammonia and urea-ammonia solution, are used primarily by manufacturers of commercial fertilizers. Others are distributed more directly through trade outlets. Following is an incomplete but representative list of products which are offered for sale in the farm field:

"Agritol"—Explosives for agricultural use; also Du Pont Ditching Dynamite for farm drainage uses.

"Alkanol B"—A valuable wetting-out agent used to remove spray residues of arsenic and lead from fruits.

"Du Bay" Seed Disinfectants—Those sold by the Bayer-Semesan Company include—"Ceresan" for sorghums, flax and cotton; "New Improved Ceresan" for wheat, oats and barley; "Semesan" for vegetable and flower seeds, bulbs, corms and certain plant diseases; "Semesan Jr." for field and sweet corn; "Semesan Bel" for white and sweet potatoes; "Du Bay 738," a soil disinfectant to prevent bottom rot of lettuce.

"Du Pont Plant Spray No. 2"—A combined insecticide and fungicide for citrus trees.

Grasselli Spray Products—Arsenate of lead, blue vitriol, Bordeaux mixture, calcium arsenate, casein spreader, dry lime-sulphur, dust mixtures, "Dutox," flake zinc sulphate, "Kleenup," lime-sulphur solution, "Manganar," "Manganar" Rose Dust, monohydrated copper sulphate, paradichlorobenzene, sulphur, "Sulfuron," sulphate of nicotine, "Volek" and zinc chloride.

"P. A. C." Formaldehyde—An R & H disinfectant for the seed treatment of grains, potatoes and other vegetables.

"Hydro-Cy"—Hydrocyanic acid gas; made by the Pacific R. & H. Chemical Corporation and used for fumigating citrus trees.

and finding new outlets for agricultural products. The manufacture of syrup and sugar; canning, preserving and pickling of farm products; the curing, processing and packing of meats; the manufacturing of dairy products; the manufacture of vinegar and sauerkraut; the curing and processing of tobacco; the curing and tanning of hides; the making of gelatin and glue; bread making, and others, although still practised on the farm to a certain extent, have developed into industries dependent on farm products.

CHEMICAL RESEARCH IN AGRICULTURE

Agriculture has profited handsomely as a result of chemical research. When normal conditions are restored it will undoubtedly do so again, for there is apparently a keener, more extensive interest in

chemical research in agriculture today than ever before. With the will to achieve, a tremendous fund of information at hand and talent available to serve as a background, we may confidently expect a continuation of impressive discoveries, and perhaps the development of synthetic compounds that will replace certain agricultural products in a limited way. That has happened in a few instances in the past. But the discovery of uses for the products of new species of plants and the development of more extensive applications for the commonly grown crops and farm animal products will, no doubt, tend to offset any developments that may be unfavorable to the farmer. Indeed, research may result in an appreciable credit balance to start a new era in agricultural progress.

Introducing "Elasticord"

(Continued from page 11)

until it kinks—and that is a potent factor in reducing its service life.

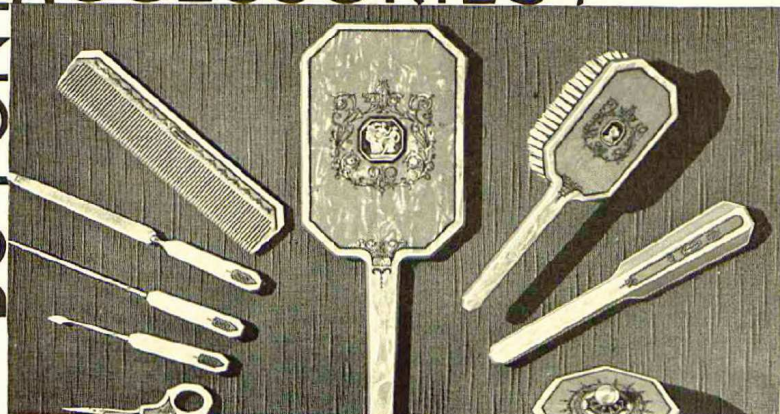
In developing "Elasticord" the manufacturer also considered the modern woman's penchant for color, for this product is covered with Du Pont rayon in gay hues that lend a bright note of glamour to the kitchen. This cord is also made in more subdued tones to blend harmoniously with rugs and furniture in the living-room.

The United Elastic Corporation, Easthampton, Massachusetts, will be glad to furnish more specific details about this product and tell you where it can be purchased in your community.

And Tontine, Too

RECENTLY, you have heard much about the new home of the National Broadcasting Company in New York City. Through the press and over the air a wealth of information about it has been given world-wide circulation. Perhaps you will be interested to know that one unit of Radio City and the building in which the British and French trade centers are located have been shaded entirely with du Pont "Tontine." It is one of the largest installations ever made.

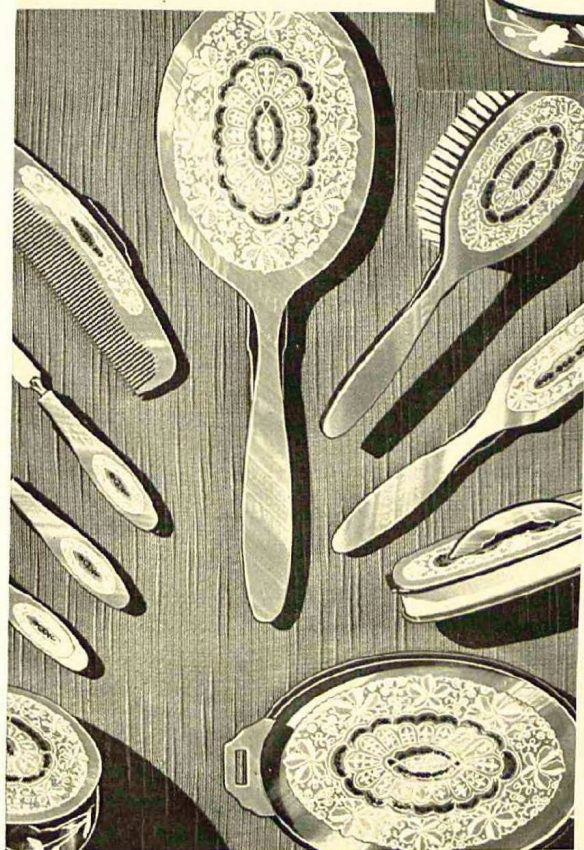
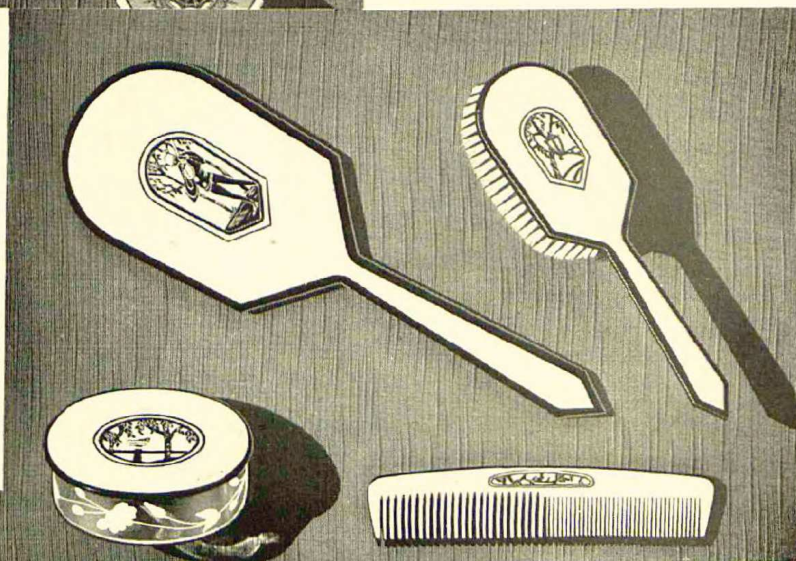
Du Pont ACCESSORIES for the boudoir



COLORS—Jade, Rose and Blue. The inspiration for this beautiful Adam Pattern was from the ceiling designed by the famous designer, Robert Adam, in an old English home of the 18th Century.

COLORS—Jet on Maize and Grained Ivory on Jet. This set represents an entirely new patented process of manufacture. The decoration is carved out of the material. The inspiration for the design is the Spanish Strolling Minstrel in costume of the time with his guitar. Each piece is decorated differently and in perfect harmony.

COLORS—Jade only. This set has for its decorations an old lace pattern, a copy from a piece of fine old Brussels lace. The delicate tracery of the thread lines in the weave has been portrayed by the exclusive patented du Pont process of built-in decoration. The color of jade gives this set a pleasantly soft, restrained tone and distinctly feminine appeal.



THE distinct charm of Du Pont Toiletware is irresistible to every woman who appreciates real beauty. These boudoir accessories are styled and designed by some of our most eminent artists and range from the ultra-modern in feeling to the lovely and graceful designs reminiscent of the French Empire. You are sure to find the exact set of Du Pont Toiletware to fit in with your plan of interior decoration. Their beauty is only matched by their usefulness. The brushes in these sets have the finest of bristles, the mirror glass and steel for the manicure implements are of the best quality. You may see the wide range of new patterns, designs and colors in all leading stores. And look for the Du Pont Oval, your assurance of beautiful and correct toiletware at moderate prices. Du Pont Viscoloid Co., Inc., Empire State Bldg., 350 Fifth Ave., New York, N. Y.



Lucite

Pyralin

Arlton