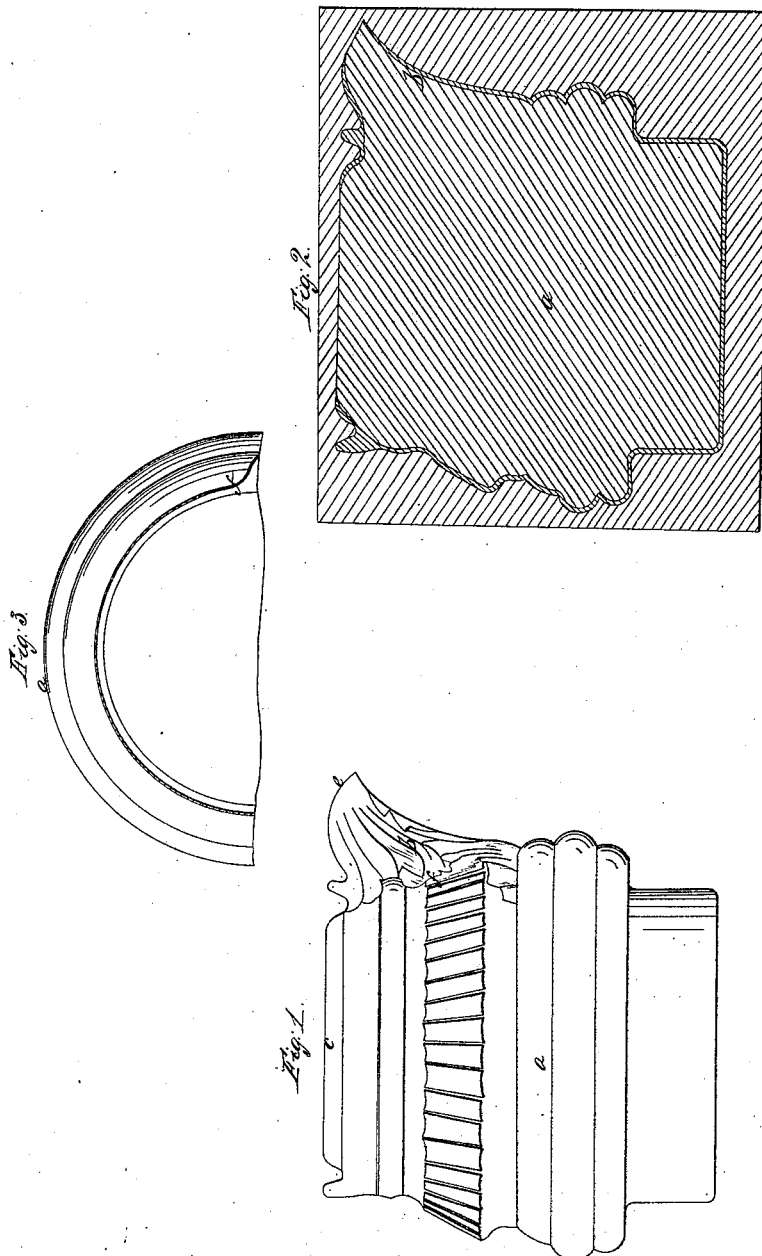


E. Pinley.

Casting Hollow-Ware.

No 4,417.

Patented Mar. 14, 1846.



UNITED STATES PATENT OFFICE

EZRA RIPLEY, OF TROY, NEW YORK.

IMPROVEMENT IN TEA-KETTLES.

Specification forming part of Letters Patent No. 4,417, dated March 14, 1846.

To all whom it may concern:

Be it known that I, EZRA RIPLEY, of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Tea-Kettles, whereby they can be molded with greater facility and consequent cheapness; and I do hereby declare that the following is a full, clear, and exact description of the principle or character thereof, which distinguishes it from all other things before known, and of the manner of making or molding the same, reference being had to the accompanying drawings, in which—

Figure 1 is a representation of the kettle; Fig. 2, a vertical section thereof in the mold, and Fig. 3 a horizontal section taken at the line X X of Fig. 1.

The same letters indicate like parts in all the figures.

A tea-kettle is a culinary implement of a definite nature, distinct from all others, in which water is to be boiled, to be poured therefrom through a spout projecting from the bulge or largest diameter of the body, the upper part which receives the lid being of a reduced diameter, to prevent the water from running out at the top when inclined to discharge the water from the spout. As heretofore and now generally made, the spout is a circular tube projecting from the bulb or larger diameter of the body in a curved line, which can only be cast by means of a hard sand core attached to and projecting from the body of the mold, and therefore attended with much difficulty.

To avoid these objections is the object of my improvement, which consists in making that part of the spout which starts from the body of the kettle to extend from the greatest diameter or bulge of the body up to within a short distance of the top, leaving only sufficient space between the top of the spout and the top of the kettle to give the necessary strength of metal, the sides of the spout being curved so as to gradually run into the curve of the body of the kettle. By this form of the spout I am enabled to get the necessary area in the cross-section of the spout to give the requisite strength to support a green sand core for the formation of the spout, so

that the mold can be made in two parts, separated by a vertical plane passing through the middle of the body and spout. The two ears to which the bail is affixed are cast at the same time, one of these being a projection from the top of the spout. Another and important advantage arises from this mode of making tea-kettles, which cannot be attained by the old method, and that is the glazing of the inside of the spout to prevent the injurious action of oxidation.

In the accompanying drawings, *a* represents the bulge or greater diameter of the body of the kettle, from which the lower curve of the spout *b* commences, and *c* the top or smaller diameter, to which is fitted the cover. From the lower part of the upper rim or smaller diameter, *c*, commences the upper curve of the spout, which extends to the opening *e* thereof.

The swell of the sides of the spout (represented at *f f*) gradually runs into the curve of the body, to give the necessary strength to the junction of the core with the body of the mold, giving a graceful curve, adding beauty to strength. It will be evident that the form of this spout may vary considerably within the range of the principle pointed out above, which consists, simply, in extending that part of the spout which starts from the body of the kettle to extend from the bulge or larger diameter to within a short distance of the top, so that the necessary area can be obtained for molding with a green sand core, while a channel is formed from the bulge of the body for the delivery of the water without the danger of spilling the water from the top of the body. This mode of forming the spout admits of molding by means of a pattern divided into two parts by a plane passing through the middle of the body and spout and through the ears, instead of by a plane at right angles to the spout, whereby the parts for molding the ears make part of the pattern, instead of requiring the mold to be altered for this purpose after the molding has been effected; and the core for the body and spout is made in one piece instead of two, the space between the end of the spout and the top of the kettle being so short and the area of the junction of

the two so great as to give abundant support to that part which forms the spout.

What I claim as my invention, and desire to secure by Letters Patent, is—

Making the spouts of tea-kettles, at their junction with the body, to extend from the bulge of the body to within a short distance

of the top, whereby, in molding, the spout can be formed by means of a green instead of a dry sand core, as herein described.

EZRA RIPLEY.

Witnesses:

A. P. BROWNE,

J. J. GREENOUGH.