

J. C. GOODALE.
 FLASK HINGE.
 APPLICATION FILED JUNE 27, 1910.

1,001,018.

Patented Aug. 22, 1911.

2 SHEETS—SHEET 1.

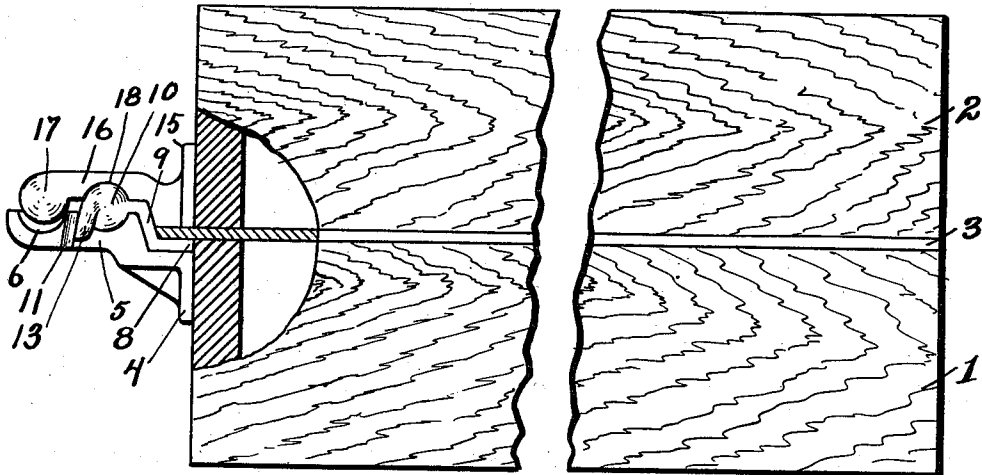


Fig. 1.

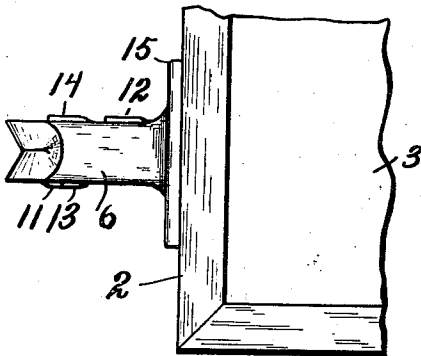


Fig. 2.

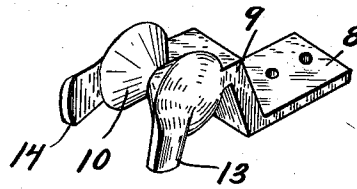


Fig. 4.

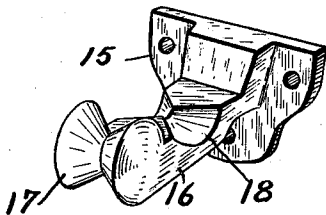


Fig. 5.

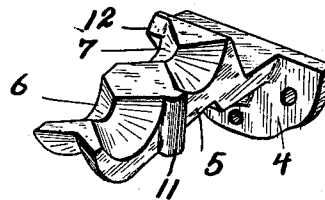


Fig. 3.

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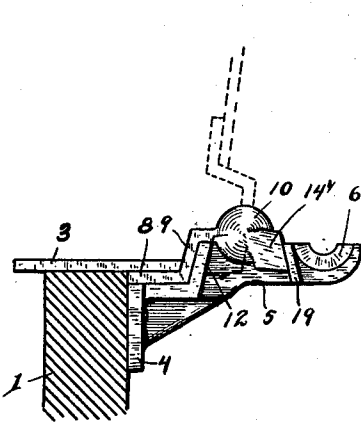


Fig. 7.

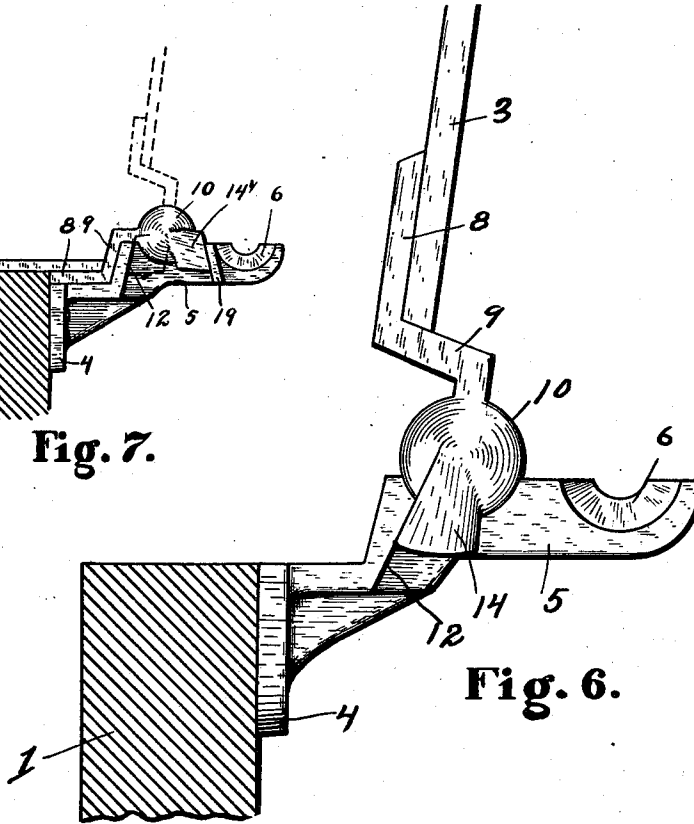


Fig. 6.

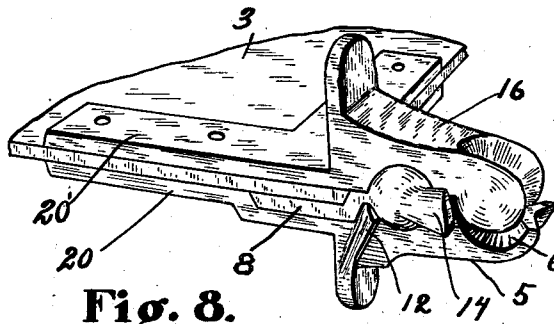


Fig. 8.

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UNITED STATES PATENT OFFICE.

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FLASK-HINGE.

1,001,018.

Specification of Letters Patent. **Patented Aug. 22, 1911.**

Application filed June 27, 1910. Serial No. 569,199.

To all whom it may concern:

Be it known that I, JOHN C. GOODALE, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Flask-Hinges, of which the following is a specification.

This invention relates to improvements in flask hinges.

The main objects of this invention are to provide an improved hinge for molder's flask which guides, supports and retains the match plate in efficient relation to the drag and cope and permits convenient handling of the same in assembling or separating the parts.

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 structures described constitute effective embodiments of my invention. Other embodiments could be readily devised by those skilled in the art.

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

Structures constituting effective and preferred embodiments of the features of my invention are clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a detail side elevation of a structure embodying the features of my invention, portions of the flask walls and match plate being broken away to better disclose the structural details. Fig. 2 is a detail plan view of a part of Fig. 1, showing one of the hinges in position. Fig. 3 is a perspective view of the drag hinge member. Fig. 4 is a perspective view of the match plate hinge member. Fig. 5 is an inverted perspective view of the cope hinge member. Fig. 6 is an enlarged detail elevation view of one of the hinges showing the drag and the match plate in its erected position, the cope being removed. Fig. 7 is a detail elevation view of a modified form of hinge in which the stops are modified and having both stop means appear on each side of the hinge. Fig. 8 is a detail perspective of a modified construction of the hinge members, the modification being in the

means for attaching the hinge members to the corner of the cope and the drag.

In the drawings, similar reference numerals refer to similar parts throughout the several views.

Referring to the drawing, the drag 1, the cope 2 and the match plate 3 of a flask are shown mainly in conventional form. I provide a drag hinge member, consisting of an attaching plate 4, having an upwardly-offset arm 5 thereon in which are knuckle sockets 6 and 7, the knuckle sockets being spool-shaped or double-conical in form. A match plate locking stop 11 is on one side of the arm and a match plate supporting stop 12 is on the opposite side. The operation of these stops will fully appear later on.

The match plate hinge member consists of an attaching strap 8, with an upwardly-offset arm 9 having a spool-shaped or double-conical knuckle 10 thereon, adapted to coact with the inner socket 7 of the drag hinge member. A lock stop finger 13 is on one side of the arm 9 and a rest stop 14 is on the opposite side. These stops coact with the drag hinge member stops 11 and 12. The stops 11 and 13 are disposed so as to engage when the match plate is in its closed position and effectively lock the same against movement. The stops 12 and 14 are disposed so as to engage and support the match plate when it is in the erected position, as shown in Fig. 6. The stop fingers 13 and 14 are on opposite sides of the match plate hinge arm and embrace the opposite sides of the drag hinge member and efficiently guide the same and prevent lateral movement of the parts.

The cope hinge member consists of an attaching plate 15 having an arm 16 thereon provided with a knuckle 17 at its outer end, adapted to coact with the socket 6 of the drag hinge member, and a socket 18, adapted to coact with the knuckle 10 of the match plate hinge member.

In Fig. 7, a modification of the hinge is illustrated in which the supporting stop 12 and the locking stop 19, corresponding to the locking stop 11, are shown on the same side of the drag hinge. These coöperate with modified stop finger 14', which has double stop surfaces, one to engage with the lock stop 19 and the other with the support stop 12. These stops can be duplicated

on the opposite side and make a very strong structure for heavy work. The fingers 14' will engage the opposite sides of the drag hinge.

5 In the modified construction shown in Fig. 8, the drag hinge member is provided with an angled strap-like attaching portion 20, while the cope hinge member is provided with a similarly shaped strap-like attaching plate or portion 20'. The stops are provided on these hinge members to coact in the same relation as those of the structure illustrated in Figs. 1 to 6.

10 The modification, particularly that appearing in Fig. 8, shows that the height of the pivot point of the match plate may be varied when the hinge is being made to insure the best point for hinging for the particular pattern to be molded.

20 A flask equipped with my improved hinge members is very easily manipulated and permits the ready assembling and disassembling of the parts of the flask and their ready manipulation in forming the mold.

25 I desire to be understood as claiming the structures specifically, as illustrated, as well as broadly within the scope of the appended claims.

30 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 having a pair of double conical or spool-shaped knuckle sockets therein and an oblique supporting stop and an oblique locking stop on opposite sides of said hinge member, a match plate hinge member having a double conical or spool-shaped knuckle thereon coacting with the inner knuckle socket of said drag hinge member and having stop fingers on opposite sides thereof embracing said drag hinge member and coacting with the stops thereon to support said match plate when in its elevated position and to lock it when in its closed position, and a cope hinge member having a double conical or spool-shaped knuckle coacting with the outer socket of said drag hinge member and a socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

2. The combination with a drag, cope and match plate, of a drag hinge member having a pair of double-conical or spool-shaped knuckle sockets therein and having an oblique supporting stop on the side thereof, a match plate hinge member having a double-conical or spool-shaped knuckle thereon coacting with the inner knuckle socket of said drag hinge member and having a stop finger arranged to coact with the oblique supporting stop on said drag hinge member to support said match plate in its elevated position, and a cope hinge member having a

double-conical or spool-shaped knuckle coacting with the outer socket of said drag hinge member and having a socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

3. The combination of a drag, cope and match plate, a drag hinge member having a pair of double-conical or spool-shaped knuckle sockets therein, having an oblique locking stop on the side thereof, a match plate hinge member having a double-conical or spool-shaped knuckle thereon coacting with the inner knuckle socket of said drag hinge member and having a stop finger arranged to coact with the said oblique locking stop on the said drag hinge member to lock the match plate when in its closed position, and a cope hinge member having a double-conical or spool-shaped knuckle, coacting with the outer socket of said drag hinge member and having a socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

4. The combination with a drag, cope and match plate, of a drag hinge member having a pair of double-conical or spool-shaped knuckle sockets therein, a match plate hinge member having a double-conical or spool-shaped knuckle thereon, coacting with the inner knuckle socket of said drag hinge member, and having stop fingers on both sides of the said match plate hinge member, disposed to engage the opposite sides of the said drag hinge member to prevent lateral movement, and a cope hinge member having a double-conical or spool-shaped knuckle coacting with the outer socket of said drag hinge member, the socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

5. The combination of a drag, cope and match plate, a drag hinge member having a pair of knuckle sockets therein, having an oblique locking stop on the side thereof, a match plate hinge member having a knuckle thereon coacting with the inner knuckle socket of said drag hinge member and having a stop finger arranged to coact with the said oblique locking stop on the said drag hinge member to lock the match plate when in its closed position, and a cope hinge member having a knuckle coacting with the outer socket of said drag hinge member and having a socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

6. The combination with a drag, cope and match plate, of a drag hinge member having a pair of knuckle sockets therein, a match plate hinge member having a knuckle thereon, coacting with the inner knuckle socket of said drag hinge member and having stop fingers on both sides of the said match plate hinge member, disposed to engage the opposite

site sides of the said drag hinge member to prevent lateral movement, and a cope hinge member having a knuckle coacting with the outer socket of said drag hinge member, the
5 socket corresponding to and coacting with the knuckle of said match plate hinge member, as described.

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

JOHN C. GOODALE. [L. S.]

Witnesses:

CLARA ELLYN BRADEN,
CHESTER E. WARNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
