

W. C. BOGENSCHUTZ.
FLASK.
APPLICATION FILED OCT. 6, 1910.

983,870.

Patented Feb. 14, 1911.

2 SHEETS—SHEET 1.

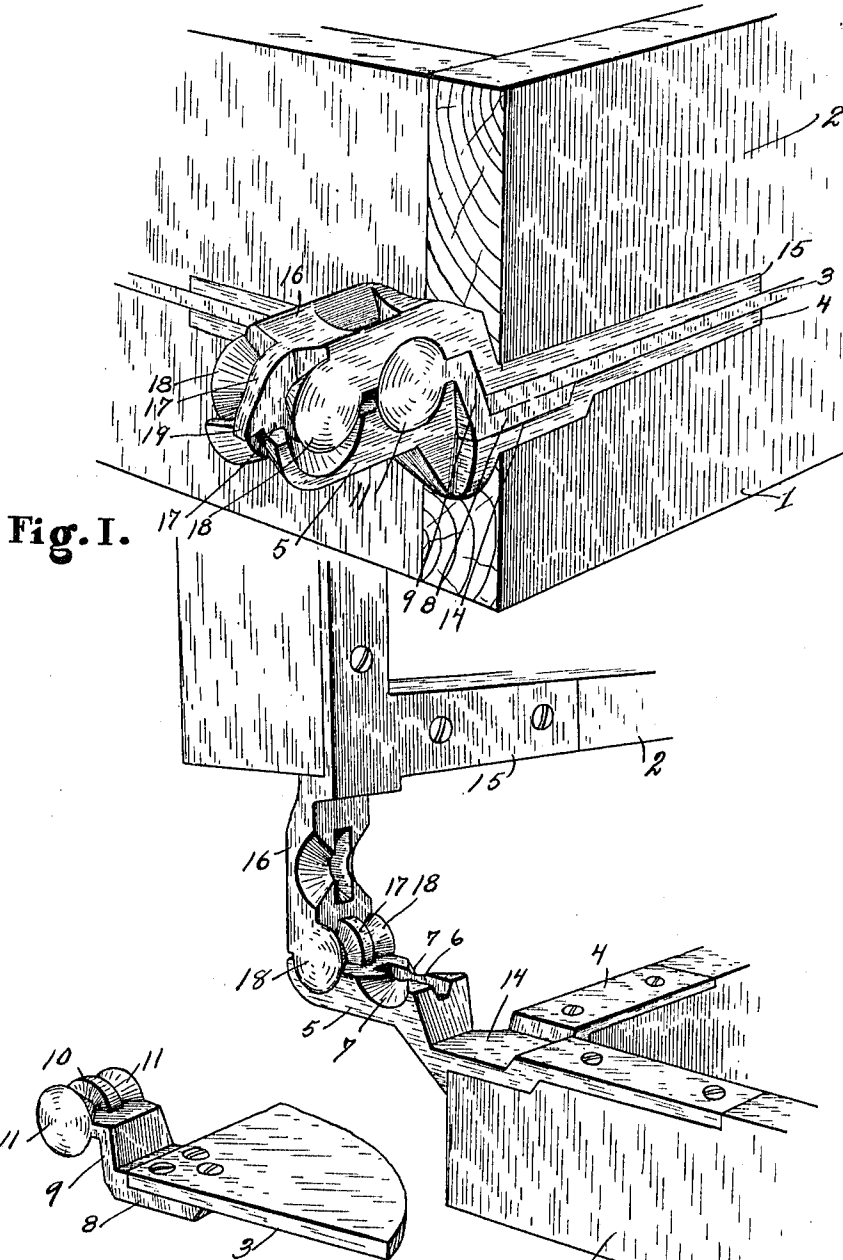


Fig. I.

Fig. II.

Fig. III.

Inventor

Witnesses
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Lulla G. Greenfield

William Charles Bogenschütz
By Chappell & Earl
Attorneys

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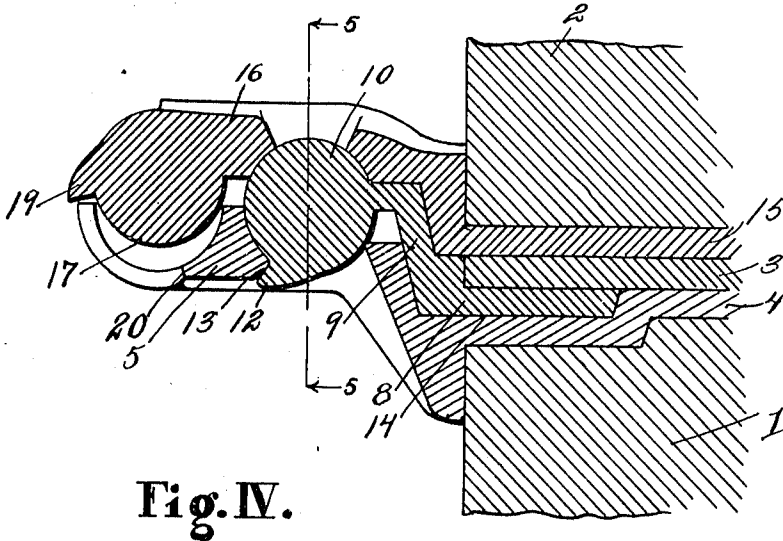


Fig. IV.

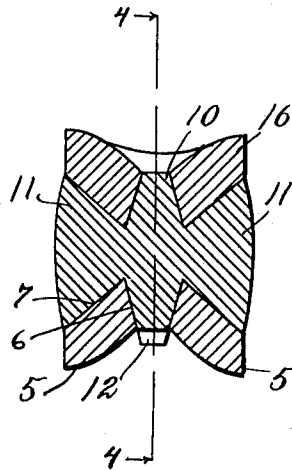


Fig. V.

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UNITED STATES PATENT OFFICE.

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FLASK.

983,870.

Specification of Letters Patent. Patented Feb. 14, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM CHARLS BOGENSCHUTZ, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Flasks, of which the following is a specification.

This invention relates to improvements in flasks.

It relates particularly to an improved hinge for flasks.

The main object of this invention is to provide an improved flask hinge which permits the swinging of the cope and the removal of the match or parting plate with little likelihood of destroying the mold, and thus facilitating molding operations.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure, which is a preferred embodiment of my invention, is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a detail perspective view of a structure embodying the features of my invention. Fig. 2 is a detail perspective view with the cope in its open position and the match or parting plate removed. Fig. 3 is a detail perspective view of the match or parting plate and its hinge member. Fig. 4 is a detail vertical section taken longitudinally of my improved hinge, as on a line corresponding to line 4—4 of Fig. 5. Fig. 5 is a transverse section taken on a line corresponding to line 5—5 of Fig. 4.

In the drawing, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the drag, 2 the cope and 3 the match or parting plate of a flask, the parts being shown largely in conventional form. I provide a drag hinge member, consisting of an angle-shaped body or strap 4, having an upwardly off-set hinge arm 5 thereon. This arm is provided with a pair of knuckle sockets, each consisting of a slot-like central portion

6 having downwardly-converging sides and outwardly-expanding conically tapered end portions 7. The outer socket member is open at the outer end of the arm, as shown in the drawings.

The match plate hinge member consists of a body portion 8 having an upwardly off-set hinge arm 9 thereon provided with a knuckle comprising a central cylindrical portion 10 having conical sides and outwardly-expanding conical end portions 11.

The inner socket of the drag is preferably open at the bottom, as shown, to receive the stop lug or rest 12 on the lower side of the central portion 10 of the match plate hinge member. This stop is positioned to engage the rest 13 of the drag when the match plate is in its closed position.

The drag hinge member is provided with a depressed seat 14 adapted to receive the body of the match plate hinge member when in its closed position, the match plate being lapped upon and secured to the body of the parting plate hinge member, as shown in the drawing. This seat is of such depth that the upper surface of the body of the match plate hinge member is in the same plane as the upper surface of the remaining portion of the body of the drag hinge member, so that the match plate rests thereon, as shown in the drawing, it being, however, further supported by the stop lug 12.

The cope hinge member consists of an angle-shaped body portion 15, having an upwardly off-set arm 16 thereon, the arm being provided with a knuckle at its outer end comprising a central portion 17, adapted to coact with the outer socket of the drag hinge member. At each side of this central portion is a conical end portion 18. The central portion 17 is provided with a stop lug 19 adapted to engage the rest 20 when the cope is in its erected position. By thus shaping the sockets and knuckles, the parts are effectively guided and centered so that they are automatically brought into proper position in closing the flask. Further, when it is desired to remove the match plate, the cope is supported in its open position by the stop, as described. The match plate is supported by its stop-lug so that in rapping the plate preparatory to removing it, the mold is not likely to be injured by the swinging of the plate.

I have illustrated and described my im-

provements in detail in the form in which I have embodied them in practice, and which form I find to be very satisfactory. I am aware, however, that considerable structural variations are possible and the apparatus still be desirable, but as these variations will no doubt be readily understood by those skilled in the art to which this invention relates, I have not attempted to illustrate or describe the same herein.

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

1. The combination with a drag, cope and match plate, of a drag hinge member provided with knuckle sockets, each comprising a central portion having downwardly converging sides and outwardly expanding conical end portions, the central portion of the inner socket being open at the bottom and the central portion of the outer socket being open at the bottom and outer edge; a match plate hinge member provided with a knuckle comprising a central cylindrical portion having conical sides and inwardly tapered conical end portions, the central portion being provided with a stop lug on its inner sides engaging with the outer end of the opening in the bottom of the socket when the match plate is in its closed position, said knuckle being adapted to coact with the inner knuckle socket of said drag hinge member; and a cope hinge member provided with a knuckle comprising a central portion having conical sides and inwardly tapered conical end portions, said central portion being provided with a stop lug adapted to engage with the inner end of the opening in the bottom of the socket when the cope is in its open position, said knuckle being adapted to coact with the outer knuckle socket of said drag hinge member, said cope hinge member being also provided with a knuckle socket comprising a central portion having upwardly converging sides and outwardly expanding conical end portions adapted to coact with the knuckle of said match plate.

2. The combination with a drag, cope and match plate, of a drag hinge member provided with knuckle sockets, each comprising a central portion having downwardly converging sides and outwardly expanding conical end portions; a match plate hinge member provided with a knuckle comprising a central cylindrical portion having conical sides and inwardly tapered conical end portions, the central portion being provided with a stop lug engaging with a coacting stop on the drag hinge member when the match plate is in its closed position, said knuckle being adapted to coact with the inner knuckle socket of said drag hinge member; and a cope hinge member provided with a knuckle comprising a central portion hav-

ing conical sides and inwardly tapered conical end portions, said central portion being provided with a stop lug adapted to engage with a coacting stop on the drag hinge member when the cope is in its open position, said knuckle being adapted to coact with the outer knuckle socket of said drag hinge member, said cope hinge member being also provided with a knuckle socket comprising a central portion having upwardly converging sides and outwardly expanding conical end portions adapted to coact with the knuckle of said match plate.

3. The combination with a drag, cope and match plate, of a drag hinge member provided with knuckle sockets, each comprising a central portion having downwardly converging sides and outwardly expanding conical end portions; a match plate hinge member provided with a knuckle comprising a central cylindrical portion having conical sides and inwardly tapered conical end portions, said knuckle being adapted to coact with the inner knuckle socket of said drag hinge member; and a cope hinge member provided with a knuckle comprising a central portion having conical sides and inwardly tapered conical end portions, said knuckle being adapted to coact with the outer knuckle socket of said drag hinge member, said cope hinge member being also provided with a knuckle socket comprising a central portion having upwardly converging sides and outwardly expanding conical end portions adapted to coact with the knuckle of said match plate.

4. The combination with a drag, cope and match plate, of a drag hinge member provided with knuckle sockets, each comprising a central slot-like portion and outwardly expanding conical end portions; a match plate hinge member provided with a knuckle comprising a central cylindrical portion and inwardly tapered conical end portions, the central portion being provided with a stop lug engaging with a coacting stop on the drag hinge member when the match plate is in its closed position, said knuckle being adapted to coact with the inner knuckle socket of said drag hinge member; and a cope hinge member provided with a knuckle comprising a central portion, and an inwardly tapered conical end portion, said central portion being provided with a stop lug adapted to engage with a coacting stop on the drag hinge member when the cope is in its open position, said knuckle being adapted to coact with the outer knuckle socket of said drag hinge member, said cope hinge member being also provided with a knuckle socket comprising a central slot-like portion and outwardly expanding conical end portions adapted to coact with the knuckle of said match plate.

5. The combination with a drag, cope and

match plate, of a drag hinge member provided with knuckle sockets, each comprising a central slot-like portion and outwardly expanding conical end portions; a match plate hinge member provided with a knuckle comprising a central cylindrical portion and inwardly tapered conical end portions, said knuckle being adapted to coact with the inner knuckle socket of said drag hinge member; and a cope hinge member provided with a knuckle comprising a central portion, and inwardly tapered conical end portions, said knuckle being adapted to coact with the outer knuckle socket of said drag hinge member, said cope hinge member being also provided with a knuckle socket comprising a central slot-like portion and outwardly expanding conical end portions adapted to coact with the knuckle of said match plate.

6. The combination with a drag and cope, of a drag hinge member provided with a knuckle socket comprising a central portion having downwardly-converging sides and outwardly expanding conical end portions, said central portion being open at the end of said hinge member; and a cope hinge member provided with a knuckle comprising a central portion and inwardly-tapered conical end portions, said central portion being provided with a stop lug engaging with a coacting stop on the drag hinge member when the cope is in its open position.

7. The combination with a drag and cope, of a drag hinge member provided with a knuckle socket comprising a slot-like central portion having downwardly-converging sides and outwardly expanding conical end portions; and a cope hinge member provided with a knuckle comprising a central portion and inwardly-tapered conical end portions, said central portion being pro-

vided with a stop lug engaging with a coacting stop on the drag hinge member when the cope is in its open position.

8. In a structure of the class described, the combination of a pair of hinge members, one of said hinge members being provided with a socket comprising a central portion having outwardly-converging sides and outwardly-expanding conical end portions, the other hinge member being provided with a knuckle comprising a central portion having conical sides and inwardly tapered conical end portions.

9. In a structure of the class described, the combination of a pair of hinge members, one of said hinge members being provided with a knuckle socket provided with a central slot-like portion and outwardly-expanding conical end portions, the other hinge member being provided with a knuckle comprising a central portion and inwardly-tapered conical end portions.

10. The combination with a drag and match plate, of a drag hinge member provided with a knuckle socket comprising a slot-like central portion and conical end portions; and a match plate hinge member provided with a knuckle comprising a central portion and inwardly-tapered conical end portions, the central portion being provided with a stop lug on its under side engaging with a coacting stop on the drag hinge member when the match plate is in its closed position.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

WILLIAM CHARLS BOGENSCHUTZ. [L. s.]
Witnesses:

CHAUNCEY STRONG,
MABEL GARRISON.