

C. Neale;

Molding Apparatus.

N^o 24,701.

Patented July 5, 1859.

Fig. 1.

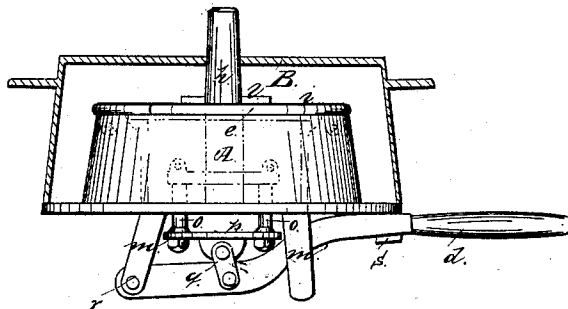


Fig. 2.

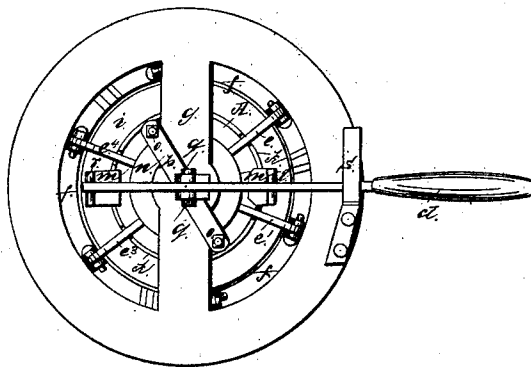
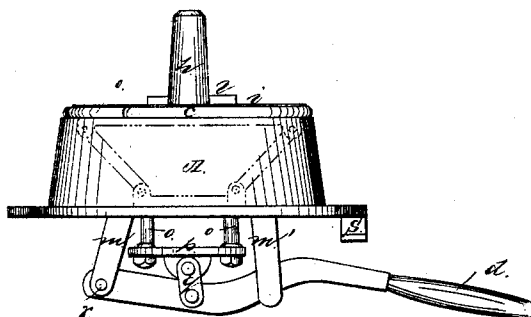


Fig. 3.



Witnesses:

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CHARLES NEALE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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IMPROVEMENT IN MOLDING BEADS ON HOLLOW WARE.

Specification forming part of Letters Patent No. 24,701, dated July 5, 1859.

To all whom it may concern:

Be it known that I, CHARLES NEALE, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and improved mode of molding beads, flanges, and other similar projections or ornaments which may be desired on the outer sides of pots, kettles, and other similar cast-metal vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a side view of the apparatus used with its appropriate part of the flask in section, and the print for the bead to be molded as projecting outward from the pattern; Fig. 2, a view of the under side of the same; and Fig. 3, a side view showing the said bead-print as drawn into the pattern, so as to allow the latter to be withdrawn from the sand mold.

Like letters in all the figures indicate the same parts.

The object of my invention is to enable the operator to mold beads, flanges, and other projections or ornaments which may be desired on the outer sides of cast-metal pots, kettles, &c., in a two-part flask. Its nature consists in a combination and arrangement of mechanical devices in connection with the pattern, whereby the operator can, by simply moving a lever or handle thereof, cause the print for the said bead, flange, or other desired projection on the vessel to be moved inward sufficiently to allow of the withdrawal of the whole pattern from the sand, and thereby enable him to mold such vessels in a practical and expeditious manner in a two-part flask.

In the drawings, A is the pattern for the upper or beaded half of a pot, and B that part of the flask in which it is molded. The pattern A is hollow, and in this instance has its bead-print *c* around its upper edge, and produces in the sand a counterpart of the upper half of a pot, having a bead around on the outer side of its upper edge. It will be manifest that if the bead-print *c* were rigidly fixed in the projecting position shown in the figure, the pattern could not be withdrawn from the sand, so as to leave therein a counterpart of the same; hence it has been the practice heretofore to have the flasks made to part at every

bead-print, and therefore to mold a pattern with a single bead around its upper edge, as indicated in the figure, would require a three-part flask, and consequently, also, an increased consumption of time and labor in molding. The bead-print *c* in this apparatus is made so that it can be readily pushed out, as seen in Fig. 1, or drawn in flush with the sides of the pattern A, as seen in Fig. 3, as occasion may require, by means of the lever *d*, and the six connecting-pieces, *e e'*, which are jointed to the ring upon which the bead-print *c* is formed, the latter being divided into three sections, *f f f*, so as to allow of the said movement.

Across the bottom of the hollow pattern A there is a piece, *g*, which supports a round stem, *h*. The top of the pattern A is formed by a thin disk, *i*, whose periphery is beveled from the under side to a thin edge, and it has also fixed concentrically on its under side a hollow cylindrical slotted projection, *k*, whereby it is supported steadily upon the cross-piece *g* at a sufficient height above the upper edge of the sides of the pattern A to receive and allow also the required motion of the bead-print *c* between them, as hereinafter described, the stem *h* passing up through the said disk *i* far enough to serve also as a central steadying-pin for keeping the pattern A concentric with the flask B while the said pattern is being molded from; and for the purpose of keeping the disk *i* accurately down in its proper position, as described, a small draw pin or key, *l*, is inserted through the said stem *h*, so as to bind it down firmly, and yet allow it to be rotated upon the stem *h* as a center. Two downward-projecting pieces, *m m'*, for supporting and guiding the lever *d*, are fixed on opposite sides of the cylinder *k*, and at a point midway between them the sections *f f f* of the bead-ring are connected therewith through the media of the connecting-pieces or bars *e e'*, the disk *n*, to which the said bars *e* are also jointed, the posts *o o*, and their connecting-bar *p*, and the two short connecting-pieces *q q*, the lever *d* turning upon a fulcrum-pin, *r*, in the piece *m* as the same is moved up and down, and also sliding in a guide-slot in the piece *m'*, which causes the lever to rotate the bead-print *c* when the same is moved horizontally or laterally.

The mode of forming the bead in the mold

by this apparatus is as follows: The lever *d* is first forced, by hand, upward into contact with the bottom of the pattern *A*, and then by a lateral motion of the same slipped between it and the stay-piece *s*, whereby it is held firmly, as seen in Fig. 2. This operation forces out the bead-print *c*, as seen in Fig. 1, the then relative positions of the said print *c*, sections *fff*, pieces *e e'*, and disk *n* being as is indicated by the dotted lines in the same figure. The said pattern is then covered by the flask *B*, (which is open above,) and therein molded from in the usual manner. To withdraw the said pattern, the lever *d* is first moved laterally out of the stay *s*, which operation slides the bead-print *c*, and causes it to thereby "slack" or smooth the mold produced by the same in the most perfect manner, and then forced downward from the bottom of the pattern to the position shown in Fig. 3, which operation draws the bead-print *c* inward, so as to bring it flush with the sides of the pattern *A*, thus permitting the flask *B*, with its mold of sand, to be lifted off, or the withdrawal of the pattern from the sand in the usual manner. The mold for the bottom half of the pot having been formed in the other half of the flask in the usual way, the two fronts are put together, the usual central core being first inserted so as to come between, and the pot, when cast therein, will

have a bead around the outer side of its upper edge, which will be free from the objectionable "fringe" caused by flasks parting thereat, and a great deal more smooth, uniform, and perfect than can be produced in a three-part flask.

Having thus fully described my apparatus, and the mode of using it for molding beaded and other like ornamented cast-metal vessels in a two-part flask, I wish it to be distinctly understood that I do not confine my claim to the apparatus described in all its particulars, as it may be variously modified to produce the same general result; but

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

Molding for the production of beads, flanges, or other projections and ornaments on the outer sides of cast-metal pots, kettles, and other vessels, so as to form the said vessels in two-part flasks, the pattern bead, flange, or other projecting ornament being so constructed, arranged, and operated as to admit of its being drawn in and pushed out of the vessel-pattern, substantially in the manner described.

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Witnesses:

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