

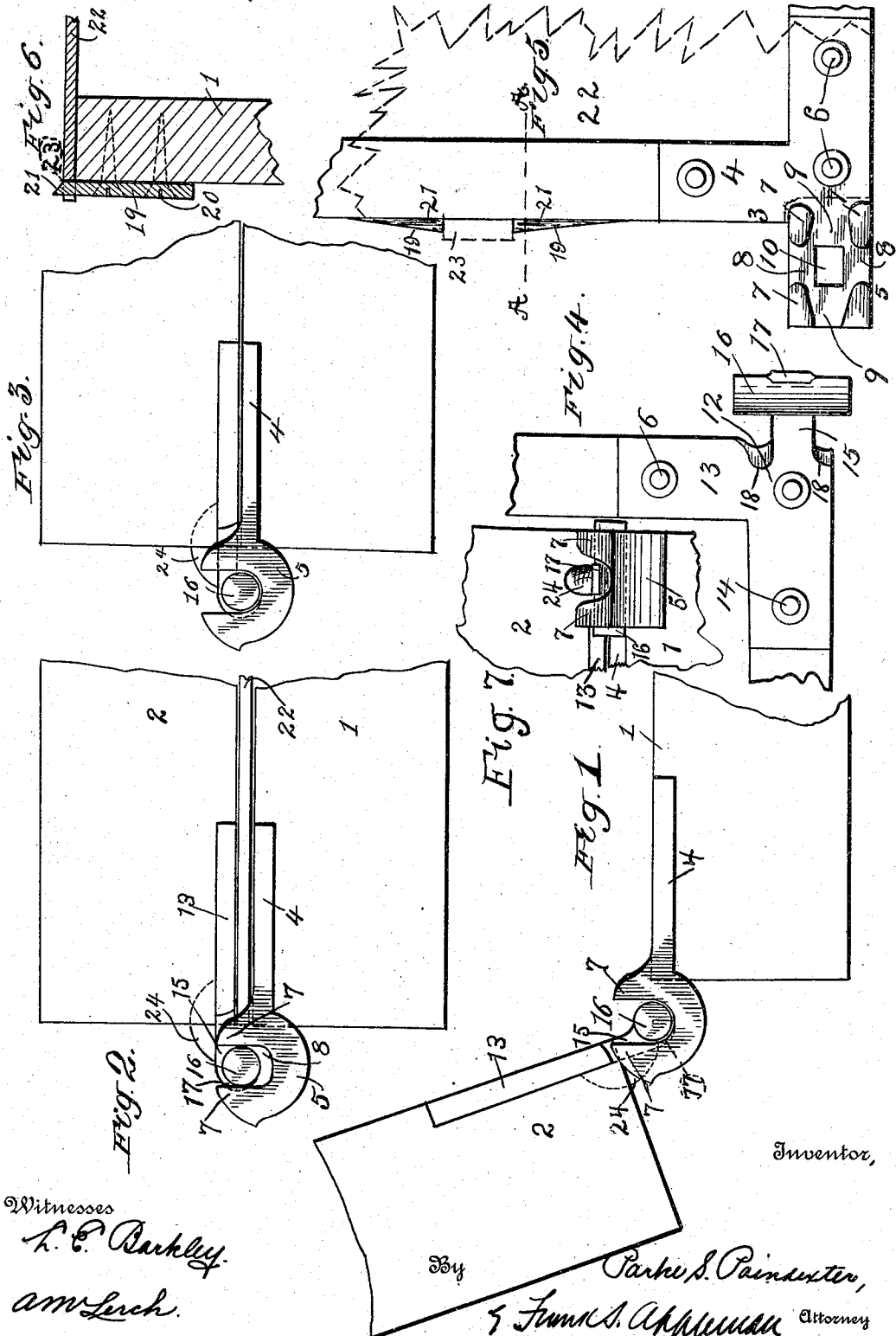
P. S. POINDEXTER.

FLASK HINGE.

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Patented Oct. 19, 1909.



UNITED STATES PATENT OFFICE.

PARKE S. POINDEXTER, OF CHATTANOOGA, TENNESSEE.

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Specification of Letters Patent.

Patented Oct. 19, 1909.

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To all whom it may concern:

Be it known that I, PARKE S. POINDEXTER, a citizen of the United States of America, residing at Chattanooga, county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Flask-Hinges, of which the following is a specification.

This invention relates to improvements in molders' flasks and embodies the construction of a flask whereby a match plate may be accurately positioned on the drag and the cope may be hinged to the drag so that it will fold in alinement thereon, whether the match plate is in position or not.

In the practice of molding metallic shapes, flasks are used for retaining the shapes of the molds and the hinges as ordinarily constructed will not permit of the use of a match plate. The pattern, which is the exact shape of the casting required, is placed into the flask and sand rammed around it on both sides. The flask is then opened up, the pattern drawn out, and the flask is closed up again and is then ready to be poured full of molten metal.

The practice of molding metallic forms by means of flasks, consisting of two unhinged sections requires the employment of highly skilled mechanics. When match plates are used in the ordinary way, it is very difficult to return the pattern to the mold for the purpose of repairing defects in the sand or to reprint to obtain an extra smooth casting, as is the practice in some classes of work. Should the effort be made to reprint and the pattern placed back in the flask with a slight variation of a sixteenth of an inch from its original position, the mold would be spoiled.

One of the objects of this invention is the construction of a molder's flask, whereby ordinary laborers may be employed in the molding operation and reprinting may be accomplished without difficulty.

Another object of the invention is the construction of a molder's flask hinge that may be used for molding in the ordinary way or with a match plate, without making any change in the regular foundry equipment, whereby the cope may be folded against the drag, whether the match plate has been placed in position over the drag or removed therefrom, so as to bring the cope into a true position with the drag, whereby a perfect mold is formed.

Another object of the invention is the construction of improved means for hinging the cope to the drag and stop means whereby the match plate may be accurately positioned on the drag.

With the above and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification, wherein like characters denote corresponding parts in the several views, in which—

Figure 1 is a side elevation showing the cope in a raised position on the drag, Fig. 2 is a side elevation showing the cope in a folded position, or the flask closed, and a match plate in position between the cope and drag, Fig. 3 is a side elevation showing the flask closed with the match plate removed, Fig. 4 is a detail bottom plan view of a hinge member adapted to be secured to the cope, Fig. 5 is a top plan view of a hinge member adapted to be secured to the drag and also showing one of the match plate stops with a portion of the match plate shown in dotted lines, Fig. 6 is a detail sectional view taken on the line A—A of Fig. 5, showing the manner in which the match stop plate is mounted on the drag and the manner in which the match plate engages with the stop plate, Fig. 7 is a detail view in rear elevation showing one of the hinge members and the parts immediately adjacent thereto.

Referring to the accompanying drawings, 1 denotes a drag, and 2 the cope. On a part of the corners of the open side of the drag hinge members 3 consisting of right angular plates 4 and off-sets 5 are suitably secured by means of fastening devices 6. The off-set portions 5 of the hinge members 3 are provided with four upstanding pintle holding lugs 7, which are suitably spaced apart from each other so as to form spaces 8 and 9. At a point central of the upstanding lugs 7, a recess or slot 10 is preferably formed. The spaces 9 are located in transverse relation to the spaces 8 and said spaces or slots 8 are of sufficient depth to allow for pintles to have a secure vertical movement therein, equal to the thickness of a match plate.

On the open side of the cope and on a part

of the corners thereof hinge members 12 are mounted, said members consisting of right angular securing plates 13, which are attached to the cope by means of fastening devices 14. On the securing plates 13 out-
 5 standing arms 15 are formed and on the ends of said arms pintle lugs or bars 16 are formed, each of the pintle lugs having an off-set 17. The plates 13 are slightly re-
 10 cessed at 18 to provide for movement of the same against the pintle engaging lugs 7 of the hinge members 3. When the pintles 16 are placed in operative engagement with the
 15 lugs 7, said pintles will occupy different portions of the slots or spaces 8 and the arms 15 will be adapted to move alternately into and out of the spaces or slots 9. The slots 8
 are formed with depths equal to twice the thickness of the pintles 16.

On the ends of the drag, match stop plates 19 are secured by means of screws 20, the upper end of said stop plates projecting
 20 above the upper edge of the drag and being beveled at 21. A match plate 22 adapted to be positioned on the drag is provided on its
 25 ends with recesses or slots 23, adapted to receive the beveled upper ends of the stop plates 19, whereby the match plate may be accurately positioned on the drag, and if
 30 necessary may be removed and repositioned thereon. The hinge members 12 are preferably formed with rounded lugs 24, which are adapted to reinforce the arms 15 and to
 35 move into the outer slots or spaces 9 when the cope is placed in open position on the drag, as shown in Fig. 1, said rounded lugs 24 forming stops or rests for the cope.

When the match plate 22 is positioned on the drag and the cope folded thereon, or the
 40 flask closed, the pintles 16 will occupy the upper portions of the slots or spaces 8, thereby allowing for the cope to occupy a true parallel position on the drag whereby
 45 the different halves of the mold will be in true alinement with each other. When the match plate 22 is removed so as to place the mold in condition for receiving the molten
 metal before casting, the pintles 16 normally rest on the bottoms of the slots or spaces 8,
 50 so that the cope will be brought into positive engagement with the drag and the flask wholly closed.

Having described my invention, I claim and desire to secure by Letters Patent.

55 1. In a molder's flask, the combination with a drag and a cope, of hinge members adapted to be fastened to said drag and said cope, one of said hinge members having a plurality of upstanding lugs, the other hinge
 60 member having pintle lugs, and means on said second hinge member adapted to rest on said first hinge member when the cope is open whereby the latter is supported in a raised position.

65 2. In a molder's flask, the combination

with a drag and a cope, of flat plates forming match plate stops suitably connected to the drag and extending above the edge thereof, said plate stops having notches
 70 formed in the upper edge thereof, and match plates having projections on the edges thereof, said projections adapted to enter said notches in the plate stops.

3. In a molder's flask, the combination with a drag and a cope, of hinge members
 75 adapted to be fastened to the edges of said drag and said cope, one of said hinge members being offset and having upstanding lugs, the other hinge member having an out-
 80 wardly extending arm, pintle lugs formed on the end of the arm, said pintle lugs adapted to be received between said upstanding lugs, and a projection on said pintle lugs
 adapted to enter a recess in the first mentioned hinge member when the cope is
 85 opened, whereby said cope is prevented from lateral displacement.

4. In a molder's flask, the combination with a drag and a cope, of hinge members
 90 adapted to be fastened to the edges of said drag and said cope, one of said hinge members being offset and having a plurality of upstanding lugs, the other hinge member
 95 having an outwardly extending arm, pintle lugs formed on the end of the arm, said pintle lugs adapted to be received by the up-
 standing lugs and being free to move vertically within the lug and a reinforcing member on said arm, said reinforcing member
 100 adapted to operate between two of said upstanding lugs and to form a rest or stop whereby the cope may be held in an approxi-
 mately vertical position when the latter is open.

5. In a molder's flask, the combination
 105 with a drag and a cope, of hinge members adapted to be fastened to the edges of said drag and said cope, one of said hinge members being offset and having a plurality of upstanding lugs, the other hinge member
 110 having an outwardly extending arm, pintle lugs formed on the end of the arm, said pintle lugs adapted to be received by the up-
 standing lugs and being free to move vertically within the lug and a reinforcing
 115 member on said arm, said reinforcing member adapted to operate between two of said upstanding lugs and to form a rest or stop whereby the cope may be held in an approxi-
 120 mately vertical position when the latter is open, and a projection on said pintle lug adapted to move in contact with said up-
 standing lugs whereby all lateral motion of the cope is prevented.

In testimony whereof, I affix my signature
 125 in the presence of two witnesses.

PARKE S. POINDEXTER.

Witnesses:

CHAS. J. KRUG,
 JAS. F. JAMES.