No. 649,153. Patented May 8, 1900.

J. H. ASHBAUGH & C. L. WEBSTER.

APPLIANCE FOR MENDING TINWARE

(No Model.) (Application filed Aug. 21, 1899.)

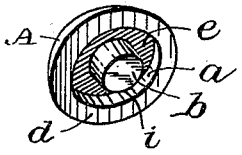

Fig. 1.

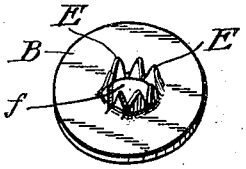

Fig. 2.

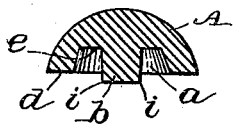

Fig. 3.

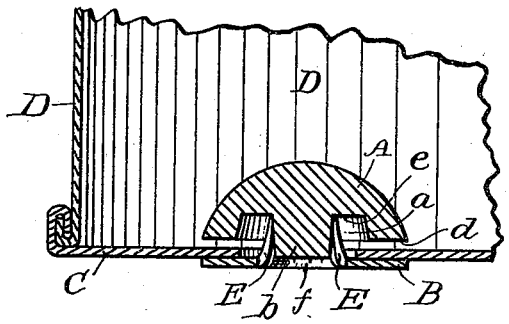

Fig. 4.

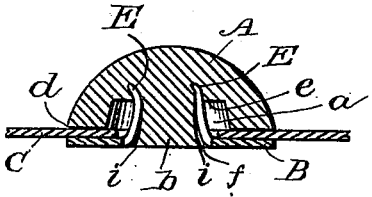

Fig. 5.

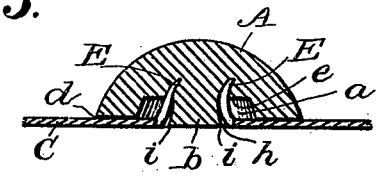

Fig. 6.

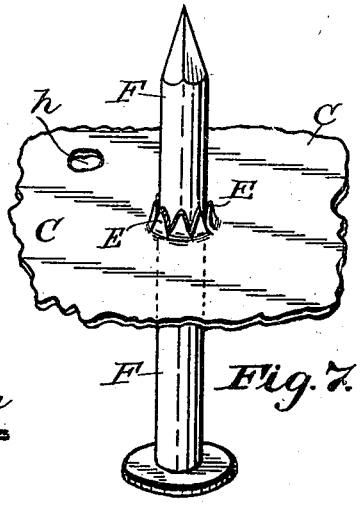

Fig. 7.

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UNITED STATES PATENT OFFICE.

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APPLIANCE FOR MENDING TINWARE.

SPECIFICATION forming part of Letters Patent No. 649,153, dated May 8, 1900.

Application filed August 21, 1899. Serial No. 727,926. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. ASHBAUGH and CHEEVER L. WEBSTER, citizens of the United States, residing at Irvington, in the county of Marion and State of Indiana, have invented certain new and useful Appliances for Mending Tinware; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to the class of appliances or devices that are employed in mending or repairing tinware and like articles which leak and become useless on account of corrosion or by reason of punctures or on account of the metal wearing away and causing slight openings or "pinholes" in the bottom of the vessel; and the invention consists in appliances consisting of a ductile cap-plug and clenching-washer of new and novel form of construction and application, whereby a small hole in a vessel may be closed and rendered water-tight without the aid of either heat or other special appliances or tools; and the invention consists, further, in the parts and combination thereof hereinafter described and claimed.

It is well known that household utensils of tinware and like material become damaged and require repairing, necessitating by the usual methods of soldering a greater expense than the article may be worth, and hence it is more economical to discard the article and purchase a new one than to repair it; and it is our object to provide appliances whereby such articles may be repaired at a very slight cost and by the most inexperienced person.

Referring to the drawings, Figure 1 represents a perspective view of the cap-plug or the principal part of our appliances, and Fig. 2 the equally-essential clench-washer part thereof, but which may be formed as part of the article to which the plug is applied; Fig. 3, a central vertical sectional view of the cap-plug; Fig. 4, a vertical sectional view of a fragment of a vessel, such as a tin pail, illustrating the manner of applying our devices, the two parts shown in central section being in position ready for clenching and securing together in a puncture in the bottom of the vessel; Fig. 5, a similar view showing the two parts clenched and the closure effected; Fig. 6, also a sectional view showing the closure effected, but by forming the clench-points as part of the bottom of the vessel; and Fig. 7, a fragmentary perspective view illustrating a corroded perforation and the manner in which the clench-points may be formed as part of the vessel.

Similar letters of reference throughout the several figures designate similar parts.

All the views are greatly exaggerated.

In practically carrying out our invention we cast or forge in a mold or die a cap-plug A, substantially in the form shown in Fig. 1 particularly, the top surface, however, being permissibly of other than the "button" type or semiglobular form shown. It is composed of block-tin, tin and lead, or of other suitable metal sufficiently soft to permit of the clench-points entering the metal, but preferably hard enough to cause the points to turn and clench after entering somewhat, although the clenching in very soft metal may be accomplished by striking the plug-head with a hard hammer or like substance. The lower surface *d* of the plug-head is a plane, but has an annular recess *a*, at the center of which is a shank *b*, forming the plug for the aperture to be closed, and it extends from the bottom of the recess to the top thereof and slightly beyond the plane bottom surface *d* of the cap part. The diameter at the end *i* is preferably less than at its base.

In order to render the cap-plug effective in closing an aperture, we provide clench-points E, which are preferably formed at the inner surface of the vessel around the aperture to be closed; but we provide also a separate disk or washer B, preferably composed of tin-plate, in which is a perforation *f*, surrounded by a series of raised clench-points suitably formed by means of a pointed punch, and is designed to be employed particularly where corrosion has made an aperture too large to permit of turning up the clench-points at the edge thereof.

In Fig. 7, *h* designates an aperture in a metallic plate caused by corrosion, and F designates a common wire nail which may be em-

ployed in raising the clench-points E about such an aperture and at the same time rendering the aperture of proper size to admit the plug *b*, which is made in various sizes to correspond to the different standard diameters of nails, which are usually attainable on most premises. The washers B are adapted to fit the plugs and are put up in packages with them to be used, if required.

In making use of our appliances no special tools are required. If the opening or puncture *h* is unusually large, a cap-plug A is inserted from the inner side of the wall or bottom of the vessel and a clench-washer B applied at the outside, so that the plug *b* enters the aperture *f* of the washer, as illustrated in Fig. 4. Then by means of a piece of wood or any convenient article, while the washer rests upon the floor or upon any smooth surface, as a table or stove-top, the cap-plug is driven down close to the bottom C of the vessel D or against the side plate, as the case may be, some of the clench-points being turned over inward, while others may turn outward in the metal of the cap, causing a complete closure as effectually as by soldering, the face *d* being beaten into close contact with the surface of the plate. Should the aperture permit and a perfectly-smooth finish at the bottom of the vessel be desired, a nail or other pointed implement may be driven through the aperture and the points raised, as shown in Fig. 7, in which case the washer B may be dispensed with, the closure when completed being similar to that shown in Fig. 6. Should the bottom of the vessel be placed upon hard metal when driving the cap-plug with a hard substance, the end *i* may slightly upset in the aperture *f*, which would be somewhat advantageous in some cases, tending to prevent removal of the plug under rough usage. It will be observed that the shank or plug *b* does not extend beyond the under surface of the vessel or washer when finished, the ductility of the metal of which it is composed permitting of whatever distortion may be necessary to insure a plane surface at the outside of the vessel.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. An appliance consisting of a pliable metallic cap-plug formed while in a melted state in a metallic mold and providing a plug and a cap having an annular recess at the base of the plug whereby a pliable annular plane bearing-surface removed from the plug at the under side of the cap is formed adapted to yield to the surface to which it may be applied, said cap being capable of being penetrated and also capable of turning over tin-plate clench-points forced therein.

2. The combination of a tin-plate having a perforation and provided with upturned clench-points at the edge of the perforation, and a soft-metal cap-plug having a central annular recess and a plane bearing-surface surrounding the annular recess whereby to effect a closure of the perforation, and the plug projecting from the center of the annular recess.

3. The combination with a plate having a perforation therethrough, of the upturned clench-points at the edge of said perforation, and the soft-metal cap-plug provided with an annular plane bearing-surface and the annular recess, whereby the perforation is closed and the cap secured in place, substantially as set forth.

4. The herein-described appliance, consisting of the pliable cap-plug having the projecting plug and the annular recess at the base of the plug, and provided with the annular plane bearing-surface surrounding the annular recess, and the tin-plate washer having the perforation and the upturned clench-points at the edge of the perforation, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN H. ASHBAUGH.
CHEEVER L. WEBSTER.

Witnesses:
WALTER E. ASHBAUGH,
MAGGIE M. PATTON.