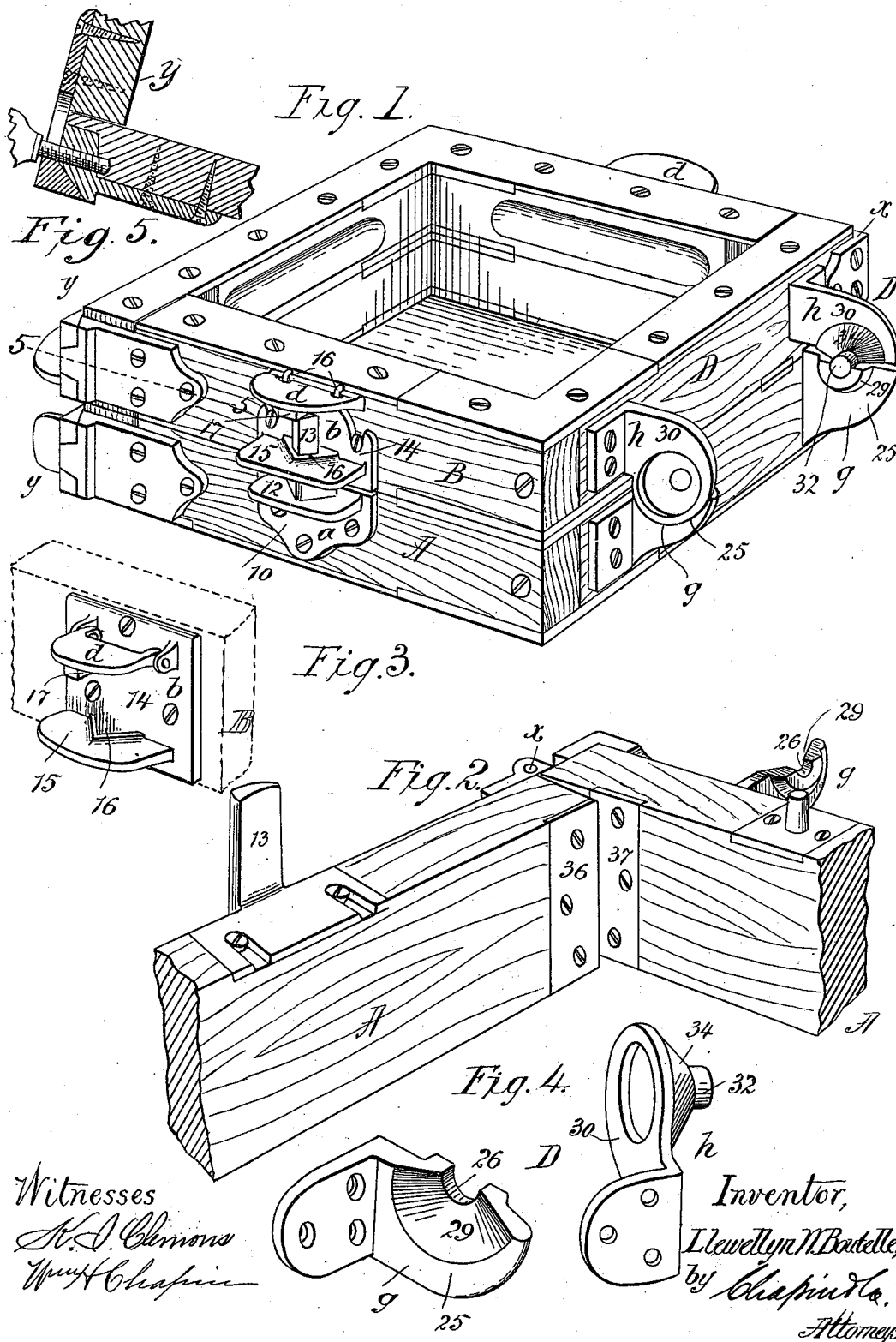


(No Model.)

L. W. BOUTELLE.
MOLDER'S FLASK.

No. 544,560.

Patented Aug. 13, 1895.



UNITED STATES PATENT OFFICE.

LLEWELLYN W. BOUTELLE, OF ORANGE, MASSACHUSETTS.

MOLDER'S FLASK.

SPECIFICATION forming part of Letters Patent No. 544,560, dated August 13, 1895.

Application filed January 18, 1895. Serial No. 535,304. (No model.)

To all whom it may concern:

Be it known that I, LLEWELLYN W. BOUTELLE, a citizen of the United States of America, residing at Orange, in the county of Franklin and State of Massachusetts, have invented new and useful Improvements in Molders' Flasks; of which the following is a specification.

This invention relates to improvements in molders' flasks, the principal object being to provide improved means for guiding and moving the cope part perpendicularly away from the lower part of the flask with which it contacts with the utmost steadiness and without the least liability of shaking or joggling, whereby the mold impressions in the sand might become impaired, and to generally provide means for the improvement of flasks having the capabilities for action aforementioned, and for the improvement of the flasks in respect to their capabilities for long and protracted use without deterioration thereby.

To these ends the invention consists in constructions and combinations of parts, all substantially as will be hereinafter more fully described, and set forth in the claims.

Reference is to be had to the accompanying drawings, in which the present improvements in molders' flasks are substantially illustrated, Figure 1 being a perspective view of a two-part flask comprising the present improvements. Fig. 2 is a perspective view of portions of a flask member adjacent the hinge to illustrate a feature of construction to be specifically referred to. Fig. 3 is a perspective view showing an appliance for the cope part of a mold to be fully described, and Fig. 4 is a perspective view of the members of the separable hinge. Fig. 5 is a detail sectional view taken through one corner and showing the fastening.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the lower or drag half or part of the flask and B the cope. The lower part has provided therefor the castings *a* on its opposite sides, each comprising the attachment-plate 10, the outstanding or shelf-like member 12, and the vertically-standing guide-pin 13. The cope has at its opposite sides the castings or appliances *b*,

each comprising the attachment-plate 14, with the rigid shelf-like member 15 outstanding therefrom, which has the aperture 16, to have a very precise and close and yet a free sliding and guiding fit over the aforementioned upstanding guide-pin 13.

Above the extremity of the guide-pin 13 is a finger or lever *d*, pivotally connected or hinged to the cope, either directly thereto, as seen at 16 in Fig. 1, or to the ear-pieces of the attachment-plate 14, as seen in Fig. 3; and said part *d* has preferably on its under side the wedge-shaped or otherwise downwardly and outwardly expanding projection 17, which has bearing on the upper end of the guide-pin 13.

In operating the cope side of the flask to lift it when the sand is in, the palms of the hands are placed against the upper sides of the levers *d* and the ends of the fingers are placed under the shelf-like projections 15 through which the guide-pins pass, and by drawing the fingers toward the palms of the hands the cope side is, by reason of the prying or leverage action of the parts *d*, which immediately thereof have fulcrum-bearings on the upper ends of the guide-pins 13, lifted with perfect steadiness away from the lower portion of the flask and with an even movement at each end of the cope.

It is to be understood that the wedge-shaped bearings 17 are not essential in the use of the levers *d* to obtain a certain elevation of the cope; but it is apparent that said wedge-shaped formations serve to impart to the cope side on a given swing of the levers a more accelerated movement than would result were the under sides of the levers *d* formed flat.

On what may be termed the "back" side of the flask are secured hinges D, each of which is formed separable, whereby the cope part on which one member of the hinge-support is applied may be perpendicularly moved, the separating movement of the hinge member being in a line transverse of the hinge-axis. Thus the cope is enabled to be separated from the lower part of the flask to be disengaged therefrom, whereupon the cope may be so tilted or swung down as to resume its hinge engagement and may be swung on such hinge

into a vertical plane in the manner of the cover of a box. Each hinge comprises the two metallic castings or appliances, the one *g* for the lower part of the flask having the out-
 5 standing bracket 25 with the upwardly-opening socket 26, and the casting or appliance *h* for the cope having the outstanding bracket-like part 30 with the trunnion 32 to set in
 10 said socket. As will be seen in Fig. 4, the trunnion is at the apex of a conical protuberance 34. The face of the bracket *g* has, adjacent the socket 26, the concaved formation, as seen at 29, for the reception therein of said
 15 protuberance 34, these conical and flaring features being to the end of shedding sand, as obvious and desirable. The said parts of the separable hinges are made rights and
 20 lefts, and so that when applied on the flask parts there will be no end lash. The frame-like lower part of the drag or the cope, in what is termed a "snap-flask," is usually hinge-jointed at one corner, while at the
 25 diagonally-opposite corner it is provided with a fastening device, all whereby the boundaries of the separable parts of the flask may be spread open away from the sand-mold which has been produced therein, as well-known in certain species of founding. Now,
 30 as illustrated somewhat in detail in Fig. 2, the wooden frame-bars of the flask parts adjacent the hinge-corner and also adjacent its diagonally-opposite corner are provided with the in-laid metallic jamb-pieces 36 37, which prevent
 35 the wearing away of the parts contacted on one by the other when the snap-flask part is brought and locked into its rectangular form. In Fig. 2 the hinge of the snap-flask is shown at *x*, and in Fig. 1 the hinge is also partially shown at *x*. In Fig. 1, at the diagonally-oppo-

site corner from the hinge, the fastening de- 40
 vices at the corner are indicated at *y*.

The attachment-plate 14, which has as an integral part thereof the shelf-like apertured projection 15, is extended well up on the side
 45 of the cope to or near its upper edge, whereby a rigid and strong construction and attachment may be acquired.

Having thus described my invention, what I claim, and desire to secure by Letters Pat-
 50 ent is—

1. In a two part flask, a support secured to the side of the drag, and an upright 13 rising from the support, combined with a guide
 15 15 secured to the cope, and a lever *b* attached to the cope and adapted to bear upon the
 55 top of the upright, substantially as shown.

2. In a two part flask a flange or support secured to the side of the drag, and an upright 13 projecting therefrom, combined with
 60 a perforated guide which projects from the side of the cope and fits down over the upright, and a lever separately secured to the
 65 cope, and having a wedge shaped projection upon its under side, substantially as described.

3. In a two part flask, uprights 13 secured to the drag, guides 15 secured to the cope and fitting down over the uprights, and levers *b*
 70 separately pivoted to the cope and bearing against the top of the upright; the levers being adapted to receive downward pressure from the palms of the hands, and the guides to receive upward pressure from the fingers,
 substantially as set forth.

LLEWELLYN W. BOUTELLE.

Witnesses:

FREDERIC D. KELLOGG,
 JAMES D. KIMBALL.