(No Model.)

G. M. HEYDE.

ATTACHMENT OF HANDLES TO ENAMELED VESSELS.

No. 305,388. Patented Sept. 16, 1884.

Fig. 1

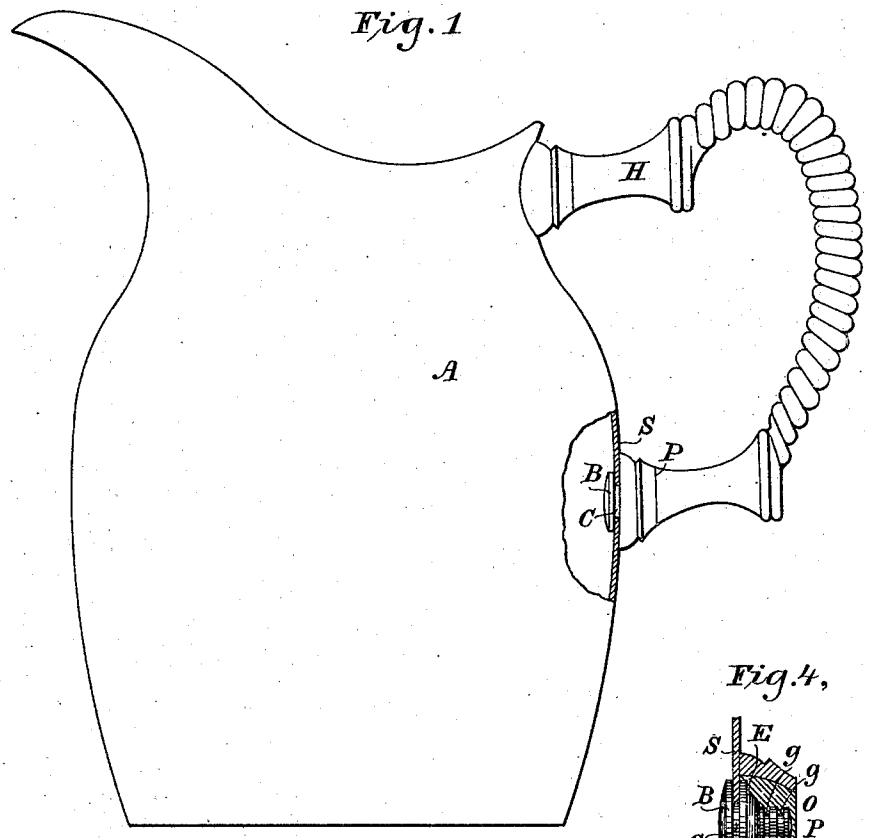


Fig. 4,

Fig. 2.

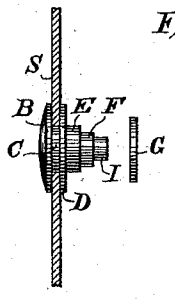
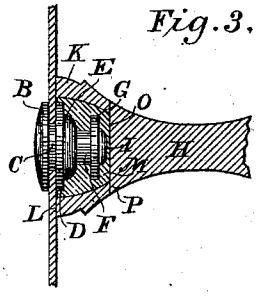


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ATTACHMENT OF HANDLES TO ENAMELED VESSELS.

SPECIFICATION forming part of Letters Patent No. 305,388, dated September 16, 1884.

Application filed February 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORG M. HEYDE, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in the Attachment of Handles to Enameled Vessels, of which the following is a specification.

My invention relates to that class of goods in which a handle of comparatively soft metal is to be attached to those vessels which are constructed of iron, steel, or some similar hard metal, and coated with enamel or porcelain. Vessels thus made and glazed have been found to possess very desirable qualities for all household purposes, and as the nature of the covering is such that solder cannot be made to adhere to the surface, and it will not bear severe hammering—such as might be required for riveting—the attachment of handles to such vessels is a question of great difficulty. The surface should be unbroken, otherwise rust will appear and the vessels soon become useless and are thrown aside.

Heretofore the method of attaching handles to such vessels has been to leave upon the surface of the vessel an uncoated spot when the article was enameled, to which spot a collar or plate is attached by soldering, and to this collar or plate the handle is subsequently soldered. It is found, however, very difficult in enameling this class of goods to leave an uncovered spot. In most cases the enamel, under the very great heat required to render it fluid, runs over the entire surface of the article, and that makes it necessary to grind away the enamel from the spot where the handle is to be attached. This is expensive and troublesome, and even when it is done—inasmuch as the strength depends upon the soldering of a soft and hard metal, which is always an uncertain attachment—the joint is not a strong one, and frequently gives way before the article has been long in use. By my invention I overcome the difficulties and defects of the method which has been described, and secure an attachment of the handle of soft metal to the hard surface of the vessel in a strong and durable manner.

My invention is illustrated in the accompanying drawings, in which Figure 1 is an elevation of a vessel with handle attached according to my invention, and showing the attachment partly in section. Fig. 2 shows in section some of the parts which form the joint. Fig. 3 is a section of the complete joint, and Fig. 4 is a modification.

The invention consists, first, in attaching firmly to the side of the vessel, by means of an aperture therein, a strong bolt or rivet similar to that shown in Letters Patent No. 282,007, granted to Emile Mouhot, July 24, 1883. The head of the rivet is inside the vessel, and at its outer end is secured a strong washer. The rivet and the washer at its outer end are then covered by a ring or collar extending a little beyond the outer end of the rivet. Metal (solder or similar metal) is then poured into the collar until it is full, so that the collar is securely held in its place by the solder, which fills the space behind the washer, which is fastened to the end of the rivet. A flat surface is thus left of the size of the ring or collar, and to this the end of the handle may be soldered in the usual manner.

In the drawings, A represents the vessel, and H the handle.

In Fig. 1 the head B of the rivet C and the section S of the side of the vessel A are shown.

In Fig. 2, S represents the side of the vessel; B, the head of the rivet on the inside of the vessel; C, the rivet; D, a washer of about the same size as the head of the rivet, which fits closely against the side of the vessel on the outside and encircling the rivet C. The rivet is made with two shoulders, E and F; and G is a washer similar to D, but somewhat smaller, which fits over the end of the rivet and against the shoulder F. The rivet C is first passed through the vessel from the inside. The washer D is placed over the rivet and against the outside of the vessel. The shoulder E is then, by suitable machinery or tools, turned over against the washer D in a very firm and strong manner. After that the washer G is put upon the end of the rivet C and against the shoulder F, and the extreme end I of the rivet, as shown in Fig. 2, is turned over and set up against the washer G. The collar K, Fig. 3, is then laid against the side of the vessel, which it is shaped to fit, so as to afford a close contact, as at L, and the collar is filled with solder, M, by pour-

ing through the opening O. As the collar is of soft metal to which solder will adhere in the strongest manner, it is evident that as the solder is poured in it fills all the space beyond the washer G, so that the collar and the rivet are held together in the firmest manner. The outer surface of the collar (represented by the line P) is then made flat, and the end of the handle H, which is also made flat, is laid against it, and the two soldered together in the usual manner. The great advantage of this method of attaching a handle is that it is not attempted to solder together a hard and a soft metal, but only two soft metals are so united together, so that the greatest strength is obtained, for it will be seen that the rivet is held in the firmest manner to the side of the vessel. The collar K is equally held in the firmest manner in connection with the vessel by means of the solid metal around and behind the washer G, while the handle being of similar metal to the collar K the latter is attached in the most reliable manner. Nothing has to be done to the vessel, except make the hole for the rivet C.

Instead of the washer G, one or more grooves may be made in the rivet C, as shown at *g g* in Fig. 4, which grooves will be filled by the melted metal as it is poured in to fill the collar, and which serve the same purpose as the washer—namely, affording a strong attachment and bond between the collar and the rivet.

I claim as my invention—

1. The combination, substantially as hereinbefore set forth, of the body of a vessel, the handle therefor, a rivet extending through the side of the vessel, a washer surrounding said rivet and resting against the outside of the vessel, a portion of said rivet being upset against said washer, so as to firmly secure said washer and rivet to the body of said vessel, a second washer secured to the end of said rivet, and a collar surrounding said rivet and washers, and attached thereto and to the side of the vessel by being filled with soft metal.

2. The combination, substantially as hereinbefore set forth, of the body of a vessel, the handle therefor, a rivet firmly secured to the side of the vessel, a collar surrounding said rivet, and a mass of soft metal filling the space in the interior of said collar.

3. The combination, substantially as hereinbefore set forth, of the body of a vessel, the handle therefor, a rivet firmly attached to the side of the vessel, a washer secured to said rivet, a collar surrounding said rivet and washer, and a mass of soft metal filling the remaining space in the interior of said collar.

4. The combination, substantially as hereinbefore set forth, of the body of a vessel, the handle therefor, a rivet firmly secured to the side of the vessel, a mass of soft metal surrounding said rivet to which said handle is attached, and means, substantially such as described, for holding said mass of soft metal in place.

In testimony whereof I have hereunto subscribed my name this 20th day of February, A. D. 1884.

GEORG M. HEYDE.

Witnesses:
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