Inventions New and Interesting

A Department Devoted to Pioneer Work in the Arts

Exerting an Even Pressure on Irregular Surfaces

WHAT is claimed to be an entirely new application of a mechanical principle, has been recently made in the construction of an attachment for a vise by which the latter may be made to take a firm hold on all irregular surfaces and shapes. No matter what the lines of a piece of work may be, equal pressure is exerted throughout its length and it is firmly secured in the jaws of a vise supplied with this equalizing device. This will save much time in shops where in order to handle irregular shapes the men are called upon to make blocks to equalize the pressure of the jaws so that the piece may be held securely while being worked.

According to the manufacturers, the mechanical principle may be likened to a number of round balls resting in a row, slightly off center. When the pressure is applied to the end balls, all of the others will move out of line in opposite directions. Thus by arranging a number of lugs in opposite directions, with curved contracts on a channel, these lugs will act as compensating wedges and force the gripping lugs to protrude from the channel and automatically equalize any pressure which may be applied.

The article to be held is placed in the vise and the jaws brought together and then a few turns of the exposed screw heads of the device bring all the lugs in equal contact, after which a slight additional turn on the vise handle is given and the grip on the object is absolute. The principle involved in this invention has been applied to the locking up of printer's forms and here it will also be the means of saving much time. The system now generally in vogue requires the workman to make several adjustments to each of many quoins before getting the form locked up securely. The new method calls for manipulation at two points only and a tremendous pressure is distributed where required throughout the chase by screw pressure. It provides a straight edge next to the form which is always locked up perfectly true.

Sanitary Can and Sealing Machine

THE new can for putting up fruit and vegetables will be appreciated by the housewife who likes to have her table look pretty. Fruits and vegetables can be packed in these can without cutting, such as large tomatoes and peaches that would not go into the old-style cans. The can is open entirely so that the packer can see just how the can is being filled and can arrange her fruit to the best advantage.

A sealing outfit goes with these cans which quickly and easily closes the cans without the use of solder. The entire cover is off when the can is received. It is full size and has a rim bent down to hook up under the flange of the top of the can body in such a way as to form a tight joint without the use of solder. The covers are lined with a gasket or preparation to make the joint doubly sure. The sealing operation is quite simple. The can when filled is placed on the can base of the sealer machine which is grooved to fit the bottoms of different sized cans. A lever below this base is turned to the right, raising the can against the sealing chuck and pressing the cover down tightly on the can. Another lever is turned which rotates the can and the sealing rolls are brought against the rim of the cover by turning the small hand wheel, first one way and then the other. The first roll curls the can cover up under the edge of the can body and bends the

A new type of grip for the vise

flange of the can body down into the bend of the cover. The second roll squeezes the seam tight so that it will sustain over twenty pounds of pressure. This makes an airtight joint.

This little outfit is a great convenience to the housewife who does her own preserving and canning, in these days of food conservation.

At the command of a push button, this centrifugal windshield revolves and clears itself of snow, rain, mist or dust

Clearing the Windshield of Rain and Snow by Centrifugal Action

NOT contented with the numerous methods of keeping the automobile windshield clear of rain and snow and other things which interfere with the visibility of the driver, an inventor has lately developed an ingenious centrifugal form of windshield based on the centrifugal

principle. While it is simple in construction and readily applied to any existing windshield, it apparently "does the trick," to use a good colloquial expression.

The centrifugal device, it will be noted in the accompanying illustration, consists essentially of a plate-glass disk revolved at a high rate of speed by a small electric motor. The disk is inserted in a hole of slightly larger diameter, in the windshield, leaving but a small clearance. The speed of the revolving disk is 2,000 r. p. m., and by the use of fine ball bearings a tiny motor is sufficient for the work in hand. Current for the motor is provided by the usual battery of the automobile, and the designer claims that the windshield device costs less to operate than a single headlight. Obviously, the centrifugal windshield does not have to be operated continuously, and to this end a push button installed in a convenient place on the regular instrument board is used to control it. Whenever the windshield becomes covered with rain, snow, sleet, mist or dust, the push button is pressed, and instantly the circular plate in front of the driver is perfectly clear.

While the standard-sized plate-glass disk is seven inches for use on automobiles, the makers are ready to supply larger disks and equipment for use on street cars, airplanes, battleships and wherever else such a device is now needed to ensure clear sight at all times.

Enemy-Owned Patents

THE Trading-with-the-Enemy Act provides that any person in the United States who holds or has custody of any property of, for, or on behalf of an enemy or ally of an enemy, or who is indebted to an enemy or ally of an enemy, or to any person whom he may reasonably believe to be such, shall make report of this fact to the Alien Property Custodian.

It is estimated that there are over a thousand enemy owned or controlled patents used by manufacturers in the United States that are earning royalties or fees of some kind for enemies. Less than one-fifth of them have been reported to the Alien Property Custodian. This means that 800 persons, inventors, manufacturers, agents, holders or licensees are making themselves liable to the penalty of \$10,000 fine or 10 years' imprisonment or both.

If the persons using these patents will not report, it becomes the duty of loyal and patriotic citizens to do so, or at least to send in information on which the Government may proceed. At the request of the Custodian, the SCIENTIFIC AMERICAN takes this opportunity to call the provisions of the Act to the attention of all concerned, and to urge them to cooperate in causing reports to be made of patents, royalties, or other property or debts coming within the provisions of the Act. In case of

doubt, the facts should be reported and the Alien Property Custodian will make whatever investigation is necessary.

Price Fixing Contracts on Patented Articles

By E. B. Marshall

IN the recent case of Boston Store of Chicago vs. American Graphophone Co. and Columbia Graphophone Co., the United States Supreme Court has again gone over the questions which have been repeatedly raised as to the right of a patentee who delivers his patented article to another for a gross consideration then received, to reserve by contract a part of his monopoly right to sell. This question has been presented to the Courts in various ways each time in the hope that with some change in

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Machine for sealing fruit cans in the kitchen

The home canner in operation

careful and painstaking work of the engineers in charge.

By glancing at the accompanying drawing it will be noticed that the north bound local track does not pass under the existing subway but joins it just below Forty-first Street. The Diagonal Station is placed at a much lower grade than the present subway station, and were the north bound local to rise from the station to the level of the existing subway at the point the two intersect the grade would be too steep for its intended use.

The building line at Forty-first Street is close to the existing subway so that the new track cannot run off to the side and the only way in which connection can be made with the north bound local is to lower the grade of the existing tracks at this point. One of our photographs very clearly shows the difference in level at this junction.

The new local tracks pass under the old northbound local for a considerable distance, and when the Fourth or Park Avenue line is finally connected with the Lexington Avenue subway, the existing north bound local track will have to be cut away and connection can then be made with the new track at a point near Fortieth Street.

In our drawing the various levels are indicated by differences in shading. There is a broad mezzanine platform extending over the Diagonal Station and connected with the present subway station by means of a ramp. In this mezzanine platform there are a number of large elevators which run down to the Queensborough tunnel, formerly known as the Belmont tunnel, and prior to that as the Steinway tunnel.

The present subway platform will be extended so to bring the shuttle trains nearer the Diagonal Station. A large part of the Lexington Avenue subway is double-decked. The express tracks being on the lower level and the local tracks on the upper level; where they are more readily accessible to the street. A very interesting development is to be found at the 125th Street station. Here the subway performs a corkscrew twist which is very complex but which has a very good reason for its existence. As the subway is in two levels it has been planned to have downtown trains on the lower level and uptown trains on the upper level, the purpose of this being that, as most of the traffic is south-bound in the morning, there will be no hardship in going down two flights of stairs to reach the lower level. In the evening, when the rush is north bound, tired passengers will be much relieved to find themselves on the upper level with only a single flight up to the street; and thus, while both express and local north bound trains are on the upper level here, we find further downtown that the expresses have been separated from the locals, with the express trains on the lower level and the locals on the upper level.

In the region above 125th Street there is another complication. Trains, after passing under the Harlem River, branch toward the west and the east, one line running under Jerome Avenue and the other under Westchester Avenue. Trains coming from these two branches down to 125th Street remain upon their own side of the track—those from the one branch on the west side and the others on the east side, whether they are locals or expresses. After passing the station they are routed on the express or local tracks. North-bound trains, on the other hand, are switched over after passing the 125th Street station according to the branch that they are to take. In order to avoid switching upon coming into a station and to allow for it after the station has been passed, a very complicated arrangement of tunnels is provided.

In a general survey of the new line one cannot but be impressed with the intelligence and foresight shown in planning this piece of New York's great subway system. At the same time the work stands out as one of the most notable undertakings in a city renowned for its big and daring engineering achievements.

Price Fixing Contracts on Patented Articles

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the facts a decision would be handed down which would enable an inventor to retain certain rights in connection with the resale of patented articles.

A brief statement as to the previous cases considered by the United States Supreme Court in which this question was involved will be of interest. In the case of Bobbs-Merrill Co. vs. Straus it was held that a copyright on a book did not give to the proprietor the right to vend the book and by a notice placed in the book fix a price below which it should not be resold by all those who might subsequently acquire title to the book.

In the case of Dr. Miles' Medical Co. vs. Park & Sons Co., it was held that under the general law the owner of movables could not sell the same and lawfully by contract fix a price at which the product should afterwards be sold, because to do so would be at one and the same time to sell or part with, and retain or hold.

In the case of Henry vs. A. B. Dick Co., it was held that the owner of patents on a machine had the right in selling one of the machines to make a contract with the purchaser requiring the latter to buy from the owners of the patents all materials essential for working the machine. At the time this case was decided there was one vacancy on the United States Supreme Court Bench and one member of the Court was absent. In the subsequent cases of Bauer vs. O'Donnell and Straus vs. Victor Talking Machine Co., rulings were made in conflict with the doctrine announced in Henry vs. Dick, which case was consequently overruled. The case of Bauer vs. O'Donnell held that the right of a patentee to impose a restraint on the price of future sales of a patented article was not within the monopoly conferred by the Patent Act.

In the case of Straus vs. Victor Talking Machine Co. it was held that it was necessary for the Court to consider the substance of things and to disregard mere forms of expression as to licenses, etc., the Court ruling that the contract in this case was obviously in substance a sale of the patented article with the reservation limiting the price at which the patented article might be resold. Applying these cases, the Court, in deciding the case of Boston Store vs. American Graphophone Co. *et al*, held that although a contract was prepared in the form of a license, there was nevertheless an actual sale of the patented article, and this being so the owners of the patent could not lawfully reserve by contract a part of the monopoly right to sell granted under the patent. The law on this question is now clear, for from the above cases it will be seen that the Courts will not look with favor on any form of contract which may be used with a view of reserving the right to fix the price on the resale of articles protected by patents.

Improving Fish by Smoking It

THE smoking of fish of good food quality that is not generally in demand on account of the flavor or on account of bones is advocated by the United States Bureau of Fisheries. As a result of the smoking process, the flavor and the texture are improved, and the bones may be removed easier than in the case of fried, baked, or broiled fish.

Smoked fish may be kept several weeks if protected from mold. This process should solve the problem of fishermen who find it difficult to dispose of their catch of "coarse" fish, except at the very lowest prices, as properly smoked fish commands a higher price. A small smokehouse for fish would also be a profitable investment for owners of fishponds and even for householders who are able to secure fresh fish at nominal prices.

The general method of smoking fish and the construction and operation of a small smokehouse that has proved satisfactory are described in a circular which will be supplied free on application to Division F, Bureau of Fisheries, Washington, D. C.

Why Doesn't Your Automatic Telephone Rust?

When the warm days come—and you are working your trusted Automatic overtime to keep up with the war time activities of your organization—why doesn't the base stand or transmitter rust?

When the acid from the perspiration of your hand works its way through the enamel down to the metal, why doesn't the steel corrode and shortly cause the enamel finish to flake away?

To forestall these conditions the Automatic Electric Company uses the Parker Process. The Parker Process prevents rust and thereby insures all users of the automatic Telephone a permanent finish—and a permanent service.

A Book on Rust-Proofing for Industrial Executives

No matter what you manufacture—if you use iron or steel in any way—you will find valuable information in the Parker Process book. This explains how the Parker Process is rapidly reducing the great toll rust takes annually from our steel supply—how it is being used on metal articles from motor trucks to typewriters—and how easily you can apply it to your own product without in any way interfering with your present production plans. For your copy address

In addition to the base stand and transmitter the Automatic Electric Company rust-proofs the cores and armatures of all coils—as well as other small parts of exposed metal. This is the third year that the Parker Process has been used in the production of the Automatic Telephone.

PARKER RUST PROOF COMPANY of AMERICA

DETROIT, MICHIGAN, U. S. A.

PARKER PROCESS

RUST PROOFS IRON AND STEEL