

(No Model.)

J. HARRISON.
MOLDER'S FLASK.

No. 375,935.

Patented Jan. 3, 1888.

Fig. 1.

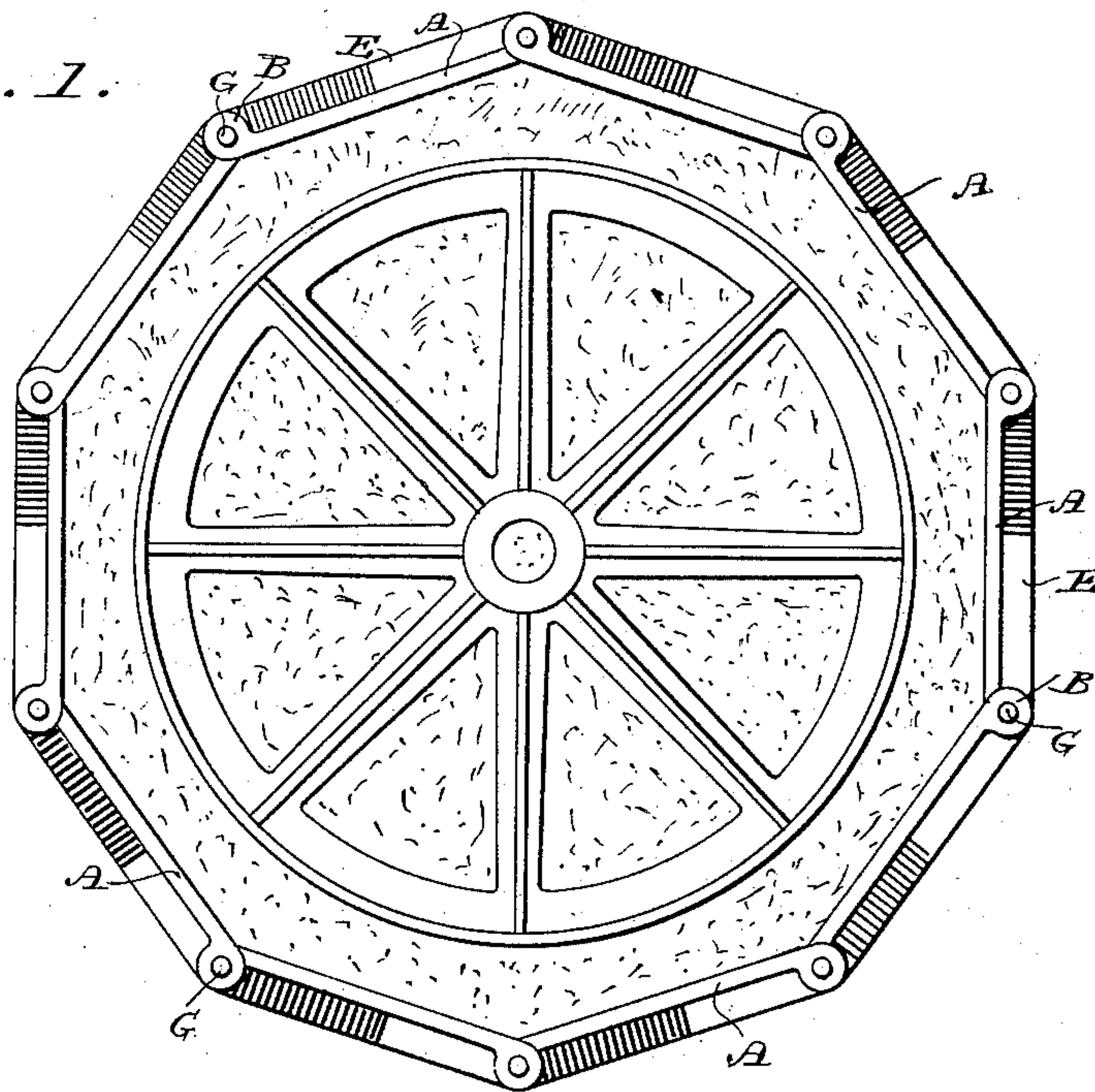


Fig. 2.

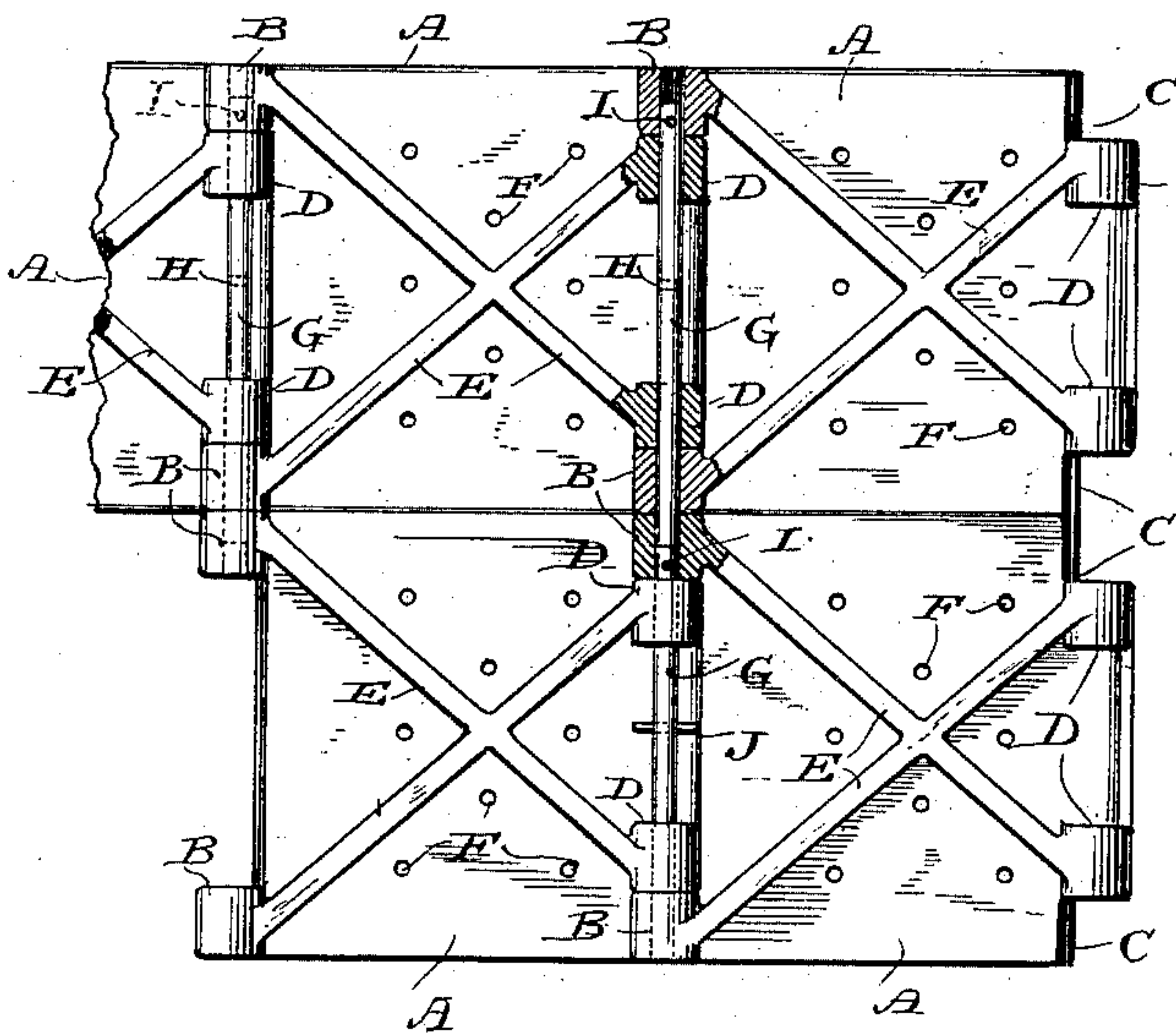


Fig. 3.

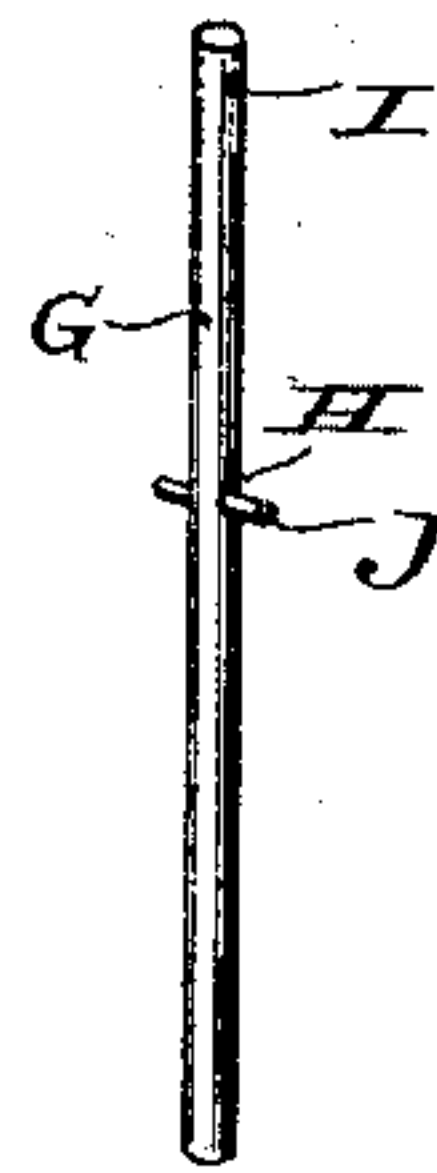


Fig. 4.

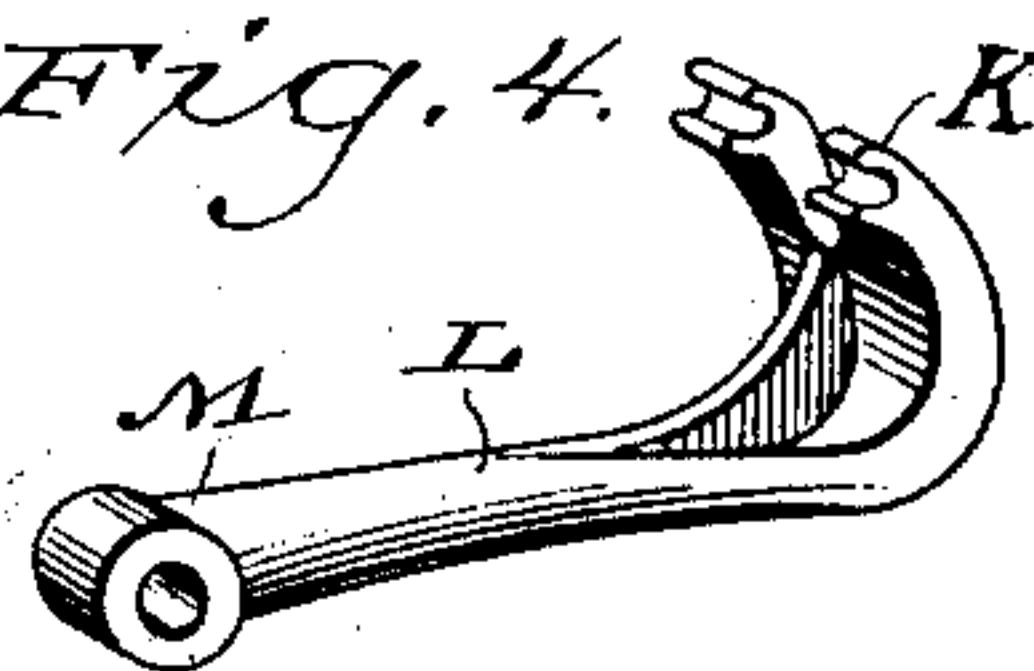
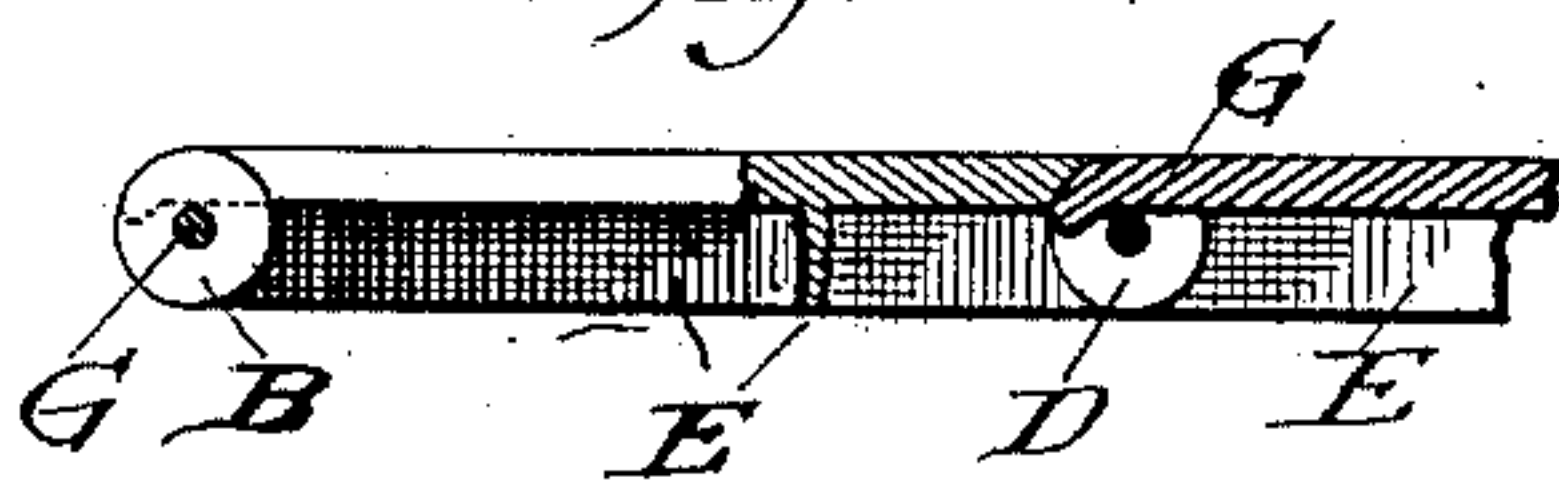


Fig. 5.



Witnesses

Geo. W. Young,
N. E. Cliphant

Inventor

Joseph Harrison
By Stuart & Underwood
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH HARRISON, OF MILWAUKEE, WISCONSIN.

MOLDER'S FLASK.

SPECIFICATION forming part of Letters Patent No. 375,935, dated January 3, 1888.

Application filed November 8, 1887. Serial No. 254,599. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HARRISON, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Molders' Flasks; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to molders' flasks; and it consists in certain peculiarities of construction and combination of parts, to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents a plan view illustrating the application of a flask constructed according to my invention; Fig. 2, a side elevation, partly in section, of a portion of my flask; Fig. 3, a detail view of a connecting-rod employed in my invention; Fig. 4, a similar view of a hook employed to remove the connecting-rods, and Fig. 5 a plan view, partly in section.

Referring by letter to the drawings, A represents a series of sections, each of which has the upper and lower corner of one of its vertical edges provided with a perforated lug, B, and the upper and lower corners of the opposite vertical edge cut away to form recesses C. Immediately adjacent to the recesses C each of the sections is provided with perforated lugs D, that are joined to the lugs B by means of diagonal strengthening-webs E, said sections being also provided with a suitable number of perforations, F, for the escape of the gases generated during the process of molding. Between the lugs B, and outside the lugs D, each of the sections A has its edge beveled, and between the lugs D the edge is rounded. The lugs B of each section are designed to fit the recesses C of the section next adjacent, and thus the perforations in said lugs will be brought into register with those in the lugs D to receive a connecting-rod, G, whereby a hinge-joint is established between said sections. The sections are automatically prevented from folding inward upon one another by means of the beveled edges of one section coming into contact with the inner side of the next adjacent section. The pins G are severally provided with transverse perforations H I, in which to insert a pin, J, for engagement with the bifurcated and grooved

end K of a hook, L, (shown in detail, Fig. 4,) the other end of this hook being preferably provided with an eye, M, whereby it may be attached to a suitable tackle or lever.

In the operation of my invention any desirable number of the sections A are joined together to constitute a chain, and the ends of this chain are then united to form a flask. As shown by Fig. 2, the sections may be built up on one another, and this building up carried on indefinitely, according to the desired depth of flask, the rods G, uniting the lower sections, being of such length as to leave a space in the upper lugs, B, for engagement with the lower ends of the rods uniting the adjoining sections, whereby all the sections are united in one chain.

A flask being formed in the manner above described, a mold is made therein by packing sand around a pattern, and it will be noticed that the flask assumes a shape approximate to that of said pattern, whereby an equal amount of the sand is on all sides of this pattern. After the metal has been run and it is desirable to remove the casting, I draw one or more of the rods G, and thereby break the flask apart, so as to readily separate the sand from said casting. From the fact that the rods G are difficult to remove after the sand has been packed, I provide the pins J and hook M and operate as follows: Supposing the flask to have been made in two tiers, as shown by Fig. 2, I place a pin, J, in transverse perforation H of a rod, G, in the upper tier, then catch hold of said pin with the hook L and draw the rod up far enough to bring its lower end out of the lugs by which it is engaged. The pin J is now removed from the perforation H in the rod and placed in the perforation I thereof and the operation of drawing out continued. The rod in the lower tier immediately below the one just drawn is removed in a similar manner, the pin J being alternately arranged in the perforations H I and operated upon by the hook, as above described. The operation just described being accomplished, the flask is broken apart and can be readily moved. After the flask has been broken apart the remaining rods can be readily removed by hand, in order to disunite the several sections of which it is composed. When only one tier is used, I may make the rods G of

such length as to project above the upper edges of the sections, so that they may be more readily operated upon by the hook.

By my invention I provide a flask that can be readily and quickly set up for any size of casting, and, as before stated, will approximate in shape to the pattern, thus enabling me to make a mold with less sand and at the same time pack this sand more securely with less time and labor than is ordinarily the case.

Another advantage of my invention lies in the fact that after the casting has been completed there is no necessity for digging out the sand, as when the flask is broken apart said sand will fall for want of support, and hence the time and labor about a foundry is greatly economized. I also economize space in storing flasks made according to my invention, as the sections composing these flasks take up comparatively little room when unlaced and stacked.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A molder's flask that comprises a series of sections, each of which has one vertical edge thereof provided at its corners with perforated lugs, and the other vertical edge cut away at the corners to form recesses, and also provided with perforated lugs, and rods passed through the several lugs when those of one section are in register with those of the sections next adjacent, substantially as set forth.

2. A molder's flask that comprises a series of sections, each of which has one vertical edge thereof provided at its corners with perforated lugs, and the other vertical edge cut away at

the corners to form recesses, and also provided with perforated lugs, diagonal strengthening-webs uniting the lugs on the opposite edges of the sections, and rods passed through the several lugs when those of one section are in register with those of the sections next adjacent, substantially as set forth.

3. A molder's flask comprising a series of sections, each of which has one vertical edge thereof beveled and provided at the corners with perforated lugs, and the other vertical edge rounded and cut away to form recesses that are beveled in a vertical direction, and this last-named vertical edge also provided with perforated lugs, and rods passed through the several lugs when those of one section are in register with those of the sections next adjacent, substantially as set forth.

4. A molder's flask comprising a series of sections, each of which has one vertical edge thereof provided with perforated lugs and the other vertical edge cut away to form recesses, and also provided with perforated lugs, and rods provided with transverse perforations, passed through the several lugs when those of one section are in register with those of the section next adjacent, in combination with a pin or pins that detachably engage the perforations in the rods, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JOSEPH HARRISON.

Witnesses:

N. E. OLIPHANT,
GEO. W. YOUNG.