



No. 693,441.

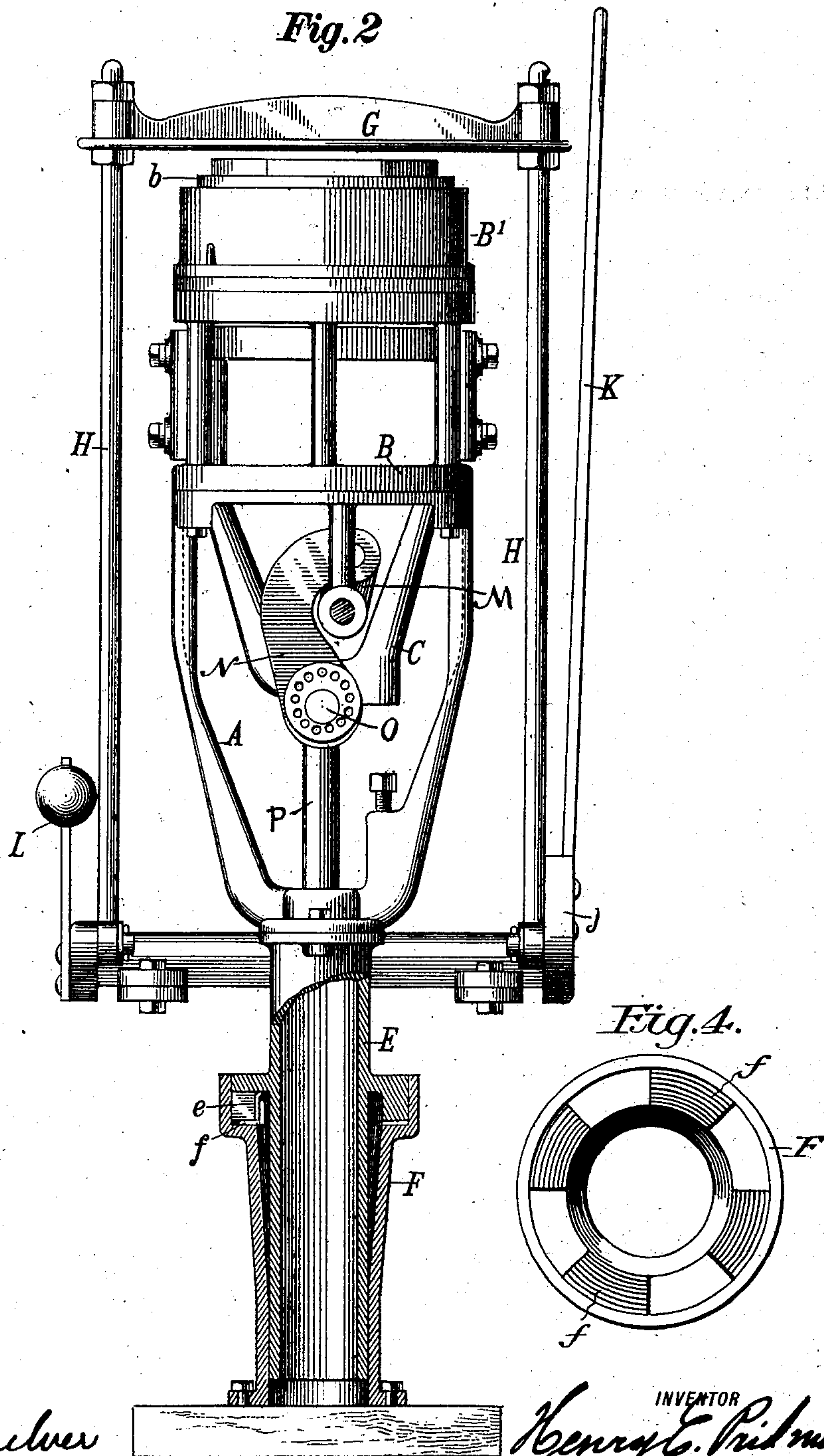
Patented Feb. 18, 1902.

H. E. PRIDMORE.  
MACHINE FOR MAKING SAND MOLDS.

(Application filed Nov. 15, 1894.)

(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

HENRY E. PRIDMORE, OF CHICAGO, ILLINOIS.

## MACHINE FOR MAKING SAND MOLDS.

SPECIFICATION forming part of Letters Patent No. 693,441, dated February 18, 1902.

Application filed November 15, 1894. Serial No. 528,861. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. PRIDMORE, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have  
5 invented a new and useful Improvement in Machines for Making Sand Molds for Casting Metals, of which the following is a specification.

My invention relates to improvements for  
10 sand-mold-making machines in which the sand is filled into the half-flask that is mounted on the machine and in which the pattern is already placed or into which it is forced after the half-flask has been filled with sand.  
15 One feature of it has reference to the packing or pressing of the sand about the pattern by means of a press attached to the machine and the other feature has reference to the positioning of the machine at various places  
20 throughout the foundry that shall be most convenient for handy work. I attain these objects by the mechanisms illustrated in the accompanying drawings, of which—

Figure 1 is a side view of a machine, showing  
25 my improvement in the press in full as well as dotted lines and also showing the machine positioned in a pot or holder the top of which is at the surface of the ground. Fig. 2 is a front view of the same machine with  
30 the holder and base of the molding-machine partly in cross-section. Fig. 3 is a top view more particularly to show the stops for the press in its forward and backward movement, while Fig. 4 is a detail plan view of the pot  
35 or holder, more particularly showing the recesses in the same.

Similar letters refer to similar parts throughout the several views.

The yoke A, the frame B, carrying the part-  
40 ing-board and half-flask B', the plunger C, carrying the pattern, together with the handle D and its connections, are of a well-known type of draw-molding machines. I show the plunger as operated through the link M and  
45 a curved crank N, which is operated from shaft O.

P is a depending guide which moves in a hollow base.

The machine shown in the drawings or any  
50 other draw-molding machine of whatever type it may be is rigidly attached to the base E, that fits into the pot F, which is firmly

fixed in the floor of the molding-room. The machine is in this manner positioned for work, and the platen G, which is carried by the arms  
55 H, is swung to one side, as shown in dotted lines in Fig. 1, where it rests against the stop I. Sand is then shoveled into the cope or drag B', a cover b placed upon top of it, and the platen G is swung back again. The arms  
60 H are pivoted at their lower extremities to cranks J on the shaft J', to which shaft is rigidly attached the long hand-lever K. A counterbalance-weight L balances these parts, so they are easily handled. It will be noticed  
65 that the shaft J' is connected to the base E, so that the press can be easily removed if a class of work is being molded that cannot be handled with pressure, and that it is so positioned that the action of the cranks J when  
70 the platen is in position for use is practically in a vertical line with the machine. Pressure then upon the hand-lever K will draw the platen G upon the sand in the flask and a strong pressure can be put upon it. The base  
75 E being firmly fixed in the pot F, there is no danger of overthrowing the machine when the pressure is applied.

In the molding-machines with which I am acquainted and which have pressures ap-  
80 plied to them the machine itself is forced against the platen and lifted in a vertical line or the connecting-arms H are broken, the upper parts of which work in guides upon the machine-frame and the lower parts are  
85 connected with the crank-arms. By positioning the hand-lever outside of the central line of the machine, so that the pivoted point of its cranks will have practically a vertical  
90 movement, I dispense with the jointing of the arms H, thus making a more simple machine and one in which the platen G does not have to be lifted to as great a height as in the  
95 jointed machines heretofore spoken of when it is rocked to one side from the machine, as its arc of movement is greater than it would be were its arms broken and thus shortened. A stop G' on the platen G stops it over the  
100 flask as it is swung into position for pressure, and as different-sized flasks are often used the stop is adjustable on the platen by slotting the stop and securing it by bolts R, as shown in Fig. 3.

The pot F is formed with a converging bot-



tom of the same diameter as the base E, while its top diverges and forms a seat for a flange on the base E, which flange has stops *e*, that fit into recesses *f* in the pot F, as shown in Fig. 2. The machine is thus rigidly positioned and can be turned to any angle desired, which will be found of much practical convenience in a foundry. By positioning these pots throughout the foundry along the line where the sand is piled as it is gathered together after the finished castings have been taken from it the machine can be taken from pot to pot throughout the foundry, thus following the sand piles. This plan of doing work dispenses with the costly chain conveyers which have been and are still in use to bring the sand to the rigidly-positioned machines in general use. The machine in my plan is taken to the sand and not the sand to the machine.

Having now explained my invention, what I desire to secure by Letters Patent is—

1. In a molding-machine, a swinging presser-plate and a stop secured thereto and arranged to contact with the exterior of the flask and position the plate relatively to the same; substantially as described.

2. In a molding-machine, a swinging presser-plate, and an adjustable stop secured thereto and arranged to contact with the flask

and position the plate relatively to the same; substantially as described.

3. The combination with a hollow support, of a molding-machine revolvably supported therein and having a mold-support and sand-pressing mechanism carried thereon, and means for locking the machine at different points in its circle of rotation; substantially as described.

4. In combination with the flask, in a molding-machine, a platen carried upon arms loosely pivoted upon a crank, a stop to limit the movement of the platen when it is swung from the machine, and a stop on the platen to engage the flask when the platen is swung over the flask, substantially as and for the purpose specified.

5. In combination with a molding-machine and a cylindrical base having a peripheral flange with bosses thereon, a pot to receive the base having a diameter at its bottom substantially the same as that of the base, a flange at the top to receive the flange of the base, and recesses in the flange corresponding with the bosses on the base, substantially as and for the purpose specified.

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Witnesses:

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