March 23 , 1926. 1,577,718

J. F. HINES

MOLD CONTAINER

Filed Jan. 2, 1926

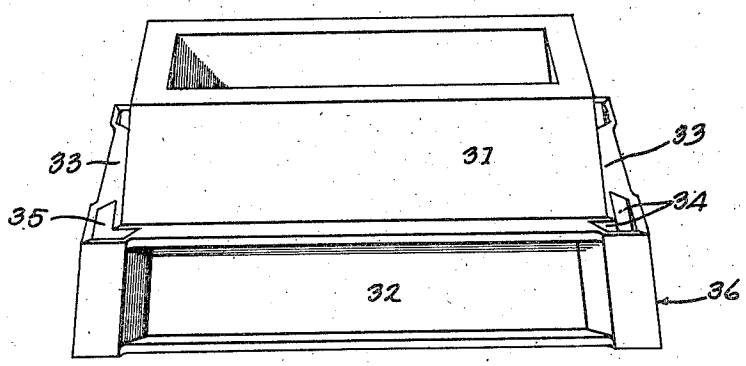


Fig. 1

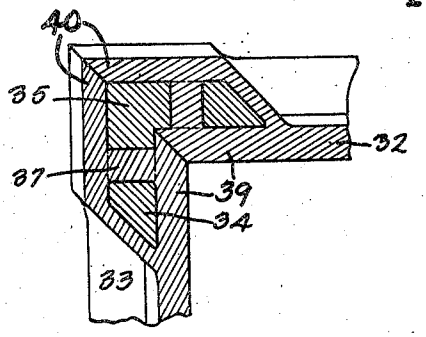


Fig. 2

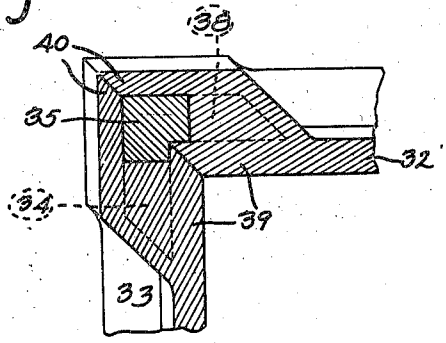


Fig. 3

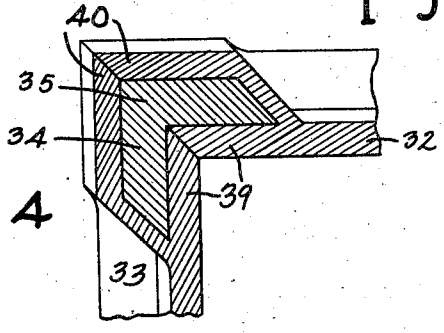


Fig. 4

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Patented Mar. 23, 1926. 1,577,718

UNITED STATES PATENT OFFICE.

JAMES F. HINES, OF LAKEWOOD, OHIO.

MOLD CONTAINER.

Application filed January 2, 1926. Serial No. 78,796.

To all whom it may concern:

Be it known that I, JAMES F. HINES, a citizen of the United States of America, and a resident of Lakewood, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mold Containers, of which the following is a full, clear, and exact description.

So far as I am aware snap flasks and jackets in use prior to my invention have all been open to a variety of objections, principally the high cost of providing a permanently rigid flask or jacket having a finished interior, the inability to construct a finished interior flask or jacket with rigid corners at a commercial cost, and the inability of any one flask or jacket to function in all the various types of molding. My invention provides a mold container free from these and other defects.

In the drawings accompanying this specification and forming a part of this application I have shown, for purposes of illustration, one form which my invention may assume, but I have illustrated this form only as applied to the drag section of a flask since its application to the cope section of a flask, or to a jacket, or to any other mold container, will be obvious from the disclosure relating to the flask drag section.

In these drawings:

Figure 1 represents a preferred method of forming the flask, while

Figures 2, 3, and 4 show alternative forms of corner construction.

The present application is a continuation in part of my copending application Serial Number 720,218, filed June 16, 1924.

In constructing the flask drag section herein shown I first construct a form 31, preferably made of wood, and having its exterior of the exact form desired for the interior of the flask section, and I then assemble about this form 31 a pair of drag side plates 32 and a pair of drag end plates 33 of the proper dimensions to exactly encircle the form 31 when their ends are tightly abutted, preferably formed of cast aluminum, having their inner surfaces completely finished before assembly, and each provided at each end with a recess 34 arranged to communicate and cooperate with the adjoining recess of the adjacent part. I then clamp these members 32 and 33 tightly in position about the form 31, close the lower ends of the recesses 34 in any suitable manner, as by resting the form and members upon a suitable flat plate, and then pour into the recesses 34 molten metal 35 which may be lead or babbitt but it preferably the same material as the flask members and therefore preferably aluminum. I then maintain the members 32 and 33 in position about the form 31 until the metal 35 is set after which the metal 35 is effective to firmly and fixedly permanently retain the members 32 and 33 together and form the members 32 and 33 into a unitary and integral flask drag section 36.

A jacket, or flask cope section, or any other mold container, would of course be constructed in the same manner, but in constructing the sections of a flask I prefer to extend the form 31 as shown and to construct the additional sections about the same form above the drag section 36.

Under certain circumstances I prefer to form the corner joint as shown in Figure 2 wherein each recess 34 is interrupted by a plurality of vertically spaced cross pins 37 which are embraced by the metal 35 and serve as an anchorage to absolutely prevent the metal 35 from pulling out of the recesses 34. In other cases I find it entirely sufficient to use the construction shown in Figure 3 wherein each recess 34 is interrupted by a plurality of vertically spaced lugs 38 upon which the metal 35 may grip. In still other cases I find it entirely safe to utilize the construction of Figure 4 wherein I omit all interruptions in the recesses 34 and rely solely upon the roughness of the walls of the recesses 34, as cast, to provide the desired grip between the members and the metal 35. Under certain circumstances it might also be desirable to taper the walls of the recesses 34 to provide a dove-tail construction but so far I have not found such a construction necessary and I prefer to

omit it, as I also prefer to omit the pins 37 and lugs 38 when possible, all in order to reduce the cost of manufacture.

In actual practice, however, I find desirable either the pins 37 or the lugs 38, preferably the pins 37, because by interconnecting the interior and exterior walls 39 and 40 they permit these walls being made thinner and therefore lighter.

After the mold containers have been formed in this way any sand strip and registering devices and other accessories may be added thereto in any manner found convenient.

From the above it will be obvious to those skilled in the art that I have disclosed herein a mold container superior to anything heretofore used. It will also be obvious to those skilled in the art that the particular embodiment of my invention herein shown and described may be variously changed and modified without departing from the scope of my invention or sacrificing the advantages thereof.

It will therefore be understood that the disclosure herein is illustrative only and that my invention is not limited thereto.

I claim:

1. A joint securing together two substantially non-integrated members of a metal mold container, comprising cooperating joint sections formed one on each of said members, and abutting, and formed to provide a recess between said sections, and a metal tie cast in said recess and effective alone to hold said members firmly and fixedly rigidly assembled.

2. A flask section comprising a plurality of nonintegrated metal members arranged in an annulus with each pair of adjacent ends abutted and containing a recess lying partly in each member, and metal ties cast in said recesses and effective to hold said members firmly and fixedly permanently assembled into a rigid flask section.

3. A joint securing together two members of a metal mold container, comprising cooperating joint sections formed one on each of said members, and abutting, and formed to provide a recess between said sections, and a metal tie cast in said recess, and lying entirely exteriorly of the inner walls of said members, and acting to hold said members firmly and fixedly rigidly assembled.

4. A joint securing together two members of a metal mold container, comprising cooperating joint sections formed one on each of said members, and abutting, and formed to provide a recess between said sections lying partly in each of said sections, and a metal tie cast in said recess, and lying entirely exteriorly of the inner walls of said members, and acting to hold said members firmly and fixedly rigidly assembled.

5. A flask section comprising a plurality of metal members arranged in an annulus with each pair of adjacent ends abutting and containing a recess lying partly in each member, and metal ties cast in said recesses, lying exteriorly of the inner walls of said members, and effective to hold said members firmly and fixedly permanently assembled into a rigid flask section.

6. A joint securing together two members of a metal mold container, comprising cooperating joint sections formed one on each of said members, and abutting, and formed to provide a recess between said sections elongated longitudinally of the axis of said joint, and a metal tie cast in said recess and acting to hold said members firmly and fixedly rigidly assembled.

7. A joint securing together two members of a metal mold container, comprising cooperating joint sections formed one on each of said members, and abutting, and formed to provide a recess between said sections elongated longitudinally of the axis of said joint and lying partly in each of said sections, and a metal tie cast in said recess and acting to hold said members firmly and fixedly rigidly assembled.

8. A flask section comprising a plurality of metal members arranged in an annulus with each pair of adjacent ends abutted and containing a recess lying partly in each member and elongated longitudinally of the junction of said members, and metal ties cast in said recesses and effective to hold said members firmly and fixedly permanently assembled into a rigid flask section.

9. The method of forming an all metal mold container which comprises forming a set of side members each provided with joint sections each arranged to abut the cooperating joint section of an adjoining side member, and to form with said cooperating joint section a recess lying between the two said joint sections, assembling said members with said joint sections abutted and said recesses formed, and, without substantially integrating said members, casting metal into said recesses to form ties acting to hold said members firmly and fixedly rigidly assembled.

10. The method of forming an all metal mold container which comprises forming a set of side members each provided with joint sections each arranged to abut the cooperating joint section of an adjoining side member, and to form with said cooperating joint section a recess lying between the two said joint sections, assembling said members about a form with said joint sections abutted and said recesses formed, and, while said members are so assembled about said form, casting metal into said recesses to form ties acting to hold said members firmly and fixedly rigidly assembled.

11. The method of forming an all metal mold container which comprises forming a

set of side members each provided with joint sections each arranged to abut the cooperating joint section of an adjoining side member, and to form with said cooperating joint section a recess lying between the two said joint sections, assembling said members with said joint sections abutted and said recesses formed, and casting metal into said recesses to form ties acting to hold said members firmly and fixedly rigidly assembled, and into at least a plurality of said recesses without essential change in position of said members.

In testimony whereof I hereunto affix my signature.

JAMES F. HINES.