SALES SUGGESTIONS FOR PAPER BOX MANUFACTURERS

A Practical Book, Designed Particularly for the Purpose of Offering Suggestions to Paper Box Manufacturers for Promoting New Business.

By ROBERT F. SALADE

Author of "*How Paper Boxes Are Made*," "*Plate Printing and Die Stamping*," "*How Cutouts Are Made*," "*Electrotyping and Stereotyping*," Etc.

With 68 Illustrations

LAFAYETTE, INDIANA.
SHEARS PUBLISHING COMPANY
1922

LIST OF CONTENTS

high grade candy. Odd-shaped candy boxes. Descriptions of several out-of-the-ordinary paper boxes. Methods of doming tops for large-size round, oval and odd-shaped boxes.—Pages 32 to 42.

Chapter IV

Attractiveness will sell goods. The mission of the paper box manufacturer. How box manufacturers can help create new business for other manufacturers. A simple idea that sold tons of fine candy. Carnival box tops. New fields for plain paper boxes. New fields for attractive paper boxes. "Flashy" candy boxes for carnivals, fairs, etc. "Je'Clair, the Package Beautiful." Two unique candy packages that have scored big hits. Opportunities for paper box manufacturers to work up complete advertising campaigns for large producers of package goods. Paper boxes that are works of art.—Pages 43 to 55.

Chapter V

New fields for folding boxes. The new-school paper box manufacturer. The wonderful utility of folding boxes. A new-style folding box for brick ice cream. Selling methods of one successful box manufacturer. Folding boxes for books, catalogues, magazines, etc. How folding boxes helped a national advertising campaign. Folding boxes for medical tablets. Folding boxes for tooth paste, shaving cream, etc. An interesting case. Folding boxes for jars of complexion cream. Suggested improvement for Easter egg boxes.—Pages 56 to 65.

Chapter VI

Selling goods with unique folding boxes. Modern manufacturer of folding boxes a business promoter. The art department as a business builder. Advantages of first class printing and lithographing departments in paper box factories. Some big orders for folding boxes. "Share Thy Knowledge." The kinds of folding boxes that sell goods. A cake box with the utility feature. 100,000,000 folding boxes for raisins. Other lines of merchandise that could be sold in small-size paper boxes. Unique display containers. Folding boxes and cartons for window displays. Opportunities for paper box manufacturers to plan and sell new ideas in folding boxes. A cylinder cutter and creaser.—Pages 66 to 76.

Chapter VII

Improved methods of cutting and creasing. The demand for all kinds of folding boxes increasing. Brief outline of cutting and creasing work. Suggestions for building an extra-strong die. Simple method of preventing a steel die from warping. Advantages of

printers' brass rule as scoring rule. Brass feeding guides with self-contained fenders. Out-of-the-ordinary method of making ready a cutting and creasing form. Best methods of corking forms. A "bender," or spring, made of binders' board.—Pages 77 to 85.

Chapter VIII

Cutouts paper box manufacturers can produce. Meaning of the term, "Cutout." Partitions and "set-ins" for holiday boxes. How the "set-ins" are made. How the cutout work is done. Practical facts about making the cutting dies. The make-ready for cutout work. Cutouts for Christmas, Easter, Valentine Day and other holidays. Odd-shaped candy boxes for holiday occasions. Fancy paper baskets, bon-bon holders, etc. Unusual color effects. Advertising signs and cutouts. Advertising novelties. Cardboard fans, wall pockets, calendars, and paper caps. Display cards for buttons, pins, etc. Other kinds of cutouts.—Pages 86 to 99.

Chapter IX

Suggestions for new designs in tops, labels and wrappers. Future bright for progressive box manufacturers. Excellent sales-promotion work being done by many box men. A box wrapper with a blue-bird design. Printing patterns for box wrappers on a cylinder press. The imitation marble effect. A checker-board design. The stripe effect in wrappers. Out-of-the-ordinary box tops. Type-and-border forms for box tops. Helps for printing on highly glazed paper. Labels for the inside of box lids. How one paper box manufacturer gained an important order.—Pages 100 to 108.

Chapter X

Keeping the box manufacturer's print shop busy. Opportunities for producing job and commercial printing. How to keep the printing plant profitably employed during all seasons. Kinds of work produced in one box manufacturer's print shop. Factory forms, time sheets, loose leaf forms, etc. Business cards, letter heads, envelopes, statements and bill heads. Labels of many different kinds. Fancy labels cut out to odd shapes. Gummed labels and advertising stickers. How the paper box manufacturer may produce his own advertising matter. A telephone list booklet. Wall calendars, blotters, motto cards, folders and circular letters. Large-size wall calendars. A suggestion for a motto card.—Pages 109 to 115.

Chapter XI

Important engraving processes every box manufacturer should know. Steel-die-stamped wrappers for fine paper boxes. The utility of die-stamped box wrappers. Steel die stamping—what it is. The

Chapter XII

Chapter XIII

CHAPTER I

THE MODERN PAPER BOX FACTORY

WHAT wonderful changes have occurred in the paper box industry during the last few years! Remarkable changes for the better. The old, dilapitated building of some twenty years ago has been replaced by a handsome, modern, fire-proof structure, designed particularly for the purposes of a paper box manufacturer. Modern factory buildings of this class are being erected in many different parts of the country and many of them are of beautiful architecture in addition to being 100 per cent useful.

It is not simply these handsome new buildings that have marked the great progress of the paper box industry during the last few decades. The buildings themselves have had much to do with this progress, but so has modern mechanical equipment, skilled labor and efficient management. Moreover, the proper arrangement of mechanical equipment in modern factory buildings has made increased production possible in numerous cases.

If you put old, worn-out machinery in a modern building you have not solved the production problem. The conditions are not much better in a case where new mechanical equipment has been installed in an old, dingy building where pure air and natural light are almost unknown. The modern paper box plant must be complete in every detail of its equipment and organization else it would not be truthful to call it a modern plant.

For the purpose of compiling data for this subject the writer visited a considerable number of paper box plants, including factories devoted exclusively to each of the following products: Set-up paper boxes, folding boxes and cartons, pill and powder boxes, corrugated containers, and solid fibre shipping cases. Plain facts about the construction, equipment, arrangement of the equipment and the general management of these various plants will be given in the following paragraphs. This information has been taken from the original sources and for that reason should be helpful and suggestive to any

reader who is interested in the subject. Several of the finest paper box plants in the world are referred to in this article—concerns that are noted for quality, service and genuine efficiency—and the splendid examples set by these firms should be closely studied by other paper box manufacturers who desire to improve their plants. While it is true that extraordinary improvements are being made in the paper box industry throughout the country, it is likewise a fact that some of the paper box manufacturers are not participating in this grand march of progress. Among the plants that were visited by the writer was one that was nothing more than a "fire-trap." It was an ancient, five-story brick building. The old, wooden floors were actually oil-soaked. The stairways, pillars and partitions were all of wood. There was only one elevator, operating at a "snail's pace," and used principally for carrying stock to the various floors. It was necessary for the employes to climb the stairs to reach the different departments. Some of the workers had to climb as many as four flights of stairs. The entire place was dark and dirty. If ever a fire breaks out in that building there will probably occur a heavy loss of life.

Yes, we still have with us a number of old-time buildings like the one just described, but happy to say, they are passing away rapidly, and the time is soon coming when such a building will be rare, indeed. Let us all help in bringing about this betterment as quickly as possible. The dingy, unsanitary, fire-menace type of factory has no place in the paper box industry of today.

THE MODERN PAPER BOX FACTORY

The modern paper box factory is built of brick, stone or re-inforced concrete. The sides of the building are of steel and glass, allowing an abundance of natural light to reach all departments of the plant. The floors, stairways, partitions and pillars are all formed of concrete, although in some cases the floors are made of solid wood blocks which have been treated with certain chemicals to make them fire-proof. It is almost impossible for a building of this kind of construction to take fire and burn. The stock and materials inside of the building may catch fire and burn, but in such an event the "inhabitants" of the structure would have ample time to make their escape.

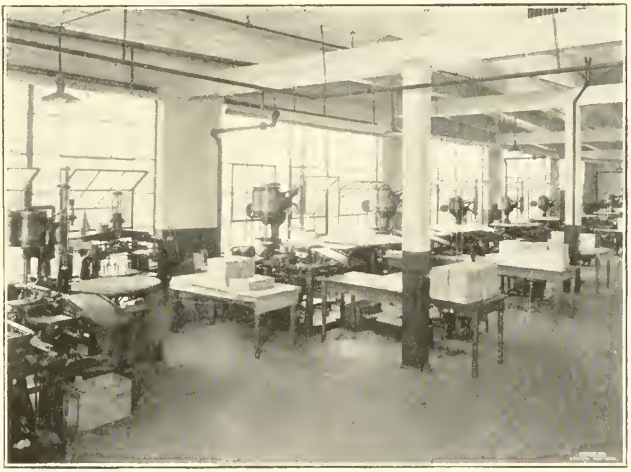
The new-style, double fire-tower-escapes are so constructed that they do not become congested as hundreds of persons rush into them from the various floors. As the workers from the ninth floor (for example) are running into one tower, the workers from the eighth floor are rushing into the other tower. This system allows plenty of room in the double towers for all of the employes, and those from the

lower floors are out on the street while the workers from the upper floors are descending the towers.

The interior of the modern paper box factory—the walls, pillars and ceiling of every work-room—is painted in mill white, finished with a coat of gloss-white. The walls and pillars have a dado of gray, or dark olive green, about 4 feet high from the floor. The doors, metal window sash, steel doors leading to the fire towers, etc., are painted either gray or dark olive green.

STEEL EQUIPMENT

The modern paper box factory has steel equipment in practically all of its various departments. In one well-known plant even the office furniture is of pressed steel, finished in dark olive green. The



Group of Automatic Wrapping Machines. This photograph was taken in one of the larger paper box factories in the Middle West.

imposing tables upon which cutting and creasing forms are built are of pressed steel with planed steel tops. The work-tables, material cabinets and lockers in the different departments are also of pressed steel.

If the modern paper box factory is operating its own printing department, as many of the leading box manufacturers are doing today, the type cabinets, roller cabinets, make-ready tables, and other equipment of this variety are all made of pressed steel. The steel equipment is as close to being indestructible as anything could be, and its handsome appearance enhances the beauty of the entire plant.

LABOR-SAVING CONVEYOR SYSTEMS

The conveyor system is an important feature of the modern paper box plant. In several of the larger plants the conveyor system is so efficient that the finished product is automatically carried from the various departments to the shipping department. By this system it is possible to "shoot" finished product directly into freight cars, or motor trucks, as the case may be.

The conveyor system is also used for the purpose of carrying stock and products in process of manufacture from one department to another. For example, and in the case of a factory devoted to the manufacture of set-up paper boxes, the blanks first go to the cutting and scoring machine. From this machine the blanks are carried to the corner-cutter machine. The blanks then pass on to the flange bender, on to the staying machine, and finally on to the automatic wrapping machine. It is one continuous operation. As the finished boxes and lids come from the wrapping machines, the boxes and lids are assembled, and then on down the chute they travel directly on their way to the shipping department.

In one large plant devoted to the manufacture of solid fibre shipping cases, the conveyor system carries the printed and folded boxes directly through the automatic wire stitching machine. As the ends of the containers are wire-stitched together, the finished product is carried on to the shipping department. The owners of this plant have their own private railroad siding, and at times the completed containers are conveyed directly from the wire stitching department to the freight cars standing on the railroad outside.

The conveyor system is something that deserves the deepest study of any paper box manufacturer who may be planning to have a new factory erected. The right kind of a conveyor system will make it unnecessary for employes to carry stock or product in process of manufacture from one department to another, thus saving a great deal of time and labor in every department of the plant. The conveyor system now in practical service can be improved upon, of course. One improvement always leads to another.

THE PNEUMATIC AIR TUBE SYSTEM

The larger, modern paper box factory has a pneumatic air tube system running from the general business offices to each and every department of the plant. By this system orders, written instructions, samples of stock, telegrams, bills of lading, etc., are "shot" to the proper department in less than five seconds' time. This tube system in conjunction with a plant telephone system makes it practically un-

necessary for a foreman to leave his department. The time-saving advantages of this plan may be illustrated by the fact that in one large plant several thousand orders and other articles pass through the tubes every day.

A REMARKABLE "ALL-ON-THE-GROUND-FLOOR" PLANT

The plant of the Fibre Container Company, Manayunk, Philadelphia, is remarkable in several particulars. This plant consists of a number of modern, "saw-tooth" buildings, built of brick and con-

Typical of the modern paper box plant is this recreation and first aid room in the factory of W. C. Ritchie & Co., Chicago. Here the employees gather to enjoy themselves, buy candy and soft drinks. A nurse always in attendance with two cots for emergency.

crete, and so arranged that the entire plant is laid out on the ground floors of the various buildings. This means that there are no stairs to climb; no elevators are essential, and all of the machinery is set on an absolutely solid base of concrete. As this plant is devoted exclusively to the manufacture of solid fibre shipping containers, extra heavy machinery is required, thus the advantages of the "all-on-the-ground-floor" plan can be readily understood.

Talk about a complete paper box manufacturing factory! The Fibre Container Company not only makes its own container board, but it even manufactures the jute and chip papers from which the container board is made. One entire building is devoted to the paper-making processes, and here are located the mammoth paper making machines which can be used, if desired, for making any kind of

paper. In the next building is the great container-board making machine which spreads warm, liquid sodium silicate between three, four or more sheets of chip paper, and which pastes a sheet of jute paper on top and bottom of the completed board. This machine looks much like its brother, the paper making machine. The finished board is delivered in large, flat sheets, ready to be cut, slotted and scored for making up into solid fibre containers.

In the other "saw-tooth" buildings of this big plant are installed the special printing presses, cutting, slotting and scoring machines, wire stitching machines, giant paper cutters, corner cutters, special two-color printing presses for printing on the heaviest kinds of solid fibre shipping cases, and special machines which print in two colors, cut, slot and score the container board all at the one operation.

In addition to the conveyor system in this plant, there are also about half a dozen miniature motor trucks which are used for carrying stock and product from one department to another. Tons upon tons of solid fibre containers are made in this plant every day, and the mechanical equipment is laid out in such a manner that the work passes rapidly from one department to another, and finally to the shipping department. Freight cars and motor trucks are in close proximity to the shipping department.

There is no waste material in this plant. The paper and board trimmings are simply re-converted into pulp, and this pulp eventually is rolled into new chip paper.

THE CHUTE SYSTEM FOR WASTE PAPER

In a number of modern paper box factories where stiff or set-up paper boxes are made there is a chute system leading from the cutting and corner-cutting departments to a section of the basement where the balers are located. The waste trims from the cutting and scoring machines, and also the waste stock from the corner-cutting machines, is immediately thrown down the chutes referred to, and soon after reaching the basement the waste is pressed into bales ready to be sent to the paper mills. This chute system not only saves a great deal of time and labor, but it also helps in the maintenance of a clean plant.

MECHANICAL EQUIPMENT OF THE MODERN PLANT

It goes without saying that the mechanical equipment of the modern paper box factory should all be of the newest designs, and should be kept in first class working condition so that the highest degree of production may be maintained. Every machine should be operated

by individual motor. Overhead belts and shafting are out of place in the plant of these times.

The machines should be arranged in a scientific manner so that work in the plant may be handled as a continuous operation, and this does not mean putting each group of machines in a separate department. For example, by having several gluing machines operating in connection with a number of cutting and creasing presses, it

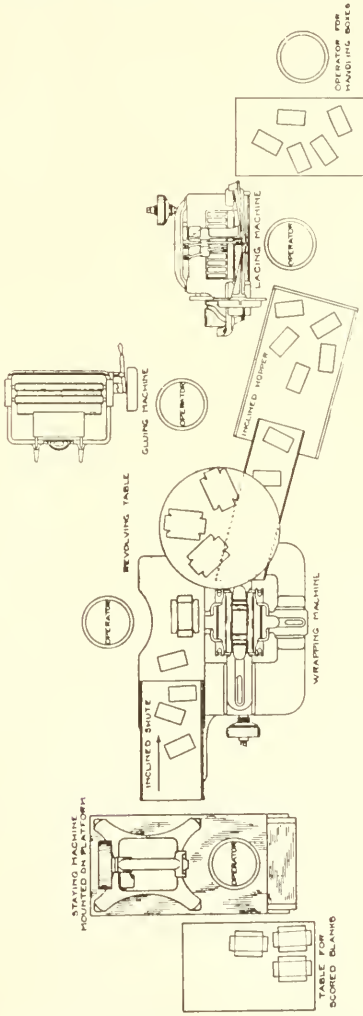


Fig. A. Grouping of machines and operators to cut cost of production. Job: Tight-wrapped boxes with fly-leaves; staying, gluing, wrapping, lacing and stacking. Note the arrangement of the portable platforms and inclined chutes.

is possible to turn out large quantities of folding boxes without wasting time and labor in carrying the stock from one room to another.

THE MODERN CUTTING AND CREASING DEPARTMENT

In the modern cutting and creasing department the platen cutting and creasing presses are lined up in such positions that natural light

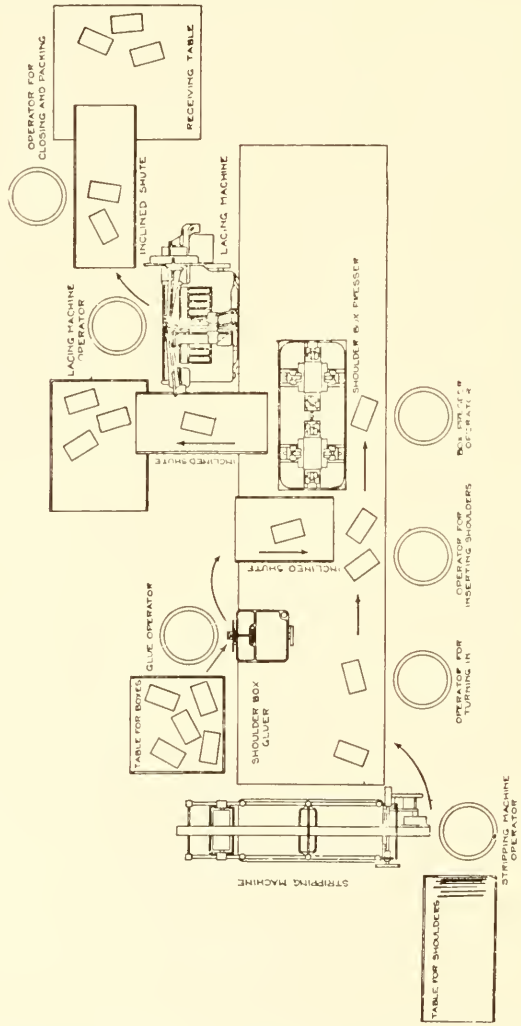


Fig. B. Another special grouping of machines and operators for shoulder stripping and turning in, box gluing and inserting shoulders, pressing and turning. Note the positions of the inclined chutes.

coming in from the windows at the end of the room illuminates the inner side of the side guide on each press. This makes it possible for the feeder of the press to clearly see the side of the side-guide which is most important in the matter of close register work. Were the presses to be turned the opposite way, the natural light would fall upon the side-guide in such a way as to cause the side-guide to cast a shadow at the point where the sheet is to be fed, making it difficult for the feeder to do close-register feeding.

The printed sheets are first sent to the cutting and creasing presses where they are cut and scored to the required sizes and shapes. As the sheets come from the cutters and creasers, they are conveyed to the "stripping" department nearby where the trims, or waste material, are removed. The blanks are then passed on to the gluing department, where two ends of each blank are glued together thus forming a complete folding box.

SEQUENTIAL MACHINE ARRANGEMENT

Floor space can be economized and production can be substantially increased by the sequential machine arrangement—something that is being done in many of the modern paper box plants. For example, in a number of plants the machines for making a tight-wrapped candy box with fly-leaf; staying, gluing, wrapping, lacing and stacking are grouped and handled as follows:

By this arrangement of machines, the stayer, the wrapper and the lacer, are on three different elevations. Portable platforms are used for the purpose, and the reason for the different elevations is to take advantage of the power of gravitation which is utilized as a natural conveyor between the machines, the work sliding down inclined chutes from one machine to another. The staying machine is on the highest elevation; the wrapping machine is on the next elevation, and then comes the fly-leafing machine.

The force on this job—tight-wrapped candy box with fly leaf; staying, gluing, wrapping, lacing and stacking—consists of five skilled operators, one for each machine, and one to inspect and pack the finished work.

The boxes are passed down the inclined chute from the staying machine to the operator of the wrapping machine who registers them to the glued wraps. The operator of the gluing machine takes the glued wraps from the machine and places them upon a revolving table within convenient reach of the wrapping machine operator. From the wrapping machine, the second elevation, the wrapped boxes are "chuted" to the fly-leafing machine where the fly-leafs are inserted.

Machines such as the stayer, the lacer, etc., should be mounted on rollers and should be equipped with individual motor so that they may easily be moved to any part of the building to work in connection with other machines.

INCREASING SHOULDER-BOX OUTPUT

One of the most complicated jobs in set-up paper box manufacture is as follows: Shoulder stripping and turning in, box gluing and inserting shoulders, pressing and lacing. By handling this work in a sequential, uninterrupted course, the production cost is decreased to a large extent. The group plan calls for seven operators, and all seven stages of the work are accomplished without unnecessary handling.

From the shoulder-stripping machine operator the boxes are within easy reach of the operator for turning in. This operator then hands the boxes to the operator who does the inserting. By means of an inclined chute the boxes are passed from the gluing machine to the operator who inserts the shoulders. The boxes are then passed on to the presser operator. Another inclined chute conveys the boxes to the lacing machine operator. Still another chute carries the boxes to the operator attending to the closing and packing.

The two time and labor-saving plans mentioned in the last few paragraphs were perfected by the Stokes & Smith Company, of Philadelphia. These plans have been tried out successfully by numerous box manufacturers and they may be adopted by others with good results.

TIME-SAVING MACHINES

The modern paper box factory is not complete without time-saving machines of the newest type. Among the great time-savers for set-up box work are the double cutting and scoring machine, the automatic wrapping machine, and the double corner cutter. The new-style cylinder cutter and creaser is a big time-saver on various kinds of folding boxes and cartons. For the printing department there are automatic feeders for both cylinder and platen presses.

Only a few of the principal time-saving machines have been mentioned, and there are many others that belong to this class, but enough have been quoted to illustrate the point intended. The ordinary machines have their advantages, too, like the single cutting and scoring machine, the single corner cutter, the topper and the standard covering machine, all for example. Genuine economy is effected by utilizing the right machine for each particular class of work.

THE BUSINESS OFFICES

The business offices of the modern paper box factory are on a par with those of other high class industrial plants. The general offices are spacious, well-lighted and neatly furnished. The comfort of the visitor is carefully considered. The lobby is provided with easy chairs, a library table, and a well-stocked bookcase, and copies of the leading business magazines are spread upon the table. "Miss Information" is a pleasant, intelligent girl, who is courteous to visitors and who knows how to give each caller the proper attention. The private offices are handsomely furnished, and whenever a customer is ushered into one of these offices he is made to feel perfectly "at home."

There is also a special consultation room in connection with the business offices where the customer is escorted in a case when an important order for paper boxes is to be placed. Here the matter may be talked over and planned under the most favorable conditions for all concerned.

THE DISPLAY ROOM

The display room is an important feature of the modern paper box factory. It is usually equipped with glass cases on all sides of the room, and in these cases are specimens of the box-maker's best product. Some of the larger firms have displays of decorated candy boxes that are exceedingly attractive. The display cases are illuminated by electric lights. The room is nicely furnished for the convenience of customers.

DINING ROOM FOR THE EMPLOYES

Nearly all of the larger paper box factories now have private dining rooms for the convenience of the workers, and some plants have first-class "self-service" restaurants where meals are served to the employes at nominal cost. In a number of plants hot coffee, tea or milk is given free to workers who prefer to eat their own lunch in the dining room of the factory.

The modern plant also has private rest rooms for the female workers and a smoking room for the males. The dressing rooms are commodious and sanitary and each worker is provided with an individual steel locker for his or her clothing and other personal belongings. In a number of the larger factories is a small but complete emergency hospital, in charge of a trained nurse.

In this chapter we have attempted to give merely a rough outline of the modern paper box factory in the effort to show the remark-

able advancements which have been made in the paper box manufacturing industry during the last few years. It is safe to say that even greater improvements than those which have been mentioned will be made in the future. The conditions brought about by the great World War resulted in many betterments in the industry that are bound to remain permanently, and many other improvements will surely follow.

CHAPTER II

JUDICIOUS ADVERTISING FOR PAPER BOX MANUFACTURERS

WHILE glancing over the pages of a big daily newspaper the writer's attention was attracted by a full-page display advertisement which was unusual in several ways. First, it was a handsome piece of typography, exceptionally well arranged, and having plenty of white space between the type-matter and border on all sides. Second, a number of illustrations were incorporated with the reading matter—illustrations of shipping containers made of corrugated paper board. Third, the copy-matter was exceedingly interesting, telling about the great utility of the shipping containers referred to, and explaining the advertisers' facilities for making paper-board containers of all kinds.

The main reason why this advertisement was unusual was because of it being a full-page newspaper display advertisement of a paper box manufacturing concern. We do not often see advertisements of this kind in the daily newspapers. Why? Simply for the reason that paper box manufacturers in general have not yet awakened to the wonderful possibilities of newspaper advertising, but the time is soon coming when newspaper and magazine advertisements of paper box makers will be quite numerous.

The display advertisement referred to was placed by one of the nationally-known paper box manufacturing firms, a concern that has been utilizing newspaper space for some time past, and it goes without saying that this publicity is helping to boost the sales of paper-board shipping containers in many new fields. Manufacturers, merchants, storekeepers and business men in general, all read the daily newspapers, and when they see an out-of-the-ordinary advertisement in the newspapers in re the economy of fibre shipping containers, they are bound to be interested.

One day the writer was talking with the head of a large manufacturing concern when the fact was mentioned that this concern is now using fibre containers for shipping its product instead of the old-fashioned wooden boxes which that firm has been using for many

years past. This is probably only one of many similar cases where manufacturers are now utilizing paper-board shipping containers in place of wooden boxes. But, think of the vast field that still remains for the manufacturers of paper boxes! Powerful propaganda on the part of the box-makers in general is certain to place countless numbers of paper boxes in entirely new fields. We are not speaking merely of fibre shipping containers—we refer to all kinds of paper boxes, from the smallest-size pill box to the largest-size solid fibre container.

Judicious advertising is what the average paper box manufacturer needs more than anything else. The paper box makers, as a class, have not been advertising in the same proportion as many of the other manufacturers in various lines are advertising. How often do you see a paper box manufacturer's advertisement in a standard magazine, in a daily newspaper, or on a billboard? Three of the large manufacturing stationery firms of Philadelphia are using big painted signs for the publicity of their business. These signs are of extra-large size; are attractively painted in colors, and are set up at prominent points on the main streets of the city. Some of these signs are brilliantly illuminated with electric lights at night.

Now if a manufacturing stationer can use painted sign publicity to advantage, so can a paper box manufacturer. Things like corrugated and solid fibre shipping containers can be pictured as well on billboards, or painted signs, as blank books or other stationery specialties. The business man who buys commercial stationery should also be a good prospect for paper-board containers. Really, the larger manufacturers of paper boxes should devote close study to the question of bill-board publicity.

A recent issue of a well known monthly advertising magazine contained more than a dozen full-page display advertisements of printing concerns, about the same number of the same size advertisements of paper manufacturers, and a large number of other full-page display advertisements representing photo-engravers, advertising agencies, lithographers, commercial artists, newspaper publishers, etc. In the entire collection was only one advertisement of a paper box manufacturing firm, but this happened to be an attractive "double-spread," handsomely illustrated, and having reading matter of the most interesting kind.

Does it not seem strange that only one paper box manufacturing concern was represented in the advertising pages of that magazine—a publication which is widely circulated among the leading business houses of the United States? Mind, more than a dozen printing firms alone were featured in that journal, but only one, lone paper

box making company! Surely, this does not look well for the paper box industry as a whole.

There is no reason at all why the paper box manufacturers should not use "printed salesmanship" in the same proportion as printers, paper manufacturers, photo-engravers, and others of the allied printing trades. Yes, the time has arrived when the larger paper box manufacturer must consider *all* the various advertising mediums now being used by manufacturers in other lines, including the following:

Trade Journal Advertising.
Business Magazine Advertising.
Newspaper Advertising.
Poster and Sign Advertising.
Direct-by-mail Advertising.
Remembrance Advertising.
Moving Picture Advertising.

In these days when a larger manufacturer of package goods is planning a national advertising campaign for his product, particular attention is devoted to subjects like folding boxes, cartons, fancy paper boxes, and shipping containers. What kind of containers will the manufacturer decide upon for his new product if he has never seen a paper concern's advertisement? Possibly he may decide upon *glass jars*, or *tin boxes*, for the merchandise, and *wooden boxes* for the shipping containers.

The paper box manufacturer should be in a position to offer other manufacturers expert advice on every phase of package merchandising, and this service should be emphasized in all the box-maker's advertising. This advertising should be placed in trade journals, business magazines, newspapers, etc., and should be planned to catch the attention of manufacturers, merchants, jobbers, dealers, advertising specialists, and all others who are interested in paper boxes of any variety.

INSPIRATION NOT HARD TO FIND

There are so many good things to say about paper boxes that it is a comparatively easy matter to write an attractive, *alluring* advertisement about them. For example, it does not require a stretch of the imagination to write truthfully about the great economy and utility of corrugated, or solid fibre shipping containers. And, when it comes to writing an advertisement about the selling qualities of beautiful set-up paper boxes, one does not have to seek hard for inspiration. Paper boxes of all kinds are adapted to the most attractive kind of display advertising—more so than many other lines of product which are being constantly and nationally advertised.

"They laid aside their hooks without being told"

Official Government test of fibre containers indicates important economies for American shippers

"I NOTICED the common tendency of freight handlers all along the route — even in Belgium and Germany — to lay aside their hooks without being told, which taught me one reason, at least, why freight handlers are so insistent on throwing their hooks into small freight, often doing concealed damage. *It is to save their hands from injury, which they had no reason to fear from the fibre package.*"

This is the conclusion of the Army Packing Expert who supervised an official test of standard fibre and corrugated containers, made by the U. S. Government in an overseas shipment of canned tomatoes to the Army of Occupation on the Rhine.

Even more important than this explanation of the damage so often suffered by wooden cases is the official report of the economies secured by the use of fibre containers

—a reduction of 10 to 15% in the number of cases set aside because of damaged condition

—a reduction of 10% in the actual weight of shipments

—a saving of 17% in shiproom and storage.

Timely savings in shipping methods to offset higher freight rates

It is just such economies which help to solve the present problem of higher freight rates. Scores of progressive manufacturers are already profiting from these savings by modernizing their packing and shipping methods in co-operation with the Robert Gair Company.

In such factories the costly shipping room—a veritable carpenter shop with its expensive personnel—is replaced by a single clerk who seals all shipments automatically. Conspicuous savings in time, wages and storage space are thus secured.

Lower transportation charges are assured on every shipment because of the difference in weight between fibre and wood. Additional cuts in freight costs can often be secured by rearranging the units within the case.

Quicker and more careful handling is the rule — both at the factory and in transit — for fibre cases, unlike wooden cases, have no splinters or sharp edges to invite rough treatment.

With our fifty-five years of printing experience, we can reproduce your identifying trade-mark in colors on each case—thus adding advertising value and affording extra protection against loss in transit. And the cases which we design for you will meet even abnormal strains safely, and minimize delivery failures.

Expert advice on every phase of package merchandising

Because of its broad experience in solving shipping problems for the leaders in every industry, the Robert Gair Company is especially qualified to offer expert assistance and advice on every phase of package merchandising—Folding boxes, Labels, Shipping cases, Window display advertising.

We control the whole process of manufacture, from wood-pulp to finished product. We operate our own paper mills, prepare our own colors, make our own inks and glues, maintain our own art, engraving, printing, lithographing departments. Our chemistry department regulates and improves our processes and tests finished products. Our plant is the largest of its kind in the world.

With these facilities we are prepared to offer a complete service for packaging and displaying your goods—Folding boxes, Labels, Shipping cases, Window display advertising—giving unity to your product from factory to consumer.

We serve the greatest package merchandisers of the country. Among our clients are:

American Sugar Refining Co.
Huyler's
Beech Nut Packing Co
Charles B. Knox Gelatine Co
National Biscuit Co.
Colgate & Co
Royal Baking Powder Co.
Bauer & Black
Palmolive Co
Andrew Jergens Co
Arbuckle Bros
N. K. Fairbank Co

ROBERT GAIR COMPANY

BROOKLYN

Folding boxes *Labels* *Shipping cases*

Window display advertising

An impressive "double-spread" display advertisement of a nationally known paper box manufacturing concern, which appeared in a recent issue of a prominent business magazine.

We are not losing sight of the fact the many manufacturers of paper boxes are advertising their product in trade journals such as those devoted to the confectionery industry, textiles, drugs, hosiery, etc. Some of the candy magazines seem to be overcrowded with box-makers' advertising, and many of the advertisements are beautifully illustrated in colors, featuring pictures of fancy candy boxes. This class of advertising has long proved its value to the box manufacturers who are making use of it, but it is a medium of printed salesmanship that ought to be extended to many other trade journals in other fields.

For instance, why would it not be a good plan for certain paper box manufacturers to advertise in the printing trade journals? Many

An interesting double-column display advertisement of a paper box manufacturing firm, which appeared in a recent issue of a magazine devoted to candy manufacturers.

printers pack letterheads and other printed matter in paper boxes. Many of the large printing concerns are using corrugated, or solid fibre shipping containers. The great majority of printers, however, seem to be following the ancient method of bundling printed matter with ordinary wrapping paper and twine, and here is a big opportunity for the paper box manufacturers to do some desirable propaganda work.

One, only one, advertisement of a paper box concern was noticed in the trade journals devoted to the tobacco field. It was a remarkably-good advertisement in every particular, incorporating illustrations which show the time-saving advantages of corrugated fibre shipping cases. The text matter explained how tobacco manufacturers can reduce their shipping expenses, prevent breakage of package goods,

Is the small retail candy maker going to put the large manufacturing confectioner out of the package goods business?

Manufacturers of package goods depending upon National distribution must either sell their goods over the retail counter at 60c a pound or go out of the package goods business.

UNLESS

The package that sells for $1.50 is so vastly superior to the 60c package in appearance, that it will be worth $1.50 to the buyer.

JE'CLAIR The Package Beautiful

will sell your candy for you at

$1.50 per pound

R. C. TAFT CO., 223 W. Jackson Blvd., Chicago

An interesting full-page advertisement which appeared in a candy-trade magazine.

and avoid pilfering claims by using fibre containers instead of wooden boxes. This is the kind of advertising that brings inquiries and creates sales.

A number of paper box manufacturers are specializing in suit boxes for merchant tailors, ready-made clothing concerns, department stores, retail clothiers, women's wear specialty shops, dressmakers, etc. The merchant tailors, for example, could be "reached" by display advertising placed in the trade journals devoted exclusively to their business, and the other interests mentioned could be "talked to" with advertising placed in trade magazines devoted to their particular fields. Here is an opportunity for the box-makers to advocate the use of a higher quality of suit boxes than those which are now being used in most instances.

Here, also, is a wonderful opportunity for the paper box men to conduct direct-by-mail advertising campaigns, designed to appeal to merchant tailors, dressmakers, dealers in ready-made clothing, and others engaged in the clothing business. The direct-by-mail advertising may include booklets, folders, form-letters, mailing cards and miniature samples of the kinds of suit boxes referred to in the advertising matter. Each piece of advertising literature should follow soon after another, say at monthly intervals. While the advertising campaign is on in full swing, personal calls should be made by salesmen. A great deal of new business will be developed in this way.

Among the many different styles of paper boxes which deserve a special advertising campaign are decorated hat boxes such as are now being used by a large number of progressive milliners. The custom among milliners of placing an expensive hat in a common paper bag is gradually passing, and it is now regarded as good taste on the part of a milliner when she puts a woman's bonnet in an artistic paper box. The large-size, round paper boxes, covered with decorative paper of pretty colored patterns, are becoming more popular every day.

A splendid opportunity here for some paper box manufacturers to inaugurate a live-wire advertising campaign among the milliners. Attractive booklets, folders and mailing-cards can be made to put the box-maker's message "across" to excellent advantage. Doubtless many of the milliners who are now putting bonnets in paper bags can easily be persuaded to order supplies of high grade hat boxes. Display advertising in the milliners' trade magazines can also be made to sell quantities of decorated paper hat boxes.

Not long ago the writer studied the pages of a well-known business magazine which circulates exclusively among the wholesale drug

Bisler's Built Best Boxes

49 Years

The Sign of
QUALITY *and* SERVICE

Plants in Three Cities at Your Service

DESIGNING and PRODUCING
DISTINCTIVE and POPULAR
CANDY BOXES

GENERAL OFFICES AND MAIN PLANT
2135-55 North 6th Street
PHILADELPHIA

NEW YORK FACTORY
160-82 Washington Street
BROOKLYN, N. Y.

PITTSBURGH FACTORY
3rd Avenue and Ross Street
PITTSBURGH, PENNA.

QUALITY
THAT
COUNTS

SERVICE
THAT
SATISFIES

Good example of a paper box advertisement which appeared in a business magazine.

trade. This journal carried a large amount of display advertising, and tucked away in one corner of a page was a small-size advertisement concerning folding boxes, cartons and pill and powder boxes. This was the only paper box advertisement in the entire magazine, and it was not interesting enough to accomplish much in the way of real sales work.

Manufacturers of drugs and pharmaceutical preparations are using vast quantities of pill boxes, powder boxes, folding boxes, cartons, set-up boxes and shipping containers, and the demand for these lines is constantly increasing. In this field, particularly, the tendency is towards a better quality of paper boxes, and the box manufacturers themselves can help to further this tendency by advertising better-quality paper boxes in the trade magazines circulating among the wholesale pharmaceutical field. It is a field, in fact, that is open for a strong, direct-by-mail advertising campaign—a campaign designed to increase the demand for more attractive folding boxes, cartons, pill boxes, and so forth.

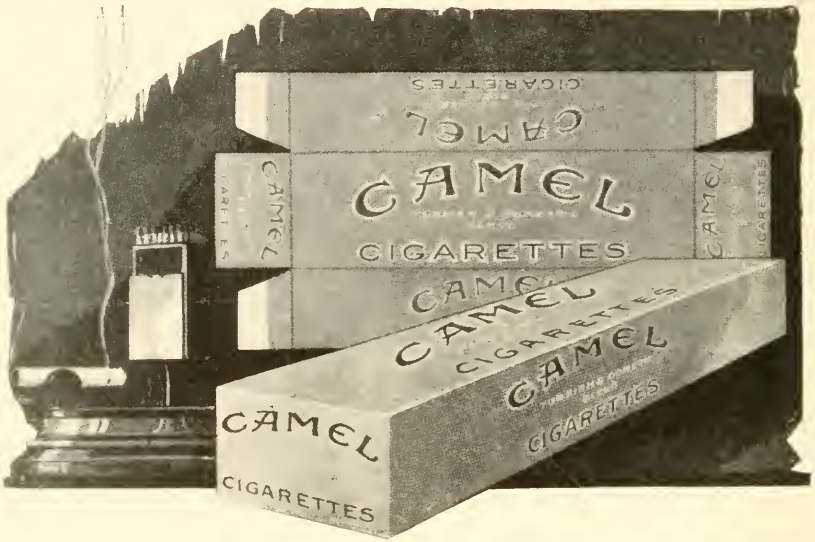
The magazines devoted to the jewelry trade contain practically no advertising about paper boxes, and yet the more than 35,000 retail jewelers of the United States are large users of paper boxes of the set-up variety. Many of the smaller-size paper boxes, used for holding scarf-pins, bar-pins, society emblems, and other kinds of jewelry, are of excellent quality, and are consumed in large numbers. The large-size set-up boxes are generally used in the "gift department" of a jewelry store, holding things like cut-glass, silverware, clocks, fancy china, and smokers' articles.

The retail jewelry trade presents an inviting field for any paper box manufacturer who is in a position to cater to that trade, and who will advertise his product in a way that will appeal to jewelers. The jewelry magazines offer an advertising medium which should not be overlooked by the paper box makers. Direct-by-mail advertising literature, illustrating beautiful set-up boxes suitable for jewelry and accessories, should also be distributed among the jewelry trade.

MOVING PICTURE ADVERTISING

Moving picture advertising could be used to advantage by some of the paper box manufacturers who are operating model plants. The idea would be to have moving pictures taken of the various departments of the plant, showing the many different operations necessary to produce set-up boxes, folding boxes, fibre shipping containers, etc. "The Making of a Candy Box" would serve as a title for a moving picture reel photographed in a factory devoted to

the manufacture of candy boxes. Other interesting pictures of this class could be taken, designed to interest candy manufacturers, hosiery manufacturers and others who buy paper boxes for their products.



Camel Cartons Cut Packing Cost, Sefton Fixed it So No Time's Lost

These scientifically designed cartons save untold millions of hand operations at the Camel Cigarette Factory every year

Millions of these Camel cartons made and printed by Sefton in beautiful colors and perfect register prove the ability and dependability of Sefton service

The next time you are thinking of folding cartons or corrugated shipping cases, there is just one thing to do—

Send for SEFTON

In this field we serve

R. J. Reynolds Company
Liggett & Meyer Tobacco Co
Spaulding & Merrick
Weyman-Bruton Company
Independent Snuff Company
P. Lorrillard Company, Inc.
Geo. W. Helm Company

We make folding cartons and corrugated shipping cases for

Meat Products
Coffee, Tea, Spices, Raisins
Butter, Ice Cream, Oysters
Metal Ware
Glass Ware
Rubber Goods
Confectionery
Soaps, Drugs
Bottles
Clothing
Flowers
Millinery
Bread, Cakes, Pies, Pastry

ANCHOR PAPER GOODS BRAND

SEFTON MANUFACTURING CORPORATION 1301 W. 35th Street, Chicago—Also Anderson, Ind., and Brooklyn, N. Y.

A beautiful display advertisement, exploiting paper cartons for cigarettes, which appeared recently in a business magazine.

A moving picture of the kind suggested could be staged as an instructive feature at a National or State convention of a business association, like the National Confectioners' Association, for example. The motion picture could also be shown along with other entertainment features at meetings, banquets and outings of business associations. In certain instances, a reel of this character could be show at local moving picture theatres as a general education proposition. It is safe to say that the average person would enjoy seeing a motion picture showing the various operations in a paper box factory.

ADVERTISING WITH DISPLAYS AT CONVENTIONS

Some of the leading manufacturers of paper boxes have adopted the plan of arranging attractive exhibits of their products at national conventions of business associations, like the National Confectioners' Association, and these exhibits have always proved successful from an advertising standpoint. The exhibits are arranged in booths and beautiful samples of paper boxes are featured, also samples of wraps, ribbons, and other decorative materials.

Merely by way of suggestion, it might be a good plan for a paper box manufacturer to install a miniature box-making plant in connection with one of the exhibits referred to. Why not a couple of cutting and creasing presses running in actual operation, and turning out folding boxes or cartons? Certainly, an "industrial show" of this character would attract crowds of conventionites and would prove exceptionally interesting. It would also be practicable to have a small plant installed for making fine quality set-up boxes, in which case the blanks could be cut, scored and cornered in the regular plant, only the staying and covering being done in the miniature factory.

SOUVENIR ADVERTISING

At a recent convention of candy manufacturers a number of paper box concerns distributed souvenirs consisting of beautiful paper boxes filled with fine confections, paper weights in the form of a miniature bronze Liberty Bell, sets of colored box wraps, memorandum books, telephone message pads, loose-leaf note books, folding rulers, blue pencils, and Eversharp pencils. At a banquet of the same Association additional souvenirs were given out by paper box manufacturers, including "Pal" pencils, fancy paper boxes filled with chocolates, pen and pencil holders for desks, unique paper weights and cigars tied with colored ribbons.

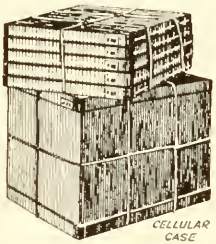
Good-will advertising of this variety is always acceptable and is appreciated by the recipients. The average conventionite thinks more

of a useful souvenir than he or she thinks of something more expensive, and the paper box manufacturers should pay more attention to this class of advertising. Here is a couple of suggestions for souvenirs to be distributed at some big banquet: For the ladies, a beautiful, round, decorated paper box in the form of a work-box, filled with first quality bon bons. For the men, an odd-shaped, decorated paper box containing either good cigars or cigarettes. The manufacturers of fancy set-up boxes are naturally in a position to

PIONEERS T&N EST. 1875

TELEPHONE MAIN 6500

CELLULAR CASES AND FOLDING CORRUGATED FIBRE BOXES



Parcel Post and Shipping Containers
For Freight and Express

Everything of Corrugated Paper

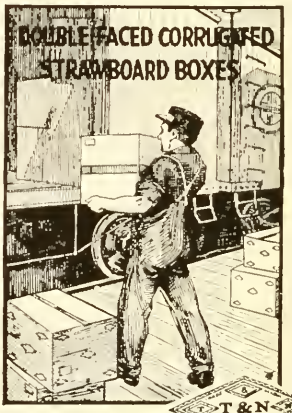
Corrugated Paper
Cellular Board
Carpet Lining
Cellular Folding Freight Boxes
Cellular Express Boxes
Bottle Packing
Bottle Wrappers
Bottle Boxes
Silk Wrappers
Inflexible Envelopes
Photo Mailers
Mailing Tubes
Corrugated Combination Boxes
Sq. Cornered Corrugated Carton

Standard Sizes Carried in Stock

THE THOMPSON & NORRIS CO.

Main Office and Works
CONCORD & PRINCE STS.
BROOKLYN, N. Y.

Other Factories
Boston, Mass. Brookville, Ind.
Montreal, Canada Toronto, Canada
London, England



The ideal box, combining the greatest strength with the lightest weight. Made of the T. & N. Cellular Board

T&N T&N

This advertisement, which was featured in a prominent trade journal, was declared to have been fruitful of profitable returns.

invent gift boxes of original styles which could be sold to other manufacturers who may desire to distribute such articles as souvenirs at conventions, banquets, outings, etc.

REMEMBRANCE ADVERTISING

Remembrance advertising includes printed matter such as pictorial wall calendars, desk calendars, illuminated wall cards, blotters, illuminated greeting cards, pencils, rulers, book-marks, memorandum books, paper weights, and other useful novelties of this group. In numerous instances, the box manufacturers can produce these things in their own printing departments. Send the novelties to your customers and prospectives, and you are bound to gain compensation.

CHAPTER III

UTILITY OF BEAUTY IN SET-UP BOXES

ON the Hudson River recently one of the great trans-atlantic liners was preparing to sail for France. Excited passengers were hurrying aboard, and on the docks was a crowd of men, women and children awaiting to bid farewell to relatives and friends. It was an old and commonplace scene, and yet there is always something intensely interesting in watching a steamship start off on a long voyage. There is always an element of sadness in the picture, too.

Among the last-minute passengers to reach the main deck of the vessel was a beautiful young woman of the dashing American type. In one hand she carried a big bunch of roses, and under her right arm was a pretty paper box; heart shaped, covered with decorative paper, and tied with blue silk ribbon. Slowly the boat steamed down the river on its way to the Atlantic Ocean while the passengers stood upon the decks waving handkerchiefs, hats and other articles. The pretty girl referred to seemed to stand out more prominently than most of the other travelers. She occupied a graceful position at the railing, and as the boat gained speed she was seen to place the heart-shaped paper box on the railing; open the lid, take out a piece of candy, and as she ate the piece of candy she lifted up the paper box and waved it towards a certain young man standing on the wharf.

It was a moving picture story without any words being necessary; The young man on the wharf had evidently given the girl that box of sweetmeats, and from all indications, she thought more of that gift than any of the other things in her possession at that time. It was a striking example of the utility of a beautiful paper box. Doubtless that girl took that gift box along with her to France, and probably brought it back home when she returned. That paper box by reason of its beauty was useful in more than one way. It was useful in helping the confectioner sell several pounds of expensive candy; it was useful in assisting the young man to show his regard for the girl; it was useful in making the girl happy on her long journey, and

now, doubtless, the box is still useful as a work-box, jewelry case, or general utility box.

In the average home can usually be found a number of attractive paper boxes of the set-up type which originally had been used for holding candy, writing paper, linen collars, jewelry, toilet articles, neckties, handkerchiefs, stockings, hats, or other articles of merchandise. Women, particularly, delight in saving paper boxes of these

Candy Box. Heart-shape, shouldered, extension top and bottom, two gold trims. Padded top covered with lithographed paper picturing beautiful flowers in colors. (By Jesse Jones Paper Box Co., Philadelphia, Pa.)

kinds, and such containers are often used to advantage long after the original contents of the boxes have been consumed. Every woman treasures beautiful paper boxes of the kinds that are used for holding fine varieties of confectionery, and many a girl thinks more of such a box than she does of the candy in it.

The utility of beautiful paper boxes is demonstrated every morning on trains and trolley cars in the cities. Numerous women can be seen on the trains or trolleys using attractive paper boxes as lunch containers, work baskets, etc. The round and oval shapes of set-up boxes are exceedingly popular with the fair sex as work-holders for knitting, embroidery and sewing. These boxes usually

come in 2-pound, 3-pound and 5-pound sizes, and as a rule, are covered with lithographed paper having flower patterns in colors.

THE BOX MANUFACTURER'S OPPORTUNITY TO SELL

Never were there more favorable opportunities for the paper box manufacturers to sell new ideas in paper boxes than at the present time. The candy manufacturing field is particularly inviting, and

Candy Box. Hexagon, shouldered, dome top, extension top and bottom, two gold trims, covered with white laid paper. Beautiful floral design handpainted on top of lid. (By Jesse Jones Paper Box Co., Philadelphia, Pa.)

there are many other promising fields including those devoted to stationery, writing paper, collars, handkerchiefs, garters, suspenders, jewelry, toilet articles, rubber goods, face powders, and neckwear.

Only a few of the big fields for set-up paper box manufacturers have been mentioned in the above paragraph, but enough have been quoted to illustrate the point that new styles of stiff boxes are constantly in demand. One of the largest candy manufacturing concerns in the world is now using more than 200 different styles of paper boxes for marketing its various lines of confections, and at frequent intervals this concern is adding other new styles of set-up boxes to its already large assortment. Another well-known candy

manufacturer is using nearly 50 different styles of paper boxes, and is continually planning additional numbers.

Progressive manufacturers of package goods are always in the market for new and beautiful styles of paper boxes, and when something exceptionally attractive in the way of a set-up box is offered, these manufacturers will not hesitate in buying it. The package goods field is so vast that it offers rich opportunities for every good box maker to develop new business, and it is a field that is growing larger every day.

What the package goods manufacturers want and need more than anything else today is *beautiful* paper boxes—not "flashy" paper boxes, but the kind that are aesthetically beautiful. We are not saying a word against the flashy styles of paper boxes, for they have their particular use like everything else that is flashy in appearance. But we are speaking of the kinds of package goods which are designed to appeal to the refined class of buyers. To sell goods of this character to the right people it is necessary to pack the goods in beautiful paper boxes.

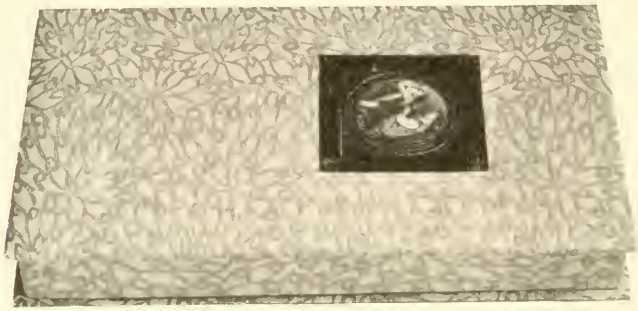
There is quite a number of things which go to make a paper box beautiful, including the shape of the box, the quality of the paper products used in its construction, the design of the wrapper, the style of the printed matter on the box top, and the decorative features, such as the ribbon, glassine paper, seals, string, etc. You can easily spoil the beauty of a shapely paper box by putting on a ribbon of the wrong color. You can also make a box look cheap by trimming it with too much decorative material. Original designs for fancy paper boxes should be prepared by persons who thoroughly understand the principles of art.

The time has come for paper box manufacturers to sell beautiful set-up boxes for all kinds of package goods. The plain, low-priced paper boxes are no longer in strong demand.

HOW ONE BOX MANUFACTURER HELPED A CONFECTIONER INCREASE SALES

One of the larger confectionery firms having a national distribution of expensive brands of chocolates had been experiencing difficulty in moving some of its fine package goods. This same line of chocolates had sold easily and heavily during the period of the World War, but soon after the war had closed the sales of these products rapidly diminished. The candy packages in question were in half-pound, one-pound and two-pound sizes, and the line was carried in first-class drug stores, grocery stores, and other retail establishments.

Many of the retail dealers began complaining to the confectionery firm about the goods being hard to sell. In many instances the retailers returned packages that had remained on the shelves for months and demanded fresh goods in exchange for the old. Several of the retailers declared that the package goods referred to were



Candy Box. Oblong, telescope type, extension top and bottom, covered with fancy lithographed and embossed paper. Padded top. Beautiful medallion in rich colors and gold attached to top of lid.
(By Jesse Jones Paper Box Co., Philadelphia, Pa.)

not as attractive as some of the other lines of boxed candy on the market, and for that reason these dealers refused to place additional orders for the slow-selling line. Said one prominent retailer to the general manager of the confectionery concern at fault:

"It really does not pay me to handle your line of boxed goods as the sales are too slow. The quality of your chocolates is excellent; I have no complaint to make on that score, but the packages are not sufficiently attractive. There is the 'X' line, and the 'D' line. Both are selling actively, and at higher prices than your goods. Why? Because they are packed in handsome packages. I know what I am talking about. Every day I see people enter the store, pass by the display of your goods, and then stop to buy either an 'X' or a 'D'

Candy Box. Oblong, shouldered, extension top and bottom, covered with fine white laid paper. Padded top and beautiful design hand-painted on top of lid. Two white satin ribbons and double bows on top of lid.
(By Jesse Jones Paper Box Co., Philadelphia, Pa.)

package. Use attractive paper boxes for your chocolates and you will help us retailers to sell more of your product."

It was the blunt statement of that dealer that finally persuaded the confectionery firm to seek the advice of a certain paper box manufacturer who had earned a reputation for making exceptionally fine candy boxes. This box expert listened to the confectioner's tale of woe, and after a conference in regard to prices, time of delivery and other matters, the box man promised to have a number of samples ready by the following morning.

The new samples, which were ready at the time mentioned, were real works of art. There were several standard sizes, and all of the sizes were made in the same style: Low, oblong; shouldered; wide extension top and bottom, padded top; covered with Nile green paper having an embossed, all-over pattern; two gold edges. The name of the chocolates was to be die-stamped in gold on the box top, and the box was tied with silk ribbon of the same shade of green as that of the covering paper. The ribbon was tied across the lid on an angle leaving a medium-size bow on top of the padded lid at one end.

So well pleased with these samples was the general manager of the confectionery firm that he immediately ordered large quantities of the various sizes. Within a month after the new style boxes had been delivered they were being packed and shipped. The retailers were delighted with the beautiful packages, and they were not slow in arranging them in attractive window and store exhibits. Sales of the goods immediately increased, and soon the candy manufacturers were handling double the amount of business that they had been doing in the past. The entire problem of speeding up sales had been solved by the use of beautiful paper boxes.

The writer was recently engaged in conversation with a well known druggist who is conducting one of those remarkable "general stores" where you can buy almost anything from a postage stamp to an electric cooking utensil. This druggist carries among many other things a complete assortment of boxed candy, and he reported that the demand for attractive package goods is constantly growing. He recently bought a new stock of fine hard candies packed in decorated paper boxes of artistic design. Window and store displays of the new stock were arranged. In three days' time more than 100 of those packages were sold.

"It was probably the colored silk ribbon on the boxes that helped to sell the candy so rapidly," laughed the apothecary. "The public certainly 'fall' for a little bit of color."

CABINET BOXES FOR FINE WRITING PAPER

Among the most acceptable gifts for any intelligent man or woman is a cabinet box of writing paper, envelopes and correspondence cards. Fine writing paper is now being made in many different tints with envelopes and correspondence cards to match each tint. The paper, envelopes and cards are neatly packed in beautiful paper boxes, many of them being as large as 18 x 12 inches, and equipped with hinged lids.

Some of the larger manufacturers of writing paper are specializing in the production of the finest grades of boxed stationery, and

Candy Box. Square with round corners; dome top, extension top and bottom, three gold trims. Covered with lithographed paper picturing flowers in colors. (By Jesse Jones Paper Box Co., Philadelphia, Pa.)

many of the cabinet sets sell at retail for as high as $25 each. Papeteries of this variety are sold in jewelry stores, stationery stores, art shops, drug stores, etc. In some instances the dealer's busines card is die-stamped on the box tops. Many of the paper boxes used for the cabinet sets of writing paper are tied with satin ribbons.

Paper boxes of this type are often covered with tinted paper to match the tint of the paper in the box, and the ribbons are of the same color. One exceedingly attractive box was lined with shell-pink paper and was covered with rose-pink paper containing an embossed

all-over pattern that suggested a basket-weave. The edges of the box and lid were trimmed with white glazed paper. The box was tied with narrow, rose-pink silk ribbon, leaving two rosettes on top of the lid. Another box of this same design and tint had a large-size ribbon bow on top of the lid.

Other cabinet boxes were covered with delicately-tinted papers such as turquoise blue, primrose, sea-green, corn, pearl-grey, cream and fawn. The dainty appearance of these boxes can easily be imagined. Papeteries of this magnitude appeal to the discriminating class of buyers, and are appropriate for numerous gift occasions.

The larger-size cabinet boxes are usually fitted with partitions, forming compartments for holding the various sizes of writing paper, envelopes and correspondence cards. In some cases are also compartments for holding pens, pencils and blotters.

Manufacturers of set-up paper boxes can readily make cabinets, or cases, of the kinds described in this article. Many of the leading stationers, as well as the manufacturers of writing paper, are always in the market for new-style paper boxes of this group. Beautiful cabinets of original designs can be sold in large quantities in the right field. It is a field, of course, that needs to be cultivated.

The field for regular writing paper boxes is still larger. We refer to the telescopic style of boxes, size about 6 x 7½ x 2 inches—the kind that is largely sold in department stores, drug stores and stationery shops. Many of these boxes have telescope lids covered with fancy lithographed paper featuring colored pictures of pretty girls' heads, landscapes, marines and other pleasing subjects. Large numbers of box-tops are of tinted glazed paper, and contain die-stamped designs instead of pictures. The better grades of boxes are lined with white paper. The die-stamped designs are usually done in several colors, although some are done in gold, silver, or a single color.

Writing paper boxes offer the box trade unlimited opportunities for introducing new effects in wrappers, pictures, embossed designs, and colors. The offset process of lithography is especially adapted to art color work for paper box wrappers, including reproductions of oil paintings and water colored pictures.

DE LUXE PAPER BOXES FOR FINE CONFECTIONS

Practically all of the larger confectioners are using de luxe paper boxes for their highest grades of products, and the majority of the smaller manufacturing confectioners are also using boxes of this class for the convenience of their retail trade. We refer to beautiful

art boxes, of various odd shapes, and made in two-, three- and five-pound sizes. The shapes include round, oval, hexagon, octagon, heart and diamond.

Boxes of this variety are packed by the larger candy manufacturers and are then shipped to jobbers and retailers. The smaller manufacturing confectioners, who operate their own retail stores in addition to selling goods wholesale, generally use the de luxe boxes as calls for them come in their stores. The empty boxes are kept in cabinets

Candy Box. Oval, shouldered, dome top, extension top and bottom, four gold edges. Beautiful design of roses hand-painted on top of lid and covered with pink paper of a delicate tint. (By Jesse Jones Paper Box Co., Philadelphia, Pa.)

and show cases, and whenever an order is received for a special gift occasion, one of the art boxes is selected and is filled with fresh sweets. The buyer pays an extra sum, over the regular price of the candy, for the box.

The de luxe boxes make exceedingly attractive window and store displays for confectioners, and are appropriate for numerous gift occasions in addition to the great holidays of Christmas, New Year, St. Valentine's Day, Easter and Thanksgiving Day.

Some of the leading paper box manufacturers, who specialize in the production of de luxe candy boxes, have quantities of popular numbers made up during slack periods in their factories, and have them put into stock ready for immediate delivery as orders come. There is a steady demand from the confectionery trade for the finest kinds of art boxes, principally in the two-, three- and five-pound sizes.

Some time ago the writer enjoyed the privilege of visiting the plant of a nationally-known paper box manufacturing concern that is making a specialty of fine candy boxes. Several departments of this plant

are devoted exclusively to the production of de luxe candy boxes, and the writer spent considerable time in these departments where he saw the actual processes of making art boxes of many different varieties. Among the most beautiful numbers were the following:

Three-pound square with round corners; shouldered; dome top; three gold rims. Covered with lithographed paper picturing flowers in beautiful colors. Extension top and bottom.

Three-pound heart-shape; shouldered; dome top; extension top and bottom gold trimmed. Covered with lithographed paper illustrating orchids in natural colors.

Two-pound oblong; telescope type; extension top and bottom; padded top; covered with fancy lithographed and embossed paper. Beautiful medallion in rich colors and gold attached to the top of the lid.

Three-pound oblong; shouldered; padded top; extension top and bottom; covered with heavy white laid paper; hand-painted spray of flowers on top of lid. Top trimmed with two white satin ribbons and double bows.

Five-pound oval; shouldered; dome top; four gold trims; covered with pink paper of a delicate tint; beautiful picture of roses hand-painted on top of the lid.

Three-pound hexagon; shouldered; dome top; extension top and bottom; four gold trims; covered with white laid paper; beautiful design of flowers hand-painted on top of the lid.

Two-pound round; shouldered; dome top; four gold edges; covered with lithographed paper picturing an all-over pattern of flowers in pleasing colors.

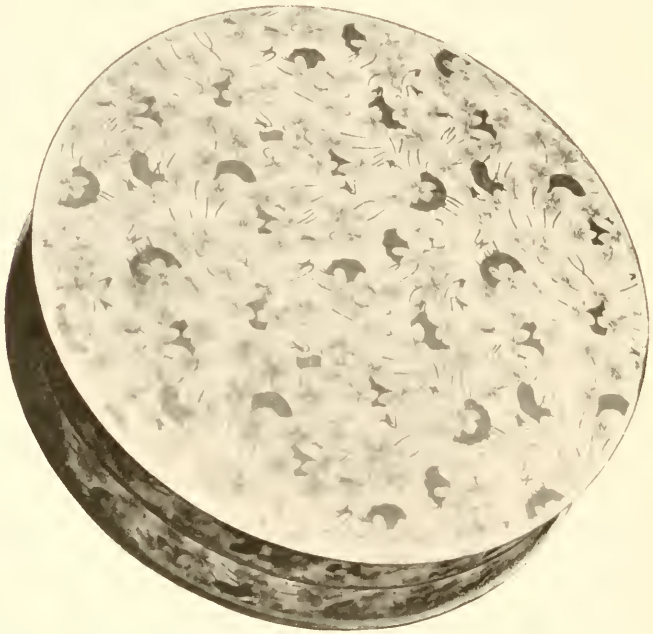
Illustrations of these seven different numbers are shown on pages Nos. 33, 34, 36, 38, 40 and 42.

Only a few of the many different kinds of candy boxes being manufactured by the firm referred to have been mentioned, but the brief descriptions will give the reader an idea of the splendid work being done by this concern. All of the larger-size paper boxes, and those having odd shapes like the heart, hexagon and square with round corners, for example, are made entirely by hand. Special forms are utilized for making shapes like the round, oval, heart, hexagon and octagon. The covering is done by women who have had long experience in this particular line of work.

The tops and bottoms for odd-shaped boxes like the heart, oval, round, square with round corners, diamond, etc., are produced on a cutting and creasing press with cutting dies made of steel cutting rules. The shape of each die is marked and sawed in a piece of laminated board of the necessary size. The sawing is done with a

power jig saw. The steel cutting rules are bent to the shapes desired and are then inserted in the crevices sawn in the laminated board.

An extra-heavy doming press, heated by steam or electricity, is used for doming the tops for the larger size boxes. The tops are domed after the covering paper has been applied to them, so that the covering paper will be "ironed" smooth without showing wrinkles. The female die for a domed top is made of solid brass, and the male die, or counter die is made of any of the standard embossing compounds, like sodium silicate and carbonate of magnesia, for example.



Candy Box Round, shouldered, dome top, extension top and bottom, three gold trims. Covered with lithographed paper having a beautiful all-over pattern of flowers in colors. (By Jesse Jones Paper Box Co., Philadelphia, Pa.)

Another method of doming tops for large-size paper boxes is as follows: After the boxes and lids have been covered and finished the boxes are laid out in rows on spacious tables. The lid for each box is then inverted, and is laid *upside down* over the top edges of the box. A piece of muslin is dampened and is spread over the inner side of the lid. A quantity of fine buck-shot is then poured over the dampened piece of muslin inside the lid. The boxes and lids are then allowed to stand in this manner for several hours, the weight of the buck-shot causing each lid to dome as shapely as though embossed with a male and female die on a hot press.

CHAPTER IV

ATTRACTIVENESS WILL SELL GOODS

MANUFACTURERS of paper boxes in general have an important mission to perform, a duty which strange to say has not yet been recognized by some of the paper box makers. This mission is nothing less than that of studying and solving the merchandising problems of other manufacturers who are selling package goods. In fact, this mission even extends to large numbers of manufacturers who are not yet putting package goods on the market.

It is true, of course, that many of the leading manufacturers of paper boxes are helping to solve the merchandising problems of candy makers, hosiery manufacturers, wholesale jewelers, stationers, and other manufacturers by supplying such concerns with the right kinds of paper boxes, but it is likewise true that some box producers are not following the business-building practice of suggesting new ideas to customers and prospectives.

It lies within the power of the average paper box manufacturer to create thousands of dollars worth of new business for the producers of merchandise such as confectionery, writing paper, haberdashery, toys, toilet articles, rubber-goods, jewelry, tobacco, cigars, cake, perfumes, stockings, handkerchiefs, novelties, fountain pens, etc. Only a few of the most popular lines of merchandise have been named to illustrate the great variety of fields which are open to all paper box manufacturers. How may the paper box manufacturer help all of these other manufacturers? By suggesting new ways of selling, and by furnishing attractive containers for the different kinds of merchandise. Some of the leading paper box concerns are constantly doing promotion work of this character.

A SIMPLE IDEA THAT SOLD TONS OF FINE CANDY

One of the well known confectionery firms was recently visited by a progressive manufacturer of set-up paper boxes who had a business-building plan to present. The box man was ushered right

into the private office of the head of the firm as soon as that gentleman learned that the box man had an *idea* to offer. This idea was simple enough, and yet the candy manufacturer admitted that he had

THE "HAREM GIRL"
Carnival box-top by the M. A. Brown Paper Box Co., St. Louis, Mo.

never thought of it before, and he was not slow in recognizing its selling possibilities.

Here is the idea referred to: Two attractive paper boxes, each of the one-pound size, were to be filled with sweet-meats, and then were to be packed in a plain, inexpensive paper box, the whole to

be sold at retail as a "special combination" at a tempting price. For example, one of the attractive paper boxes contained a pound of assorted chocolates, and the other box contained a pound of bon-bons.

THE "WINTER GARDEN GIRL"
Carnival box-top by the M. A. Brown Paper Box Co., St. Louis, Mo.

The "special combinations," with the lids of the common containers removed temporarily, were to be displayed in the windows and sales-rooms of retail stores. The special offer was to be advertised in the newspapers, and the plan was to be tried out only in the larger towns and cities where thousands of persons are frequently buying

candy. The name of the confectionery concern referred to is nationally known for quality, and this would make the special combination box have a particularly strong appeal to all classes of candy buyers.

THE "CENTURY ROOF GIRL"
Carnival box-top by the M. A. Brown Paper Box Co., St. Louis, Mo.

After the paper box expert had exhibited neat samples of the proposed styles of containers, and after he had minutely explained his selling idea, the candy man awarded him a large order for the three different kinds of boxes in question. Within the next three weeks

the special combination sets of packaged sweets were on display in retail stores of many large towns and cities. Several of the big department store concerns bought extra heavy quantities of the com-

THE "PALAIS ROYAL GIRL"
Carnival box-top by the M. A. Brown Paper Box Co., St. Louis, Mo.

binations and featured the special offer in their display newspaper advertising. It is no exaggeration to say that the combinations sold like "hot cakes." Of course, the price of each combination was modest, but every purchaser bought two boxes of candy instead of the usual pound-size box, and this meant a quick turn-over of many

thousands of dollars for the confectionery firm. Moreover, it was excellent advertising for the candy concern. The fine quality of its product is now known to thousands of persons who in the past had not been buying this particular brand of confectionery.

THE "HIPPODROME GIRL"
Carnival box-top by the M. A. Brown Paper Box Co., St. Louis, Mo.

The idea of packing two one-pound-size boxes of candy in a plain paper box is something new, and it is an idea that could be adopted by other manufacturing confectioners with profitable returns. The plain paper box protects the fancy paper boxes from possible injury

during transit, and it also makes a neat and substantial package—a far better one than could be made by wrapping two fancy paper boxes with ordinary wrapping paper.

A NEW FIELD FOR PLAIN PAPER BOXES

While the purpose of this chapter is to talk mainly about the selling qualities of beautiful paper boxes, yet we must not lose sight of the fact that the demand for plain paper boxes is constantly growing, and in many instances the box manufacturers can make new business for themselves in this line by suggesting new uses for the plain paper boxes.

At least a dozen of the larger manufacturing confectionery concerns are now using plain paper boxes as containers for their fine candy boxes. Every box of candy sent out by these firms is packed in a plain paper box of the necessary size. This is done, of course, to protect the edges, ribbons and wrappers of the fancy paper boxes. The plain paper boxes are made of a cheap grade of pulpboard; the corners are strongly stayed, but no covering paper is applied to them. A square-shape container of this kind is used for holding a round, fancy box; an oblong is used for holding a fancy, oval box. The plain, oblong containers are also used for all styles of fancy oblong boxes. The plain boxes are made in different sizes to provide for all the different sizes of the fancy boxes.

Any paper box manufacturer who is in a position to produce large quantities of the plain paper boxes should find it easy to gain orders for such boxes from manufacturing confectioners. In some cases it may be necessary to prove to a confectioner the advantage of packing expensive paper boxes in plain paper boxes, but it should not require a long argument. The retail dealers as well as the buyers of package candy will certainly appreciate the advantage of having beautiful paper boxes placed in substantial containers.

Many other lines of package goods, like writing paper for example, should be protected by plain paper boxes. The wholesaler or the manufacturer should supply the retailers who handle their goods with the plain paper boxes to protect the fancy packages.

NEW FIELDS FOR ATTRACTIVE PAPER BOXES

Printers and lithographers to some extent are using plain, set-up paper boxes as containers for letter-heads, bill-heads, statements, business cards, etc. Usually, 500 letter-heads are packed in a box. Cards are also packed 500 in a box. It is a fact, however, that the majority of printers and lithographers are not using paper boxes of any kind for their finished product.

Why not attractive paper boxes for letter-heads, etc.? Good, substantial boxes, covered with colored paper, and containing the printer's or lithographer's business card on the lids? It remains for some progressive box salesman to visit the printers and lithographers and to boost the merits of attractive set-up paper boxes.

The Delightful "Brunette" and "Blonde" Package of Stephen F. Whitman & Son, Inc., Philadelphia.

Soft collars for the men folks are becoming more popular every day, especially during the hot weather season. All soft collars seem to be packed in individual glassine envelopes. Why not a half-dozen soft collars packed in a good-looking paper box? It may be possible for the paper box men to interest some of the collar manufacturers in this suggestion. Show the collar manufacturers a complete dummy box having an appropriate design or picture on its cover.

"FLASHY" CANDY BOXES FOR CARNIVALS, FAIRS, ETC.

Among the leading manufacturers of paper boxes who are successfully following the practice of suggesting new selling ideas to

Two Exceedingly Beautiful Round Boxes Used by Stephen F. Whitman & Son, Inc., Philadelphia.

customers and prospectives is the M. A. Brown Paper Box Company, of St. Louis, Mo. This concern had a splendid exhibit of its products at a recent convention of the National Confectioners' Association, including a wide assortment of lithographed box wrappers. Visitors to the exhibit were presented with useful souvenirs consisting of miniature Liberty Bells and complete sets of the M. A. Brown Company's special line of box wrappers to be used for candy boxes at carnivals, for fox trot contests, fairs, circus candy booths, etc.

The box wrappers referred to are lithographed in six different colors, and the pictures and ornamental designs on them are embossed. Some of the pictures represent scenes at a circus. There are also colored pictures of pretty girls, such as the "Trapeze Girl," the "Century Roof Girl," the "Winter Garden Girl,", the "Harem Girl," the "Hippodrome Girl," etc. These wrappers are designed to cover the lids of large-size, flat, candy boxes—the "flashy" kind of candy boxes that are sold at carnivals, fairs and other gala occasions. The boxes have individual compartments for each piece of candy. They also have extension tops and bottoms and are covered with colored paper to harmonize with the colors of the box-tops. It should be understood that these wraps and boxes are designed exclusively for the purpose of pleasing a certain class of trade—a *Mardi Gras* crowd for example. They may not be beautiful, but certainly they are exceedingly attractive, and without question they "sell the goods."

The M. A. Brown Paper Box Company will supply manufacturing confectioners with either the complete carnival boxes, or with the lithographed wrappers separately. Some of the confectioners are specializing in package candies for carnivals, fairs, etc., and are using large quantities of the wrappers and boxes mentioned. The M. A. Brown Company is manufacturing all kinds of attractive set-up paper boxes in addition to those described, and in many instances this concern is originating big orders for paper boxes by suggesting new styles of paper boxes to manufacturing confectioners and other producers of package goods.

"JE'CLAIR, THE PACKAGE BEAUTIFUL"

The R. C. Taft Company, of New York and Chicago, recently designed a new style paper box for candy which was called "Je'Clair, The Package Beautiful." It was indeed a beautiful container, artistically trimmed with silk ribbon of a color that matched perfectly the color of the box, and it was sold in large quantities to manufacturing confectioners. The R. C. Taft Company is continually producing new things in the way of beautiful paper boxes, but of course

this company advertises the new things immediately as they are ready for the market. Without the proper advertising, new things like the "Je'Clair" line would not prove highly successful.

Paper box manufacturers in general should use more advertising than they have been using in the past. The business magazines offer one of the best advertising mediums for the box-makers. With the business papers you can often talk to an audience that could be reached by no other form of magazine advertising. Direct-by-mail

The Popular "Pleasure Island" Package by Stephen F. Whitman & Son, Inc., Philadelphia.

advertising, like catalogues, booklets, sample sets of wrappers, etc., can also be used by every paper box manufacturer to excellent advantage.

TWO CANDY BOXES THAT HAVE MADE BIG HITS

The beautiful candy packages which are being distributed all over the world by Stephen F. Whitman & Son, of Philadelphia, are familiar to the public in general. Why? Because the Whitman packages are displayed in the show-rooms and windows of retail stores in many different parts of the world. So wide is the distribution of these goods that you can stroll the business section of practically any town or city and see a number of store windows containing exclusive displays of them. This statement applies to many foreign countries as well as to the United States.

The Whitman line of package goods consists of a wide variety of beautiful paper boxes filled with special selections of chocolates and confections. Some of the boxes are round in shape and have pretty pictures in colors on their lids. Others are of oblong type, with ex-

tension tops and bottoms, and are trimmed with silk ribbons. Others still are of oblong form and are equipped with hinged lids. There is about a dozen different styles of these packages which have become extremely popular, and among these are the Whitman's "Sampler," and the Whitman's "Pleasure Island Chocolates." Any paper box manufacturer may gain ideas for new business by studying the merits of these two remarkable paper boxes. By originating new types of paper boxes that would have the "human interest appeal" like that possessed by the Whitman packages, the box manufacturer will have no difficulty in getting all the business that he can handle.

The Whitman's "Sampler" is designed to contain ten different kinds of chocolates and confections, selected from ten of the most popular Whitman packages. The "Sampler" is a one-pound-size, flat, oblong box, shouldered and equipped with a hinged lid. Inside the box are a number of trays of different sizes to hold the different kinds of candy referred to. Both the box and the lid are covered with lithographed paper having a sampler design in colors—that is, a reproduction of a piece of ornamental needlework like grandmother used to make. The bottom of the box, as well as the sides and top, are covered with this lithographed paper. The effect is very artistic. The beauty and utility of these containers are so great that thousands of women use them as work-boxes after the sweetmeats have been consumed. The design of this box is patented.

The Whitman's "Pleasure Island" box is a one-pound size, of high, oblong shape like that of an old-time treasure chest. It is equipped with a flat, hinged lid. The hinge is made of muslin. On the inside of the lid is a panel of box-board, covered with white paper, this panel serving to make the flat lid stronger. Inside the box are three trays, two square ones at the bottom, and an oblong one above. The lid and sides of the box are covered with lithographed paper having colored pictures of scenes suggested by Robert Louis Stevenson's famous book on "Treasure Island." Kindly note that the Whitman's package is called "Pleasure Island," not "Treasure Island." This design is also patented.

Upon opening the "Pleasure Island" chest the buyer first finds a tempting assortment of chocolates in the oblong tray at the top. When this tray is removed, the buyer then finds two small sacks filled with chocolates, each sack placed in a square tray. The idea of the sacks, of course, is to suggest money bags, like one would expect to see in an old pirate's treasure chest. No wonder that the thousands of persons who are buying these packages are delighted over them. The "Pleasure Island" package made an instant hit as soon as it was placed on the market because it was unique as well as attractive.

The Whitman's line is being nationally advertised, principally in the standard magazines, and illustrations of the popular Whitman packages are incorporated with the advertisements. This national advertising is linked with handsome window displays of Whitman's packages in all parts of the country. The company supplies the retail

The "Pink of Perfection" Package of Stephen F. Whitman & Son, Inc., Philadelphia.

dealers with complete window trims, consisting of empty containers and advertising cutouts. The main cutout is of large size, and is lithographed in colors, forming an attractive background for the display of packages.

National advertising of this magnitude is bound to sell the goods. The retail dealers are anxious to handle nationally advertised lines of merchandise, particularly beautiful package goods, because sales-winning window and store displays of such things can easily be arranged; new patrons are drawn to the store, and they often buy other articles in addition to the packages in question.

Many of the paper box manufacturers are capable of planning complete advertising campaigns for confectioners, hosiery makers

and other manufacturers—advertising campaigns which would include out-of-the-ordinary window and store display of packages. Empty paper boxes are used for such displays, and for this purpose alone the box manufacturers could sell thousands of fancy paper boxes.

New ideas for window trims, featuring beautiful paper boxes, are wanted by many large manufacturers of package goods. The box-maker who is in a position to plan such exhibits should offer his ideas to advertising agencies as well as to the manufacturers direct.

PAPER BOXES THAT ARE WORKS OF ART

In the following paragraphs brief descriptions are given of some of the beautiful paper boxes now being used by Stephen F. Whitman & Son. All of these boxes have proved successful in selling to the highest class of the confectionery trade.

Large-size round box; shouldered; extension top and bottom; covered with white glazed paper; and containing two colored pictures of blue birds on the lid. "The simplicity of beauty" is clearly expressed by the appearance of this box.

Medium-size flat, oblong box, aptly called the "Pink of Perfection." Shouldered, and containing nine separate trays; extension top and bottom; covered and lined with fancy pink paper. Cover trimmed on one corner with ribbon and bow of pink silk. Whitman's name, trade-mark and a plain, heavy rule border printed and embossed in gold on the box-top.

Medium-size round box; shouldered; covered with white glazed paper; extension top and bottom; two gold edges. Whitman's name and trade-mark printed and embossed in gold on the cover. Lid decorated with ribbon and double bow of light-blue silk.

Medium-size round box; shouldered; extension top and bottom; two gold edges; covered with lavender paper. Beautiful picture of orchid in natural colors on the lid. Decorated on the side with lavender silk ribbon and bow.

Large-size round box; shouldered; side covered with white glazed paper; extension top and bottom; two gold edges; side-view picture of pretty girl's head, with dark hair, in colors, on the lid.

Large-size round box; shouldered; side covered with white glazed paper; extension top and bottom; two gold edges. Side-view of pretty blonde girl's head, in colors, on the lid.

These are the kinds of candy packages that the men buy for their best girls, and the girls buy them also. These are the kinds of paper boxes that all manufacturing confectioners need in their business.

CHAPTER V

NEW FIELDS FOR FOLDING BOXES

NEW fields for folding boxes and cartons are open on every side for progressive paper box manufacturers who are willing to enter them—new fields of tremendous proportions, rich in virgin soil, and ready for immediate planting. The old fields are by no means overworked, and are growing more productive every day, but the new fields offer still greater possibilities for business.

The new-school paper box manufacturer is one who is capable of developing entirely new fields for his product. He first carefully selects a promising field for folding boxes or cartons. He then "tills the soil," and plants good "seeds," by means of advertising and salesmanship. New business in the way of orders for folding boxes and cartons soon springs up, and it then becomes necessary to "cultivate" the new business by giving the customers who place the new business product and service of the highest order.

Study the working methods of the modern farmer: Whenever he plants a new line of produce in a new field he devotes particular care and attention to the new field. He studies the nature of the soil, and often he changes the condition of the soil to meet the requirements of the plants that are to be grown. So it is with the modern American business man. He never tackles a new selling field before he is fully prepared to work it to the limit of his resources.

It has been well said that a man can make a great business success of a modest peanut stand if he will give the right attention to such a business. By the way, why not have peanuts packed in attractive folding boxes? We mention this in lighter vein, but there may be something in the suggestion just the same.

Only a comparatively few manufacturers of folding boxes and cartons seemed to have recognized the large number of new fields for their product which abound in all directions. These manufacturers usually have busy plants when many other paper box makers are waiting for orders. These manufacturers are always "on the job."

planning new things in folding boxes and cartons for concerns that may never have used such things before. In not a few instances certain box concerns have gained exceedingly large orders merely by suggesting desirable changes in old-style paper boxes.

Any live manufacturer of folding boxes or cartons is capable of opening new markets for his product by suggesting new uses for paper boxes to manufacturers in general. At the present time hundreds of different lines of merchandise are being sold in loose form in retail stores, and practically all of this merchandise could be packed to advantage in folding boxes. The box-maker, by studying the great variety of merchandise on display in the big department stores, can see many an opportunity for folding boxes. Whenever you see a good article on sale in a store that could be packed to advantage in a folding box, go after the manufacturer of that article and show him a sample of the paper box which you think should be used for his goods. Do not fail in making your samples attractive.

Pretty pictures, beautifully colored, and handsome typographic forms printed in colors, have much to do in making a folding box attractive. The old-time folding boxes and cartons were plain and far from being pleasing to the eye, but many of the new-style paper boxes are fine specimens of the printing art. The time has arrived when it is necessary for the paper box manufacturer to pay closer attention to the printed matter that is placed on folding boxes and cartons. With the aid of good color printing it is possible to make a plain, low-priced carton, or a folding box, exceptionally attractive.

No other manufacturer has a stronger selling argument to offer customers and prospectives than the manufacturer of folding boxes, and every point in this argument is absolutely true. For instance: Folding boxes are inexpensive; they help in keeping merchandise fresh, and prevent it from becoming soiled; they make it easy for the dealer to keep account of stock, and they help the dealer in handling sales quickly; folding boxes, handsomely printed, help the dealer in making attractive window and store displays; folding boxes help the manufacturer in promoting a national market for trade-marked goods; folding boxes help the buying public in keeping various articles of merchandise fresh and clean in the home. Here are the rough notes for an argument that ought to be the means of selling many a manufacturer a large quantity of folding boxes.

The facts mentioned in the remaining portion of this chapter concern several uses for folding boxes, and the reader is kindly asked to study these facts from a student's point of view with the idea of thinking out other new fields for folding boxes. Some of the facts may not be new to the reader, but possibly they will lead up to other

suggestions of a business-building character. Now is the time for paper box manufacturers in general to sell their product in new fields, but at the same time the old fields should not be neglected.

FOLDING BOXES FOR ICE CREAM

Folding paper boxes for bricks of ice cream are comparatively new, and are now being successfully used by several of the larger ice cream manufacturers. These boxes are made in pint and quart sizes, and

One of the new model folding boxes for holding a brick of Ice Cream. The advertising advantage of such a box is obvious.

are made in two different shapes—square and oblong. The name of the ice cream manufacturer and other advertising matter is printed on the flaps and sides of the box. The bricks of ice cream are first neatly wrapped in butter-wrapper paper, and the bricks are then placed in the folding boxes.

The printed matter for one line of the folding boxes referred to includes stripes running vertical on the sides of the boxes. This printing is done in lavender on manila stock and the effect is decidedly interesting. The printed matter, particularly the stripes, seems to put these boxes out of the ordinary class of folding boxes, and it is a fact that these boxes have helped in increasing sales of the ice cream contained in them.

Large numbers of druggists, grocers, cigar dealers, confectioners, etc., are handling the various makes of brick ice cream referred to, and before the advent of the folding boxes it had been tiresome work for the dealers to sell the frozen delicacy in loose form. Often during the hot weather months customers would have to stand in line waiting for the dealer or his clerks to measure the ice cream. It was slow and unpleasant work for all concerned, and frequently a patron would receive either short measure or over measure, as it was difficult to spoon and pack exactly the right quantity in every case. Valuable time was lost by both the dealer and his customers.

The new method of packing the bricks of ice cream in folding boxes not only saves time for the dealer and his patrons, but also insures the correct measure for each customer. The buyer asks for a pint, quart, or for several pints and quarts of ice cream, and the dealer simply opens an ice chest, lifts out the required number of boxes, wraps the boxes in a sheet of paper, and then hands over the package to the buyer. No longer is it essential for a group of worried patrons to stand waiting while the dealer tries to fill glass or china dishes with the right portions of loose ice cream.

Many of the larger manufacturers of ice cream are not yet using folding boxes for brick ice cream, but are literally waiting for some enterprising box-maker to call and sell them on this idea. Out-of-the-ordinary shapes, and attractive designs for printing, will help greatly in landing a big order for ice cream containers.

THE SELLING METHODS OF ONE SUCCESSFUL PAPER BOX MANUFACTURER

One of the leading manufacturers of folding boxes, cartons and advertising novelties is following modern methods of selling which could be adopted by many other paper box manufacturers with good results. The box man referred to has been successful in selling new lines of his paper products to numerous manufacturing concerns that previously had not used such materials, and in most cases business was procured after he had called on the manufacturer and presented his ideas.

Not so long ago this box-maker sold a baking company a large order of folding boxes, handsomely printed in three colors, to be used for marketing a special brand of cake. That brand of cake met with such a hearty reception in grocery stores, delicatessen stores, etc., that the bakers decided to put out several other kinds of cake, in pound sizes, and packed in individual folding boxes. Today this baking concern is marketing some half-a-dozen different kinds of cake, all packed in paper boxes, and all are having heavy sales.

This box manufacturer has originated various kinds of folding boxes for medicine bottles, toilet water bottles, soaps, tooth brushes, tubes of tooth paste, and other merchandise of this variety. He has also originated a large number of advertising novelties of the paper cut-out group, some of them in the form of odd-shaped folding boxes. Practically all of the cutouts were sold to large manufacturers who distributed the cutouts among their customers and prospectives in the form of good-will advertising. Some of this remembrance advertising proved unusually successful, especially a cutout of a combination "bunny" and Easter basket which was distributed by a prominent baking company. This cutout was printed in two colors —tint brown and black—on light-weight stock, and when completed

One of the Popular Styles of Folding Boxes Used for Holding a Tube of Shaving Cream.

each cutout formed a small-size tapered basket with the figure of a white rabbit standing up at the back part of the basket. The cutout was of one piece of stock, folded on two sides and the two side ends pasted together, thus forming the basket.

Several hundred thousands of these advertising novelties were distributed by the baking company to the homes of customers and prospectives during the week preceding the Easter season. The kiddies were delighted with the cutouts and made proper use of them by filling the paper baskets with straw and candy eggs. The baking concern received hundreds of requests for additional copies of the novelties, and all of such requests were granted of course. The novelties were inexpensive, but what made them so popular was their unique shape and pleasing appearance. Another thing, cutouts of exactly the same kind could not be bought in stores, and that made the combination Easter bunny and basket a genuine novelty despite its low cost.

Cutouts of this same variety can easily be made and sold by any manufacturer of folding boxes. Special paper novelties, in the way

of odd-shaped folding boxes, and printed in bright colors, can be made to provide for all the different holidays of the year. Original novelties of this group can often be sold in large quantities to manufacturing concerns who know the value of good-will advertising. It remains for the paper box manufacturers to originate and sell the ideas for new things in folding boxes, cartons and advertising novelties.

FOLDING BOXES FOR BOOKS, CATALOGUES, MAGAZINES, ETC.

Several well-known paper box manufacturing concerns are specializing in patented forms of folding boxes to be used for mailing books, catalogues, magazines, etc. The boxes are made to order to suit the particular size of a publication, and the fronts of the boxes are printed in the usual manner. No wrapping paper or labels are needed when mailing books, catalogues, etc., in these patented folding boxes, as the addressing is done on the fronts of them. Labels, however, may be used if desired, but no wrapping paper or string are needed. The box folds tightly at two ends; firmly holds the publication, and prevents the edges of the publication from becoming damaged in transit.

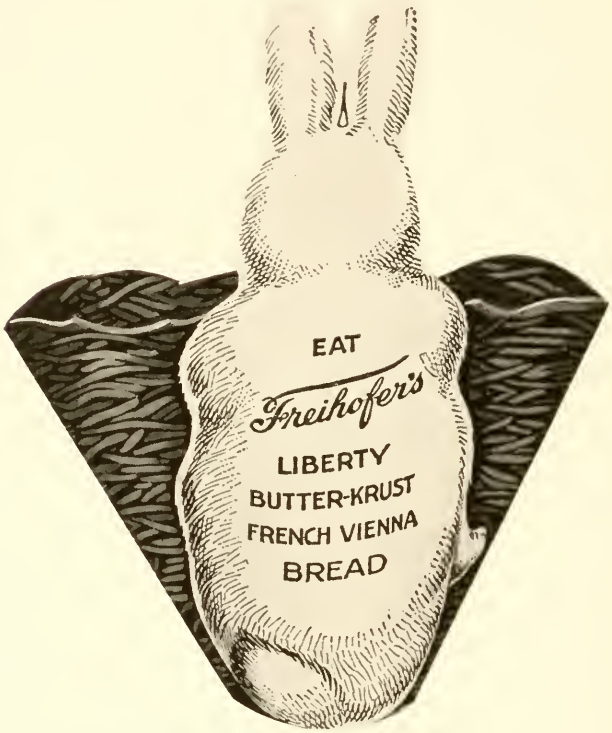
Large quantities of these mailing boxes are purchased by book and magazine publishers, advertising agencies, mailing concerns, and by many manufacturing concerns for mailing out copies of general catalogues. Some of the orders for folding boxes to be used for catalogues run from 10,000 to 50,000, and even higher. The field for mailing boxes of this class is constantly expanding. There is plenty of room for new ideas in this line.

HOW FOLDING BOXES HELPED A NATIONAL ADVERTISING CAMPAIGN

The manufacturers of a popular brand of toilet soap recently conducted a national advertising campaign which subsequently was the means of selling thousands of dollars' worth of the soap in question. Display advertising concerning the merits of this soap was carried in prominent magazines and newspapers, and with each advertisement was incorporated a coupon. Upon presenting a coupon and ten cents at any store where the soap was carried, the purchaser was entitled to two cakes of the soap. The newspaper and magazine advertising was linked up with window display advertising in towns and cities throughout the country. The window displays were planned and furnished by the soap manufacturers, and were shown by a great number of retail storekeepers.

Each window display was made up of a large-size, lithographic-colored cutout which formed the background, and of a considerable

number of bars of soap packed in folding boxes and cartons. The folding boxes were printed in two colors and contained individual cakes of soap. The cartons were also printed in two colors, and each carton contained a dozen of the boxed cakes of soap. The folding boxes and cartons were arranged in such a way as to make an ex-



Cutout of a Combination Easter Basket and Rabbit that made a big hit as an advertising novelty.

ceedingly interesting window trim. Some of the small-size paper boxes were shown with opened ends revealing the contents temptingly.

Several of the larger printing and lithographing companies, who are operating cutting and creasing departments in their plants, are planning complete advertising campaigns, like the one just referred to, for great merchandising concerns. In not a few cases the advertising campaign includes colored posters for stores and bill-boards, colored street car cards, colored cutouts for window displays, and also folding boxes and cartons printed in colors. The printing and lithographing concern planning such a campaign naturally receives the orders for the different kinds of paper products mentioned.

FOLDING BOXES FOR MEDICAL TABLETS

The increasing uses for folding boxes is clearly illustrated by the fact that many of the standard brands of medical tablets are now packed in folding boxes in addition to being packed in glass bottles. One brand of Aspirin tablets, for example, is now being sold in both paper boxes and glass bottles. One dozen tablets are packed in a small folding box. Larger quantities of the Aspirin are packed in bottles, and the bottles are then placed in folding boxes of the proper size. Both the small-size and the larger-size paper boxes for the Aspirin are printed in colors.

The pharmaceutical field offers unlimited possibilities for manufacturers of folding boxes and cartons.

FOLDING BOXES FOR TOOTH PASTE, SHAVING CREAM, ETC.

Other successful advertising campaigns which were recently conducted in a large way featured tooth paste and shaving cream. The tooth pastes and shaving creams are put into metal tubes which in turn are packed in folding boxes. About a dozen of the folding boxes containing the tubes are packed in a carton. Merchandise of this group is becoming more popular every day, and no wonder when we consider the old-time methods of selling tooth powder and shaving soap in loose form. The modern methods of tubing tooth paste and shaving cream, and of packing the tubes in attractive folding boxes, are meeting with great favor among the buying public.

The numerous new lines of tooth paste, shaving cream, cold cream, toilet preparations, headache salves, and other tubed materials of this variety, have opened entirely new fields for folding boxes and cartons. Think of the millions of paper boxes which are now being used for these new-style preparations, where only a few years ago you bought things like shaving soap in absolutely "nude" form. In these days even a bar of common soap is packed in a neat folding box.

The majority of manufacturers of tooth paste, shaving cream, toilet preparations, etc., have learned by experience that it pays to pack the tubed goods in attractive folding boxes. Not all of the tubed lines of merchandise, however, are packed in folding boxes, and here are glowing opportunities for the box-makers to build new business. Visit some of the first-class drug stores and note the number of tubed preparations which are not packed in folding boxes. Buy samples of such goods. Take them to the factory and plan attractive containers for them. Also plan cartons for holding the smaller-size boxes. Do not neglect to have the printed matter, or rather the "layouts" for the printed matter, done in pleasing, colorful

style. Then get busy with the manufacturers who ought to be using the proposed paper boxes.

A CASE IN POINT

For a long period a certain manufacturer of a hair tonic had been marketing the preparation in plain glass bottles without using folding boxes for holding the bottles. Time came when an enterprising box-maker visited the hair tonic man and suggested a bottle of more graceful shape than the one being used, and also suggested that the bottles be inclosed in neatly-printed folding boxes. The box-man had a sample of the new-style bottle suggested, and a dummy of the new folding box in question. The hair tonic maker was a hidebound individual, and while he liked the idea of the shapely bottle, he could see no reason for packing the bottles in paper containers. The box manufacturer was a real salesman, nevertheless, and during the course of argument he sprung the strong point of the paper boxes keeping the bottles and labels perfectly clean while the bottles stood for a long time on the shelves of stores. It was probably this point that finally sold the man on the folding box idea, but the suggestion *in re* the new-style bottle also helped.

FOLDING BOXES FOR JARS OF COMPLEXION CREAMS, ETC.

Some of the expensive lines of complexion creams, salves, etc., are not only packed in art glass or china jars, but the jars are packed in beautifully colored paper boxes. One of the boxes referred to is lithographed in colors, the completed design suggesting purple satin ribbon tied around the box. There are also pictures of flowers in natural colors. Another paper box of this type is delightfully printed in the oriental style of covering, the design picturing flowers of different species. These facts are mentioned to illustrate the possibilities of fine color printing for folding boxes of this variety.

SUGGESTED IMPROVEMENT FOR EASTER EGG BOXES

The average reader would be astonished were he to learn of the actual number of Easter egg folding boxes that are used throughout the country every year. Many of the larger candy manufacturers buy many thousands of such boxes every year preceding the Easter holidays. We refer to the well-known line of folding boxes used for holding decorated chocolate eggs which sell retail for 25c, 50c, 75c, $1, $1.50, $2, $3, and $5 apiece. Paper boxes are also made for candy eggs selling at 5c, 10c, 15c, and 20c apiece, but this chapter is more concerned over the various sizes of boxes used for holding the

higher-priced eggs, such as the sizes used for the 50c, 75c, $1, etc.

The same old-fashioned printed designs that have been seen on the Easter egg boxes for the last few decades seem to be used today for the majority of such boxes; plain, one-color designs of chicks and rabbits printed on the sides of the containers. Why is it not a good sales opportunity for some progressive box-maker to put out a new and attractive line of these popular boxes? Why not pictures on the sides of the boxes printed, or lithographed, in bright colors? The pictures could be made highly suggestive of the Easter season. The main thing would be to have the pictures done in pleasing colors in a style that would be interesting to grown-ups as well as children.

Practically all of the candy manufacturers buy substantial quantities of the Easter egg boxes in all of the standard sizes, and certainly the candy-makers would prefer paper boxes of this variety that are more attractive than the old kind. We all know that beautifully-colored boxes of this type would help in selling greater quantities of candy eggs. Here is a field that is wide open for some box manufacturer with new ideas.

Some of the larger candy manufacturing concerns are now using colored folding boxes for the cheaper grades of candy, such as taffy, peanut brittle, and so forth, and here, too, is another new field for paper box manufacturers with ideas. Some of the folding boxes used for special makes of candy are of the pleasing high-chest shape, the stock printed with an all-over pattern in three or more colors. The color effect is rich, and puts an ordinary folding box out of the common class.

CHAPTER VI

SELLING GOODS WITH UNIQUE FOLDING BOXES

IN many ways the modern manufacturer of folding boxes and cartons is more than simply a manufacturer of such product. First of all, he is a business promoter for many other manufacturers of merchandise. In many instances he is planning advertising and selling ideas which when put to actual use will be the means of creating thousands of dollars' worth of new business for the manufacturers who may utilize these ideas.

Visit some of the larger plants devoted to the production of folding boxes and cartons, and you will understand how the owners of those plants are creating business for other manufacturers. In any one of the larger plants you will find a special department in charge of experts who are constantly planning new designs for folding boxes and cartons—planning new uses for folding boxes and cartons—thinking out new merchandising ideas to be used in connection with folding boxes and cartons. These experts do not sit around waiting for prospective customers to come in the office and place orders for containers. No; they go right after prospective customers and present *ideas* and *suggestions* which often result in opening up entirely new fields of business for the concerns that are wise enough to adopt the ideas and suggestions.

In the modern plant where folding boxes and cartons are being made you will find an art department where new pictures, designs and patterns for folding containers are being originated. These pictures, designs and patterns are to be lithographed or printed on the containers after the original sketches have been approved. These artists are capable of making colored effects for containers that will raise the attractiveness and beauty of the containers far above those of the ordinary class.

The modern plant is equipped with a first-class printing department, of course, usually with batteries of both platen and cylinder printing presses, and in some cases there is a battery of off-set lithographic presses. The finest grades of color work are produced in

these printing departments, and in many instances the pictures, designs or patterns for folding boxes are printed or lithographed in four or five different colors. The printing or lithographing is done on the large-size sheets of boxboard, often as many as ninety-four (94) complete forms for folding boxes being printed or lithographed at one time on a single sheet.

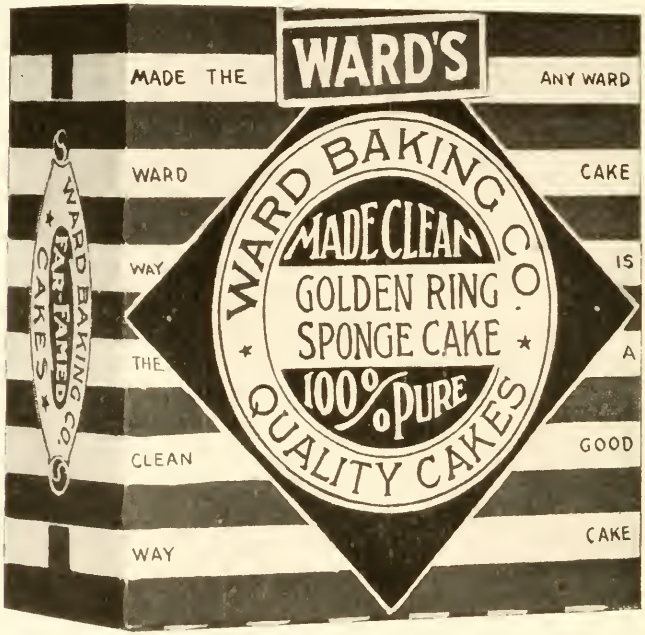
Not long ago the writer had the pleasure of visiting one of the largest factories in the world where nothing but folding boxes, display containers and cartons are being produced. The containers for many of the nationally known lines of merchandise, which are to be bought in every good general store, are being manufactured in this plant. The orders for these containers frequently run into the millions. It seems almost unbelievable, but it is a fact, nevertheless, that some of the orders for folding boxes handled in this plant are for 50,000,000, 75,000,000 and even 100,000,000. In one of the special departments of this factory alone several millions of a certain kind of folding box are completed every day.

The printing and lithographing departments of this plant are worthy of being featured in one of the educational picture films. Each department is an exceedingly long and wide room with an extra high ceiling. The walls and ceiling are done in white. There are windows on three sides. The presses are lined up in two long rows. The floor is of concrete. In the printing department a large number of cylinder presses are installed. In the lithographic department are about a dozen large-size off-set lithographic presses of the newest models. Two of these machines are built to lithograph four different colors simultaneously. Both departments are constantly busy on color work for containers.

Another plant which the writer visited also possessed big printing and lithographing departments, both departments used exclusively for lithographing or printing on large-size sheets of boxboard for folding boxes, cartons and display containers. The cutting and creasing departments of this factory are remarkable. There are more than fifty platen cutters and creasers of various makes and sizes. There are also about two dozen cylinder cutters and creasers of different makes and sizes, including a number of the new-style automatic piling cutters and creasers which automatically deliver the flat sheets, cut and creased, on trucks ready to be carried away in big piles to the stripping department.

The writer is not at liberty to mention the names of the two plants referred to, nor is he in a position to describe the special kinds of work which are being done in these plants, but enough has been said to give some idea of the equipment and efficiency of the plants. The

owners of these great factories are manufacturers in the true sense of the term; they are not merely paper box makers. They are operating their business on a genuine manufacturing basis, and therefore are capable of handling the largest and most difficult classes of folding box product on a profitable foundation. Moreover, these manu-



The familiar Cake Box distributed by the Ward Baking Co., New York City. Printed in two colors—red and blue. This container can be used as a lunch box for picnics, outings, etc., after the original contents have been removed.

facturers are continually promoting new business for both themselves and other manufacturers by inventing new purposes for folding boxes.

Would that all paper box makers were conducting their business in this same manner. Is it not a fact that many a box concern is not paying attention to the important matter of suggesting new ideas in folding boxes to prospective customers? Is it not true that numerous box-makers are operating plants that are not modernly equipped or efficiently managed? You do not have to own a mammoth plant to originate new ideas in folding boxes, and a small-size plant can be just as modern and efficient, in proportion to its size, as any of the larger plants.

"Share Thy Knowledge" is the motto of the International Association of Printing House Craftsmen. This organization is made up

of many clubs formed of printing house executives. Every member of any one of these clubs must be willing to share his technical knowledge with any of his fellow craftsmen. It is the old Golden Rule applied to a modern purpose. The paper box manufacturers should have an organization of this character, and the paper box men could learn a great deal by visiting one another's plants. You will never lose anything by sharing your technical "secrets" with your brothers in the trade.

"Co-operation, not competition, is the life of commerce."

THE KINDS OF FOLDING BOXES THAT SELL GOODS

There are many different kinds of folding boxes on the market which are automatically selling large quantities of merchandise by reason of their attractiveness and utility. These are the kinds of containers which manufacturers in various fields are always looking for. If you can show a progressive manufacturer something new and attractive in the way of a folding box, a display container, or a carton, he will be ready to talk business with you on your own terms, and why not when you have something that would possibly make a fortune for him?

Yes, there are numerous folding boxes on the market which have earned large fortunes for certain manufacturers who are using them for their products, and there are just as many opportunities for other new-style containers that have not yet been invented. Because there are numerous patented containers already on the market it does not mean that there is no more need for other styles of patented containers. In fact, the need for out-of-the-ordinary containers is greater every day.

Who has not seen one of those famous folding boxes which are being used as cake containers by the Ward Baking Company, of New York City? These boxes are not beautiful in appearance, but certainly they are attractive, and they have a utility feature which makes them useful as lunch boxes after the original contents have been removed. These boxes are made in various sizes, and are used as containers for pound cake, sponge cake, etc. The popular size of these boxes is 7½ x 7½ x 3 inches. This is the size that may be used as a lunch box, and thousands of persons are using them as lunch boxes. The idea is to wrap up the lunch box in plain paper, and to throw away the box after the lunch has been removed. Boxes of this kind are appropriate as lunch containers for picnics, boat trips and other outings.

There is nothing really startling or new about the Ward cake boxes, with the exception of the printed line on the top flap of each

box reading, "Keep this handy lunch box—when empty." That line of reading matter puts each one of the Ward folding boxes in the special utility class, and buyers of the cake packages are reminded of the fact that the boxes may still serve a useful purpose after the cake has been consumed. The point is that the Robert Gair Company, of Brooklyn, N. Y., the company that is manufacturing the folding boxes for the Ward Baking Company, was progressive enough to "play up" the utility feature possessed by these containers.

Practically any kind of a folding box carton that is made in the same style, and about the same size as the Ward cake box, has the same utility feature as the Ward box. But, who ever thought of

The famous 5c raisin package. Lithographed in four colors and varnished.

advertising this utility feature until the Robert Gair Company tried it out? The folding boxes which are being used as containers for breakfast foods, coffee, teas, etc., may be utilized as lunch boxes after the original contents of the boxes have been disposed of, but to make any of these containers popular in this respect, it would be essential to print instructions on each box.

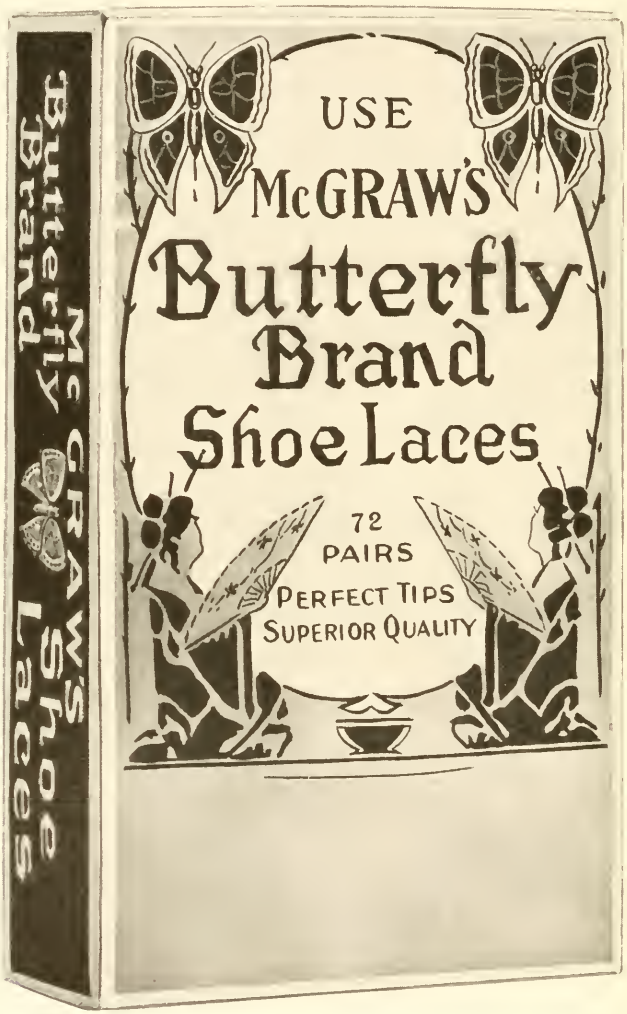
Display Container, made from a single piece of boxboard by the Brooks Bank Note Co., of Springfield, Mass. Lithographed in one color.

There is an opportunity for some paper box manufacturer to produce a beautiful folding box—something out of the ordinary, and having special utility features. For example, a handsomely-printed folding box that could be used as a "doll house" by children, ought to prove popular for some brand of cereal. There is a growing demand for more attractive folding boxes having designs, pictures or patterns printed or lithographed in warm colors.

100,000,000 FOLDING BOXES FOR RAISINS

After having passed through a woefully dull business period, brought about by national prohibition, the California raisin industry is now enjoying the most prosperous times in its history. Everybody is now eating raisins. Why? Because the raisin growers' Association in its national advertising tells everybody to eat more raisins.

Probably the most interesting side of this great national advertising campaign is the five-cent package of raisins which can now be purchased in many different retail stores in all sections of the United



Display Container, made from a single piece of boxboard by the Brooks Bank Note Co., of Springfield, Mass. Lithographed in two colors.

States. You may see these packages even in the chain cigar stores, drug stores, candy shops, etc. According to reliable reports, more than 100,000,000 of these five-cent raisin packages have already been

placed on the market, and arrangements are being made to distribute additional millions of these packages.

Like all good things this original five-cent raisin package was quickly counterfeited, but the imitations are so mean-looking as to the style of the packages that they have no chance at all of competing with the original. The original package is a folding box, size 1¾ x 1⅛ x 2¾ inches. It is beautifully lithographed in four different colors, incorporating a pretty picture of the "Sun-Maid" on one side, and the entire surface of the box is finished in varnish. These packages are packed two dozen in a handsome display container which is also lithographed in four colors and varnished. Think of it, 100,000,000 of these packages have already been distributed to the retail trade, and millions more are to follow! Were ever the advantages of a beautiful folding box demonstrated more forcibly than in this case? You have probably bought one or more of these five-cent raisin packages yourself, and if so, you have doubtless admired the attractive qualities of the folding box. We do not know whether it was a paper box manufacturer who originated this idea of putting raisins in five-cent packages or not, but we hope that it was a box manufacturer.

Many other lines of merchandise could be sold in larger quantities by packing them in small-size folding boxes. Why not have salted peanuts packed in small-size five-cent packages instead of packing them in glassine bags? This is merely a suggestion, of course, to show how new fields for folding boxes may be developed. There are unlimited opportunities for new styles of folding boxes for candy, cakes, bottled goods, coffee, sugar and many other lines.

The wonderful success of the five-cent raisin packages should serve as an inspiration to manufacturers of folding boxes. Attractive folding boxes, cartons and display cases will help many a manufacturer in solving his merchandising problems.

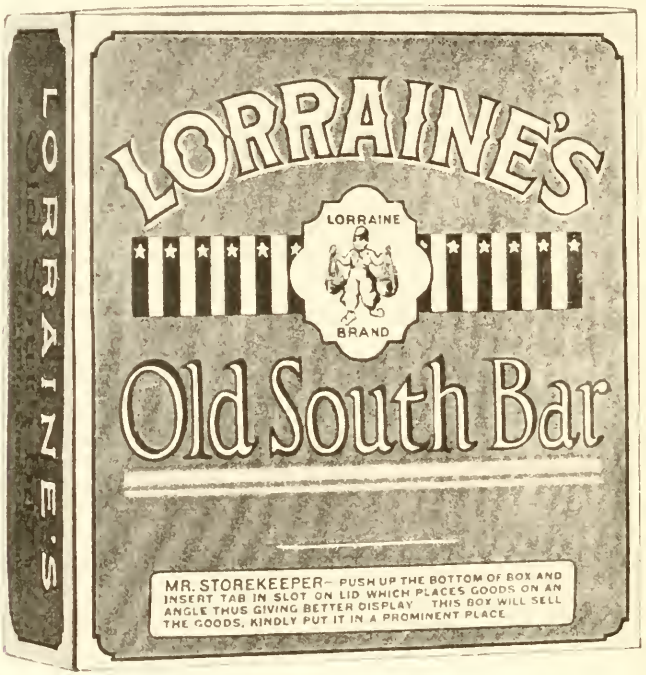
UNIQUE DISPLAY CONTAINERS

Several of the larger manufacturers of folding boxes, including the Brooks Bank Note Company, of Springfield, Mass., are making patented display containers for various lines of merchandise. These display containers are usually formed of a single sheet of boxboard, lithographed in colors, and cut and creased in such a manner that when the completed sheet is properly folded it forms an attractive display case of the set-up box type, the box raised up on an angle at one end, and an advertising card standing up at the back.

Display containers of this type are generally used for holding small-size folding boxes filled with candy, chocolate bars wrapped

in tin foil, packages of chewing gum and other sweets of this variety. Some of these containers, however, are being used for holding packages of shoe strings, braid, cough drops, seeds, and other things which can be conveniently sold in small-size packages.

The display containers illustrated in this chapter were manufactured by the Brooks Bank Note Company, a well known concern that is producing many varieties of folding boxes, cartons and display containers, in addition to doing all kinds of fine lithographing.



Display Container, made of one piece of boxboard by the Brooks Bank Note Co., of Springfield, Mass. Lithographed in one color.

The display containers referred to are unique in construction. When the filled container goes to the retailer it looks much like a regular set-up paper box, but when the cover is raised and thrown back, it forms an attractive advertising placard standing up at one end of the box. The box is then pushed up from the bottom of the container so that it will rest on an angle, thus displaying the goods inside the box to great advantage. The display containers are to be placed on cases and counters of stores, and they may also be placed in show-windows of stores.

These unique display containers certainly help in selling the goods that are packed in them. In many retail stores it is surprising to see how rapidly the small-size packages move from these containers. One dealer remarked that the profits earned on popular five-cent packages of chocolates, mints, drops, nut-bars, etc., easily paid the rent of his store.

Manufacturers of folding boxes should pay closer attention to the many different lines of merchandise which could be sold to advantage in smaller-size packages. You can probably think of numerous good lines which could be sold in five-cent packages. Why not interview the manufacturers of those lines on this important subject?

FOLDING BOXES AND CARTONS FOR WINDOW DISPLAYS

Large numbers of the retail drug stores recently arranged window trims of a nationally known brand of tooth paste which were exceptionally interesting. In each display were a number of lithographed cartons of extra large size—enlargements of the regular-size cartons which are used for holding a certain number of the smaller-size folding boxes containing the tubes of tooth paste. In each display were also about a dozen good-size folding boxes, lithographed in such a manner as to resemble the real carton, opened, and showing the smaller-size packages within.

Window displays of this kind were also arranged by numerous grocery stores, only the large-size cartons and the "imitation" packages represented a well known brand of breakfast food. The retailers like to have these window displays, of course, as they not only make the show-windows attractive, but they make it unnecessary for the dealers to put the genuine packages in the windows, thus preventing the original packages from becoming "sunburned" or soiled.

Any manufacturer of folding boxes is capable of making window displays of this variety without it being essential for him to add special mechanical equipment to his plant. The displays are made in the same way as regular folding boxes and cartons. The designs for the large-size cartons and "imitation" packages may be printed or lithographed.

There is a wonderful and growing field for window displays of the kinds referred to—a field that is waiting for "live" paper box manufacturers to develop it to greater proportions. Right now beautiful and out-of-the-ordinary window displays, made up of folding boxes, cartons and display containers, are needed by many manufacturers of package goods. Suggest your ideas to these manufacturers and show them sketches or models of the new subjects that you have in mind.

The large advertising agencies, and the larger printing and lithographing concerns, are constantly planning new things of the kinds which have been referred to in this article. But, only a comparatively few of the paper box manufacturers seem to be following this powerful method of business promotion. Now is the time for the paper box men to sell *new ideas* in folding boxes that will speed up their industry to full capacity.

All of the different kinds of folding boxes, cartons and display containers which have been mentioned in this chapter can be produced on either platen cutters and creasers, or on cylinder cutters and creasers, from dies made of steel cutting and creasing rule. In this connection the writer desires to say a few words about the new Babcock Automatic Piling Cutter and Creaser, made by the Babcock Printing Press Manufacturing Company, of New London, Conn. When visiting a number of large folding box plants the writer saw a number of these devices in operation. In one of these plants the machine was equipped with an automatic feeder. These machines are particularly adapted to large-size sheets and extra-long runs. In one case the writer saw a form running that was made up of more than 200 small-size cutting and creasing dies. The completed sheets were automatically delivered and piled up on a movable platform which was moved away on a truck when the pile reached a certain height.

In the modern plant the different kinds of work are handled on cutters and creasers of the sizes and styles best adapted to each class of work. The platen cutters and creasers, for example, are particularly adapted to certain kinds of product. The ordinary cylinder cutters and creasers are suited to certain kinds of work. The Babcock cutter and creaser is now being made in a number of different sizes to suit all classes of cutting and creasing work.

The designs, pictures or patterns for the various kinds of folding boxes referred to in this chapter could be printed or lithographed with about the same results. We are not saying a word against the excellent work being produced for folding boxes by the lithographic process, but it is only fair to state that the same beautiful color effects can be produced on printing presses with the use of the proper plates.

CHAPTER VII

IMPROVED METHODS OF CUTTING AND CREASING

REPORTS concerning the paper box manufacturing industry, from various sections of the United States, reveal the interesting fact that the demand for all kinds of folding boxes and cartons is constantly increasing, and in some instances, is increasing more rapidly than the demand for the "set-up" style of paper boxes. This is probably due to the comparatively low cost of folding boxes and cartons, and also to the new uses which are constantly being found for these containers.

By this statement the writer does not mean to imply that folding boxes are taking the places of high grade set-up boxes. There will always be a growing demand for first quality paper boxes of the set-up variety, but in some instances, commonly-made stiff boxes are being replaced by folding boxes on account of the folding boxes being less expensive. For example, some of the candy dealers are now using folding boxes in packing popular sweets like peanut brittle, "Yellow Jack," cocoanut strips, broken candies, etc.

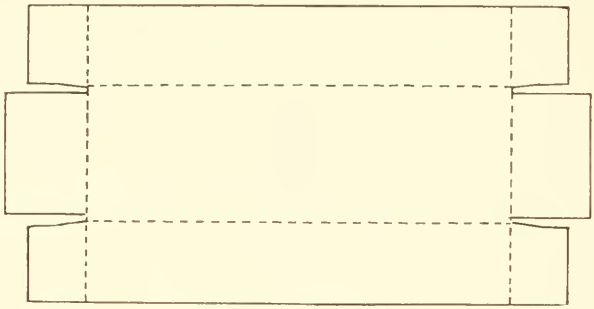
These facts are mentioned merely for the purpose of illustrating the increasing demand for folding boxes. The time is soon coming when almost every article of merchandise sold in a retail store will be packed in a paper box of some kind, and many things which are now being sold in "loose" form will be packed in folding boxes. As time advances the manufacturers of folding boxes will gradually improve the quality and appearance of their product, up to a point where a good folding box will be almost as attractive as a good set-up box. At the present time many folding boxes are commonly made and present a cheap appearance which is not altogether in their favor. Why not a handsomely-covered folding box—one that is highly pleasing to the eye of the average person?

Let us now turn to the practical side of making folding boxes. In the following paragraphs the writer shall attempt to give some information on the subject of cutting and creasing for folding boxes which we hope will prove helpful to any person interested in this

work. When high grade folding boxes are desired, first class cutting and creasing are essential, of course, and it is the writer's purpose to tell how the *best* cutting and creasing may be done on either a cylinder press or a platen press.

BRIEF OUTLINE OF CUTTING AND CREASING WORK

For the information of a reader who may not be familiar with the process of making folding boxes, the following brief outline of cutting and creasing work is offered: A folding box is made from a single piece of Manila tag board, or folding bristol board, scored, cut, folded and glued together in such a manner as to form a complete box. A folding box is glued together at two ends, usually at



Carton for holding 10 packs of cigarettes. Dotted lines represent scoring rules, plain lines represent cutting rules. Same plan is used for both box and lid, but lid is made about $\frac{1}{8}$ inch larger inside scoring rules so as to enable it to slide down over the box. When box and lid are folded, the smaller flaps are glued on the inside of the larger flaps. No staying is necessary. This style carton looks much like a telescopic set-up paper box.

the side, and at the top and bottom are flaps which fold and interlock. One of the flaps at the top, and one at the bottom, have slits into which the ends of the covering flaps are inserted.

The dies for cutting and creasing the stock for folding boxes to the different shapes required are made of steel cutting rule, and steel creasing rule. The steel rules are cut and bent to the necessary sizes and shapes, and are then built into a complete die by means of wood or metal furniture. Black cherry wood is used to a large extent for blanking out steel dies of this class, but regular printers' furniture, of steel, iron or lead, is also used for the same purpose.

After the steel die has been properly filled in with furniture, it is then locked up in a chase. The chase containing the die is then placed on either a cylinder or platen press. The make-ready is done in such a way as to cause all of the sharp steel cutting rules in the form to cut into the stock sharply, and all of the scoring rules in the form to

score the stock in the proper places. After the make-ready has been completed, on each impression of the press a folding box is cut out and scored simultaneously. In many cases several complete cutting and creasing dies are locked up together in the same chase, and several folding boxes are cut and scored on every impression. Finally, the cut and scored sheets are run through a gluing machine, each sheet being folded and glued together at two ends. The folding boxes are then ready for the customer.

SUGGESTIONS FOR BUILDING AN EXTRA-STRONG DIE

While it is true that many die makers are using 2-point hard steel cutting rule, and 2-point steel scoring rule for the great majority of all steel die work, it is likewise a fact that some die makers are using 6-point steel rules for the heavier class of work. The 6-point cutting and scoring rules are particularly adapted to heavy-weight Manila tag stock, and also to exceedingly long runs of both light and heavy forms. On the other hand, 2-point cutting and creasing rules are apt to break down to some extent on extra-thick stock, or on long runs of any kind.

The standard height of steel cutting rule is .923" which is slightly higher than printers' brass rule. The standard height of steel scoring rule is .918". The standard height of all printers' type is .918". Every box maker should be familiar with all of these figures, as they will often be required when ordering materials for cutting and creasing dies. Steel cutting and creasing rules are also made in other heights to suit special requirements.

All of the blanking out material in a die which comes directly in contact with the steel cutting and scoring rules should be at least ¾ of an inch high so as to make the steel rules stand up as firmly as possible. This is one of the most important points in die building. The idea is to have the furniture, or blanking-out material, which is placed on either sides of the steel cutting and scoring rules *high enough to prevent the rules from bending under heavy impression.* The high furniture (¾ of an inch) also helps in maintaining sharp, even cutting, for the reason that it prevents the top portions of the cutting rules from moving slightly under heavy impression. The blanking-out furniture cannot be much higher than ¾ of an inch for the reason that some space must be left for attaching corks along the surface of furniture which is placed on either side of cutting rules.

Printers' labor saving furniture, of wood, steel, iron or lead—the kinds which are to be found in any well-equipped printing office—

may be used in conjunction with "high" blanking-out material in steel dies, but pieces of printers' furniture should never be placed next to steel cutting or scoring rules on account of printers' furniture being considerably lower in height than regular box-makers' furniture which is about ¾ of an inch high. Printers' labor saving steel, iron or lead furniture makes excellent material for the die-builder on account of its accuracy and the large number of convenient sizes in which it is made. The die-maker "fills in" the blank spaces in the die with printers' furniture—that is, the blank spaces which have not already been filled with black cherry wood ¾ of an inch high. In other words, "high" material, say about one inch wide, is placed on either side of all steel rules in the form, then the remaining blank spaces are filled in with printers' labor saving furniture, of wood, steel, iron or lead.

Printers' standard lock-up furniture is made lower than ¾ of an inch high for two reasons: First, so that the furniture will be low enough to escape possible inkings from the inking rollers, thus preventing ink markings in the blank portions of printed sheets. Second, to allow space for feeding guides and "fenders" on platen presses. The majority of printers and box-makers use feeding guides made of brass, hardwood or lead, about 12 points high (⅙ of an inch high). The fenders, placed on one side of each guide to prevent the sheets of box-board from extending over the tops of the guides, stand up even higher than ⅙ of an inch. These facts mean that the outside sections of a steel die, or series of dies, cannot be entirely blanked out with *high* furniture (¾ or an inch high), as this high material would not allow sufficient space for the feeding guides and fenders. If the high furniture was used in places where the guides and fenders strike, the guides would "smash" into the high furniture.

The average steel die, or series of dies, will allow for at least one-inch margin of stock on all four sides for cutting purposes, and therefore, the die-maker should keep this fact in mind when placing *high* material on the outside sections of the die. A good rule to follow is to place high material, which is only about ¾ of an inch wide, on the outside sections of all steel rules, then blank out the remaining space in the chase with printers' wood furniture. Perfectly square pieces of black cherry, ¾ of an inch square, will serve admirably for the outside sections of a steel die.

SIMPLE METHOD OF PREVENTING STEEL DIE FROM WARPING

Even in cases where all of the blanking-out material used in a steel die is perfectly accurate, so far as the term "perfect" may be

used, often the die will warp decidedly when the lock-up squeeze is applied. In some instances, the lock-up pressure causes the surface of the die to take on a "toric" form. This is apt to result in difficult make-ready, as for the best conditions of make-ready the entire surface of the die should be perfectly level. Warps may be easily avoided in all cutting and creasing forms, no matter how large or small the dies may be, by the following simple method:

From Manila paper, of about 80 pound weight, or from any kind of good quality heavy wrapping paper, cut a number of strips, about 18 inches long and about 3/16 of an inch wide. The length of the strips is not important, as they can be cut or pieced out to any length wanted, but the width of the strips, 3/16 of an inch, is very important. At the bottom end of the form, between two of the strips of blanking-out furniture, insert one of the strips of paper. Place the strip of paper at the bottom of the strips of furniture, and make sure that the strip of paper is placed horizontally even, not higher at one end than at the other. Now repeat the same operation at the left-hand side of the form; that is, place a strip of the paper between two strips of furniture, in the same manner as at the bottom of the form. Then lock up the form with slow, gradual turns of the quoin key, rather than by rapid turns, and the die and all of its material will lie perfectly flat and even. The two strips of paper between the furniture, at the bottom, and on the left-hand side, have a remarkable influence upon all material in the form. Have a number of the paper strips in the drawer of the imposition table ready for use.

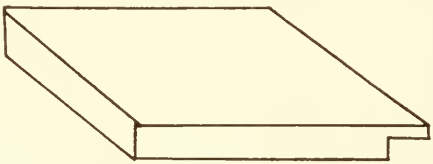
ADVANTAGES OF PRINTER'S BRASS RULE AS SCORING RULE

Some box-makers are using printers' labor-saving brass rule for scoring instead of steel scoring rule, for the reason that the printers' brass rule comes in many assorted sizes ready for immediate use. For example, the brass rule comes in a case, made expressly for the purpose, and in each compartment of this case are several pieces of rule of the same size. On account of the brass rule coming in many different lengths, from 1 em long to 60 ems long, with half-em-sizes, like 1 and ½ ems, in between, it is possible for the box-maker to make up from the wide assortment scoring rules of any length desired. For example, the box-maker may want five (5) scoring rules, each five-and-one-half inches long. This would mean five brass rules, each one 33 ems long, and if these sizes were not at the time to be found in the case, they could easily be made up from smaller pieces of rule. For example, one piece of brass rule 17 ems long, and another piece 16 ems long, would make, when put together, a strip 33 ems long, or five-and-a-half inches long.

We refer to full-face brass rule .918" high, in 2-point, 3-point, 4-point and 6-point. The great advantage of the printers' labor-saving brass rule over steel scoring rule is in the brass rule being cut to so many different sizes, while it would be necessary for the die-maker to cut the steel rule to the various sizes needed. The brass rule will last for a life-time, and may be used over and over again as scoring rules without showing serious signs of wear.

BRASS FEEDING GUIDES WITH SELF-CONTAINED FENDERS

Many pressmen who are working on regular cutting and creasing presses prefer brass feeding guides to those made of wood or lead. These brass guides are about 1/16 of an inch thick and about 1½ inches square. They are attached to the platen, or rather to the sheet of box-board on the platen, by means of LePage glue. The



Brass Feed Guide with Self-Contained "Fender." Note the undercut. This is done with an ordinary file.

side of the guide which is to be glued to the platen is first rubbed on emery paper which roughens the surface of the brass sufficiently to make it hold the glue firmly.

Some pressmen take brass guides of this same size and undercut them at one end with a file or brass saw, so as to make a guide with a self-contained fender. The undercutting is done to a point about 3/16 of an inch deep, leaving an extension above about 1/32 of an inch thick.

With brass guides of this shape none of the ordinary fenders are required, each guide having its own "fender" at the top. At first, this style of guide is a little difficult for the feeder, but within a short space of time the feeder becomes used to it, and thereafter will prefer it to the ordinary guide and separate fender.

OUT-OF-THE-ORDINARY METHOD OF MAKING READY A CUTTING AND CREASING FORM

The regular method of making ready a cutting and creasing form, on either a cylinder press, or a platen press, is as follows: After the form has been put on the press, a sheet of chip-board, news-board, or strawboard is glued to the cylinder of a cylinder press, or to the platen of a platen press. All *creasing* rules in the form are inked by

means of a printers' hand roller and printers' black ink. An impression of the form is then taken on the sheet of box-board which has been glued on the cylinder, or platen, of the press. This causes all of the creasing rules in the form which have been inked to print in the sheet of box-board. Then, with a sharp make-ready knife, the pressman *cuts out of the box-board all lines which have been marked by the inked creasing rules.* This is tedious work and calls for skill on the part of the pressman. If the scoring rules are of 2-point width, the pressman cuts only about the same size line from out of the box-board; when the scoring rules are of 4-point width, the pressman cuts away only about the same size line on the foundation board, and so on with other widths. After the make-ready has been completed, with all creasing lines cut out clean and even, and all cutting rules made perfectly level, the press is then ready for operation. On each impression the cutting rules cut sharply into the sheet and cut out the necessary shape, while the scoring rules merely force the stock into the grooves which have been made for the scoring rules.

Here is an out-of-the-ordinary method of making ready the scoring rules in a cutting and creasing form: Instead of cutting out the creasing lines form the foundation board, take strips of box-board, about one-inch wide, and any convenient length, and glue on these strips to the foundation board, on both sides of all lines marked by the scoring rules. It will be essential, of course, to glue on these strips accurately, leaving the right amount of space between each two strips. For example, for a 2-point creasing rule it will be necessary to space the two strips of box-board only about "2-points" apart, and so on.

With this method of make-ready no cutting out work of any kind is needed on the foundation board, and the strips of box-board make possible more even grooves than those that are cut out of the foundation board with a knife. This plan saves a great deal of time over the ordinary method of make-ready, as it is a comparatively simple matter to have the strips of box-board cut on a paper-cutting machine, and to glue them in the proper positions. After a little practice, the press feeder will experience no trouble in feeding over the edges of the strips, but it is a good plan to bevel all edges which may interfere with the feeding. Some pressmen, after finishing the make-ready for a cutting and creasing form on a platen press, take a large sheet of thin Manila paper and glue it over the entire surface of the make-ready. This protects the make-ready to some extent, and makes the work of feeding easier.

THE BEST METHODS OF "CORKING" FORMS

One of the best methods of "corking" a cutting and creasing form, on either a cylinder press or platen press, is in using the patented strip cork which is now on the market. This form of cork comes in long strips, of various widths and thicknesses, and is rounded on the surface which comes in contact with the sheets of box-board. With this cork, the pressman simply cuts strips to the required lengths, and then glues them on the top of wood furniture on either side of the steel cutting rules.

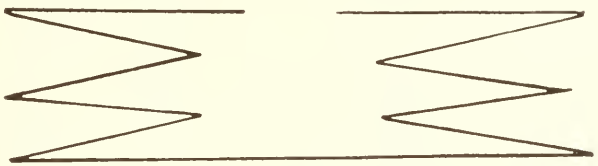
There are strips of rubber, made in various sizes, which can be used in the same way as the strips of cork. Some pressmen prefer using individual corks, and have large quantities of the corks, cut to required sizes, ready for immediate use. The great advantage of the strip cork, however, is in its being of uniform height, while it is hardly possible to cut a large number of separate corks by hand to exactly the same height. Some pressmen would claim that various sizes of corks would not matter in the work of cutting and creasing but the writer is of the opinion that corks of irregular heights often cause break-downs in the make-ready. For example, if a spacious cutting and creasing form on a platen press is corked to a greater extent on the left-hand side than on the right-hand side, it seems natural that the cutting rules on the right-hand side will be subjected to more pressure than the rules on the other side. This would mean that the rules on the right-hand side would wear down more rapidly than the rules on the left-hand side.

The same argument applies to using individual corks of various heights in different parts of the form. Place corks, ¼ inch high, in one place, and corks ⅛ inch high, in another place, and there will result irregular impressions which will cause the fine cutting surface of certain rules to wear more than the cutting surface of other rules. The effects will be noticeable on a long run, and frequent repairs to the make-ready will be necessary.

In all cases of corking cutting and creasing forms the corking material should all be of uniform height, so that everything in the make-ready will be as even as possible. In a well-regulated folding box manufacturing plant all of the "high" blanking-out material which is placed either side of cutting rules should be of uniform height, say ¾ of an inch high, and all corks, rubber and strip cork, should be of uniform height, say ¼ of an inch high. This plan would be the means of saving a great deal of make-ready time during the course of a year, and would help in training efficient apprentices.

When running large cutting and creasing forms which contain

much blank space inside the main cutting and creasing rules, cardboard "benders," or springs, may often be used in the blank spaces in addition to the corks near the rules. A bender may be made of folding bristol board, or of a light-weight binders' board. Some "benders" are folded from binders' board pieces as large as 8 x 5 inches, and when glued to the surface of furniture, inside cutting and creasing rules, appears like this rough diagram:



"Bender," or spring, made of binders' board, or folding bristol. Used for "pushing" cut stock from off the steel rule die. The bottom of the spring is glued to a piece of blanking-out wood inside the die.

A "bender" of this type will help greatly in "pushing" sheets from off cutting and creasing rules, and yet it does not impose a severe tax on the impression. It should be understood that corks are essential on both sides of cutting rules, even in cases where large-size "benders" are used.

NOTE: (Complete instructions for the making of all kinds of paper boxes, making steel dies, making ready forms for cutting and creasing, and other information of this character, may be found in the book entitled, "How Paper Boxes Are Made," published by the Shears Publishing Company, of LaFayette, Indiana. The price of this book is $2.50 per copy, and every box-maker should have a copy.)

CHAPTER VIII

CUTOUTS PAPER BOX MEN CAN PRODUCE

EVERY paper box manufacturer who is operating a cutting and creasing department in his plant is naturally in a position to make all kinds of cutouts in addition to manufacturing all varieties of folding boxes and cartons. This is a statement which doubtless will be deeply interesting to many readers, but we shall make this statement still more interesting by adding that in this chapter an attempt will be made to explain how this class of work is done.

What do we mean by the term "Cutouts?" No doubt the majority of paper box makers are familiar with this term, but there may be some who are not acquainted with it, so for that reason it may be well for all concerned to have this appellation minutely explained.

Under the heading, "Cutouts," come fancy partitions for set-up paper boxes, odd-shaped fans of cardboard, photograph folders, leather novelties, cardboard toys, fancy cardboard pictures for Christmas, St. Valentine's Day, St. Patrick's Day, Easter, New Year, etc.; all kinds of odd-shaped advertising signs and novelties made of cardboard; and a wide variety of cardboard "set-ins" for garter boxes, necktie boxes, collar-button boxes and combination holiday boxes used for holding suspenders, garters, sleeve-holders, etc. The term, "Cutouts," also applies to a large number of display-cards used for holding watch-chains, soft-collar pins, made-up neckties, watch fobs, souvenirs, and so forth.

One Philadelphia paper box manufacturer for many years has been specializing in the production of fancy holiday boxes, many of which contain partitions, or "set-ins," of orinigal design and construction. This manufacturer is continually planning new things in Christmas boxes, Easter boxes, candy boxes, and other paper boxes of this variety, many of which have proven exceedingly popular. In some instances the orders for special holiday boxes run as high as from 50,000 to 100,000. On several occasions the orders for certain

"big numbers" were so heavy that the manufacturer found it impossible to handle all of them.

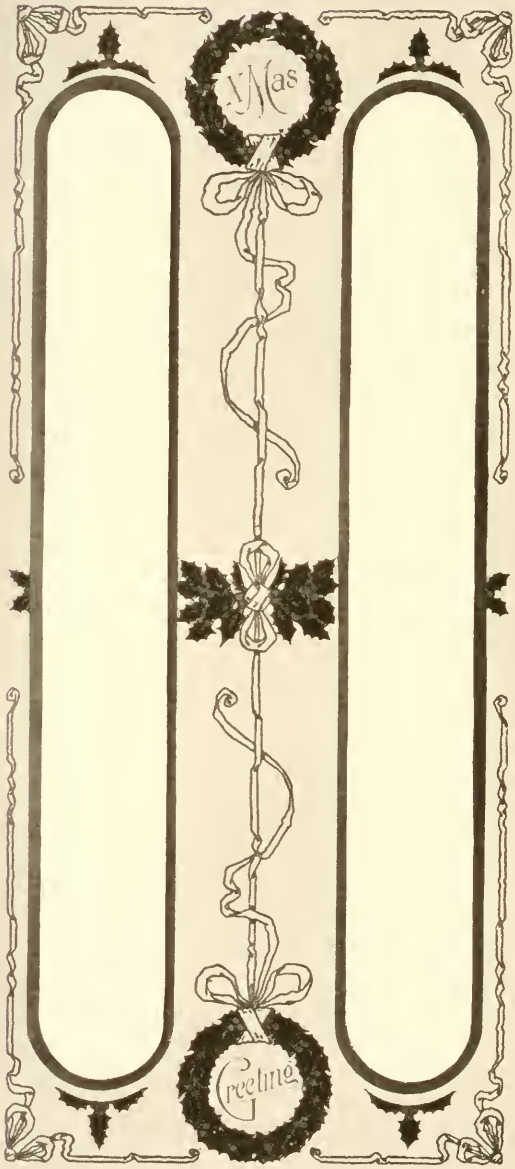
Among the many different specialties produced by this manufacturer are fancy necktie boxes, shirt-waist boxes, and combination gift boxes, the latter designed to hold a pair of suspenders and a pair of men's garters. These gift boxes have made a big hit with many haberdashers and dry goods dealers for the reason that the boxes and their contents can be attractively displayed in the show windows and sales-rooms.

A "set-in" for one of these novelty boxes is made in the same shape as a lid for a plain set-up box, with four corners cut out of the blank. But, in addition to the four corners, "windows" of various forms are also cut out of the blank to conform with the shapes of articles that are to be placed in the box. For example, the set-in for the combination gift box, which is to hold a pair of suspenders and a pair of men's garters, has four windows—two long and narrow, and two shaped like the shield-shaped pads on men's garters. The pair of suspenders is put in the box and folded like a large-size "X," and between the "X," are placed the garters, one at the top and the other at the bottom. When the completed "set-in" is placed inside the box, and overtop of the suspenders and garters, portions of these articles are shown through the windows of the set-in.

As mentioned, the set-in is usually made on the same plan as a lid for a set-up box, the four sides bending over about ⅝ of an inch. The corners are not stayed. The set-ins are made of various kinds of folding cardboard, "Litho," coated-one-side, being excellent for color printing and embossing.

The printed matter usually consists of floral designs reproduced in colors, and borders done either in colors or gold. Often the floral designs are handsomely embossed, and in some cases the borders also are embossed. The main purpose of the printed matter appearing on the set-ins is to reflect the holiday spirit, and this may be admirably accomplished by the employment of the right designs and colors. The beautiful *poinsettia* flower, faithfully reproduced in its natural red, and its deep green leaves as background, makes a splendid subject for the Christmas season. A small bunch of orchids, reproduced in their delicate tints, offers an ideal suggestion as a set-in decoration for the Easter season.

As a general rule, no advertising matter of any kind appears on the set-ins for gift boxes used for shirtwaists, suspenders, neckties and combinations. The manufacturer of the complete gift boxes sells them to large wholesalers in haberdashery, dry goods, etc., who



A "Set-in" for a holiday gift box to hold a pair of suspenders. Printed in red, green and gold and then embossed. Cut out and scored.

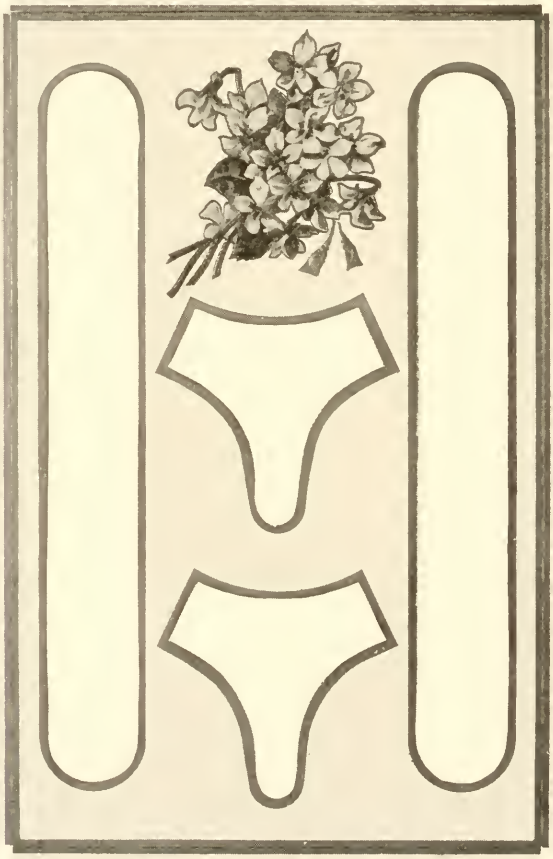
pack the boxes with popular things like suspenders, garters and neckties, and who then sell the boxes and their contents, in gross lots, to the retailers. Some of the larger retailers buy the holiday boxes and set-ins direct from the paper box makers and then pack the boxes themselves with desirable specialties. One of the big department stores recently featured gift boxes, equipped with attractive set-ins, and packed with a "combination" consisting of a man's scarf,

Attractive "Set-in" for holiday gift box to hold a pair of men's garters and pair of suspenders. Printed in three colors, gold and embossed. Cut out and scored.

pair of pad garters and a pair of suspenders. Thousands of these "specials" were purchased by both men and women for gift purposes.

HOW THE CUTOUT WORK IS DONE

All cutout work for set-ins, folding boxes, advertising novelties, fancy holiday boxes, fans, valentines, etc., is done after the sheets have been printed or lithographed. The cutting is done with dies made of steel cutting rule, and cutting of this kind can be done either



Another attractive "Set-in" for holiday gift box to hold a pair of men's garters and pair of suspenders. Printed in three colors, gold and embossed. Cut out and scored.

on a platen printing press, or on a standard cutting and creasing platen press. It is also possible to do all kinds of cutout work on cylinder presses, but for the different kinds of product referred to in this chapter a standard cutting and creasing platen press is recommended.

In the case of a cutting die for a set-in, both cutting rules and scoring rules are essential. The cutting rules, of course, cut all the way through the stock, but the scoring rules merely score the stock for bending purposes. Four sides of a set-in are scored, leaving a folding margin of about 5/8 of an inch. At each of the four corners formed by the four scoring rules are two pieces of steel *cutting* rule, placed at right-angles, for cutting out the four corners.

A steel die for cutting out a set-in therefore accomplishes three different things on a single operation: First, the cutting out of the "windows," or openings; second, the scoring of the four lines for folding; third, the cutting out of the four corners.

As many as four complete set-ins can be cut out and scored simultaneously on a large-size cutting and creasing platen press.

In the construction of all odd-shaped steel cutting dies such as circles, semi-circles, half-moon, heart, shamrock, flowers, etc., only laminated board, 5-ply, and 11/16 of an inch thick, should be used for holding the rules. A cardboard model of the subject to be cut and scored is made, and this model is then laid over the face of the piece of laminated board, held temporarily at the four corners by pins stuck into the board. All places where cutting rules and scoring rules are to be inserted are then plainly marked with a pencil on the board, following the shape of the model. The model is removed, and then all lines which have been marked with the pencil on the board are carefully cut out with a jig saw.

Standard steel cutting rule is .923-inch in height, and standard steel scoring rule is .918-inch in height.

For all sections of a steel cutting die which involve curves and odd-bendings, *soft* steel cutting rule is used. Hard steel cutting rule is used for all straight line forms such as a square, oblong, diamond, etc. After the pieces of soft cutting rule have been bent to the required shapes, they are hardened by means of heating to a cherry red in a furnace or gas-flame, and by then immersing the heated pieces in fish oil.

After the steel rules have been firmly fixed in the proper positions in the laminated board, the die is complete and ready to be locked in a chase.

The make-ready for forms of this class is comparatively simple, and yet it is essential to have an absolutely even impression. Excessive impression, and uneven impression, are responsible for first-class

cutting and creasing dies flattening out within a short space of time.

In the make-ready of a steel cutting and scoring form, the smooth surface of the steel platen plate acts as a counter-die, except in places where the scoring rules are to strike. The counter-die for the scoring rules is made simply of strips of heavy box-board, each strip

A Cutout for Easter in the form of a rabbit.

about one-inch wide, and long enough to provide for the full length of the scoring rule it is to work with. A strip of box-board is glued to the platen plate on either side of each scoring rule, in this manner forming the counter-die. In the case of light-weight Litho stock the strips are not even necessary, as the scoring rule being lower in height (.918-inch) than the cutting rule (which is .923-inch), the scoring lines are made lightly without extending so deeply into the stock as to break it.

Strips of cork, or pieces of corks about ¼ of an inch in height are glued to the blank portions of the die, on either side of all cutting rules. This is done for the purpose of removing cut sheets of stock from the form.

CUTOUTS FOR CHRISTMAS, EASTER, VALENTINE DAY AND OTHER HOLIDAYS

During the last few years fancy cutouts for Christmas, Easter, Valentine Day and other holiday occasions have become more popular than ever before, and at the present time numerous printing and lithographing plants are busy on large orders for these novelties. Many box manufacturing plants are also active in this class of work.

Among the most popular numbers of the cutouts are figures of girls and boys, dolls, comical men and women, birds, animals and so

A pretty Cutout in the form of a "Walking Doll." The figure is equipped with a wheel having five "legs," and when a wheel is turned it appears as though the doll walks.

forth, all printed or lithographed in bright, warm colors. Each figure is cut out to shape, and is equipped with a folding brace of cardboard at the back so that it can be made to stand. Some of the funny pictures of girls have imitation gems inserted as ear decorations, hat pins or other marks of ornamentation, and the effort is very pleasing.

Unique paper novelties of this variety are always in strong demand in stationery stores, toy shops, department stores, drug stores and in many other shops. Some of the larger novelty paper box concerns have traveling salesmen on the road taking advance orders

for the cutouts from wholesalers as well as from retailers. It is a line that sells in towns of all sizes in all parts of the country. Moreover, it is a line that can be exported advantageously to numerous foreign countries.

Stock of inexpensive but durable grades is used for the cutouts, the printing or lithographing being done on the full-size sheets. Process color printing is well adapted to picture work of all kinds for folding boxes, novelty boxes, and cutouts, but in most instances the new offset process of lithography is now being used. Some of

A plain Cutout for Easter in the form of a chick.

the paper box manufacturers have the color printing or lithographing done by trade concerns, but attend to the cutout part of the work in their own plants.

It is an interesting fact that even a small cutting and creasing plant, devoted to the production of folding boxes and cartons, is also adapted to the production of all varieties of cutouts such as cardboard fans, wall-pockets, advertising novelties, etc. We mean by this statement that any manufacturer of folding boxes may immediately enter the business of making cutouts without finding it necessary to install additional mechanical equipment. We take it for granted that the average manufacturer of folding boxes is also operating a printing

department, and even a small printing department can be made to produce colored picture work of the kind required for cardboard novelties.

In the case where the paper box manufacturer would like to enter the field of fancy cutouts, but would not care to produce the colored picture work in his own plant, arrangements can be made with a printer or lithographer to do all the picture work. It would be well, however, for the box maker to originate his own designs and subjects, and to have them copyrighted. The demand is for new ideas in paper novelties—new shapes, unique figures, and beautiful color effects. It is not such a costly proposition as it may seem for a box manufacturer to have a good commercial artist prepare a few dozen original subjects for cutouts. The more attractive the novelties as to forms and colorings, the greater the amount of sales. In these days it is easier to sell high grade cutouts than it is to sell those of the common grade.

ODD-SHAPED CANDY BOXES FOR HOLIDAY OCCASIONS

The writer enjoyed the privilege of visiting a large paper box factory where many different kinds of odd-shaped paper boxes were being made. These included small heart-shaped boxes for St. Valentine's Day; small shamrock-shaped boxes for St. Patrick's Day; chimney-shaped boxes with Santa Claus at the top for Christmas; hatchet-shaped boxes for Washington's birthday, and "Uncle Sam hats" for Memorial Day and Independence Day. There were also "Irishmen's hats," covered with black paper and trimmed with green ribbon; boxes shaped like a book, and folding boxes in the form of small Colonial churches of red brick.

The "Uncle Sam hat" was particularly attractive, shaped like an old-fashioned silk hat, and covered with colored paper in such a manner as to have white stars with a field of blue at the top, and red-and-white stripes on the sides of the crown and on the brim. The wide brim consisted of a cardboard cutout. A small round paper box was glued to the brim, and the crown of the hat slipped over this box, forming the lid. These boxes which are exceedingly popular, are used for holding candy of the "button" variety, and are bought by candy manufacturers and retailers in large quantities.

The "Irishmen's hats" are made on the same plan as the "Uncle Sam hat," and are used as candy boxes for holding green sweets of various kinds.

Only a few of the most popular odd-shaped paper boxes have been mentioned to indicate the wonderful field for this line of product.

Any paper box maker, by studying over the familiar types of boxes now on the market, can obtain ideas for new types of boxes. A cutting and creasing press, and the proper material for building steel dies, enables the box manufacturer to produce *anything in the way of a fancy cutout*, and by using out-of-the-ordinary cutouts in the construction of odd-shaped boxes, many unique effects may be obtained.

The hatchet-shaped boxes for Washington's birthday is a cutout proposition with the exception of the tube, and the assembling and

A pleasing Cutout in the form of a Christmas card. Figure has imitation jewel set in one ear.

covering must be done by hand operators who have had long experience in such work.

Fancy paper baskets, bon-bon holders, cones, etc., used as favors at banquets and parties, are comparatively easy to make, and with the aid of odd-shaped cutouts, such novelties can be made exceptionally attractive. For example, at one banquet the ice cream was served in fancy round paper boxes, the side of the box consisting of a printed series of dancing figures, the upper portions of the

figures cut out to form. The figures were printed in bright colors, and the completed box, equipped with a ball of ice cream, presented a pleasing offering.

To obtain beautiful effects in cutouts, printing or lithographing is not always essential for color. With the great variety of fancy colored glazed papers that the box makers now have at their command, it is possible to make an endless number of designs and color effects. For example, one large-size candy box is covered with embossed paper of robin's-egg blue tint. The shape of the box is oval, extension top and bottom and domed top. The sides of the box contain about a dozen silhouettes, which were cut from dark-blue glazed paper and then pasted on. The box is tied with heavy satin ribbon of the same shade as the silhouettes. Is it any wonder that high-class candy dealers have little trouble in selling expensive sweets in boxes like this?

ADVERTISING SIGNS AND CUTOUTS

The field for advertising signs and novelties is so vast that we can merely give an outline of the work in this chapter. It is a field that has been developed liberally during the last few years, but there is still room for thousands of new "prospectors," and there is no reason at all why many of the paper box manufacturers cannot enter it with profitable returns.

Many of the larger wholesalers of food products are supplying the retailers who handle their goods with handsome cutouts for window and store displays. These cutouts, along with samples of the goods advertised, are usually planned to link the window trim with a national advertising campaign, with the result that the retailer using the display benefits in the way of gaining new business; that is, new business created by the national advertising campaign.

In numerous instances a large printing concern not only *plans* the national advertising campaign for a manufacturer or wholesaler, but also produces for the campaign beautiful paper boxes, colored posters, booklets, catalogs, and attractive cutouts for window displays. This explains why some of the larger printing concerns are operating paper box making departments, or at least, cutting and creasing departments. It also explains why many progressive paper box manufacturers are operating first-class printing departments in connection with their plants.

One of the large candy concerns is using a beautiful illustrated cutout for advertising specialties. This cutout is lithographed in colors and it pictures a number of pretty candy boxes in addition to

a fine landscape. These cutouts are placed in the display windows of drug stores, stationery stores and other shops where the better grades of boxed candy are sold.

ADVERTISING NOVELTIES

Among the many different kinds of advertising novelties coming under the head of cutouts are odd-shaped fans of cardboard, fancy wall calendars, wall pockets, paper drinking cups, and paper caps for workingmen. All of these things are designed to contain advertising matter, and are distributed gratis by the purchasers of the advertising matter.

The advertising fans usually contain colored pictures on one side and advertising matter on the other side. Fans of this type are fitted with wood handles, wire stitched or tacked on. The wood handles are supplied by any of the larger paper houses. In addition to the popular pear-shaped, many cardboard fans are also cut out in the forms of ovals, circles, square with round corners, and octagonal. All of these shapes require wooden handles. Why not a wing-shaped fan of heavy cardboard, printed and cut out to resemble a small-size feather fan? A fan of this shape would require no wooden handle and would appeal particularly to the fair sex.

Cardboard fans of the kind referred to are cut out as many as ten at a time on a large-size cutting and creasing press. The dies are made of steel cutting rule, bent to the necessary forms.

A wall pocket is hung upon a wall in a pantry or kitchen, and is useful for holding brushes, papers, matches, etc. Some cardboard wall pockets are cut out of a single piece of stock and then folded to the proper shape, while others are made of two or more pieces of cardboard. Not a few wall pockets have "filigree," or fancy open work, involving intricate steel die building, but it is possible to make an attractive wall pocket, without any open work, by having all edges of the stock used in its construction nicely scalloped.

Many of the best pictorial wall calendars are lithographed or printed in colors; are then embossed and finally are cut out into fancy shapes on a cutting and creasing press. Calendars of this variety are sold in lots of from 100 to 1,000 or more to retail storekeepers in almost every line of business. The storekeepers have their advertisements neatly printed on the face of the calendars which are presented to customers as well as to prospective patrons.

Paper caps for workingmen, made in both oval and square shapes, and containing advertising matter, are given out by the advertisers at labor meetings, picnics, conventions, excursions, etc. In much

the same way are the drinking cups distributed. The paper drinking cups are cut, pasted and folded in such a manner that a dozen or more may be placed in a man's coat pocket.

DISPLAY CARDS FOR BUTTONS, PINS, ETC.

Display cards for holding chains, soft-collar pins, buttons, and so forth, are made of a thick grade of paper board, covered with white or tinted glazed paper. Holes, or slits, are cut in the card for holding the articles which are to be displayed. Dies for cutting the holes or slits are made of 2-point steel cutting rule, and the cutting work may be done on any kind of a platen press. Advertising matter is printed on the face of the display cards which are set on top of show cases in retail stores.

OTHER KINDS OF CUTOUTS

Among the many other kinds of cardboard cutouts that any paper box maker can readily produce are set-ins for hat boxes, cut with a round or oval hole for holding the crown of a hat; set-ins for perfumery and jewelry boxes; and "sanitary" boxes, equipped with a slot at one side, for holding adhesive tape.

CHAPTER IX

SUGGESTIONS FOR NEW DESIGNS IN TOPS, LABELS AND WRAPPERS

BRILLIANT is the future for those paper box manufacturers who are capable of offering the buying public new ideas in the form of attractive packages. The public is ever on the watch for new things that are pleasing to the eye and a beautiful paper box immediately wins favor. Progressive paper box manufacturers have long recognized this truth, of course, and are profiting by originating new designs in box-tops, labels and wrappers as well as the boxes themselves.

It always pays for a manufacturer to plan new things in his line.

The paper box manufacturer who merely works on regular orders and who never offers his customers, or prospectives, new suggestions for boxes, box-tops, labels or wrappers, is "cheating" himself out of a lot of good business. The box manufacturer should not be satisfied with the ordinary orders that come to his office during the regular course of business. These are the same orders which might easily go to a competitor. He should make it a practice to think out new designs in paper boxes, wrappers, etc., for the benefit of the merchandising field in general.

When you originate something new and attractive in the form of a paper box, box-top, label or wrapper, you can usually sell quantity orders at your own figures. This is not always the case when the customer gives you a common-place order.

An interesting book of many hundred pages could be written on the *selling power of beautiful packages*, but here we must content ourselves with a few pages on this subject. Think of the millions of dollars worth of merchandise that is sold yearly in this country with the aid of attractive paper boxes! Paper boxes have played an exceedingly important part in the development of many of the great American industries; they have contributed to the business success of many of the best known manufacturing concerns; and, there is not a retail store in the entire community that has not gained new business with the help of paper boxes.

The average paper box manufacturer is certainly a modest person. He does not seem to realize the splendid work that he is doing in the way of developing business for the commercial world in general. Whenever he designs a new paper box, label or wrapper, he has probably produced something that eventually will help increase business for an endless number of wholesalers and retailers.

So much for the romantic side of this subject. Now we shall take up the practical side with the intention of suggesting money-making ideas for any box manufacturer who will give these suggestions the essential study. Fortunately, the writer is in a position not only to offer some helpful suggestions but also to tell how the practical work may be produced. This statement is not meant in an egotistical sense. The fact is that the writer has had opportunities of seeing many new things produced in certain plants, and this information is now being passed on to the reader of this book.

Kindly note, however, that the information about new designs, etc., offered in the following paragraphs, is changed in such a manner as not to infringe upon the originators' rights. The reader is respectfully requested to make use of his own imagination and is advised to change things around somewhat so that the various suggestions may be adopted to the reader's best advantage. For instance, why not a "blue flower" design for a wrapper instead of a "blue bird" design?

A BOX WRAPPER WITH A BLUE BIRD DESIGN

The blue bird is regarded as the symbol of happiness. Dr. Henry Van Dyke, poet and author, has adopted "The Blue Flower," in his book of that name, to "signify happiness, the satisfaction of heart." We see, then, that gracefully-formed candy boxes, wrapped with paper containing pictures of either blue birds or blue flowers, have more than ordinary significance, and we can understand why a thoughtful lover would prefer buying candy for his lady in boxes of that variety.

One paper box manufacturer planned a blue bird design for a box wrapper that subsequently scored a "hit" among candy makers. Several manufacturers of fine handkerchiefs and neckwear also adopted the same style of wrapper for their line of paper boxes. The design was made up of a large number of small-size figures of blue birds, printed on white glazed paper. The breasts of the birds were printed in a yellowish-buff tint, the balance of the figures being printed in a warm tone of blue. This color scheme was pleasing to the eye of the average person, and the completed wrapper, in general appearance, was far removed from the ordinary run of box-wraps.

PRINTING PATTERNS FOR BOX WRAPPERS ON A CYLINDER PRESS

It is the custom in many box manufacturers' printing plants to print all kinds of box wrappers on platen presses, and this custom is all right in cases where the runs do not exceed from 10,000 to 20,000. With longer runs, say from 25,000 to 100,000, it is more economical to print the wrappers, four up on a sheet, on a cylinder press than to print them single on a platen press. Special designs like the blue bird pattern referred to can be produced on a cylinder press, four or more on a sheet, to excellent advantage.

After the original design for a box wrapper has been drawn and passed upon, the drawing is sent to a photo-engraver who makes a plate of the desired size from the drawing. By moving the position of his big camera backward or forward the photo-engraver can produce a printing plate with detail larger or smaller than the detail of the original drawing. When a design is to be printed in two or more colors, it is necessary for the photo-engraver to make a separate printing plate for each color. The one drawing will serve the photo-engraver in etching two or more separate plates for colors. After a photo-engraving of a design had been completed, the photo-engraving is sent to an electrotyper who is instructed to make as many electrotypes of the engraving as may be required. For a long run of wrappers on a cylinder press—a run which will probably have repeat orders in the future—from four to eight electrotypes are usually made. In one printing office the writer saw running at high speed a large cylinder press with a form containing eight (8) electrotypes of an "all-over" pattern for box wrappers. The "all-over" pattern suggested an imitation grained leather effect, printed in dark green ink on glazed paper of primrose tint. When paper boxes were neatly covered with this printed paper the effect was handsome indeed.

THE IMITATION MARBLE EFFECT

Here is an idea for an out-of-the-ordinary box wrapper which was thought out by a well-known paper box manufacturer and which proved to be a "big number":

First, the box manufacturer had made an original drawing suggesting a photographic reproduction of beautifully formed marble, or stone. The drawing was done on white cardboard, and from this sketch a spacious half-tone plate was etched by a photo-engraver. The half-tone plate was large enough to completely cover a sheet of glazed paper which in turn was large enough to cover a good-size set-up paper box. A smaller size half-tone plate was made from the same drawing to serve for the wrapper for the lid of the box.

Second, four electrotypes were made of the larger-size half-tone for the box wrappers, and four electrotypes were made from the smaller-size half-tone for the lid wrappers.

Third, all of the eight electrotypes were locked up together in a chase to be run on a cylinder press, about 1/16 of an inch space being allowed between the edges of the plates to provide for trimming after the sheets had been printed.

Fourth, the sheets were then printed in various tints, white glazed stock being used. One lot of sheets was printed in shell-pink tint, another lot was done in turquoise blue tint; still another lot of stock was printed in pale pea green. The different effects were strikingly beautiful, and the delicate coloring made it appear as though the paper had originally been made with the marble pattern instead of the background having been printed on the paper. On account of the design being printed in such light shades of ink the fine screen of the half-tone plates was practically invisible, yet the detail of the pattern could readily be seen.

After a supply of these wrappers had been printed and cut apart to required sizes, the manufacturer had samples of the wrappers mailed to a carefully selected list of customers and prospectives, along with a form letter calling attention to the new line. The letter also explained that the manufacturer would gladly furnish sample boxes covered with the unique wrapping paper, on request. This manufacturer employs a number of traveling salesmen and samples of the "marble" wrappers, along with samples of other new-style wrappers, were placed in the hands of these salesmen.

It was not long before the manufacturer had received a dozen or more substantial orders for paper boxes covered with the specially-designed wrappers mentioned, and in several instances the orders came from new customers—former "prospectives" that the manufacturer had been trying to win for some years past. These new patrons had been gained simply because the box-maker had demonstrated to them a business-building idea which they could use to advantage, and there was no higgling over the question of price.

A CHECKER-BOARD DESIGN

Another enterprising paper box manufacturer planned a series of new-designed box wrappers which eventually led to substantial orders for paper boxes. One of the most popular designs of the series was a miniature checker-board pattern. This pattern, consisting of solid blocks about 1/8 of an inch square, was printed in two colors on plain white label paper. Several different color schemes were used like

pale pink and tint green, pale blue and buff, yellow and black, etc. The effect was delightful, suggesting a "Mardi-Gras" atmosphere.

These checker-board wrappers were applied to odd-shaped boxes of various kinds. An oval-shaped box, used for holding two pounds of an expensive brand of candy, presented a particularly handsome appearance. Another novelty was a round box with extension top and bottom, covered with the checkered paper in pale pink and tint green.

THE STRIPE EFFECT IN WRAPPERS

Doubtless the reader has often seen large-size hat boxes covered with striped paper of various colors, the stripes usually as wide as half-an-inch and printed in black, dark blue or brown. This is the design which probably led one box manufacturer to apply practically the same pattern to a series of wrappers for smaller-size boxes, and the idea turned out quite successful.

These striped wrappers were printed in large sheets on a cylinder press from electrotypes containing solid lines about $\frac{1}{8}$ of an inch wide, and these lines spaced apart $\frac{1}{8}$ of an inch. The printing was done on plain white label paper in different colors like pearl gray, burnt-orange, bronze blue, olive green, dark brown and emerald green. With the striped paper applied to the boxes with the stripes running vertical, the effect was highly satisfactory.

One day the foreman of the press-room where a large order of these striped wrappers were being produced, stopped to inspect one of the printed sheets, and while glancing at the rows of long lines on the sheet he suddenly thought of a unique idea for a two-color effect. The thought was to use the same form which was on the press for printing a *second* color after the first color had been applied. This idea was carried out with gratifying results. One form was printed in bronze blue on plain white paper. The press and rollers were then washed up for a second color—a delicate tint blue made by mixing a very small quantity of the bronze blue with a quantity of mixing white ink. The feeding guide on the press was then moved so that the second color would print and register between the white spaces formed by the rules, or lines, on the first printing. Other pleasing color schemes were dark brown and light brown tint, dark green and light green tint, etc.

The main advantage of this simple-two-color plan is that a comparatively inexpensive grade of white label paper may be used, and of course, any kind of color or tint can be printed on white paper without difficulty.

Practically the same color effects—dark blue and pale blue stripes, dark brown and tint brown stripes, etc.—may be obtained with *one*

printing by using stock of the desired tint, although it is not always an easy matter to buy an inexpensive grade of label paper made in assorted tints. Print stripes in bronze blue on light blue paper (for example), and the effect will be almost as good as though the light blue "stripes," formed by the light blue paper, had been printed on.

OUT-OF-THE-ORDINARY BOX TOPS

Some paper box manufacturers are making a specialty of color printing as applied to wrappers for lids of set-up paper boxes, and in many instances the box-tops, as they are often termed, are the means of making the paper boxes exceedingly attractive. The box tops usually consist of white or colored glazed paper, cut to a size that will adequately cover the top and sides of the box lid, and printed in one or more colors. Frequently the printed subject is a beautiful picture, done in three or four colors, and then embossed. Often the picture is framed in a gold-leafed, or bronzed border which is also embossed.

The writer is personally acquainted with several paper box manufacturers who are continually producing fancy box-tops of this variety, and facts are offered herewith technically explaining how some of the color effects are produced.

One of the most successful designs was the picture of a bunch of lilacs, faithfully reproduced in the pale, pinkish-purple color of this flower on white glazed paper. It required four (4) separate halftone plates and four successive printings—yellow, red, blue and black—to complete the colored picture, but the results were worth the time and trouble. Absolute close-register feeding was essential, and process color printing inks of fine quality were also necessary. After the pictures had been printed and allowed to dry, the subject was embossed so as to form a bunch of lilacs in *bas relief*.

The quality and beauty of this box-top were so excellent that upon seeing a few samples a certain manufacturer of toilet articles immediately placed an order for many thousands of set-up boxes to have lids covered with wrappers like the samples.

Many other large orders for paper boxes have been "created" with the help of handsome box-tops like the lilac design referred to. Among some of the popular numbers were the following:

Picture of three American Beauty roses, printed in true colors with process color plates (yellow, red, blue and dark grey). This design was embossed.

Picture of bunch of violets, done in process colors and embossed.

Picture of two orchids, beautifully reproduced in natural colors and embossed.

Picture of three *poinsettia* ("Christmas flower"), gracefully grouped and sharply embossed. This number proved immensely popular during the Christmas season as wrappers for handkerchief boxes, neckwear boxes, candy boxes, etc., and judging from this record, this design will maintain its popularity for years to come.

A well-known manufacturer of candy desired an unusual design for a paper box wrapper—a design that would advertise the name of his product to good advantage—and with this purpose in mind he went to a certain paper box man and asked for his advice. After a short conference the box-maker suggested a design for the wrapper which subsequently was adopted, and which is now familiar to buyers of candy in many parts of the United States.

This design, originally outlined with a lead pencil by the paper box man referred to, consists of an "all-over" pattern formed by hundreds of reproductions of the candy manufacturer's name, written in a heavy toned script. This pattern is first printed in gold size; rich-gold bronze powder is dusted over the size, and after the printing is dry, all of the detail is sharply embossed. Glazed paper of primrose color is used, and the gold embossed pattern on this background makes a rich appearance.

TYPE-AND-BORDER FORMS FOR BOX-TOPS

It is surprising what an artistic typographer can produce in the way of type-and-border designs for box-tops. Handsome effects are produced from display type series like Bodoni Bold, Cheltenham Bold, Caslon Bold, Goudy Bold, and other popular type faces of this variety. The typographic design is usually framed in a decorative type border, of design and tone to harmonize with the style of type used.

Combination borders are made by combining several different kinds of borders into one, and the tasteful compositor can easily produce work of this class in a comparatively short space of time. In some cases a large-size combination border is printed in two different colors, like dark green and bright red, for example, thus adding interest to the reading matter displayed on the wrapper.

Dealers in glazed papers offer a wide assortment of tints and colors, such as primrose, corn, goldenrod, pink, turquoise, buff, pea-green, gray, light brown and pale blue. With this delightful assortment of colors the printer of box tops can readily combine type designs and colors of printing ink that will be adaptable to every purpose of a box-top. For example, print a neatly composed type-and-border form in bronze blue ink on pale blue glazed paper; bronze green on primrose; dark bronze red on corn color stock, and so on.

Many other good color schemes of this kind will doubtless suggest themselves to the reader.

When printing forms containing lines of extra-heavy type like 48-point Cheltenham Bold, 60-point Bodoni Bold, etc., on highly glazed paper, the printing ink will have a tendency to "lift," or "pick" the glazed surface of the paper, and to overcome this difficulty it is often essential to reduce the body of the ink with paste dryer, or with a small quantity of 00 boiled linseed oil. When the reducing substance is added to the ink, however, it will cause the printing to appear "motley," or broken into various spots of color, and to eliminate this effect, a small quantity of powder should be thoroughly mixed into the ink: Mix fine carbon black with black inks of all kinds; mix fine ultramarine blue powder with all shades of blue or green inks; mix vermilion red powder with any shade of red ink.

With the addition of the reducing compound and the powder the printing ink dries with a beautiful dull finish on the glazed paper, suggesting the best lithography.

LABELS FOR THE INSIDE OF BOX LIDS

Countless numbers of larger-size paper boxes, used for holding medical accessories, rubber goods, gloves, towels, and patented articles of many kinds, have attractively-printed labels on the inside of their lids, so that when a box of this class is set upon a counter in a store the lid may be left open, showing the printed matter on the inside of the lid. It is understood, of course, that boxes of this kind have *hinged* lids, and are used for display purposes in retail stores, show-windows, etc.

The writer saw in a large department store a table display of face and bath towels which was attracting a great deal of attention, and a couple of sales-girls who were in charge of the display were kept busy taking orders. The towels, two of the face size, and one of the bath size, were packed in a sealed container, and the container in turn was placed in a nice paper box. The lid of the box was hinged, and pasted to the inside of the box-lid was a handsomely printed label, done in bright red ink on white glazed paper. The table display referred to consisted of a large number of these paper boxes with lids opened wide to show the contents. It presented a tempting exhibit, and without question the neat paper boxes and the attractive labels on the inside of the lids had much to do with the success of the sale.

Any paper box manufacturer is capable of thinking out new styles of paper box wrappers, box-tops and labels, for new lines of merchandise as they are ready to be placed on the market, and the box manufacturer will experience little difficulty in *selling his ideas* to

progressive manufacturers who need attractive paper boxes, wrappers, box-tops and labels for boosting the sale of their wares.

A manufacturer of perfumery, soap, and fine toilet requisites held a conference with a prominent paper box maker in reference to a new line of holiday goods that the perfumery man was planning to put on the market. It was up to the paper box maker to suggest *ideas*, and he did so to the mutual benefit of both parties. The end of the interview found the box man with orders in hand for the following:

Large size paper boxes, round corners, extension top and bottom, and equipped with shoulder; hinged lid. Inside of box to be covered with satin material, outside to be covered with specially-designed paper suggesting brocade. These boxes were to be used for holding an assortment of toilet articles.

Small, round paper boxes, dome top, shoulder, extension top and bottom. Covered with paper to match the color of the wrapper on the outside of the large-size box. To be used for holding face powder.

Small, hexagon-shaped boxes, dome top, shoulder, covered with paper to match the paper on the outside of the larger-sized box. The hexagon-shaped box was to be used for holding a cake of fine, perfumed soap.

Smaller-size round boxes, extension top and bottom, and with shoulder, covered on the same style as the other boxes in this set. This box to hold a cake of rouge.

The box manufacturer also received orders for printing colored labels for the tops of the smaller-size boxes, and colored labels for the fronts of perfumery and toilet-water bottles.

When the combination set of toilet articles was packed and ready for sale it certainly made a splendid showing. In the large-size box was neatly packed the following:

Bottle of fine perfume, bottle of toilet-water, small round box filled with face powder, hexagon-shaped box containing cake of perfumed soap, small round box containing cake of rouge. The lid of the large-size box was tied down with heavy purple satin ribbon. This rough "word picture" can convey merely a faint outline of this beautiful holiday offering, but the sketch should be plain enough to suggest good selling ideas to the reader.

Mr. Paper Box Manufacturer, the field is wide open for you and your *ideas* for new designs of paper boxes, wrappers, labels, etc. Manufacturers in many different lines of merchandise are hungry for live selling suggestions in the way of attractive packages. Are you doing your part in this important sales-promotion work?

CHAPTER X

KEEPING THE BOX MANUFACTURER'S PRINT SHOP BUSY

PRIMARILY, the paper box manufacturer's printing plant is to be used for the production of printed matter like box wrappers and labels which goes into the work of making paper boxes. In normal times the average box manufacturer's print shop is usually busy on orders of wrappers, embossing, labels, bronzing, gold-leafing, and printed forms for folding boxes and cartons, and when the plant is running to capacity on work of this variety, there is no occasion for doing work classed as "job" and commercial printing.

In the second place, however, during a period when a box manufacturer's print shop may not have enough "regular" work to keep all the presses running, there is opportunity to consider at least the plan of keeping the department active on other kinds of work. For instance, there seems to be no reason for *not* running the box-maker's printery on orders for job work when orders for box wrappers and other work of that class are exceedingly low.

Every paper box manufacturer who is operating a printing department in connection with his box factory is doubtless operating the printing department for the purpose of making money. The well-equipped and carefully-managed printing department is bound to earn profits for the box maker, provided that there is sufficient work to keep it busy, but sometimes it is not an easy matter to keep the plant busy, and in such a case the box manufacturer should be willing to study the problem with the intention of solving it in the best way possible.

This is an important chapter for the reason that it is designed to tell the paper box manufacturer how he may keep his printing plant *profitably employed* during all seasons of the year. Only plain facts will be mentioned in the following paragraphs—information which should prove of helpful suggestion to any manufacturer of paper boxes who is operating a printing department—and these facts have

been gained by the writer through personal visits to paper box factories having first-class printing plants.

It is not the writer's purpose to advocate the plan of the box manufacturer using his printing department in competition with exclusive printing concerns, although in some instances this has been successfully done by paper box manufacturers. Let us be clearly understood on this point: The box maker should stick close to his own field and the printer should keep to his field. Nevertheless, there is a naturally close relationship between the paper box making and printing industries, and to a large extent each one of these two great industries benefits from the other. Numerous printing plants are constantly handling big orders for printed wrappers, box tops, labels, and other work of this group for paper box manufacturers who have no printing plants of their own. On the other hand, some box makers are producing set-up paper boxes, shipping containers, folding boxes and cartons for printing concerns.

The writer knows of several printing firms who are operating small-size printing plants almost exclusively on work for paper box manufacturers; of several printing concerns who are operating folding box making departments in connection with their printing plants; and, of several box manufacturers who are operating printing plants in competition with "regular" printers. So after all has been said and done, it is merely a matter of opinion as to whether paper box manufacturers and printers should compete with one another or not. But, there are small possibilities of competition between these two interests for the simple reason that box makers and printers usually have enough of their own particular work to keep them hustling, and there is little time to spare for investigating other industrial fields.

The paper box manufacturer who possesses a well-equipped printing plant is in a position to produce all kinds of printed matter in addition to box wraps, box tops, labels and printing on folding boxes and cartons. With the same type and mechanical equipment, used for box wrappers, etc., it is possible to print all kinds of job and commercial work, office stationery, factory forms, and advertising literature.

KINDS OF WORK PRODUCED IN ONE BOX MANUFACTURER'S PRINT SHOP

Located in the city of Philadelphia is a certain paper box manufacturing firm that possesses a first-class printing plant, and it is interesting to see the many different kinds of printed matter which are continually being produced in this shop. The major portion of

this work is for the company's own requirements, but the other portions are for patrons of the firm who are buying the printed matter in addition to purchasing paper boxes.

To give the reader an idea of the versatility of this printing office, among the many unique jobs which were recently produced was a large order of clock dials, printed in aluminum ink, the numerals being left white so that they could be filled in, after the printing, with a patented "radium," or luminous preparation. These dials are used for a well-known line of illuminated clocks, the kind that have luminous figures on the dials which can be read in absolute darkness. With the entire surface of the dial printed in aluminum ink, with the exception of the numbers, the effect is beautiful.

Factory forms, time sheets, and loose leaf forms of many different kinds are printed in this shop, and in some cases the orders have been for as many as 50,000 copies of a particular form. These forms are of bond or ledger paper, ruled on pen-ruling machines before the printing is done. The type matter consists of small sizes of type, set and spaced in such a manner that the various headings and subheadings will strike accurately in the ruled "boxes," or columns on the sheets. It requires a good compositor to set intricate forms of this class, and the feeding of the sheets in the press-work must be done carefully. All things considered, however, it is a comparatively simple class of printed matter and could readily be handled in the average box manufacturer's printing office at a high rate of speed.

The use of factory forms and loose leaf forms of many different kinds is rapidly increasing in all lines of business. This means that the paper box manufacturers themselves are using more printed forms in their factories and business offices than in the past, and it is safe to say that these forms often are the means of saving time, labor and money. The modern system of keeping track of factory costs with the aid of printed loose leaf forms designed especially for different purposes, is an excellent system, and is one that should be adopted by every manufacturer.

Box manufacturers having their own printing departments can have all factory forms and office forms printed in their own plants, and if they care to do so, there is no reason why they cannot print forms of the same class for other business concerns. There is always an opportunity to design new factory and office forms for the purpose of simplifying the work of bookkeeping and accounting, and printed forms of this kind are constantly needed in every line of business.

To return to the subject of the printing plant referred to, among other things produced in this office are business cards, letter heads,

envelopes, statements, and bill heads. Some of this work is printed in plain black or dark blue ink, while some is done in two or more colors. One order was for 10,000 letter heads, 8½ x 11 inches, 24-pound bond paper; the printed matter consisted of a beautifully designed heading, done in three colors, bronze green, pale green and bright red. This design was printed in close register, making accurate feeding essential, and the completed work was up to a high point of perfection.

Corner cards for sizes 6, 6¼, 6½, 6¾, 9 and 10 envelopes are composed and printed in large numbers in this shop, and many "runs" of the smaller sizes of envelopes, like size 6½, for example, range all the way from 1,000 to 25,000. The box manufacturer has large numbers of these envelopes printed for use in his own business offices, while other orders are produced for his customers.

For the information of those who may not be familiar with the fact, all kinds of envelopes should be printed with their flaps opened flat so as to prevent the glue on the flaps from injuring type or plate during the printing. Some printers follow the practice of first having the flaps of the envelopes opened, and then having the person feeding the envelopes close the flaps as the printed envelopes are taken from the press. This is easy work for any experienced press feeder, and it is a plan that saves some time.

The box maker referred to also has all kinds of business stationery that is used in his own offices printed in his own plant. This line of work includes business cards for the traveling salesmen, letter heads, done in two colors; bill heads, statements and vouchers. All of this work is printed from type, composed in a neat style. The paper stock is of good quality; the printing ink is of high grade, and the press work is above the average. In this way, the box maker's business stationery compares favorably with lithographed, die-stamped or plate-printed stationery, and reflects the character of his house in the right light.

Every paper box manufacturer should make it a rule to use only first-class business stationery, whether it be type printed, lithographed, steel plate printed or die-stamped, for the reason that his letter heads, bill heads, envelopes, etc., often enter the best-appointed business establishments in the country, and when the stationery fails to present "a nice front," it is apt to lose orders for the box maker. The character of your house, the quality of your product, is often judged by the appearance of your business stationery, and under no circumstances can a manufacturer of high grade paper boxes afford to use cheap-looking letter heads, business cards, etc. If you have your own printing plant, select one of the most artistic compositors

for the composition of all work that is to be used in your own office. Insist on the paper stock, the printing ink and the press work all being of excellent quality. With the proper attention to fine details, it is possible to produce from type forms letter headings, bill heads, business cards, envelopes and so forth, so handsome in *appearance* as to win approval from your best patrons and prospective customers.

Among the many different lines of work now being turned out in this box maker's printery are labels in almost every size imaginable. Some of these labels are printed on gummed paper, others are printed on plain label stock. Some forms are printed in a single color, such as black, blue, green, red or brown; other forms are printed in two colors, like green and brown, red and black, orange and blue, etc. In some instances colored pictures are printed on either gummed paper or plain stock. In other cases the design for the label was first beautifully done in colors and gold, and afterwards the printed design was embossed.

These labels are used for various purposes, including tops for toilet boxes, the sides of paper boxes and inside the lids of set-up boxes. Many of the fancy labels are for perfumery bottles, face powder boxes, small size soap boxes and other articles of this variety. Some of the larger size labels are used as tops for paper boxes—the kind which are often made for holding fountain syringes, medical goods, instruments and fine writing paper.

The reader is to understand that the great majority of these labels are not like the ordinary run of box labels which are printed in the average box manufacturer's printing office, but are of the kind that may be seen upon bottles, jars, tins, and fancy boxes in first-class drug stores. Some of the fancy labels are cut out into odd shapes to fit odd-shaped paper boxes. These technical points are mentioned to demonstrate the great variety of labels that can be produced in any box manufacturer's print shop under efficient management. Gummed labels, and even the so-called "advertising stickers," can also be printed in the box maker's printery without great difficulty.

HOW THE PAPER BOX MANUFACTURER MAY PRODUCE HIS OWN ADVERTISING MATTER

This is a subject which deserves a long article in itself, but there is only sufficient space in this chapter to touch upon this subject in a general way. The first point is that our friend, the box maker, who is operating such a successful printing plant, is producing a lot of good advertising matter for his own publicity. This advertising matter has been well received and has resulted in substantial orders for *both paper boxes and printing.*

One of the most popular pieces of advertising matter which this box maker ever distributed was in the form of an eight-page booklet, entitled "Telephone List." On the cover page of this booklet was the box maker's advertisement, neatly composed and printed. The inside pages of the booklet were ruled with lines in such a manner that telephone numbers along with names and addresses of business firms could be written on the lines in alphabetical order. For example, there were about a dozen lines under the printed heading A; about a dozen lines under B, and so on all through the alphabet. The size of each page was 4½ x 11 inches. The booklet was punched and corded near the top so that it could be hung up in a place near the telephone.

This "Telephone List" booklet made a big hit immediately as it was distributed among the business men of the city, and it was not long before the box maker received requests for additional copies. He was quick to recognize the powerful selling force of this advertising, and he instructed the printers to make up additional lots of the booklets as the demand for them increased. It proved to be *remembrance advertising* of a most useful and lasting nature; it created good will among the recipients, and eventually led up to profitable new business for the box manufacturer, both in orders for printed matter and orders for paper boxes.

Wall calendars, blotters, motto cards, folders, and circular letters are among the other kinds of publicity matter which this box maker is sending out from time to time, and all of which are produced right in his own printery. The wall calendars are of the class that are most wanted by business men—those equipped with monthly leaflets printed in large size figures which may be easily read from a distance. These calendars contain no pictorial subjects, but merely the box maker's advertisement printed attractively in colors, yet they are serving a far more useful purpose than some of the fine illustrated calendars equipped with small figures that are hard to read.

Personally, the writer is in favor of large size wall calendars containing colorful pictures of modern factories, machine shops, workrooms, etc., for the reason that pictures of this class always convey a message in the business office where the calendar is to hang for an entire year. What could be more interesting in the way of pictorial subjects for advertising calendars than busy scenes from a paper box plant? A scene showing the new style automatic wrapping machines in operation would certainly mean something more than a picture of a pretty girl's head.

Now is the time for the box manufacturer, having a well-organized print shop, to prepare a handsome new wall calendar for the

new year. Have the work done during slack periods, and have the calendars ready by next December for distribution among customers and prospectives. Make it an artistic piece of printing with bright, warm colors, and with monthly leaflets that may easily be read. A calendar of this character will bring you new business.

The advertising blotters which were sent out by the box maker referred to were different from the ordinary advertising blotter in several respects: First, the size was 4¾ x 8 inches—a size that is wider than the average blotter, making it difficult for the user of this larger size blotter to "file" it away in a pigeon hole of a desk. Second, the printed matter, done in dark green and bright red, was set the narrow way of the blotter—the 4¾ inches way—presenting an unusual appearance, as most blotters are printed the long way for no particular reason. Third, a new style blotter stock was used, stock having a fairly smooth surface on both sides and both sides having absorbent qualities.

Blotters of this kind serve a doubly-useful purpose as either side may be used for blotting fresh ink, yet the surface of the stock is smooth enough to permit of the printing of half-tone illustrations. Blotter stock that is enameled on one side to allow for half-tone printing is not popular among business men in general for the reason that only one side of the stock may be used for blotting, and frequently a busy person is apt to use the enameled side by mistake, thus causing a blurred signature.

The motto cards referred to consisted of famous quotations of great poets or writers, printed on white or tinted card board, about 7 x 5 inches in size. An ornamented initial letter and border, printed in colors, helped in making the cards attractive. In the lower left-hand corner of the card, printed in small type was the box maker's advertisement. These cards were mailed to customers and prospectives, to be hung upon the walls of business offices, sales rooms, work rooms, etc. Here is a suggestion for one of the motto cards:

> *It is our true policy to steer clear of permanent alliances with any portion of the foreign world.*
>
> —George Washington.

This is merely a suggestion for an interesting wall card, and it is an easy proposition for any advertiser to find hundreds of other well-known quotations from the standard works of literature. One of the best books for this purpose is "Familiar Quotations," by John Bartlett, which may be consulted in any public library.

Enough has been written on this subject to prove that the paper box manufacturer's printing office can be made to produce many other things in addition to printed wrappers and cartons.

CHAPTER XI

ENGRAVING PROCESSES BOX MANUFACTURER SHOULD KNOW

WHEN you see at close range how a certain thing is manufactured, your respect for that thing is greatly increased. Take an electrotype plate, for example. Doubtless you are familiar with the process of electrotyping, but if you have never had an opportunity to visit an electrotype foundry you should arrange to do so. After you have seen the some twenty or more different processes that are essential in the making of a first-class electrotype plate, you will never again look at an electrotype without having a high regard for it.

So it is with many well-known processes such as steel and copper plate engraving, steel die engraving, plate printing, steel die stamping, embossing, etc. These various processes are being used in the paper box industry to no little extent, and it behooves the paper box manufacturer, who may not be acquainted with these processes, to learn as much practical knowledge about them as possible.

It will prove pleasing, interesting and instructive to any paper box manufacturer to visit a high class commercial engraving establishment and to see there the actual processes of steel and copper plate engraving, steel die engraving, plate printing, steel die stamping and embossing. We refer principally to the kinds of die-stamped product which are used extensively for fine paper box tops. Some folks call them "box tops," while others term them "box wrappers." Be that as it may, it is an interesting fact that many of the most beautiful designs produced in the steel engraving field are applied to wrappers for paper boxes.

Among the wide variety of die-stamped tops, or wrappers, which are now being used for different lines of paper boxes of the set-up type, are those designed for the following kinds of merchandise: Confectionery, jewelry, soap, perfumery, silverware, toilet articles, stationery, haberdashery, etc. We have mentioned merely a few of

NOTE.—The beautiful examples of die-stamped box tops illustrated in this chapter are shown through the courtesy of the Vose-Swain Engraving Co., Boston, Mass.

the numerous specialties which are packed in fine paper boxes, and boxes of this group are particularly adapted to beautiful die-stamped wraps.

Many of the leading confectioners are now using die-stamped wrappers for their candy boxes, and in numerous instances the engraved design is embossed in two or more colors. Fancy papers, of original tints and of special patterns, are frequently used in connection with the die-stamped designs, and the effects are delightful when the correct color harmony is obtained between the colors of the paper and the colors of the design.

THE UTILITY OF DIE-STAMPED BOX WRAPPERS

Suppose that you wanted a colored design for a paper box wrapper —a design that would be of the finest quality that money could buy —the wrappers to be used for the finest kind of paper boxes, and the boxes to be used for holding a special brand of candy, jewelry, perfumery bottles or something else in the way of first grade merchandise. Your want would be supplied by ordering the colored design reproduced by the process of steel die engraving, provided of course that the original design be made by a genuine artist, and the engraving and press work be done by experts in their particular lines.

Die-stamped product is better from both artistic and mechanical standpoints than either typographic printing or lithography. The latter two processes are all right for the major portion of all paper box wrappers produced, but the die-stamped wrappers are for occasions where the finest art designs are appropriate. For example, a confectioner may be catering to an exlusive class of trade—discriminating men and women who buy only the choice brands of candy. A person of this class is quick to recognize the difference between a type-printed box wrapper and a die-stamped box wrapper. There is something charming about a handsome die-stamped paper box top that appeals to a person of refinement. The detail of a die-stamped design stands up sharply above the surface of the paper. You like to rub your fingers over the raised characters and "feel" the excellent quality of the work.

Paper box manufacturers who are specializing in fine paper boxes for jewelers, perfumers, confectioners, etc., should pay closer attention to the matter of die-stamped box tops. In many instances you can "create" substantial orders for expensive paper boxes by showing your perspectives original designs for the box tops, explaining to the prospects that you are in a position to have the designs engraved and die-stamped on special order. As a progressive paper

box manufacturer you should be capable of explaining to customers and prospectives the advantages of die-stamped box tops over printed or lithographed box tops, and in this connection you can often work up a profitable business.

Several of the leading manufacturers of fine paper boxes have their own complete engraving and die-stamping departments for the production of die-stamped box tops, but the great majority of paper box makers who are doing work of this same character are having

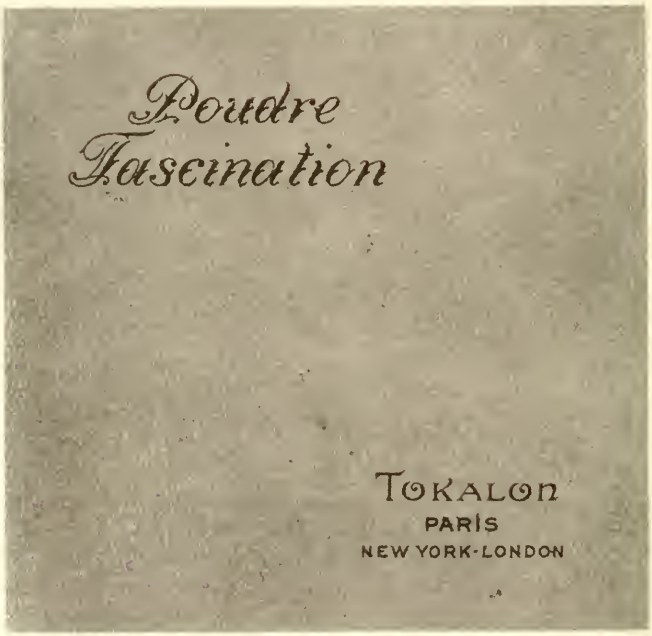


Illustration (1) Steel Die-Stamped Box Wrapper

the die-stamped wrappers produced by trade engraving concerns. Personally, we are of the opinion that it would be unwise for the average paper box manufacturer to install his own engraving and stamping plant, but doubtless there are at least a few box makers who could install such a plant to great advantage.

In all of the larger cities of the United States as well as in many of the larger towns, are located trade engravers who will gladly handle all kinds of engraved work for the paper box manufacturing trade. These concerns will not only make engraved copper and steel plates, and steel dies, for the trade, but they will also attend to all the presswork that is to be done from the plates or dies. Here is a

unique service available for any box manufacturer who may care to take advantage of it.

The main reason why it would not pay the average paper box manufacturer to install a complete engraving and die-stamping department is because highly skilled craftsmen would be essential for the successful operation of such a plant. A steel and copper plate engraver is a high-priced man, and it would require a large amount of work to keep him steadily employed. An efficient plate printer

Illustration (2) Steel Die Stamped Box Wrapper

and die-stamper is also a highly-paid man, and as a rule, he attends only to the make-ready work on the presses, the feeding of the sheets being done by girls or boys. And, yet, as we have said, there are probably cases where it would pay box makers to have their own engraving and die-stamping departments, but it is a question which calls for the deepest consideration.

STEEL DIE STAMPING—WHAT IT IS

This explanation is offered to those who may not be familiar with the technical work of steel die-stamping, and strange as it may seem, there are many in both the paper box and typographic printing trades who do not know the difference between an engraved steel *plate* and an engraved steel *die*. The following information should therefore prove helpful to the reader who is not well informed on this subject.

1. An engraved copper plate is comparatively cheap, and is used only for short runs of plate-printed matter such as wedding invitations, visiting cards, etc.

2. An engraved steel plate is hardened after having been engraved, and is used for long runs of plate-printed product such as letter-heads, business cards, announcements, bonds, certificates, etc. Paper money is printed from engraved steel plates of this character.

3. An engraved steel die differs from an engraved steel plate in being thicker and in having deeper detail. For example, lettering in a steel die is cut so deeply as to form a "female die" for the counter-

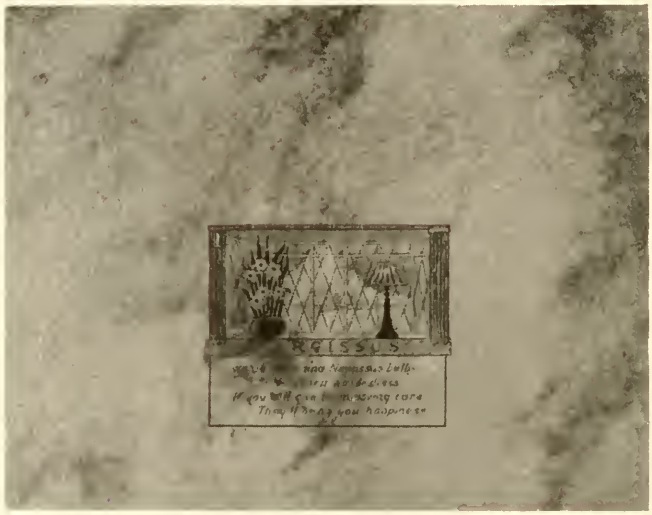


Illustration (3) Steel Die-Stamped Box Wrapper

die when the sheets are printed, or stamped. The female die and counter-die in striking together cause the engraved design to be *printed and embossed simultaneously* on each sheet of stock.

The average thickness of engraved steel plates is about $\frac{1}{8}$ of an inch. The average thickness of engraved steel dies is about $\frac{1}{2}$ of an inch.

Steel dies are used for letter-heads, monogram stationery, paper box wrappers, menu cards, greeting cards, business cards, announcements, and other fine paper specialties where sharply-embossed lettering or designs are desirable.

In the case of a design that is to be stamped in two or more colors, a separate die is usually necessary for each color. Things like paper box tops and greeting cards are frequently stamped in two or three colors. In numerous instances, however, where the design calls for considerable "flat" coloring, such as a tinted background, sky, etc., the tints are first printed from photo-engravings on a platen printing

press, and afterwards the main design is stamped over the tints from the steel die.

Practically all long runs of steel die stamping are now being handled on power plate printing and die-stamping presses, of which there are several good models on the market. The "Modern" press is made by the Modern Die and Plate Press Manufacturing Company, of Belleville, Ill., and the "Carver" is made by the Carver Company, of Philadelphia. Both of these presses are made in several different sizes, and the largest will take a steel die or steel plate as large as

Illustration (4) Steel Die-Stamped Box Wrapper

7 x 10 inches. The Modern, or Carver press automatically inks the die, or plate, and then wipes the surface of the die, or plate, before each impression is taken. A power press of this type will average from 1,000 to 1,500 impressions per hour on the regular run of work. Two operators are usually required for a press, one doing the feeding, and the other laying the printed sheets on trays as the sheets are taken from the machine.

ENGRAVING A STEEL DIE OR STEEL PLATE

The process of engraving a steel die or a steel plate is practically the same with the exception that the detail for the steel die is cut deeper. The steel "blanks" for plates or dies are furnished in any size and thickness wanted by the engravers' supply concerns.

Before being engraved the block of steel is "soft" enough to permit of easy cutting. The piece of steel is hardened after having

been engraved, and the process of hardening will be described later on in this chapter.

First, the original design that is to be engraved is painted or drawn upon a sheet of smooth white cardboard, the design to be of exactly the size desired for the completed subject. If several colors are wanted, it is necessary to have the colors painted on the original exactly as they are to appear in the die-stamping. A separate die will be essential for each color.

Illustration (5) Steel Die Stamped Box Wrapper

Second, we will suppose that an original design in two colors has been completed. Over the original is laid a sheet of gelatin held firmly to the original at the corners with pins. The engraver now takes a tool called a burin, and with the point of this tool scratches a rough but distinct outline of the original design in the surface of the gelatin. Keep in mind the fact that two (2) dies are to be made of this design, which means in this case that the engraver first scratches on the gelatin only the detail of the design which will appear in the first engraving, and afterwards he will take a second sheet of gelatin for the detail that is to appear in the second engraving.

Third, with the proper detail that is to appear in the first engraving scratched on the sheet of gelatin, the engraver removes the sheet of gelatin, and he then rubs powdered vermilion in all the crevices which have been cut in the surface of the gelatin by the burin.

Fourth, the engraver covers the surface of the steel block that is to be engraved with a thin coating of engravers' wax.

Fifth, the engraver then turns the sheet of gelatin upside down and presses the scratched surface of the gelatin against the waxed surface of the steel block. With a tool like the wooden handle of a bodkin the engraver rubs the back of the sheet of gelatin firmly but carefully, this action causing the vermilion which was placed in the crevices of the gelatin sheet to transfer to the waxed surface of the steel die. The engraver now has a plain outline of the design to be engraved on the surface of the steel die, and with a set of engravers'

Illustration (6) Steel Die Stamped Box Wrapper

tools he proceeds with the work of engraving, cutting the detail as deeply as his judgment directs.

Sixth, after the first die has been engraved in the manner described, the tracing for the second color is made on another sheet of gelatin; vermilion is rubbed over the crevices; the design is transferred to the second waxed plate, and the engraving is done after the manner of the first plate.

These two engraved steel dies will be in perfect register, or rather the completed two-color design will be in close register when printed, for the simple reason that the two gelatin transfer sheets have made accurate register possible.

HARDENING A STEEL DIE OR STEEL PLATE

There are several efficient hardening furnaces on the market, and all of them work upon the same principle. The steel die, or plate, is thoroughly cleaned after having been engraved. The die is then wired, leaving a loop at one end so that the die may be handled with

a rod while hot. Cyanide is placed in the oven of the furnace, the heating being done with either gas or electricity. The die is immersed in the cyanide and remains in the bath for about twenty-five minutes, or until it is brought to a cherry-red heat. The die is then removed and is first dipped in sperm oil and afterwards is dipped in cold water. Finally the die is cleaned, oiled and polished on the surface, and is then ready for the press.

ENGRAVING BY MEANS OF ACID

Engraving a steel die or plate with the aid of an acid solution is done as follows:

Illustration (7) Steel Die-Stamped Box Wrapper

First, the surface of the die is cleaned with a solution of carbonate of potash, and the surface of the plate is then burnished with the aid of any kind of a steel tool suitable for the purpose.

Second, the surface of the plate is coated with an acid-resisting ground. A good "resist" ground is made from this formula:

Melt 2 ounces of white wax in a can. Add and stir 1 ounce of powdered gum mastic. Add and stir 1 ounce of powdered bitumen. When the mass is nearly cold, shape it into a ball with wet hands, and then tie the ball in a silken bag.

Third, heat the plate over a gas flame until it is uncomfortable to the touch, then rub the silk bag containing the resist over the surface of the warm plate until plate has taken an even coating of the ground.

Fourth, transfer the original design to the waxed surface of the plate by means of a sheet of gelatin, scratched and powdered with vermilion, like the same process of transferring that has been described for hand engraving.

Fourth, with a graver, or burin, scratch the detail of the design, which has been marked by the vermilion, on the surface of the plate so that all of the tracing extends through the resisting ground, showing the polished surface of the plate wherever the tracing occurs.

Fifth, a wall is formed around the margins of the design to be acid-engraved, the wall composed of red sealing wax dissolved in pure alcohol. This wall may be applied with a brush, and the wall should be about 1-16 of an inch high.

Illustration (8) Steel Die-Stamped Box Wrapper

Sixth, the acid solution is now to be poured on the surface of the plate, the solution being held in position by the walls. There are a number of good acid solutions in use by various engravers, but one of the most popular formulas for deep etching is made as follows:

Hydrochloric acid	100 grammes
Chlorate of potash	20 grammes
Pure water	880 grammes

Heat the water; add the chlorate of potash and stir until it is thoroughly dissolved, then add the hydrochloric acid.

At the end of about fifteen minutes the etching solution is poured off the plate into a receptacle for the purpose of ascertaining the depth of the acid "bites." Small, fine lettering and detail is not to be as deeply etched as large-size lettering and detail. If the small characters are found to be deep enough, they are "stopped out" by painting over them with a camel's hair brush and the mixture of sealing wax and alcohol. The acid solution is then again poured over the plate and is allowed to work until all of the main detail of the design

has been etched as deeply as desired. The acid is then removed and the surface of the plate is cleaned with turpentine and a brush.

The engraver now has an opportunity to introduce his individuality. Working under a magnifying glass, he minutely finishes the etched detail with a burin. The sides and bottoms of the larger characters receive particular attention. The completed die, or plate, is hardened, cleaned and polished and is then ready for the press.

Illustration (9) Steel Die-Stamped Box Wrapper

Some engravers use the mixture of sealing wax and alcohol as a resisting ground, painting on the surface of the steel plate, around the edges of characters that are to be etched, with the mixture and a camel's hair brush.

THE ENGRAVING MACHINE

Many different kinds of engraving, on copper plates, steel plates and steel dies, are now being done on engraving machines. One of the most successful devices of this class is called the Model C Engraving Machine, made by the Engravers' and Printers' Machinery Co., of Sag Harbor, N. Y. This machine works on the same principle as the pantograph. One point of the machine follows the lines of a master plate while the other point, which is equipped with a diamond, traces the lines to be etched on the surface of the steel plate.

This machine is supplied with a wide variety of master plates, each master plate containing the complete alphabet of a certain style of lettering, such as script, Engravers' Roman, Astor Text, Black Old English, Shaded Old English, Gothic, Outline Gothic, etc. The machine can be adjusted to reproduce lettering from the master plates either smaller or larger than the lettering in the master plates.

When engraving by machine, the surface of the plate to be engraved is first coated with an acid-resisting ground, and then the letters are cut through this ground by the diamond point of the machine. An etching solution is then applied to the surface of the engraved plate, the solution "biting" out the exposed parts of the metal to the depth desired. After the etching process the engraver finishes the intaglio work with a burin.

All kinds of ruled engraving can be done by this same process, such as cloud effects, gray shadows, ornamental borders, screen backgrounds, stippled backgrounds, etc. Etching is done after the ruled work has been scratched upon the resist ground on the plate.

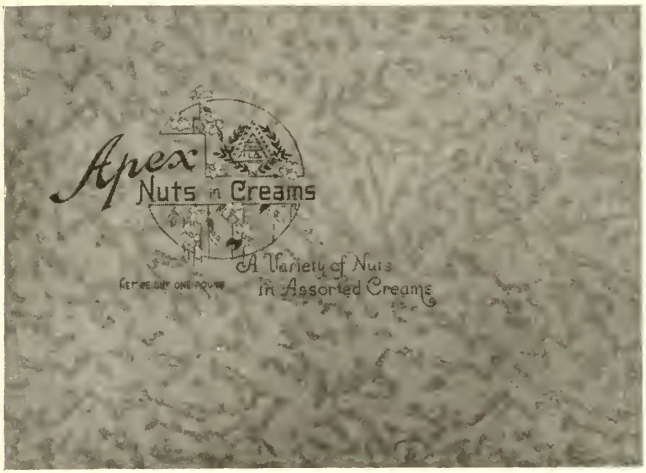


Illustration (10) Steel Die-Stamped Box Wrapper

Illustration (11) Steel Die-Stamped Box Wrapper

MAKING A COUNTER-DIE FOR STEEL DIE STAMPING

The make-ready work on either a hand stamping press or a power die and plate press is practically the same. The make-ready for a steel die-stamping job consists of a counter-die, or a "male" die. This counter-die is for the double purpose of having the engraved design *print and emboss* sharply on the paper stock.

The four edges of the surface of the steel die should be rounded so that these edges will give no impression during each printing operation.

A first-class counter-die for steel die-stamping is made as follows:

First, the foundation is made of a piece of medium weight tar board. This piece of tar board should be about the same size as that

Illustration (12) Steel Die-Stamped Box Wrapper

of the full face of the steel die, and it is glued to the counter-block on the press with Le Page glue.

Second, over the top of the piece of tar board is glued a piece of medium weight bristol, or "wedding" stock, having a soft kid finish.

Third, the counter is now struck a dozen or more times with the steel die, this action bringing out the engraved design on the counter in relief.

Fourth, weak, or low places that may show in the raised detail on the counter are "spotted up" with small bits of thin gummed paper.

Fifth, the counter is again struck about a dozen times with the steel die for the purpose of bringing up the relief work more sharply.

Sixth, the steel die is inked and wiped, and an impression of it is taken on a sheet of wedding stock.

Seventh, with knife or scissors all blank edges around the printed subject on the sheet are cut away, and the remaining section of the

printed subject is glued in true position over the raised detail on the counter.

In the case of extra-deep steel dies, several cutout make-ready sheets, like that just described, will be essential for building up a high counter-die.

Eighth, after the cut-out sheet (or several cut-out sheets) has been pasted on the counter, additional impressions are taken of the steel

The Model C Engraving Machine

die. Finally, after the raised detail appears to be sufficiently sharp and firm, the pressman takes a sharp make-ready knife and carefully cuts away all blank parts of the counter-die, working as close to the edges of the relief work as possible. The cutting at the edges of the raised detail is done on a bevel, extending all the way to the tar-board base. The make-ready is completed by covering the top of the counter-die with a piece of rubber sheeting, leather, or thin kid-skin.

CHAPTER XII

THE MAKING OF SOLID FIBRE CONTAINERS

NOTHING is more romantic than the story about the solid fibre shipping container and its remarkable growth. The solid fibre shipping container is a comparatively new thing. Over night it leaped into popularity, and no wonder, for keen business men and manufacturers were not slow in recognizing its many excellent qualities. The old-fashioned wooden shipping boxes simply had to go, in the same way that the horse and dray had to move aside for the powerful motor truck.

Speaking about motor trucks, one was recently seen piled high with thousands of flat solid fibre shipping containers. It was a rush order which had to be carried a distance of nearly 100 miles in a short space of time. The motor truck was used simply because the railroads were too slow. Now had the order been for wooden boxes, it would have required a whole fleet of motor trucks to carry it to its destination. With *flat* solid fibre cases, however, it was possible to handle the entire order with a single motor truck.

This is only one of the numerous advantages possessed by the solid fibre shipping container over the old-style wooden box. A manufacturer may order 100,000 large-size solid fibre shipping containers, which are delivered flat, and which can be stacked up in the basement in that condition until goods are packed for shipment. Think of the amount of space that would be required by the same number of wooden boxes! Floor space is worth so much per square foot. A large manufacturer can save large sums of money on floor space alone by using flat solid fibre boxes instead of wooden boxes.

One of the largest canning concerns in the world is now using solid fibre shipping containers for canned goods in place of wooden boxes which it had been using for the same purpose for many years past. Every time this firm sends out a carload of the canned goods, packed in the paper-board boxes, it saves something like $50 in freight rates over the same amount of goods packed in wooden boxes. Moreover, on account of the solid fibre containers being

sealed tight with gummed tape, the common practice of pilfering during transit of goods has been practically eliminated.

Many of the larger manufacturers of candy are now using solid fibre shipping cases for transporting fine package goods. Corrugated shipping containers are used for the same purpose, of course. The paper-board cases not only help to hold down freight rates, but they serve to protect the corners and edges of fancy set-up boxes used for holding candy. It seems strange, but it is a fact, nevertheless, that a set of fancy candy boxes can be injured more readily in a wooden box than in a paper-board shipping container. The latter will stand exceedingly rough treatment during transit without causing damage to the goods inside of it.

The uses for solid fibre shipping containers are multiplying every hour. Heavy copper wire and loom are now being packed in fibre containers. Printed matter, books, magazines, catalogues, etc., are now being packed in solid fibre containers. Sugar, coffee, breakfast foods, salt, tobacco, cigarettes, and hundreds of similar things are first packed in paper cartons, and the cartons are then placed in fibre shipping containers. Some of the orders for solid fibre shipping cases, used for holding packages of starch, sugar, dried fruits, soaps, powders, etc., run into hundreds of thousands, and the demand for such cases is constantly increasing on every side.

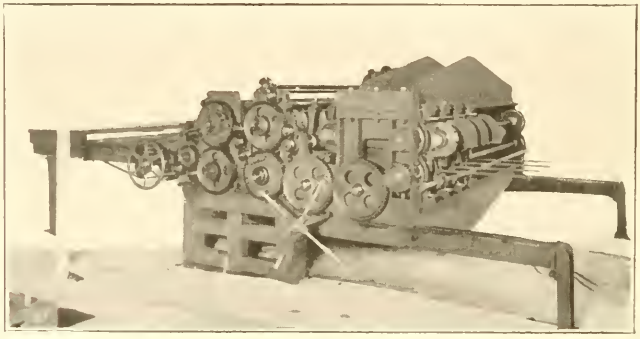
Fresh fruits, such as apples, oranges, peaches, lemons and grapefruit, are now being packed in fibre containers, instead of wooden boxes, resulting in great savings in materials and freight rates, and preventing many acres of forests from being destroyed. A new-style collapsible basket, made of solid fibre, was recently invented, and there is no limit to the possibilities of this basket as a cheap but substantial carrier for farm products. New fields for fibre containers are opening in every direction, and the time will soon come when wooden shipping boxes will be things of the past.

HOW CONTAINER BOARD IS MADE

Container board, as it is called in the trade, is a combination of jute and chip papers pasted together with sodium silicate. The finished board usually comes in 3, 4 and 5 ply, although it is also made in various other thicknesses ranging from 60 to 120 points.

The machine used for making the container board is a mammoth rotary device, resembling a paper-making machine in appearance. The rolls of jute and chip are placed on one end of the machine in such positions that as the different bands of paper travel through the machine, the jute paper runs at the top and at the bottom, while the two or more layers of chip are sandwiched between the jute paper.

As the different bands of paper travel onward through the machine, they come in contact with steel rollers covered with a warm solution of sodium silicate. The flow of the sodium silicate from the fountains can be regulated so that the right amount desired will be carried by the steel rollers. The sodium silicate is applied to only one side of each continuous sheet of paper. The paper then passes on through a series of steel rollers which firmly press the various sheets together, thus forming the container board. The damp board finally passes through a series of steel ironing rollers which compress the board to the thickness desired and which iron the two jute surfaces of the board perfectly smooth and flat.



Fibre Container Making Machine—View One.

The finished container board then continues traveling—in flat condition—until it reaches the end of the machine where the cutting knives are located. The cutting knives may be moved and adjusted to cut the wide, continuous strip of container board into a number of different sizes as it comes from the machine. The knives first cut the sheets to length, and then cut each length into a number of different sizes suitable for standard sizes of shipping containers.

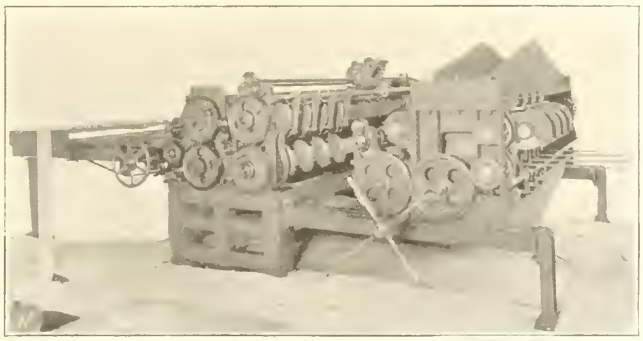
This is the kind of container board that is used for making the major portion of solid fibre shipping containers. Other kinds of container board, however, are manufactured for special purposes, and the process of manufacture is the same as that just described.

HOW SOLID FIBRE SHIPPING BARRELS ARE MADE

Is the familiar apple barrel, made of wooden staves, to be replaced by a barrel made of paper board? Who knows but that such will be the case in the near future, for they are now making medium-size barrels of solid fibre which are proving very successful. These paper-board barrels are equipped with wooden hoops, and are fitted

with flat ends, or heads, made of heavy-weight container-board. The paper barrels are being used for all varieties of dry chemicals, and there is no reason why they cannot be used as shipping containers for many other materials.

The fibre barrels are made as follows: Spiral tubes are first made on a giant tube-rolling machine, the tubes being formed of continuous strips of jute and chip stock, pasted together with sodium silicate. The sodium silicate is fed to the various tanks through which the paper passes from a big tank overhead. The entire operation is nearly automatic, the various strips of paper taking the sodium silicate on one side, and then wrapping around the great steel mandrel,



Fibre Container Making Machine—View Two

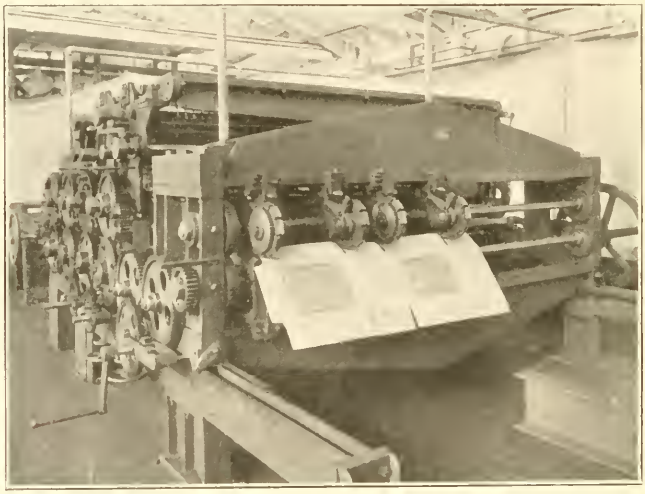
which looks for all the world like a big gun on a battleship. The tubes are spiral-wound, to as many plies as desired, the jute paper being on the outside of the finished tube. Each tube is made about 12 feet long, or even longer. The largest-size mandrel winds a tube 30 inches in diameter, but it is possible, of course, to use mandrels of larger diameter.

As the completed tubes come from the spiral tube-winding machine, they are carried away to another department where they are stood up on their ends to dry. The tubes are then put through a tube-cutting machine, a lathe-like device equipped with a circular saw which saws the long tubes into lengths suitable for the barrels.

The inside of each barrel is fitted with a paper tube of slightly smaller diameter than that of the barrel itself, and this second, or "inner-tube" is cut about two inches shorter than the length of the barrel. The inner-tube is for the purpose of supporting the round heads at the top and bottom of the barrel, and it also serves to make the body of the barrel stronger. The barrel can be made both air- and water-tight by sealing the edges of the heads with paraffin.

The heads of the barrel are made of solid fibre board, 5-ply, and the round disks are cut out, one at a time, on a die-press of powerful construction. Various sizes of steel cutting dies can be used on this press. Each head for a barrel is provided with a strong brass ring, placed out of center, this ring making it an easy matter to pull the head from the barrel when necessary.

In some instances, paper barrels of the kind described are not being fitted with wooden hoops, and some of the barrels are not fitted with inner tubes. It is obvious, however, that a paper barrel having an inner-tube and a number of wooden hoops on the outside



Container Making and Two-Color Printing Machine. A machine that cuts, slots and creases the container blank and then prints it in two colors.
Picture by courtesy of George W. Swift Jr., Inc., Bordentown, N. J.

is far more durable than an ordinary paper barrel not possessing such advantages. A machine of special construction is used for making the wooden hoops, and the hoops are attached to the sides of the barrels by means of wire stitches. A special wire-stitching machine is essential for such work.

It occurred to the writer, as he was watching the operation of putting the wooden hoops on paper barrels, that durable hoops could be made of solid fibre instead of wood. This is merely a suggestion, and it may be that fibre hoops are already being used for this purpose.

PRINTING BLANKS FOR SOLID FIBRE CONTAINERS

The blanks for solid fibre shipping containers are usually printed on special rotary printing presses, designed expressly for the pur-

pose. The larger-size printing presses of this type will take a board as wide as 64 inches, which means that as many as four blanks for large-size containers can be printed simultaneously, the sheet being cut apart after the printed matter has been applied. Some of the rotary printing presses are equipped with cutting attachments for cutting a large-size board into two or more separate pieces after the board has been printed.

The printing is done from curved electrotypes which are attached to the printing cylinder by means of adjustable screws, or register hooks. Some of the special rotary presses have two printing cylinders, and are designed for printing two colors in close register on container board. As container-board is made in various thicknesses, ranging from 60 to 120 points, it is necessary to adjust the cylinders of the press to provide for each different thickness of stock.

For printing in red ink, or other colors of printing ink, nickeltypes will be found more serviceable than ordinary electrotypes, for the reason that nickeltype will not be affected by the chemical action of colored printing ink. A nickeltype is considerably harder than an electrotype, and consequently, will last longer than an electrotype on heavy runs of work. When either electrotypes or nickeltypes are to be used for printing on container-board, the electrotyper should be instructed to make extra-thick shells for the plates, as the ordinary shell would soon break down on such heavy work as printing on container-board.

Standard cylinder printing presses of all the well-known makes are also used for printing on light-weight fibre-board, but presses of this type cannot be used for printing on extra-heavy container-board.

As the printed blanks come from the rotary printing press they are stacked up, almost in a vertical position, on trucks to dry. The vertical position of the freshly-printed sheets prevents offset of the ink on the backs of the sheets.

After the printing has dried, the sheets are fed through a fibre container-making machine—a combination slotting and creasing machine—which delivers the containers ready for the wire stitching machine.

THE SWIFT FIBRE CONTAINER-MAKING AND PRINTING MACHINE

Several well-known manufacturing concerns are specializing in the production of all kinds of machinery used for the manufacture of solid fibre containers, and one of these concerns is the George W. Swift, Jr., firm, of Bordentown, N. J. This company has per-

fected a new-style fibre container-making and printing machine which is a remarkable device in numerous ways.

This machine is a rotary, designed to take a sheet of fibre board, trim the ends of the board, slot it, crease both ways, and cut out the board for a staple flap. When this machine is equipped with the printing press attachment, it will print the blank in two colors and deliver it cut, creased and slotted ready to be completed on the wire stitcher. When this machine is not equipped with the special printing press attachment, it can be equipped with a small printing device, to be used for printing the classification stamp on the container-blanks as they travel through the machine.

Postum Cereal. View of solid fibre boxes in grocers' warehouse, Chicago. Note the interlocking stack of various sizes piled to the roof. Step piling or levelling is a convenient method of facilitating the "breaking down" of the stack as needed.

These machines are built in several different sizes, with cylinders of 12, 16, or 20 inches, and in widths of 84, 100, 112, or 120 inches. The larger-size machines can be furnished with double equipment for making two complete containers from one sheet simultaneously. Any of these machines will handle board ranging from 60 to 120 points.

REGULAR CONTAINER-MAKING MACHINES

There are a number of different makes of container machines on the market, operating on the rotary principle, and designed to make complete solid fibre shipping containers ready to be wire stitched. These machines are not usually equipped with printing attachments.

the blanks being printed in the regular way before being sent through the container-making machines.

The standard container-making machines are provided with punches and dies which can be adjusted to make various sizes of containers. The cutting, slotting and creasing are all done with one operation as the printed blanks travel through the rollers containing the punches and dies. It requires a trained machinist-operator to change the punches and dies on the machine, and at all times the work of feeding the machine must be under the watchful care of a man who thoroughly understands every part of the machine.

In the larger box-making plants the container-making machine is operated in connection with a wire stitching machine, an automatic conveyor carrying the boxes to the jaws of the stitching machine as they come from the other machine. In one large plant the conveyor system not only carries the boxes to the stitching machines, but it also carries them to the shipping department after they are wire stitched. It should be understood that conveyor systems of this character need constant watching, as the boxes do not always travel along the tapes in exactly the right positions, but it is a fact, nevertheless, that conveyors of the kind referred to are saving time, labor and money in many plants. The principal advantage of a conveyor system in a paper box factory is in it making continuous production possible.

It would be impossible to give descriptions of all the many different kinds of solid fibre shipping containers which are now being manufactured. The great majority of the shipping cases are oblong and have eight flaps, four at the top and four at the bottom. A case of this style is held together with half-a-dozen wire stitches, or staples, at one corner, the blank being cut out to a shape allowing for a flap where the wire stitches are inserted.

The telescopic style of container is in two parts, the box and the overlapping lid. The box and lid are cut out to a shape which makes it possible to fold over the edges of the blank, on all four sides, and then have the folded-over sections held down with wire stitches. Telescope containers of this kind are now being used to a great extent by department stores.

Other styles of solid fibre shipping containers include the square shape, and the flat, oblong shape, both of which have eight flaps, four at the top and four at the bottom. The shipping containers are made in many different sizes, and are built to conform with all the requirements of the express concerns, freight handlers, steamship companies, etc. On each container is printed the classification stamp,

and the old, familiar warning, "Use No Hooks." The regular advertising matter is printed on the sides of the boxes.

WIRE STITCHING SOLID FIBRE CONTAINERS

In certain instances the bottom flaps of a solid fibre shipping container are stapled together on a wire stitching machine. Heavy brass or copper wire is used for staples which are made automatically as the boxes pass through the jaws of the wire stitcher. The stitches are made in rapid succession. There is one special stitching machine which will apply as many as 16 heavy wire staples at a single operation.

There are on the market a number of wire stitching machines, built particularly for the use of paper box manufacturers. Work like solid fibre containers requires a wire stitcher of powerful construction, one designed exclusively for such work.

NEW USES FOR SOLID FIBRE CONTAINER BOARD

It is an interesting fact that solid fibre container board may be utilized for many other purposes in addition to being used for the construction of shipping cases. Among other things are game boards of various kinds—game boards like those used for checkers, cards, etc., made usually of 120 point container board of the kind that is covered on both sides with jute paper. Lap-boards for dressmakers are easily made from this material.

The writer visited a large factory where all kinds of solid fibre shipping cases are being manufactured. The equipment of the plant included a number of two-color printing presses, built particularly for the purpose of printing on solid fibre container board. One of these presses was being used for printing game boards in two different colors. The boards were to be used in connection with a new game which had just been placed on the market, and which was proving a great success. Thousands of the boards were being printed, and the finished product was both substantial and attractive.

Manufacturers of paper boxes who are specializing in the production of solid fibre shipping cases, should be interested in this new field for the consumption of solid fibre container board, for there is no reason why any box manufacturer of this class cannot make things like the game boards referred to. The idea would be, of course, to produce such work for concerns that are supplying the toy trade with games, paper toys, etc. There are many different kinds of game boards in addition to the well-known checker boards, and there is always an opportunity for introducing entirely new games.

There are two distinct methods of making game boards from blank sheets of solid fibre container board: One method is printing the colored designs directly on the surface of the board, and the other method is in first printing the designs on paper, and then pasting the printed sheets to the blank surface of the board. In either case, the printing is done from electrotypes. Curved electrotypes are essential when the printing is to be done directly on the board on a rotary printing press. When the printing is to be done on separate sheets of paper, on a flat-bed cylinder press, regular, flat electrotypes are used.

In numerous instances the solid fibre container board may be utilized for advertising signs of many different sizes and shapes. The printed matter is applied directly to the surface of the board, and as many as half-a-dozen or more good-size signs may be printed at one time on a rotary or cylinder press. In the case of an odd-shaped sign, the boards are cut out to shape after they have been printed.

We are not speaking now of pictorial signs, printed or lithographed in several colors, but are referring to the plainer variety of advertising signs, printed in one or two colors. However, it is possible to use the container board for the more elaborate styles of pictorial signs, and the same kind of board may also be used for certain varieties of advertising "cut-outs." The possibilities of the solid fibre container board in these fields are really unlimited.

The printing for the kinds of signs referred to may be done on the same models of two-color printing presses which are used for printing on solid fibre containers. Printing from regular type forms may be done on flat-bed cylinder presses.

When solid fibre container board is used for printing odd-shaped advertising signs, "cut-outs," paper toys, etc., the cutting can be done on a large-size cutting and creasing press, with the aid of cutting dies made of 6-point steel cutting rule. The cutting is done after the boards have been printed.

FOR NOVELTY BOXES

One manufacturer of paper boxes is using solid fibre container board for making of numerous novelty boxes, including a case for holding pens and pencils. This case is made of 7 pieces of board cut to the following sizes: One piece, size $4\frac{1}{2} \times 2\frac{1}{2}$ inches; two pieces, size $3\frac{1}{2} \times 3\frac{3}{4}$ inches; and four pieces, size $1 \times 3\frac{3}{4}$ inches. When properly glued together these 7 pieces of board form a neat, upright case, having a base and three compartments, each compart-

ment having the size of 1 x 1 inch square and 3¾ inches deep. This case is covered with binders' cloth of any color desired. It forms a useful "top-o'-the-desk" receptacle for holding pens and pencils, and it is as strong and durable as a similar case made of wood.

Solid fibre container board can also be used in the construction of other kinds of cases having slotted partitions. A small-size case of this type will be extra strong, and can be used as a container for many different articles.

Extra-heavy covers for books of the invoice variety can be made of solid fibre container board. In fact, the covers for check books,

Salmon from Alaska. These solid fibre containers were made in California, shipped by boat to Alaska, there filled with the canned salmon and returned by boat to Seattle, Wash. Fifteen thousand cases were comprised in the shipment.

dictionaries, scrap-books, etc., may also be made of the container board, and the cost of this material is comparatively low. The invoice books, for example, usually have about 230 pages of Manila paper, size 10 x 15 inches, and the board covers are covered with canvas duck. A book of this construction will last for a life-time without showing much year.

The uses for solid fibre container board are constantly multiplying. The manufacturers of solid fibre shipping containers, particularly those who are manufacturing their own container board, should study the new fields for this board immediately as they develop, as a new field may often offer a golden opportunity for profitable business.

CHAPTER XIII

METHODS OF SILICATING AND PARAFFINING PAPER BOARD

PROGRESSIVE farmers and dairymen in many different sections of the United States are now following the practice of selling eggs and other farm products direct to the consumer. In numerous cases these farmers and dairymen are conducting an extensive "mail order" business, the goods being sent to the buyers via parcel post. Various kinds of farm products, including poultry, eggs, cheese, and bunched asparagus, are sold in large quantities throughout the country in this way, and it is a business which is constantly growing.

The modern farmer, or dairyman, who is selling his food stocks direct to the consumers has recognized the advantage of having things like eggs, cheese and asparagus packed in sturdy paper cartons, and in some instances farmers are making good use of paper cans for mailing bunches of fresh cut asparagus, flowers, bulbs, etc. In not a few cases farmers and dairymen are packing butter and lard in damp-proof folding cartons which have the farmer's or dairyman's name and address neatly printed on the outside. Frequently a trade-name of the butter or lard is also printed on the cartons.

A BUSINESS BUILDING IDEA

Manufacturers of paraffined cartons, such as are used for butter and lard, should readily "see" a good business building idea in the two paragraphs which have just been written. Think of the great number of farmers and dairymen who are *not*, as yet, following the practice of selling direct to the consumer. Would it not be possible for the manufacturers of the cartons to interest many of these farmers in the plan? Would it not be powerful advertising for the manufacturers of butter and lard cartons if they were to send samples of the cartons to farmers and dairymen, along with some printed matter advocating the idea of selling farm products direct to the consumer?

It is a fact that many American farmers and dairymen are in a

position to sell their stocks direct to the consumer, but have not yet been made to recognize the advantage of the plan. It is safe to say that some farmers and dairymen have not even thought of the idea of mailing farm products to buyers in the cities by means of paper cartons. Here is where the manufacturers of cartons have an excellent opportunity to try some good missionary work. The results are bound to be profitable for all concerned.

We understand, of course, that some manufacturers of paraffined cartons are selling the cartons direct to farmers and dairymen, but

Knowlton Sheet Coating Machine. For applying silicate of soda, paraffin, or other liquid coating material, to one or both sides of flat sheets of paper board.

the fact remains that this unique form of business could easily be developed to greater proportions. At the cost of a little time and money the manufacturers could "convert" many a farmer and dairyman to the plan of packing various kinds of farm products in cartons and selling them by parcel post.

At the present time only a comparatively few lines of farm products are packed in paper cartons, but the day is coming when farmers and dairymen in general will use cartons, paper cans and corrugated boxes in large quantities, and for many different kinds of farm products which today are being sent to the markets in baskets. This field offers wonderful possibilities for the manufacturers of cartons, solid fibre containers, paper cans and corrugated shipping containers. It is a new, fertile field wherein the soil, as yet, has scarcely been touched.

THE MODERN HOUSEWIFE PREFERS FOOD PRODUCTS PACKED IN CARTONS

Today when the average housewife goes to the grocery store or the butter and egg store, she prefers to buy things like eggs, butter, lard, cheese, sliced dried beef, etc., packed in cartons, rather than buying such goods in loose form. Many of the large wholesalers of food products know this fact and for that reason are now packing butter, lard, eggs, cheese, and other foods of this variety in paper cartons. In the majority of cases the folding boxes used for butter and lard are made from paper board which has been coated on both sides with paraffin. These same kinds of folding boxes, or cartons, are also used for other food products. The cartons not only enable the dealer to keep and handle the food under the most sanitary conditions, but they also help the housewife in keeping the food fresh and clean. The cartons insure full weight for the purchaser, and during busy periods in the store, they are the means of saving time for both the dealer and the patron, for the reason that the goods are packed and ready to be passed right over to the customer.

For a long time the larger manufacturers of breakfast foods, cakes, crackers, and many other food products have been packing such goods in folding boxes or cartons. In some cases these paper boxes are lined on the inside with a thin coating of either paraffin or sodium silicate to protect the contents from atmospheric conditions. In other cases the boxes are lined on the inside with thin coatings of both sodium silicate and paraffin. In still other instances the boxes are not lined with any protective coating of any kind, waxed paper being placed loosely on the inside of the boxes instead of a coating of any of the materials mentioned.

In this chapter the writer will attempt to explain the practical work of coating paper board that is used for making certain kinds of folding boxes and cartons. Every effort shall be made to explain the newest methods of coating as applied to both rolls and flat sheets of stock, and it is hoped that the information so given will prove of value to those readers who may not be familiar with this class of work.

SILICATED PAPER BOARD READY FOR USE

Some of the larger paper board manufacturers are supplying the makers of grease-proof or water-resisting cartons with paper stock already coated for the purpose in question. This prepared paper board is coated either on one side or both sides with a thin coating of sodium silicate.

A number of paper board manufacturers also supply stock con-

taining a coating of paraffin on either one or both sides. This kind of paper board is furnished only on special order. It is not a difficult matter, however, to procure silicated board, as it is known in the trade, from many of the larger manufacturers of paper board.

Some manufacturers of folding boxes and cartons are making a specialty of silicated and paraffined folding boxes, and these concerns generally have their own mechanical equipment for coating the paper board. Other makers of folding boxes and cartons, in some cases, have special departments devoted to the making of silicated and paraffined paper boxes, and these concerns as a rule also have their own equipment for the silicating and paraffining.

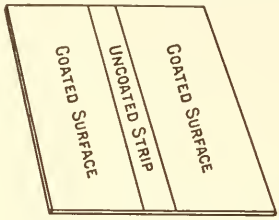


FIG 1. BLANK WITH UNCOATED STRIP.

Fig. 1. Sheet of coated paper board with uncoated strip left in center so as to provide for the proper gluing of the folding boxes.

It goes without saying that any box manufacturer who may want to specialize in the making of silicated and paraffined paper boxes should have his own plant for doing the coating. A plant of this class is not exceedingly costly, and the operation of such a plant is very simple. The major portion of the coating work can be handled easily by boys or girls, under the supervision of a man or woman who thoroughly understands all technicalities of the business.

THE KNOWLTON COATING MACHINE

The M. D. Knowlton Company, of Rochester, N. Y., is manufacturing coating machines and all other devices which are necessary for the operation of a complete sheet coating plant. The Knowlton Sheet Coating Machine is being successfully used in many paper box making factories, as well as in numerous paper board mills, for coating flat sheets of box board with water-proofing, vermin resisting and other liquid solutions such as silicate of soda and paraffin. Damp-proof board of different kinds, to be used for folding boxes or cartons for food products, millinery, etc., is coated on this machine.

This machine consists of a pair of smooth steel rollers like those on a laundry mangle, between which the stock that is to be coated

runs. The lower roller dips into a trough which contains the solution of silicate of soda or paraffin. The upper roller also is provided with a reservoir from which it receives the coating material when the stock is to be coated on both sides. Both reservoirs are connected to heating apparatus which is to be used when paraffin is being applied.

THE PRACTICAL WORK OF COATING PAPER BOARD FOR USE IN CARTONS

The coating solution is uniformly applied to either one or both sides of the sheet, as may be desired, by a single passage of the sheet through the Knowlton machine. The machine is equipped with a rotary pump for a double coating of paraffin. Paper of all kinds, also straw-board, chip-board and news-board, lined or unlined, up to 3 16 of an inch thick, can be efficiently coated on this machine. Adjustment for each different thickness of paper or board can be made easily without a wrench or other tools. When this adjustment is made the upper coating roll and its reservoir are raised as a unit so that the setting which controls the thickness of the applied coating is not disturbed. In most cases of sheet coating a thin, even coat of solution will serve as well, and sometimes better, than a thick coat, but in some instances a thick coat is required. In any case, the machine can readily be adjusted to give any thickness of coating desired, ranging from an exceedingly thin coat to an extra-heavy coat.

The machine is regularly fitted for steam heat, but on order can be equipped for either gas or electric heating. The machine is fitted with a feed table and a receiving bank, the latter adjustable in or out to suit the length of stock.

On order from the Knowlton Company, this machine may be provided with a special attachment which allows an uncoated strip to be left in the body of the otherwise coated sheet. This uncoated strip is for the purpose of making gluing easy when the stock is cut apart and made up into folding boxes. An uncoated strip can also be left on one edge of the coated sheet without the use of the special attachment referred to. When the entire surface of the sheet is coated with paraffin it is a difficult proposition to apply glue for folding boxes afterward, and for that reason it is well to leave the uncoated strip in the center, or on one end of the large sheet of paper board when the coating is done. The special attachment is adjustable so that one blank strip, or a series of parallel uncoated strips can be left on the coated sheets in any position desired. When a series of parallel uncoated strips are desired, the same number of special attachments are essential.

THE KNOWLTON ROLL COATING MACHINE

This machine is altogether different from the Knowlton sheet coating machine inasmuch that it handles large continuous rolls of paper board, or paper, instead of flat sheets. In the case of printing on the rolls of stock, on a rotary printing press, for cartons, the printing is done in most cases before the roll of stock is run through the roll coating machine. In some cases, however, the printing is done after the roll has been coated.

Fig. 2. Knowlton Roll Coating Machine.

The large roll of stock, either blank, or printed, is placed on one end of the roll coating machine, and in passing through the coating rollers it receives the coating material on one side or both sides as desired.

PRINTING THE SHEETS OF PAPER BOARD BEFORE APPLYING THE COATING

In the making of damp-proof folding boxes or cartons for butter, lard, and other food products, the printing on the containers is done before the coating material is applied. The large-size sheets are usually printed on flat-bed cylinder presses in the same way that any kind of letter-press printing is done. As many as a dozen complete printed forms for containers are printed at one time on the large sheets, and after the printed matter is dry, the large sheets are then run through the coating machine. After the sheets have been coated they are either cut into smaller sections and put through a platen cutting and creasing press, or are run full size through a cylinder press equipped with a number of cutting and creasing forms.

Butter and lard containers, of the pound size, often have the printed matter done in bright green or red ink, and after the coating of paraffin has been applied over the printed matter, the colored ink presents a beautiful appearance, looking much like printing on celluloid.

It would be difficult to print on paper stock which contains a heavy coating of paraffin, but it would be less difficult to print on stock which has been coated with silicate of soda. However, it is advisable to have all printing done before any kind of coating is applied.

PARAFFIN

Paraffin is a white, translucent, crystalline substance, tasteless and inodorous, and is obtained from the distillation of mineral and vegetable tar. It fuses from 120° to 130° Fahrenheit. When used as a coating for paper board it is applied hot, and it sets immediately by cooling. Its use makes paper water-proof, but not grease-proof.

SILICATE OF SODA

Silicate of soda, or sodium silicate, is manufactured by fusing together silica (sand) and an alkaline soda salt, such as soda ash, to form a kind of glass. By special processes this glass can be made to dissolve in water, hence one well known name for silicate is "water glass." Silicate of soda is made in different grades to suit various requirements, and the grades which are used in the paper and paper box industries are made particularly for the purposes in question.

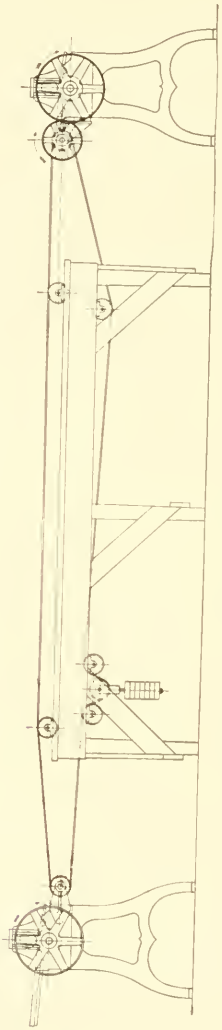
The Philadelphia Quartz Company, of Philadelphia, is one of the largest manufacturers of silicate of soda in the world, and this company is supplying the paper and paper box industries with great quantities of silicate of soda, in various brands, for adhesives, coating material for paper board, etc. The "X" brand of silicate is recommended by this company as an inexpensive, quick-drying, mineral liquid, odorless and colorless, non-corrosive, non-poisonous, yet strongly repellent to vermin. When dry this preparation is resistant to moisture, but is not absolutely water-proof. It is not softened by heat, and is impervious to all kinds of oils and greases.

COATING PAPER BOARD WITH SILICATE OF SODA

When the "X" brand of silicate of soda is properly applied as a coating to paper board, it tends to make the board both moisture resistant and grease-proof. By this process a great deal of cracker shell stock for cartons is made grease-proof and sufficiently damp-proof. By treating the stock for paper plates, butter and lard boxes, and containers for oils and greases, with a coating of silicate of soda, they are made impervious to grease.

Some manufacturers of cartons for butter, lard, etc., are making the cartons water-proof as well as grease-proof by having the paper board first coated with silicate of soda and then having the stock

coated again with paraffin. Paper milk bottles and other paper vessels for commodities containing a considerable quantity of water will serve their purpose to the best advantage when the stock from which they are made has first been coated with silicate of soda and



Knowlton Equipment for Coating Sheet Stock with two different solutions.

then with paraffin. The silicate keeps out the grease, including the paraffin itself, and the paraffin holds the moisture.

Even when folding boxes and other containers need only to be water-proof, it is sometimes economical to first apply a coating of

silicate before applying the paraffin, as this saves some of the paraffin. The silicate seals the surface pores in the paper, and when the paraffin is applied only a thin coating is essential for the reason that it will not soak into the paper. When the paper board has first been coated with silicate of soda, a thin coating of paraffin will do just as well as a thick coating.

Coating paper board with silicate can be done on the same kinds of coating machines as are used for paraffining—for example, flat sheets may be coated on the Knowlton sheet covering machine, and rolls of paper or board may be coated on the Knowlton roll coating machine. These machines are very simple in construction and operation. There are two rollers which are adjusted to pinch the board, or paper, between them, applying the coating solution to one or both sides of the stock, as desired.

It is not necessary to heat silicate of soda for coating, although the temperature of the room should not be too low. Nevertheless, when the silicate is run warm it spreads somewhat further than when run cold.

To insure an even coating of the silicate and to prevent it from hardening on the rollers the machine should be kept running continuously. The machine should be kept clean, and when stopped for a period, the rolls should be washed with hot water or with live steam. When silicate hardens on the rollers it is difficult to remove. Either steel or hard rubber rolls will give good results on the machine, but for rough stock rubber rollers will produce the best results.

The quantity of silicate of soda to be applied varies according to kind of stock and the purpose of the coating. Porous stock naturally requires a larger quantity than close-grained paper. A thin coating, averaging about five pounds of silicate to 1,000 square feet of stock, is sufficient for cracker shell paper, or as an under coat for paraffin. For stock which is to resist oils and greases, a heavier coating is required.

The proper strength of the silicate depends a great deal on the kind of stock. The aim is to have the silicate penetrate the surface pores of the paper and thus form a continuous film over the entire surface of the stock. If used too heavy it might lie on the surface of the paper and tend to crack or peel off. Or, if diluted too thinly it may soak in without forming the continuous film. For the average grade of stock the "X" brand of silicate should be diluted by adding one volume of water to six of silicate (by weight, one part of water and seven parts of silicate). Porous stock may require undiluted silicate.

Dried silicate of soda is unaffected by oils, fats, or greases of any

kind. When properly applied to wood or paper products, it possesses valuable grease-proof and water-resistant properties. Silicate is also fire-resistant.

METHOD OF COATING SHEET STOCK WITH TWO DIFFERENT SOLUTIONS

As mentioned elsewhere in this chapter it is often advantageous to have paper board for damp-proof and grease-proof cartons coated with two different solutions like silicate of soda and paraffin. For this purpose the Knowlton Company has designed special equipment which accomplishes the double coating work at a great saving in time and labor.

This special equipment consists of two Knowlton sheet coating machines, placed at a certain distance apart and connected by a rope conveyor. The sheet stock is first fed through the first machine where it receives a coating of silicate of soda. By means of the conveyor the sheet is then carried on slowly to the second machine where it receives the coating of paraffin. The sheets remain on the conveyor for a sufficient length of time to allow the silicate coating to dry or set to such an extent as to enable it to take the coat of paraffin in the right condition.

PARAFFINING STOCK FOR FOLDING BOXES AND OTHER KINDS OF CONTAINERS

Paper board for folding boxes and cartons is paraffined in the same way as the stock is coated with silicate of soda. For butter and lard containers, in the case where the stock is not first coated with sodium silicate, a thick coating of paraffin is applied. Large rolls of paper or board may be paraffined on a roll coating machine, and flat sheets of stock can be coated with paraffin on a sheet coating machine. Printing for butter cartons, etc., is usually done on the stock before the coating of paraffin is applied.

The paraffin is kept in a molten condition on the machine by means of steam, gas or electric heating. The Knowlton Company also supply a mixing and cooking machine which is used for melting and mixing adhesives and liquid coating materials. This device is useful in connection with the work of paraffining.

Paper milk bottles, paper cans, and other paper containers of this variety may be made more or less water-tight by paraffining. This may be done by submerging them in hot paraffin, or by pouring molten paraffin in and out of the paper vessel.

Paraffin may be purchased from large wholesale drug concerns, or from large oil refining companies.