C. JURACK.

SNAP FLASK FOR MOLDING.

APPLICATION FILED APR. 6, 1911.

1,041,292.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

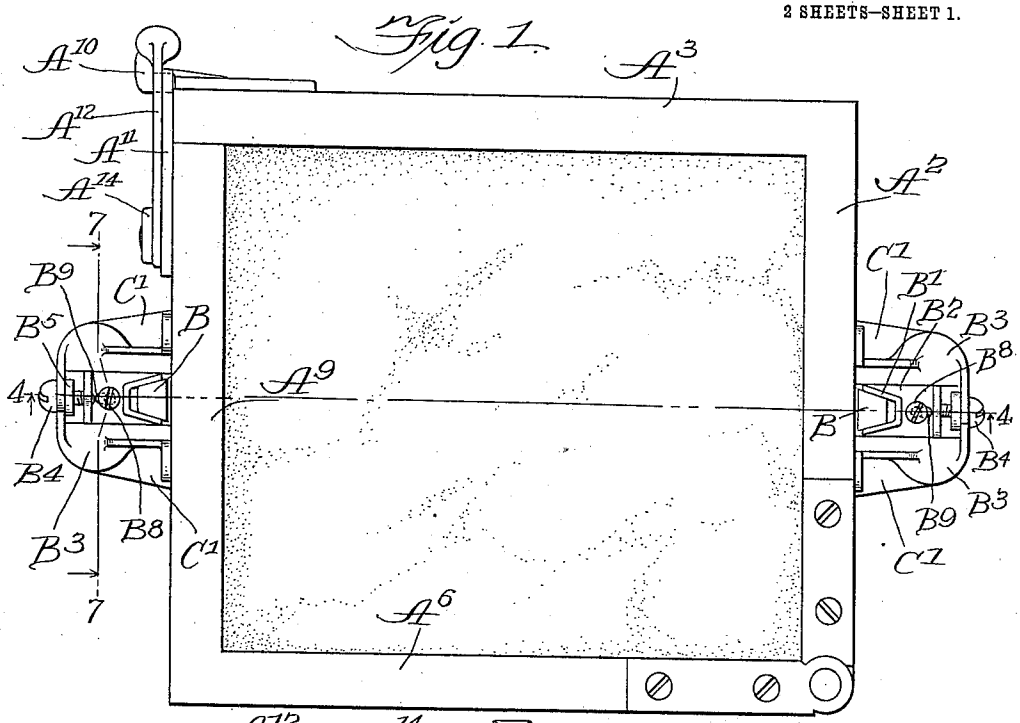


Fig. 2.

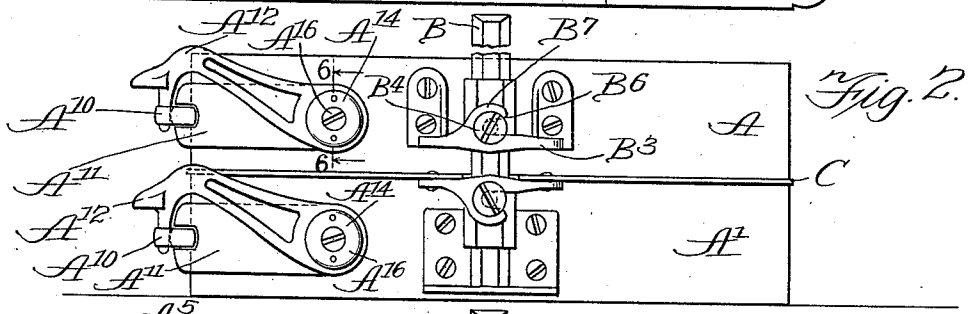
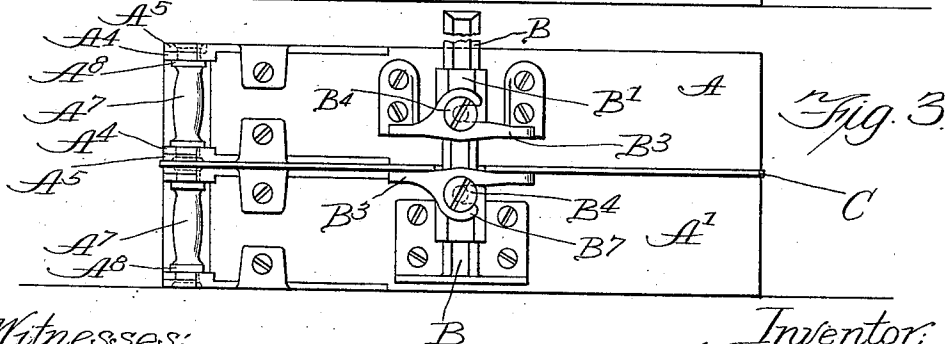


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

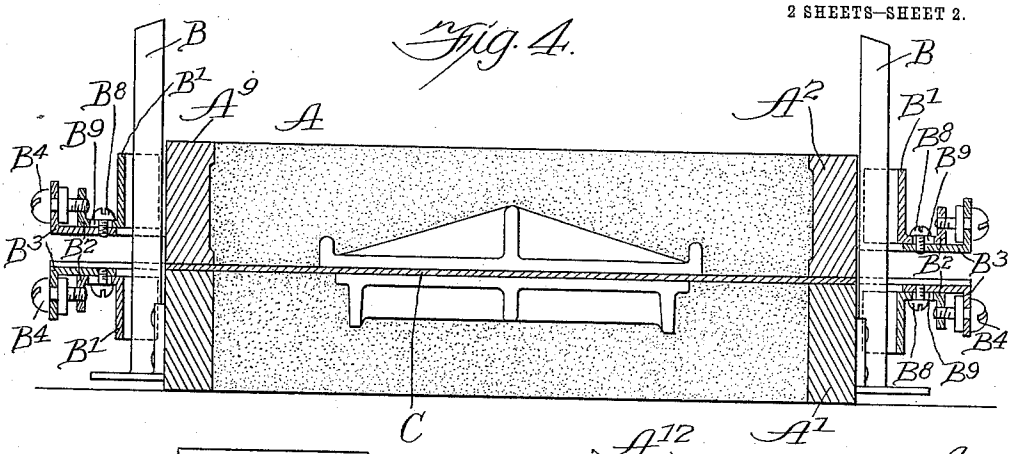


Fig. 5.

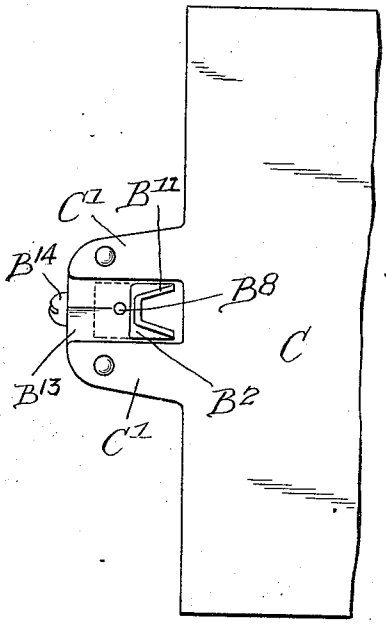


Fig. 6.

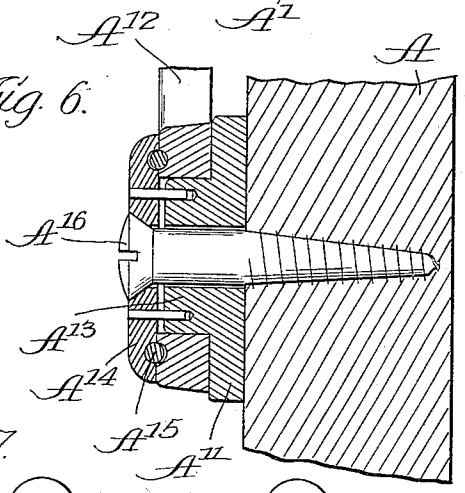


Fig. 7.

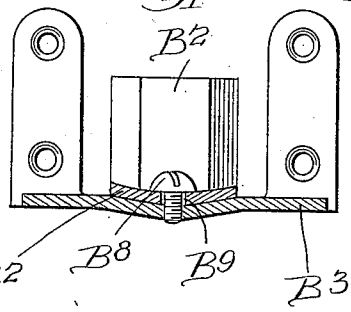
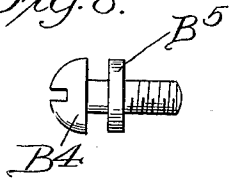


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES JURACK, OF MILWAUKEE, WISCONSIN.

SNAP-FLASK FOR MOLDING.

1,041,292. Specification of Letters Patent. Patented Oct. 15, 1912.

Application filed April 6, 1911. Serial No. 619,256.

To all whom it may concern:

Be it known that I, CHARLES JURACK, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Improvement in Snap-Flasks for Molding, of which the following is a specification.

My invention relates to snap flasks or devices used to facilitate the operations of molders particularly in connection with the molding of articles of comparatively small size. Heretofore and in ordinary molding the flask retains the sand so as to support it while the metal is being poured. In the case of snap flasks, particularly for smaller objects, the flask sections are hinged at one corner and latched together at the other so that they can be separated and lifted free from the sand which particularly in the case of smaller articles is strong enough to hold itself, thus the snap flask can be continuously re-used, whereas, in the former case, there had to be a large number of flasks.

In the case of a snap flask it is necessary that the sections of the flask should come together or separate with great accuracy and precision and that the parts should be connected together so as not to be easily abraded at their bearing parts for otherwise these parts wear and the initial accuracy of the device is destroyed. The difficulties are particularly serious in the case of a two part flask where the pattern is carried on the two sides of a parting plate, for in that case the upper half of the mold incretion must be lifted up moving with perfect precision away from the pattern and then the plate and the two parts of the pattern must be lifted up moving with perfect precision away from the lower impression and the two flask portions containing the impressions must then be brought together with perfect accuracy to make the two parts of the mold fit together with perfect precision. All these results are accomplished in my structure which is illustrated diagrammatically in the accompanying drawings, wherein—

Figure 1 is a plan view; Fig. 2 is a side elevation looking toward the right in Fig. 1; Fig. 3 is a side elevation looking toward the left in Fig. 1; Fig. 4 is a section along the line 4—4 of Fig. 1; Fig. 5 is a detailed plan view of the parting plate; Fig. 6 is a section on line 6—6 of Fig. 2. Fig. 7 is a section along the line 7—7 of Fig. 1; Fig. 8 is a detail of one of the holding screws.

Like parts are indicated by the same letter in all the figures.

In my drawings I have shown a snap flask comprising a cope A and drag A^1 but since the cope and the drag are substantially similar in construction, with the exception of certain attachments to be described later, the description of one will suffice for both. The end A^2 to which the side A^3 is rigidly atached at right angles thereto is provided at top and bottom with the hinge ears A^4 in opposition to the hinge ears A^5 on the side A^6. The column or standard A^7 is provided with projecting pintles at each end which pass through the two ears of the hinge and are upset or riveted so as to bring the two faces of the hinge ears firmly together and hold them firmly against the shoulders A^8 thereon. The side A^6 carries at its other end the end A^9 rigidly held at right angles thereto. The lug A^{10} projects outwardly from the end of the side A^3 in opposition to the slotted member A^{11}, on the end piece A^9 and is engaged by the latch hook A^{12} which is rotatably mounted about the boss A^{13} on the member A^{11} and is held in position thereon by the washer A^{14} which is compressed by means of the screw A^{16} against the coil spring A^{15} on the hook. The drag A^1 carries at either end the rigidly mounted vertically beveled strip B in opposition to the beveled guide B^1 carried by the plate B^2 slidably mounted in the cope A and adjustable therein by means of the screw B^4 which is provided with a fixed washer B^5 in opposition to a slot B^6 in the lug B^7 projecting from the bracket B^3. The screw B^8 which is adjustably mounted in the bracket B^3 slides within the slot B^9 in the plate B^2 to latch the plate in position. The parting plate C which may be interposed between the cope and the drag is provided with a lug C^1 which supports a similar beveled guide B^{11} carried by the bracket B^{13} and is

adjustable therein by means of the screw B^{14} which is provided with the fixed washer B^{15} in opposition to a slot B^{16} and a lug B^{17} projecting from the bracket B^{13}, the screw B^{18} which is adjustably mounted in the bracket B^{13}, the screw B^{18} which is adjustably mounted in the bracket B^{13} slides within the slot B^{19} in the plate B^{12} to latch the blade in position.

A general description of my invention is as follows: The hinge consists of two projecting portions on the edge of the flask sections at top and bottom and an intermediate post having at each end a short pintle which projects through registering apertures in the projecting ends of the hinged portions top and bottom and is then upset or riveted so as to draw the parts thoroughly and permanently together. There is no room for the sand to get in between the moving parts sufficiently to abrade their surfaces so as to loosen the hinge. Each of the latches is provided with the inner spring so that its engaging parts are held tightly together and the latch itself thus secured in every position.

The interlocking piece and guide on the two sides of the two flange sections must travel one upon the other with great accuracy. The groove portion is mounted on a bracket and is adapted to slide therealong to and fro. The two parts are held together by a double headed or grooved screw so that they cannot be easily separated or the screw be lost. In the preferred form the screw underlies a projecting portion of the bracket so that even if the groove piece be unscrewed still it is held in proper relation to its bracket. When the blade which carries the pattern is employed there are two groove pieces one attached to the lower flask and the other to the plate. They are separated from each other so as to permit the fingers of the operator to enter between their supporting brackets. By means of the movable groove piece on each of the brackets the connection can be made so that either the upper part of the flask or the pattern carrying blade can be moved upwardly with great precision along the guides.

It will be evident that while I have shown in my drawings an operative device, still many changes might be made in size, shape and arrangement of parts without departing materially from the spirit of my invention, and I wish therefore, that my drawings be regarded as in a sense diagrammatic.

The use and operation of my device are as follows: When the drag and cope are to be used in forming a mold the opposed end and side parts are first brought together in closed position in such manner that the lug projecting from the side is in opposition to the slotted member a portion of which projects from the end. The latch hook which is rotatably mounted upon said slotted member engages the lug to hold the parts firmly in position. The grooved guides on the parting plate and on the cope engage the beveled projecting guide bar on the drag and are allowed to travel along it until the parting plate rests upon the drag and the cope rests upon the parting plate. In event of there being too much play or in the event of the grooved guides binding upon the guide bar, they may be adjusted by rotating the adjusting screw and locked in position by means of the locking screw. The pattern which is usually carried on the parting plate may be disengaged from the mold in the usual manner by withdrawing first the cope and then the parting plate and the mold may be formed by replacing the cope upon the drag, guiding it the while upon the upright guide bar. When it is desired to remove the flask from about the mold the operator raises the latch hooks. In view of the fact that they are held by the coiled spring they will remain in the raised position and he will therefore have both hands free to open out the members about their hinged connections. When this is done the cope and drag may be conveniently removed from the mold and used again at the will of the operator.

I claim:

1. A molder's flask comprising a cope and drag, a guide finger projecting upwardly from the drag and rigidly carried thereby, a bracket projecting from the cope and a hook projecting upwardly from said bracket and a grooved guide piece in opposition to said finger, a base upon which said guide piece is mounted, a slot within said base, a screw adjustably mounted within said bracket and slidable in said slot, a flange projecting upwardly from said base and a part in screw-threaded engagement with said flange and held beneath said hook.

2. A guide for molder's flask comprising a bracket, a hook projecting upwardly from the outer end of said bracket, a bearing surface intermediate said hook and the flask, a slotted plate slidably mounted upon said bearing surface, adjustable means mounted in said bracket and slidable in said slot for holding the plate upon the bracket, a grooved guide member carried by the plate, a flange projecting upwardly from said plate at the end opposite the guide member and an adjustable part adjustably mounted in said flange and held beneath said hook.

3. The combination with a molder's flask of a slotted guide member, a base upon which said member is supported, a flange projecting from said flask and in slidable relation with said base, means for holding said base upon said bracket and combined

holding and adjusting means for sliding said base along said bracket, said combined holding and adjusting means comprising a hook projecting upwardly from said bracket and a screw in screw-threaded relation to said flange and having a collar on one side of said hook, a head on the other and a shank interposed between them beneath said hook.

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