

TECHNOLOGY

Research Brings New Advances In the Field of Packaging

Pickles in Plastic "Bottles"; Shoe Shine Outfits That Do Not Smear Hands; Medicated Wound Dressings

By WATSON DAVIS

PICKLES and juice packaged in a plastic "bottle" made of a bag of transparent film. A new kind of collapsible tube, opened by a dig of the thumbnail, containing a medical dressing soaked in liquid ready for application to burns. Coffee vacuum-packed in paper-plastic bags. Buttons fixed between transparent films instead of being sewed on cards. A vacuum valve can for vegetables that allows them to be cooked thoroughly in only 30 seconds. A shoe shine outfit that squirts the polish from a tube directly into the brush, keeping the hands clean.

These, and 30,000 other new packages were placed on the shelves of American stores during the past year as a result of the cooperation of scientists and designers with American industry.

It's a far cry from the old-fashioned cracker and sugar barrel, symbolic of the primitive days of unpackaged merchandise, to the modern containers being displayed in New York as a result of the current All-American Package Competition.

Most striking is the use of transparent sheeting, made from rubber and synthetic resins, allowing the prospective customer to see what he is buying.

Brine in Package

Pickles swimming in their own brine within a flexible and almost invisible combination film of rubber and cellulose acetate sheeting, capable of being handled roughly without danger of spilling, is perhaps the most novel package in the display. Less expensive than the conventional glass bottles, the new transparent pickle bags are expected to decrease the cost of distributing this food product to the housewife. Olives, too, will soon appear in bags of transparent film.

In the frozen food field a new method of applying transparent rubber sheeting offers a means of eliminating freezer burn and allows for a seamless sealed container for quick frozen food and other products.

Science's ability to make transparent plastic sheeting that is both air and waterproof is making it possible to package in plastic bags coffee and other products that need protection against the atmosphere.

The new type of tin can for food, made with a one-way pressure valve in its top, not only will allow speedier production of canned food by the canner but, according to claims, retains a more delicious flavor in the contents of the can.

Boxes for Display

Cardboard or fiber board is replacing wood to a large extent in the manufacture of the larger containers such as for bicycles and apples. One manufacturer of bicycles has adopted a container that does not contain a single nail or piece of wood. It is opened with a knife instead of a hammer. Apples and other fruits are being merchandised in fiber board containers, easier to open, and often so decorated that they can be used as displays in stores. In another case a gridiron is packed in a fiber board container lithographed to imitate a popular brand of expensive airplane weight luggage.

A button manufacturer developed a new card for displaying and distributing buttons because it was cheaper than the conventional methods of sewing to the cards. A sheet of transparent material made from rubber, heat pressed between two pieces of card, holds the buttons securely in place. Buttons are removed by breaking the film with a fingernail.

"Laboratory researches of the depression years are responsible for the revolutionary new types of packages, package materials and packaging processes which are now appearing on the market," it is declared by Charles A. Breskin, publisher of *Modern Packaging Magazine*, which sponsors the All-American Package Competition.

Cheese is being marketed by some 90 per cent. of the American cheese industry in transparent heat-sealed bags, into which the cheese is poured as a hot,



PACKAGED LIQUID

Pickles packed in plastic "bottles," one of the newest advances in the packaging field, are shown.

gummy fluid and in which it hardens in brick form.

A new aluminum coated steel can, called by its inventors the "metal bottle," is being used for beer. A drawing process completely eliminates top and side seams.

Ice cream has its first factory-sealed package, which can be opened by pulling a string inserted around the center of the fiber can.

Lard is dished out by the cook in the kitchen without waste and handling of greasy paper in a new square carton.

Ruffling, trimming, and even blankets have new transparent plastic containers.

Places for Old Razor Blades

A novel razor blade package pops out a new blade at the press of a finger and provides at the same time a receptacle for used blades.

An ingenious use of small screw top jars with their lids affixed to a revolving support, provides a new way of displaying and dispensing everything from nails to spices on hardware and grocery store counters or in the home or workbench and kitchen cabinet.

Perfume, cleaning fluids and other liquids are dispensed by a little rubber pump set in the top of a bottle cap.

For shippers of metallic merchandise and particularly exporters of water-borne goods, science has developed a technique whereby a moisture absorbing material is used to minimize the humidity con-

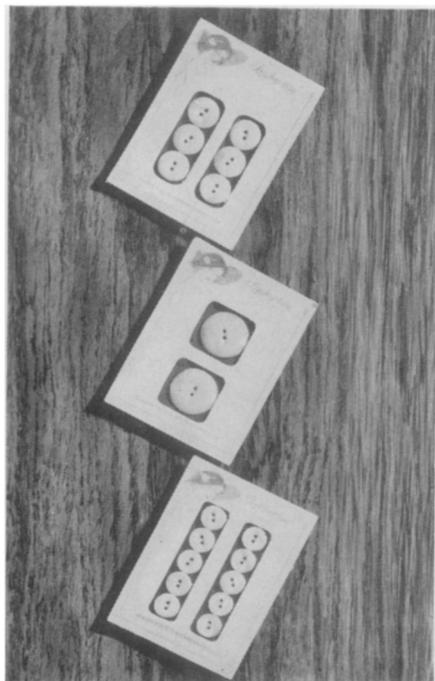
tent of the shipping container, thus eliminating mold and rust formations.

Plastic transparent bags are invading the domain of the tin can for processing and packaging food products. The blanched vegetables and other prepared foods are placed in a transparent envelope which is heatsealed and placed in cooking chambers where it is subjected to high temperatures and pressures. After the sterilization, the bags are removed and placed in printed folding boxes, wrapped in transparent cellulose when they are ready for merchandising.

The claim of the packaging expert is that due to the new kinds of containers packaged goods can be sold at as low a price as the old-fashioned unpackaged materials that sat around in barrels in the grocery store. The consumer is given the advantages of sanitary handling, uniform quality, regulated size and weight, often at a lower cost, as a by-product of new invention and design in the packaging industry.

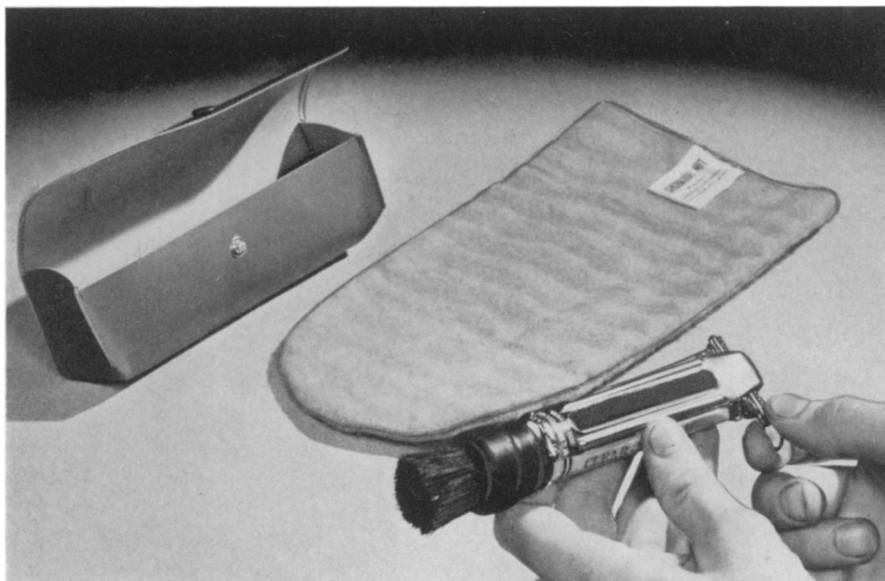
Science News Letter, March 16, 1940

Danish fishermen have been warned not to use their radio senders in mine infested waters, because such senders have been known to induce electrical currents strong enough to explode mines.



NEW STYLE

No longer are buttons sewn on display cards. These are fastened on cards with layers of transparent Pliofilm and can be removed individually.



FOR CLEAN HANDS

Here is the latest trick in shoe polish. Squeeze the tube and the paste comes out through the brush so that it can be applied without smearing the fingers.

METALLURGY

Molten Metal Formed Continuously Into Rods

LAATEST to join the increasing number of technologic processes to be performed continuously, instead of intermittently, is the casting of rods and tubes from molten metal.

After a relatively long period of development, continuous casting is applicable in principle to all metals and alloys, although most of the work has thus far been done on copper.

The equipment and process themselves are fundamentally simple, as described by an industrial bulletin issued by Arthur D. Little, Inc. The molten metal flows from a reservoir out of a water-cooled tube at the bottom. As the metal flows down the tube it solidifies into a rod, which is cooled by an accurately adjusted spray as it is continuously withdrawn. Exact control over all these operations is necessary for successful operation. The flowing metal always solidifies at the same point of the exit tube, and each part of the rod is formed under the same conditions.

Higher quality of product is promised by the new process. There is no chance for components of alloys to segregate out, air and other gases in the molten metal are not trapped in the solid metal, producing flaws, and the crystals into which the solidifying metal forms are large.

Due to high quality, the use of continuously-cast rods, instead of the usual

ingots, is foreseen as the raw material from which wire is drawn.

Science News Letter, March 16, 1940

More than 31,000,000 pine seedlings have been planted by land owners in Florida in the past 12 years.

Interested?

in Science, growing improved vegetables, giant flowers in home or garden

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