

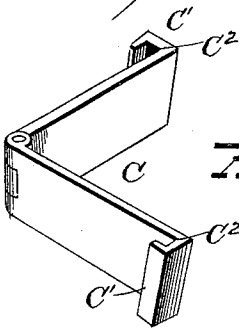
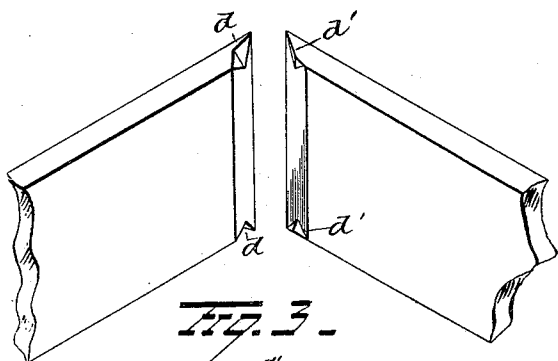
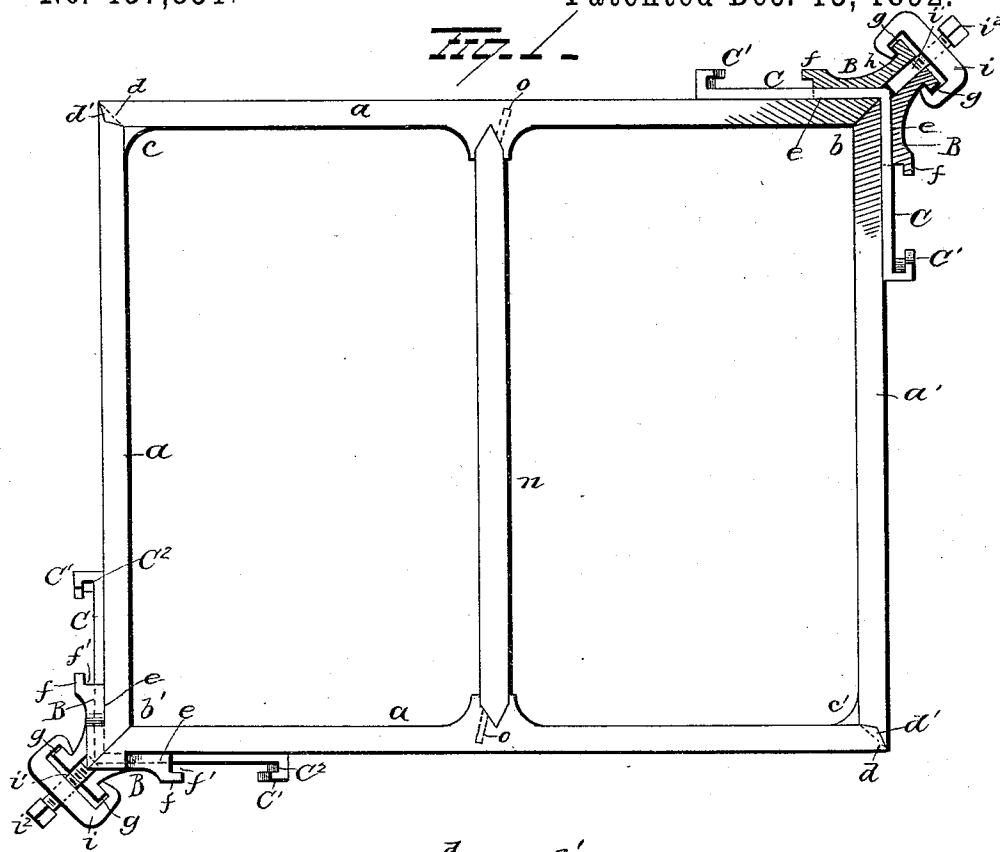
(No Model.)

3 Sheets—Sheet 1.

F. MORRIS.
MOLDER'S FLASK.

No. 487,851.

Patented Dec. 13, 1892.



Witnesses
G. F. Downing
S. G. Nottingham

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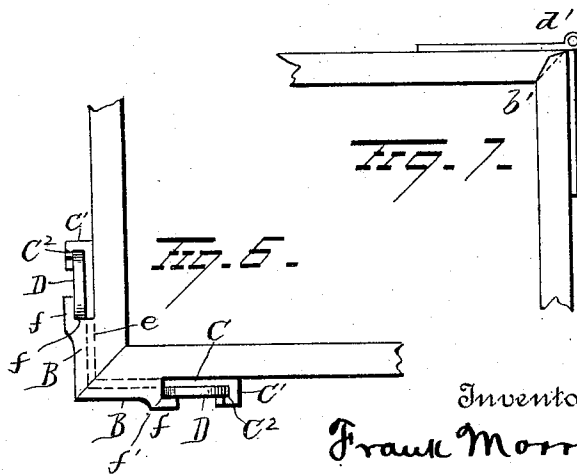
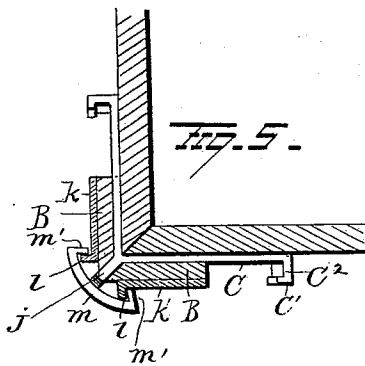
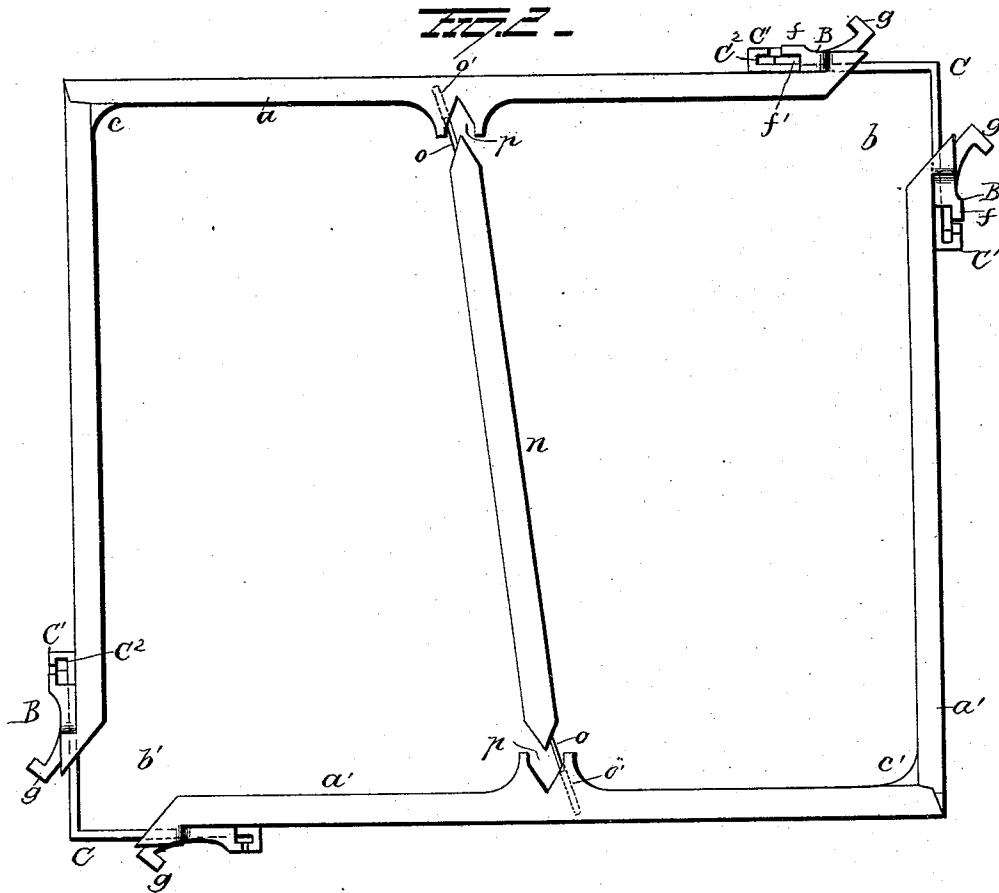
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(No Model.)

3 Sheets—Sheet 3.

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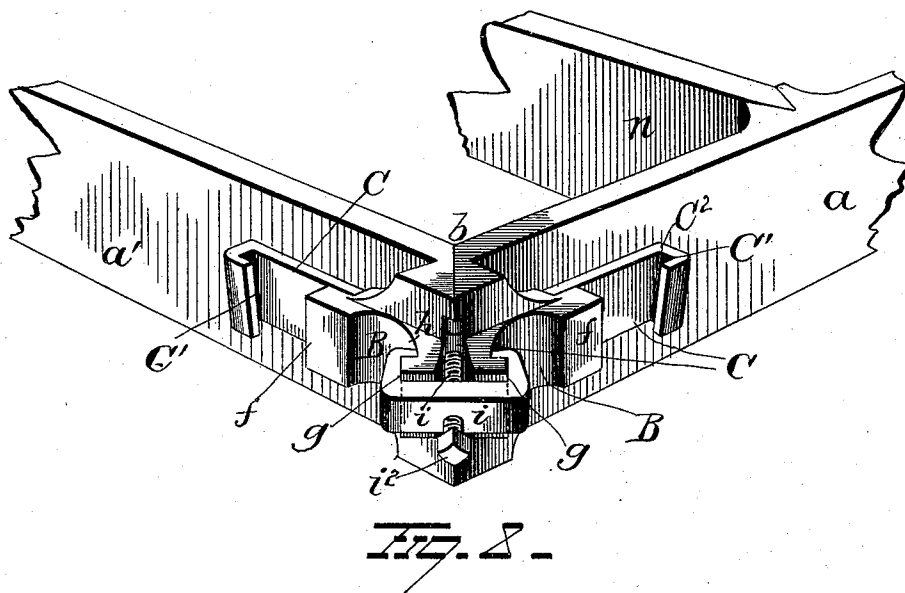
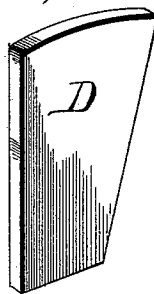


Fig. 9.



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UNITED STATES PATENT OFFICE.

FRANK MORRIS, OF ALLIANCE, OHIO.

MOLDER'S FLASK.

SPECIFICATION forming part of Letters Patent No. 487,851, dated December 13, 1892.

Application filed September 5, 1891. Serial No. 404,837. (No model.)

To all whom it may concern:

Be it known that I, FRANK MORRIS, a resident of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Molders' Flasks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in molders' flasks, the object of the invention being to produce improved devices for rendering the flask expansible, and which also serve to firmly secure the flask when in use.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved flask. Fig. 2 is a similar view showing the positions of the parts when the flask is expanded. Fig. 3 is a view illustrating the construction of the ends of the sides of the flask, where they are mitered together. Figs. 4 and 5 illustrate a modification. Figs. 6 and 7 illustrate other modifications. Fig. 8 is a view in perspective of block B and locking-nut *i*. Fig. 9 is a view of wedge D.

A represents a flask composed of sides *a a'*, mitered together, the diagonally-opposite corners *b b'* being made expansible, while the other corners *c c'* are rigidly secured together in a suitable manner. In order to render the corners of the flask firm and keep the sides in proper condition the construction shown in Fig. 3 will be adopted—that is to say, recesses *d* are made in one of the mitered edges and corresponding projections *d'* are made in the edge of the adjacent edge and so shaped that the projections will enter the recesses and tend to draw and hold the mitered edges exactly in place. Projecting from the sides *a a'* of the flask at the meeting ends, and preferably at diagonally-opposite corners, are blocks B, which may be secured thereto or made integral therewith, as desired. The blocks B are beveled on their meeting edges, so as to produce a tight joint when the parts

of the flask are secured together. Grooves *e* are made in the blocks B for the accommodation of a metallic corner-piece C, having a beveled shoulder *C'* at each end and each shoulder *C'* being made with a groove *C²*, so that when the flask is opened the shoulders *C'* will strike the blocks B, and thus form stops to limit the movement of the sides of the flask and prevent them from becoming entirely displaced. The blocks B may also be provided with shoulders *f*, having grooves *f'*, and in the grooves *C² f'* of the shoulders *C'* *f* wedges, Fig. 6, may be inserted, and the corners thus locked together. At the meeting edges the blocks B are made with flanges or lips *g*. At the meeting edges the blocks B and flanges or lips *g* are recessed, so that when the two meeting edges are together a groove *h* is formed and extends only part way through the blocks B and flanges or lips *g*. Passed over the lips or flanges *g* is a nut or plate *i*, said nut being adapted to embrace said flanges or lips and hold the parts of the flask together. Through the plate or nut *i* a screw-threaded perforation is made for the reception of a threaded bolt *i'*, having a head *i²* on one end thereof, said bolt being adapted to enter the groove *h* in the blocks B and lips *g* and bear against the apex of the angular corner-piece C. By this means the meeting edges of the flask may be rigidly but removably secured together. If desired, the metallic angular corner-pieces C may be made in two parts and hinged together, as shown in Fig. 4. At the diagonally-opposite corner to that above described the locking-nut *i* and bolt *i'* may be dispensed with and the corner be secured together by means of wedges D, as above described, or, if desired, locking means at this diagonally-opposite corner may be entirely dispensed with and the parts hinged together, as shown in Fig. 7.

In lieu of the fastening device above described that shown in Fig. 5 may be adopted, this figure illustrating a modification of the construction above described. In this modification of the invention the angular corner-piece C is provided at its apex with an outwardly-projecting flange *j*, having its free edge beveled, and the meeting edges of the blocks B are recessed for the reception of said flange

j. Plates *k* are secured to the blocks B and are provided with laterally-projecting beveled flanges *l* at their edges in proximity to the meeting edges of the blocks B. A locking device *m*, having lips *m'*, is slid over the corner of the flask thus formed, the lips *m'* embracing the flanges *l* of plates *k* and the body of said nut or key bearing firmly on the beveled end of the projection or flange *j*.

10 I have described the corner-pieces C and blocks B as being adapted for the reception of wedges; but it will of course be understood that when the nut or key is employed the wedges will not be, and vice versa.

15 Extending through the center of the flask is a bar *n*, adapted to move freely at both ends on pins *o*, fastened into the inner sides of the flask and fitting into sockets made to receive them in each end of the bar *n*. The pins *o* 20 and their sockets *o'* are set at such an angle with the sides of the flask as to tend to throw the end of the bar away from the rigid corner of the flask when it is being opened, and thus by removing the pressure from the sand aid 25 in releasing the contents of the flask. The ends of the bar *n* are fitted into sockets *p*, raised on the inside of the flask and made deep enough to receive the bar and keep it in place even if by pressure of the sand the 30 sides of the flask should spring slightly outward.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

35 1. The combination, with a flask comprising separable sides, of blocks secured at or near the ends of the sides, said blocks having recesses formed therein, and corner-pieces passing through the recesses and having slid-

ing connection with the blocks, said corner-pieces having enlarged ends whereby the sides are prevented from entire separation, substantially as set forth.

2. The combination, with a flask comprising separable sides, of blocks secured to the sides at or near their ends, corner-pieces passing through the blocks, said corner-pieces being made in sections hinged together, and locking means engaging the blocks, substantially as set forth.

3. The combination, with a flask comprising separable sides, of blocks secured to the sides at or near their ends, corner-pieces passing loosely through the blocks, flanges or lips on said blocks, projections on said corner-pieces, and locking devices adapted to embrace said flanges or lips and bear against the projections on the corner-pieces, substantially as set forth.

4. A molder's flask comprising separable sides and a bar extending from one side to the other, one of said parts provided with pins and the other with holes adapted to receive the pins, substantially as set forth.

5. An adjustable corner for molding-flasks, consisting of blocks having recesses formed therein, corner-pieces located in the recesses, having sliding connection with the blocks and permanently connected therewith, and means for locking these corners, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK MORRIS.

Witnesses:

F. V. CASSADAY,
H. W. HARRIS.