Tebes & Muhle,

Casting Metal Spouts.

No. 12,086. Patented Dec. 12, 1854.

Fig. 5.

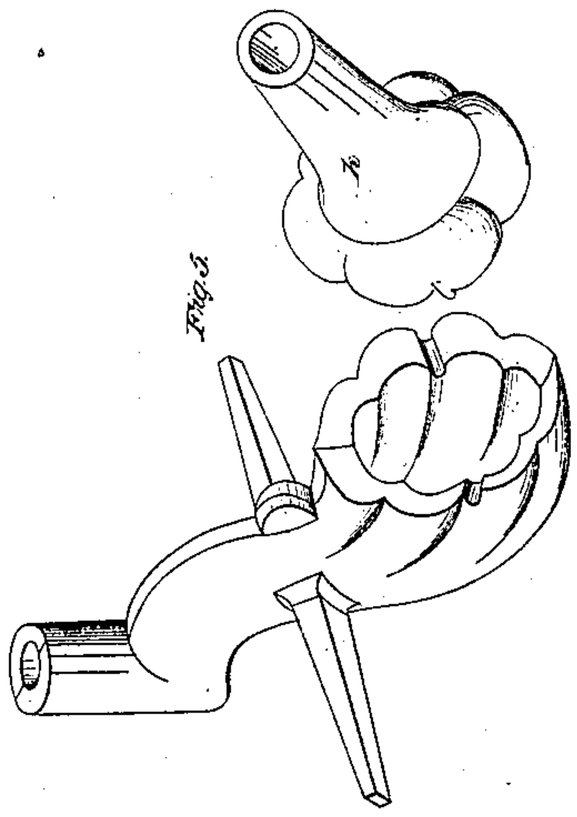


Fig. 6.

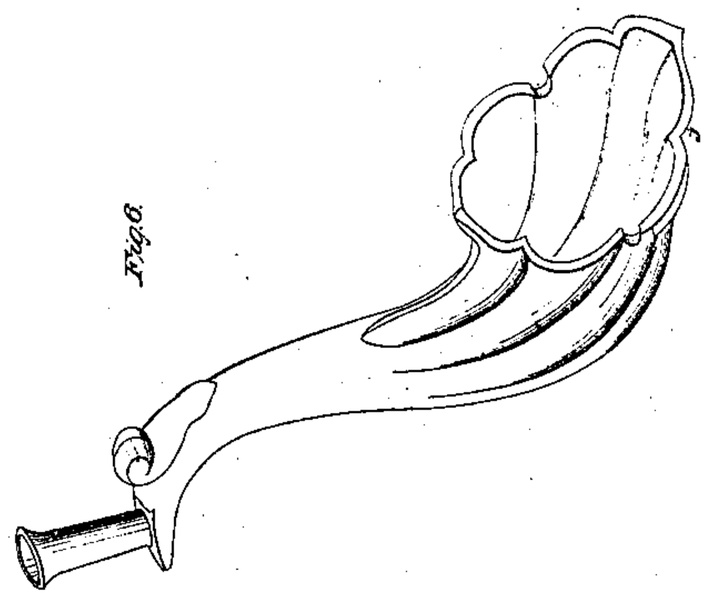


Fig. 3.

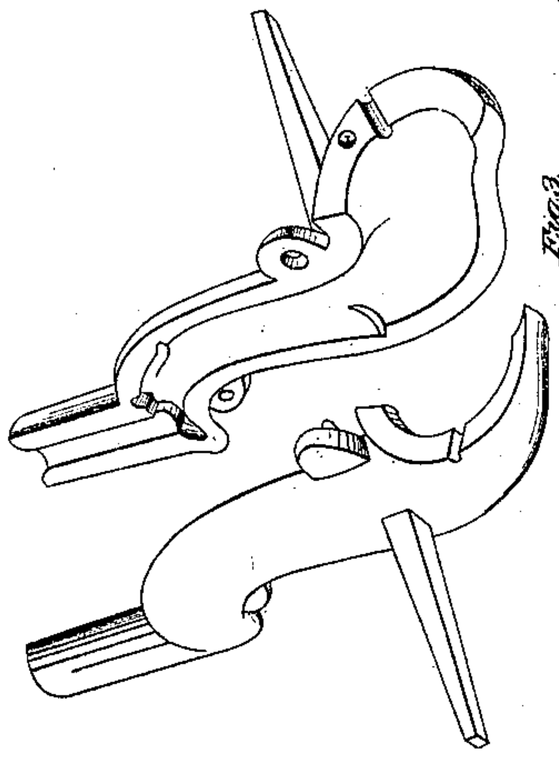


Fig. 4.

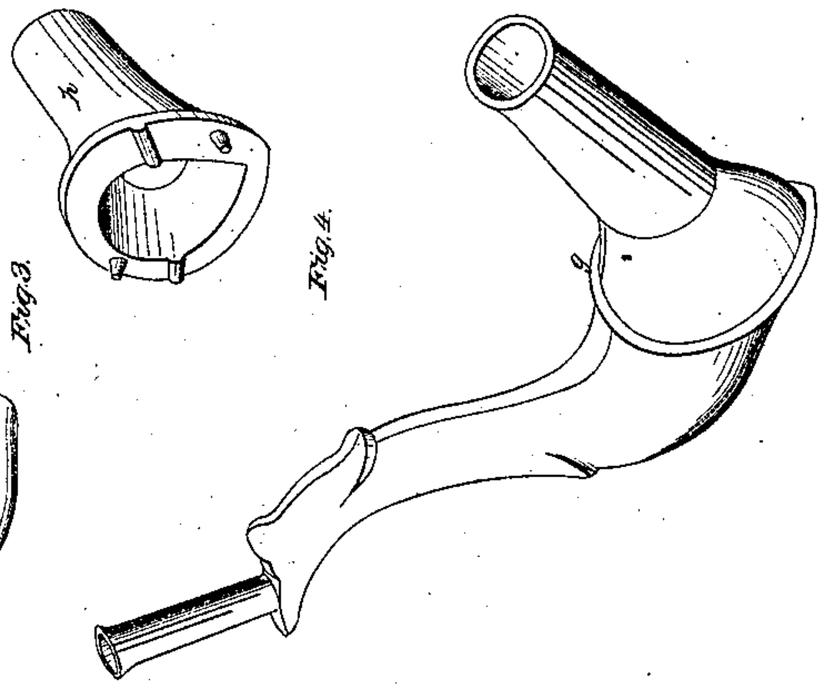


Fig. 1.

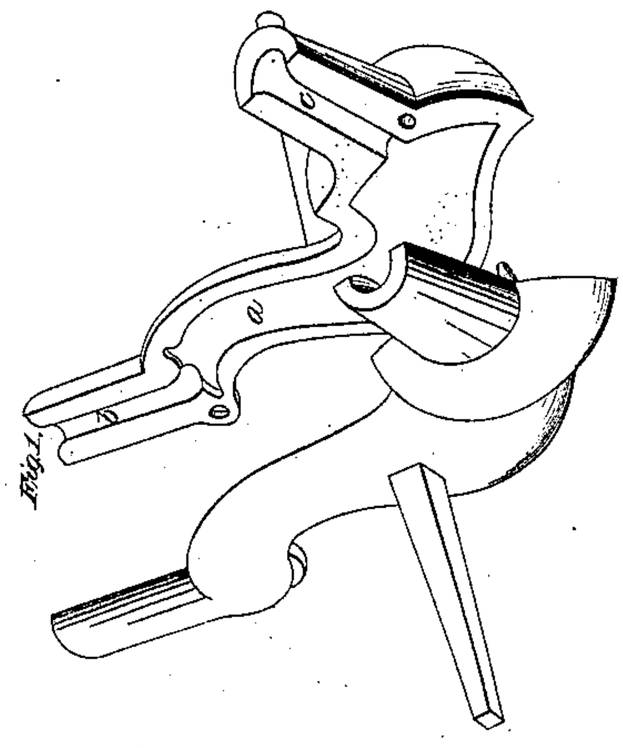
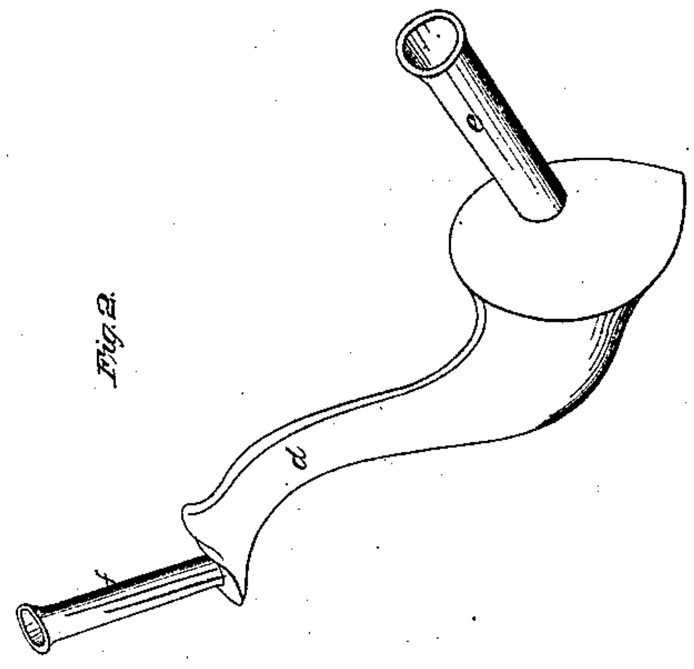


Fig. 2.



UNITED STATES PATENT OFFICE.

HENRY TIEBE AND WILLIAM MUHLE, OF CINCINNATI, OHIO, ASSIGNORS TO TIEBE, MUHLE & HOMAN.

IMPROVEMENT IN CASTING THE SPOUTS OF TEA-POTS.

Specification forming part of Letters Patent No. **12,086**, dated December 12, 1854.

To all whom it may concern:

Be it known that we, HENRY TIEBE and WILLIAM MUHLE, both of Cincinnati, Hamilton county, Ohio, have invented a new and useful Method of Casting Spouts for Tea-Pots, &c.; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification.

The object of our invention is to form in the process of casting a clean edge to the butt-end of a tea-pot spout or like object, so as to fit the body without any further manipulation than simply to clean the joining surfaces for soldering.

In the accompanying drawings, Figure 1 represents the mold usually employed. Fig. 2 represents a casting therefrom. Fig. 3 represents the first step of our improvement on molds. Fig. 4 represents a casting therefrom. Fig. 5 represents a mold embodying both features of our invention. Fig. 6 represents a casting therefrom.

All the castings in the above figures are drawn to a somewhat larger scale than their respective molds.

The mode, so far as we know, generally adopted in casting spouts in "Britannia ware" is by use of a mold, like Fig. 1, composed of brass or other hard metal susceptible of receiving and retaining a high polish, and whose point of fusion is considerably above that of the "stock" or "metal" to be worked.

The central hollow space, *a*, of the mold, it will be seen, is appropriated to the formation of the spout itself, and communicates at the ends with gates *b c*, for the introduction and discharge of the stock, which being melted and brought to the proper heat, and the mold chilled by cold water during the intervals of casting, a ladleful of the melted metal is poured in at one of the gates, and, after being detained an instant or so, at the discretion of the workman, such of it as remains uncongealed by contact with the sides of the mold is allowed to run back into the pot, leaving behind it a hollow casting, *d e f*. By this mode, it will be perceived, a great deal of the metal is expended in the formation of ungainly "sprues" *e f*, which, after being roughly separated from the intended spout *d* by means of a buzz-saw, the sprue at the base requires tedious and skillful paring in order so finish up the joint, especially in cases where the spout is to be fitted to a pot of elaborate pattern or contour. In such cases the most skillful workmen make only an approximation to a fit. Five hundred spouts usually take an experienced hand about a week to fit by the customary process. By means of our invention this labor is altogether dispensed with, a lad being able, after a brief tuition, to do all the work of casting, and no fitting being required.

The first part of our invention consists in a device for more accurately defining the seam or joint of the butt or base of a spout or like object at the place of junction with the pot.

The second part of our invention has for its object casting the base of the spout with a finished edge, which shall accurately fit the "body," however elaborate, without any exercise of skill or expenditure of time on the part of the founder.

The first object of our invention—namely, defining by a bead, *g*, seam, or other mark the contour or form required for the base of tho spout, so as to guide the paring-knife of the operative—is accomplished by making the butt-end of the mold to consist of a separate cope, *h*, Fig. 3. This separation of that part of the mold enables the joint *i* to be ground to fit a surface identical in shape and contour with that of the pot-body at the place of junction with the spout; but the chief advantageous result of the separate cope is the ability afforded for terminating the casting by a well-defined and clean edge, *j*, requiring no application of the paring-knife and dispensing entirely with the sprue, with the additional advantage of exact adaption of the base of the spout to the body of the pot. This result is accomplished by the second part of our improvement, which consists in applying the cope *k* at a temperature above the fusing-point of the metal or stock, so that while the spout is being formed by the usual method of congealation against the cold surface of the mold that portion of the metal within the cope passes out again in the melted condition, leaving a sharp, clearly-defined edge to the base of the spout.

We claim as new and of our invention—

Confining the congealation of the metal or stock in casting to an exact joining edge or margin by applying a part of the mold at a heat above the fusing-point of the said stock, whether used for forming the base of tea-pot spouts, as described, or otherwise.

In testimony whereof we hereunto set our hands before two subscribing witnesses.

HENRY TIEBE.
W. MUHLE.

Witnesses:
GEO. H. KNIGHT,
EDWARD H. KNIGHT.