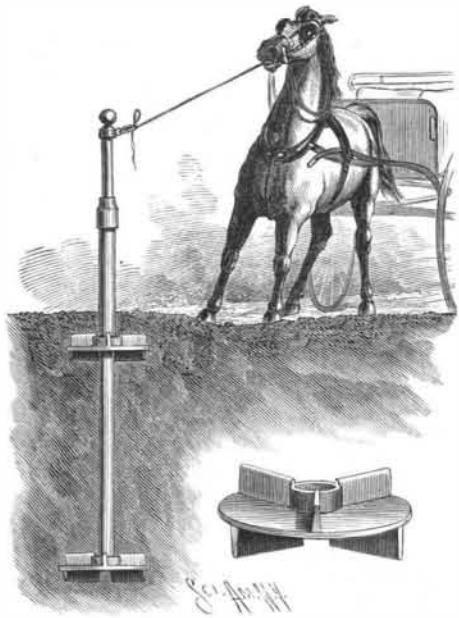


**AN IMPROVED ANCHOR FOR POSTS.**

A simply constructed anchor for hitching, fence and other posts, whereby great stability is obtained, is shown in the accompanying illustration, and has been patented by Mr. William P. Logan, of No. 726 Second Street, Trenton, N. J. The anchor is formed of a single metal casting, in the form of a circular plate with a

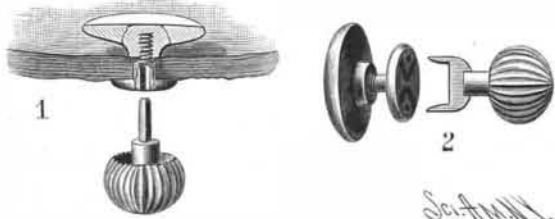


LOGAN'S POST ANCHOR.

central hole to receive the post, a hub surrounding the hole on the upper face of the plate, with a set screw for adjusting it on the post, and a series of rigid wings projecting from the upper and lower faces and radiating from the central hole. A detail view of the anchor is shown in the small figure, and two of them are applied to the hitching post, one secured to the lower end of the post and the other only a few inches below the surface of the ground, this setting giving great stability.

**AN IMPROVED SEPARABLE BUTTON OR STUD.**

A button or stud which may be readily attached to and detached from an article of dress, and which, when attached, will be firmly held until removed by hand, is shown herewith, and has been patented by Mr. Simon B. Simon, of No. 76 East Eighty-first Street, New York City. The body of the button, shown in Fig.

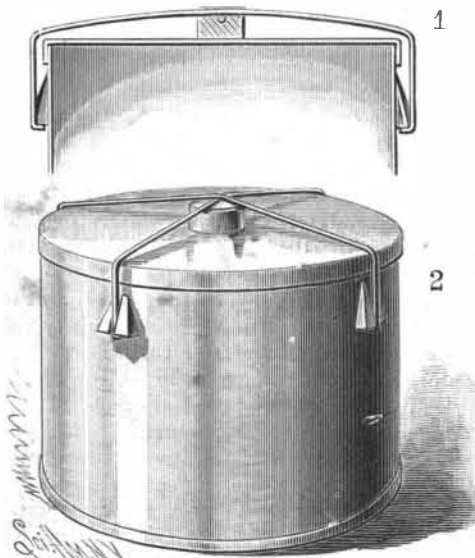


SIMON'S SEPARABLE BUTTON OR STUD.

1, has an integral neck with threaded aperture, and the shank is exteriorly threaded and made integral with the cap, which has in its center a rectangular recess, adapted to receive the square stem of a key. In inserting the button, the shank is passed through an opening in the cloth until the cap is brought in contact with the under side, when the body is screwed upon the shank and the cap and body firmly united by use of the key. In the button illustrated in Fig. 2, the cap is provided with two spaced apertures or recesses at each side of the center, adapted to receive the key, which is made in this instance with a bifurcated shank.

**A SIMPLE COVER FASTENING FOR JARS.**

A cover fastening for jars which is simple and durable in construction, and holds the cover very securely



PALMER'S COVER FASTENING FOR JARS.

to the jar or casing, is shown herewith, and has been patented by Mr. F. H. Palmer, of Long Island City, N. Y. It consists of a metallic casing having on two or more opposite sides, near the top, wedge shaped lugs or projections, each with a vertical groove on its outer face. The cover has in its center on top a post to which are secured metallic springs, extending at their outer ends to the side of the casing, where they are bent down and inward to form catches, the ends of the springs being in line with the grooves of the lugs. The post elevates the springs sufficiently to prevent them from coming in contact with the cover, and upon pressing the ends of the springs down until the ends of the catches pass under the lower ends of the lugs, the cover or lid is held firmly in place on the mouth of the casing.

**Progress of the Natural Gas Industry.**

"Few people outside of the natural gas region," said a large owner of gas wells in Washington County, Pa., "have any idea what enormous proportions the gas business has grown to. It may be said to be only about two years old in Western Pennsylvania, and more than 200,000 acres of land in Washington and adjoining counties have been drilled with gas wells. Nearly 150,000 tons of iron have been used in manufacturing the pipes through which the 500,000,000 cubic feet of gas that flow from the region daily are conveyed to the places using it. Over \$25,000,000 is invested in the business by the fourteen organized companies that produce the bulk of the gas. The land and wells represent an outlay of \$17,000,000. The wells now producing are capable of doubling the quantity now demanded for light and heat. Nearly 2,000 miles of mains are required for conducting the supply to consumers. It is estimated that the use of natural gas has displaced 25,000 tons of coal daily in Western Pennsylvania and Eastern Ohio alone. Besides the wells controlled by the great gas-producing companies, individual owners have wells for the supply of the smaller towns, and every village and hamlet in the region has enough natural gas running to waste every day to abundantly supply the same number of towns of 10,000 inhabitants each with light and fuel."

**AN IMPROVED TOASTER.**

A simple and effective device to facilitate the making of toast over gasoline and similar stoves, preventing the gases from the flame from injuriously affecting the bread, is shown herewith, and has been patented by Mrs. Julia A. Downey, of Oberlin, Ohio. The toasting plate is preferably made of steel, of a size to fit the opening in the top of the stove, and has an upturned rear end provided with a suitable handle. A wire frame is hinged to the upturned rear end of the plate, the frame being hinged by rings that encircle the rear wire of the frame and pass through apertures in the upturned end. A catch at the front of the plate serves to hold the frame down thereon, the bread to be toasted being placed on the wire, when it is not burned by contact with the plate nor affected by the gases from the flame. This device has been thoroughly tested, and can be used on vapor or oil stoves, or those of a general character, or with open fires, as well as on gasoline stoves.

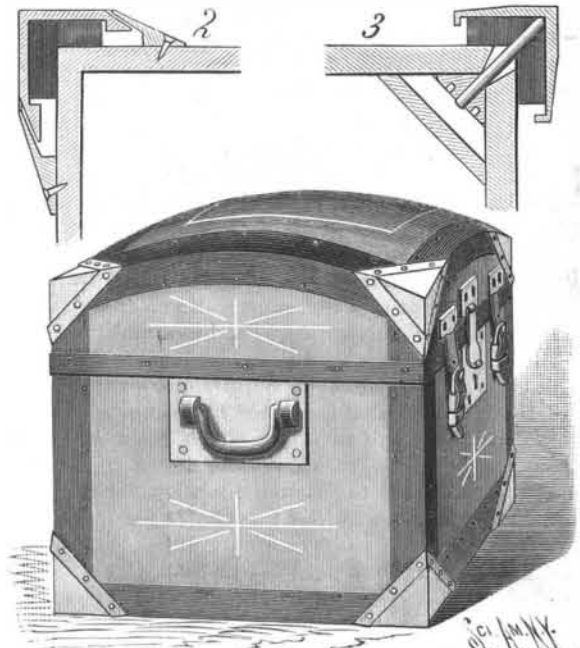
**Etching on Glass.**

A clean glass plate is coated, without being warmed, with a solution of gum dammar in ether. The exact strength of the varnish is immaterial, though it should not be too weak. When the ether has evaporated, we can light up our smoke factory—the benzoline lamp—and hold the glass, film downward, in the flame, moving it about with a circular motion to prevent the heat being concentrated in one part, which would probably crack the plate. The center of the flame consists of vapor of benzoline, which softens the dammar to such an extent that the soot is absorbed by the film as fast as it settles thereon. If this simple operation is properly done, a quarter or half plate sized glass can be smoked to opacity and will have a smooth, bright surface, which is in excellent condition for being etched, and is quite hard enough to form its own protection—that is, it does not require varnishing.—*Br. Jour. of Photo.*

**A PROTECTOR FOR TRUNK CORNERS.**

A device adapted for attachment to the corners of a trunk, to protect the trunk from being injured by rough usage in transportation, is shown herewith, and has been patented by Mr. Francisco Garcia, of No. 57 Beaver Street, New York City. A triangular base plate is provided, with inclined outer face, a central triangular recess, and a series of apertures adapted to receive screws. Within the recess is inserted a pyramidal cap, with a flange coming in contact with the inner surface of the base plate, thus limiting the outward movement of the cap, yet admitting of a movement inward. A rubber block with angular recess, adapted to fit snugly the trunk corner, is placed in the pyramidal cap, which is entered in the recess of the base plate, and, after the rubber has been brought into engagement with the trunk corners, the base plate is

securely screwed to the sides of the trunk adjacent to the corners, as shown in section in Fig. 2. In the form of corner shown in Fig. 3, a triangular or pyramidal plate is held against the rubber cushion on the corner by a threaded rod made integral with the plate, and passing through the cushion and an aperture in



GARCIA'S TRUNK CORNER.

the trunk corner, the end of the rod within the trunk being provided with a nut, and the nut and rod being adapted to have play within a corner compartment formed in the trunk. In both cases an elastic block comes between the iron corner piece and the trunk, and allowance is made for the expansion and contraction of the block.

**AN IMPROVED VEHICLE BODY SUPPORT.**

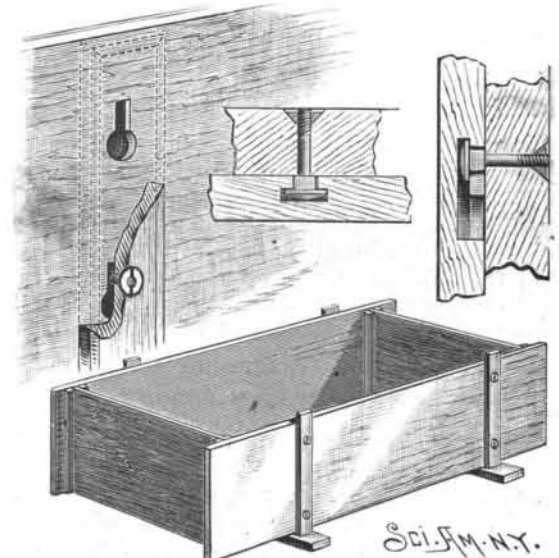
A method of attaching the panels of vehicles to their pillars or supports, whereby the panels will be securely and rigidly held in position and the inner faces of the panels will remain unbroken, is shown in the accompanying illustration, and has been patented by Mr. Fredrick M. Renner. One of the views represents a sec-



DOWNEY'S TOASTER.

tion of a panel with the support partly broken away, the other figures giving transverse sectional and longitudinal views and a perspective view. The face of the panel adapted for engagement with the supports is provided with aligning recesses extending through about half the thickness of the panel, a slot with undercut portion extending from each recess. Into each recess the head of a screw bolt is entered, the body of the bolt projecting out through the slot, suitable countersunk apertures being made in the pillars or supports to receive the bolts, by which the panels and supports are drawn to close and firm contact. The bolts, where they engage the slots, are preferably made square, to prevent turning, making a secure and rigid fastening.

For further particulars relative to this invention address Mr. Joseph Cabus, Jr., No. 206 West Eighteenth Street, New York City.



RENNER'S VEHICLE BODY SUPPORT.