

No. 765,332.

PATENTED JULY 19, 1904.

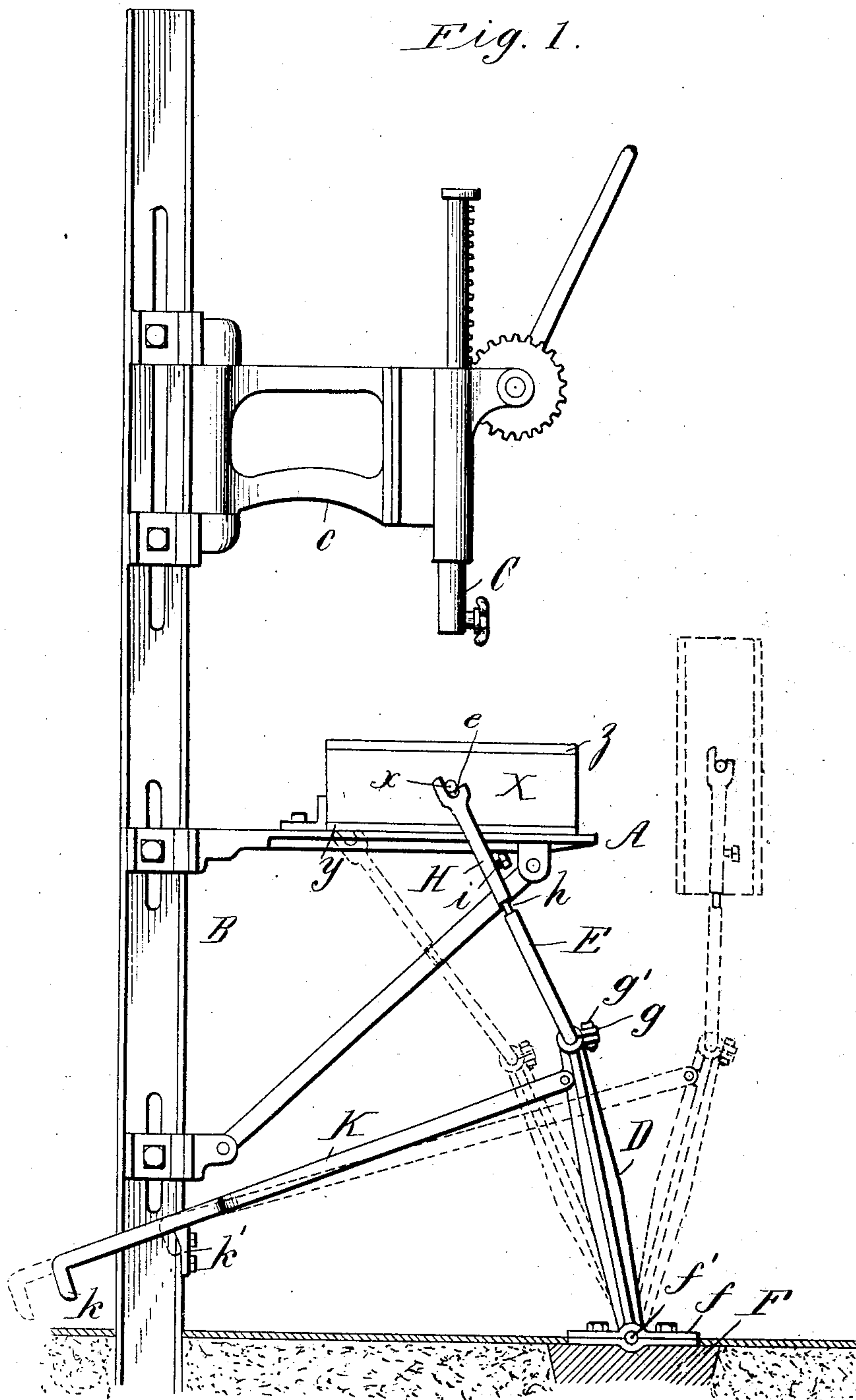
J. C. BRADLEY.
MOLDER'S FLASK SUPPORT.

APPLICATION FILED FEB. 8, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:-
J. H. Snyder Jr.
E. A. Volk.

Inventor.
John C. Bradley
by Wilhelm Parkhurst
Attorneys.

No. 765,332.

PATENTED JULY 19, 1904.

J. C. BRADLEY.
MOLDER'S FLASK SUPPORT.

APPLICATION FILED FEB. 8, 1904.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 2.

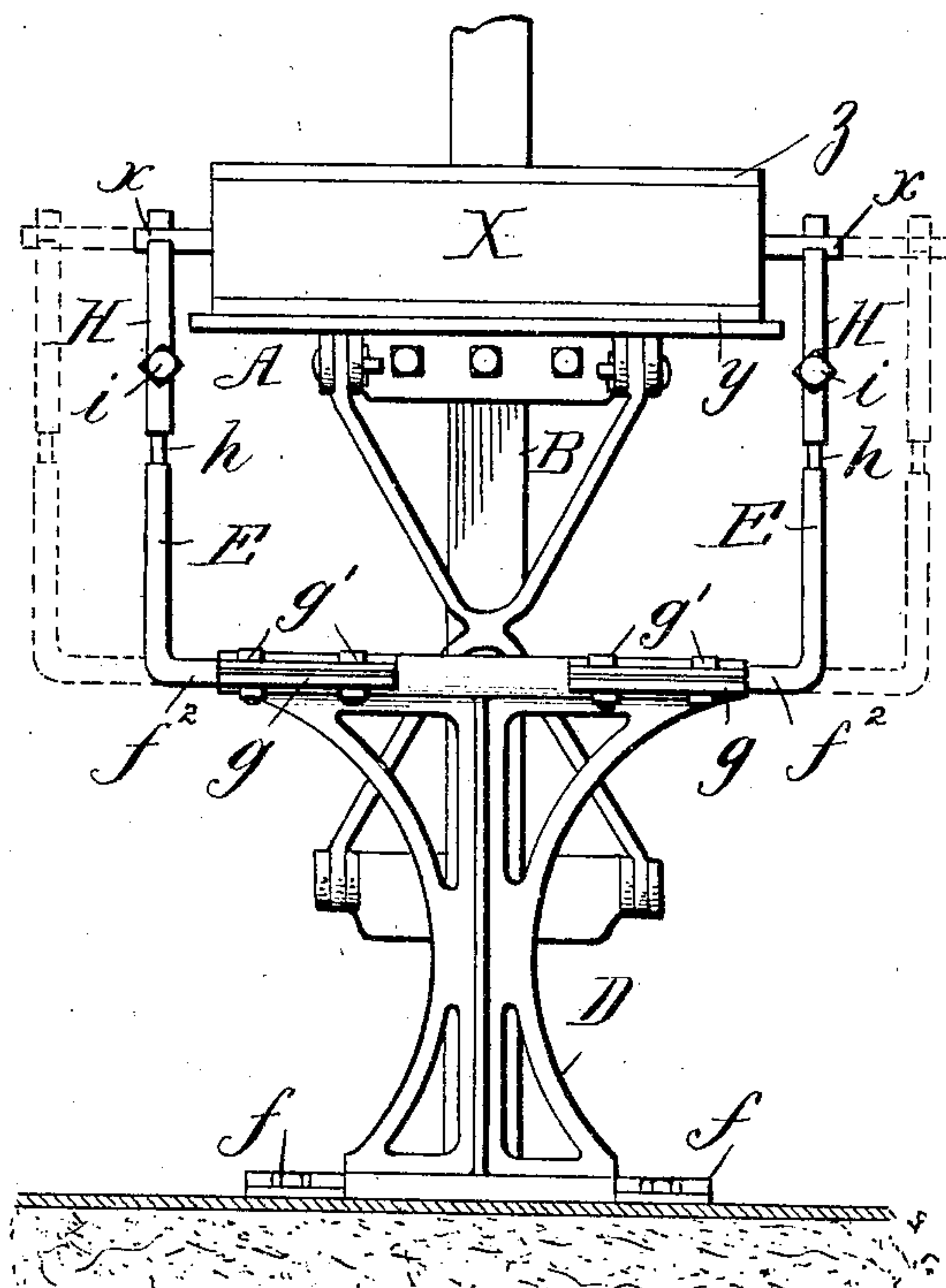


Fig. 3.

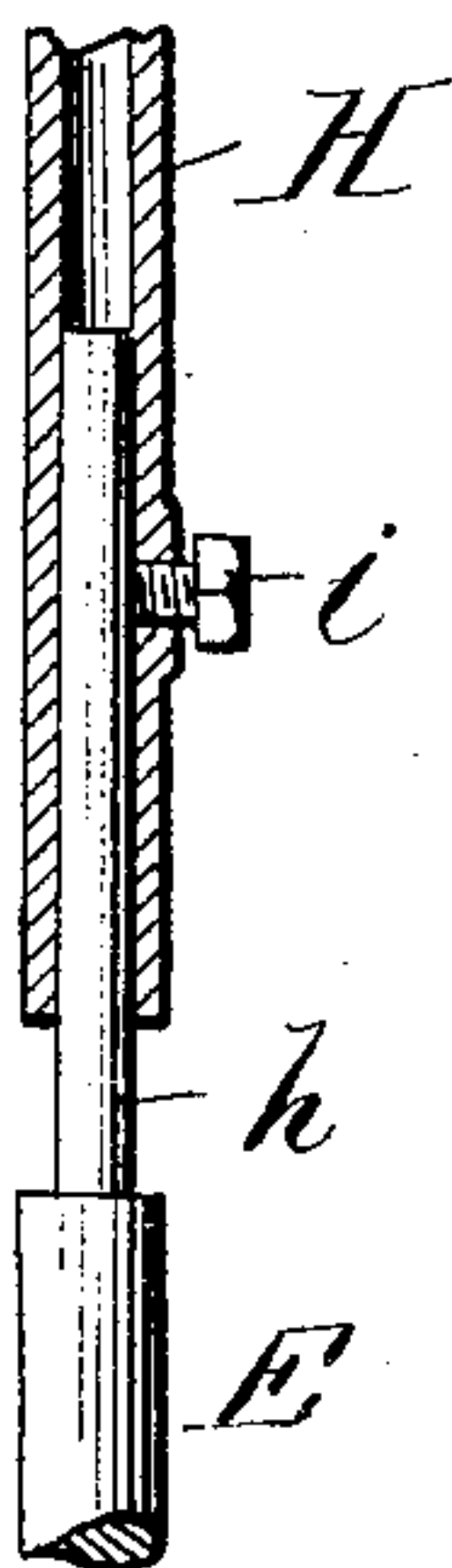
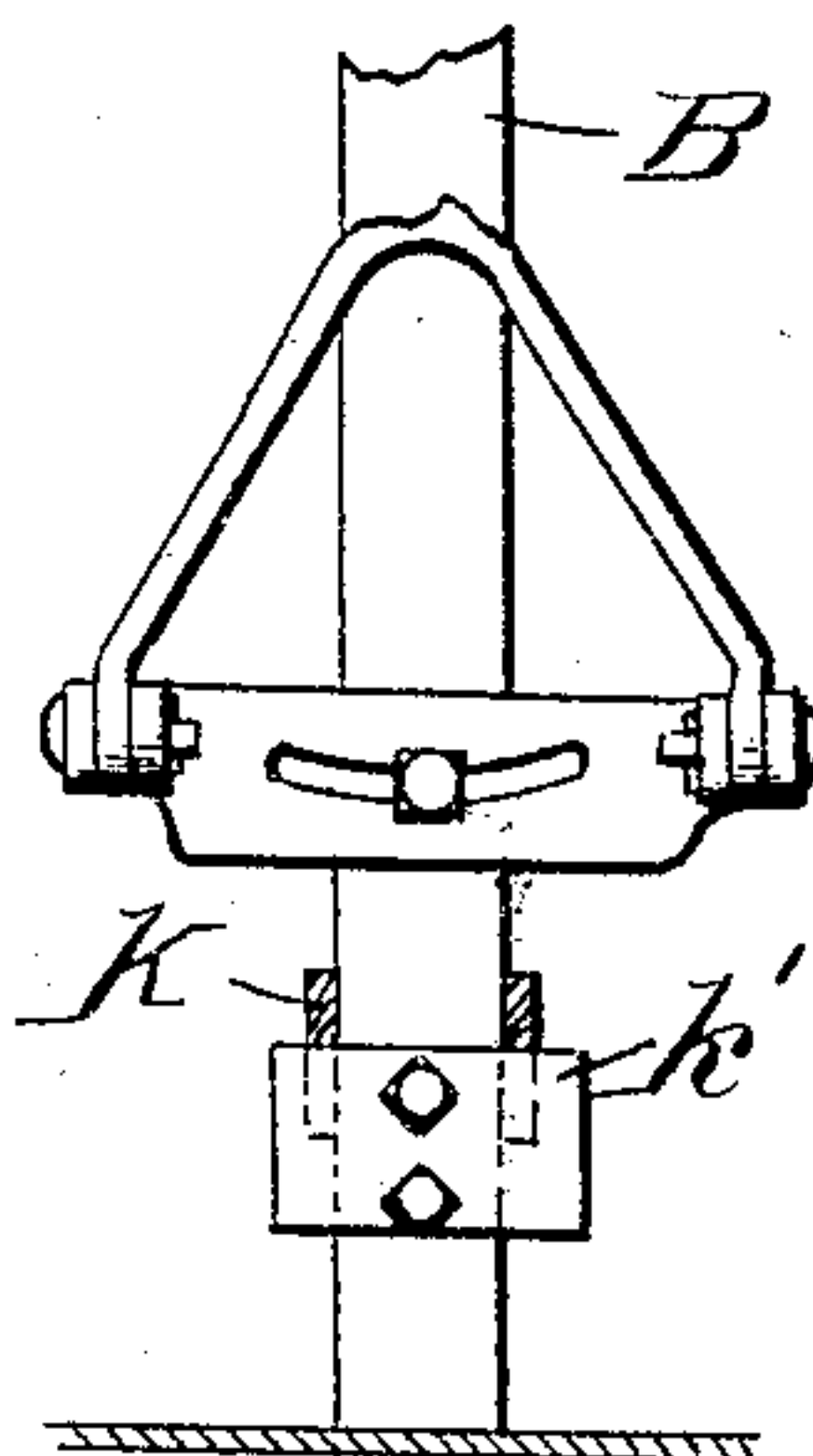


Fig. 4.



Witnesses:-
J. M. Snyder, Jr.
E. A. Volk.

Inventor.
John C. Bradley
by William Parker & Hail
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN C. BRADLEY, OF BUFFALO, NEW YORK, ASSIGNOR TO PRATT & LETCHWORTH COMPANY, OF BUFFALO, NEW YORK.

MOLDER'S FLASK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 765,332, dated July 19, 1904.

Application filed February 8, 1904. Serial No. 192,509. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BRADLEY, a citizen of the United States, and a resident of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Molders' Flask-Supports, of which the following is a specification.

This invention relates more particularly to a device to be used in connection with a molder's table to support the flask and relieve the molder from the weight thereof while inverting or rolling over the flask and the part of the mold which it contains.

In forming a sand mold the customary procedure is to place the pattern on the match-board, place the drag-section of the flask on the match-board, fill the same with sand, which is packed or tamped, after which a cover-board is placed on the drag and the latter, together with the match-board and cover-board, is inverted or rolled over and the other part of the mold formed. In the formation of large and heavy molds it is a matter of considerable difficulty and requires great exertion to roll over the flask, and for this reason it is quite common for the molder to form large molds on the floor of the foundry and call a helper to his assistance to invert or roll over.

The object of this invention is to provide a device of exceedingly simple, strong, and inexpensive construction capable of application to any molder's table to support the flask and relieve the molder of its weight while he is inverting the same, and, further, to so construct the device that it can be quickly and easily adjusted to suit flasks of different sizes.

In the accompanying drawings, consisting of two sheets, Figure 1 is a side elevation of a molder's table provided with a device embodying the invention and showing by full lines the flask supported on the table and the support about to lift the flask and showing by dotted lines the normal position of the flask-support and its position when supporting the flask clear of the table. Fig. 2 is a fragmentary front elevation of the table and flask-support. Fig. 3 is a fragmentary sec-

tional elevation, on an enlarged scale, of one of the arms of the flask-support. Fig. 4 is a fragmentary front elevation, partly in section, of the table-standard and the stop device for limiting the swing of the flask-support.

Like letters of reference refer to like parts in the several figures.

A represents a table or support for the flask while the sand mold is being formed therein. In the construction shown in the drawings this table is secured to and projects forwardly from an upright standard B, which is also provided above the table with a swinging arm c, carrying a vertically-movable pattern-drawing device C, adapted to be secured to the pattern and elevated to lift the pattern out of the mold; but the swinging flask-support forming the subject-matter of this invention is not restricted to use with such a table or machine, but is susceptible of use in connection with any ordinary mold table or support.

X represents the drag-section of a mold-flask, y the match-board, and z the cover-board supported on the table and ready to be rolled over or inverted. The drag is provided at opposite sides with projecting trunnions x.

D represents the flask-support, which consists of a swinging lever or frame arranged below the front portion of the table and having at its upper end two oppositely-disposed separated arms E, arranged at opposite sides of the mold-table and provided at their upper ends with bearing-sockets e to engage the flask-trunnions to lift and support the flask. The lever is pivoted at its lower end in any suitable manner on the floor or a base provided for the same. A base F is shown provided at opposite sides of the lower end of the lever with raised bearings f, through which and through a sleeve at the lower end of the lever passes a horizontal shaft f', on which the lever is adapted to swing toward and from the table. The arms of the flask-support are provided with horizontal inwardly-projecting portions f², which enter split clamping-sleeves g at the sides of the upper end of the lever, and these split sleeves are provided with projecting flanges connected by bolts g' for

clamping the horizontal portions of the arms to hold the latter firmly in adjusted positions. By loosening the bolts the clamping-sleeves free the horizontal portions of the arms to permit the latter to be turned in the sleeves to bring their upper ends beneath the outwardly-projecting trunnions on the flask and also to permit the arms to be moved laterally toward or away from the sides of the table to adapt the support to flasks of different widths.

As the flasks vary in height and the trunnions are not located at the same height on all flasks, it is also desirable to provide for the extension of the arms of the support to position their upper ends in correct relation to the trunnions of the flasks. For this purpose each arm is provided with an upper telescoping portion or extension H, which is preferably tubular and surrounds the reduced upper end of the arm. The arm extensions carry the bearing-sockets for the flask-trunnions. The arm extensions can be moved on the reduced portions of the arms to properly position the bearing-sockets relative to the flask-trunnions and are securely held by set-screws *i*, passing through threaded holes in the tubular extensions and engaging the reduced portions of the arms. The rear sides of the bearing-sockets for the flask-trunnions are preferably longer than the front sides to enable the flask-support to be swung rearwardly clear of the trunnions, as indicated by dotted lines in Fig. 1, while the support is prevented from being swung forwardly past the trunnions.

K represents a stop device for limiting the forward movement of the flask-support and preventing it from falling so far rearward as to be out of easy reach of the molder. This device may be of any suitable form, that shown in the drawings consisting of a rod which is hinged at its front end to the upper portion of the lever-support for the flask and having a bifurcated rear end which straddles the table-standard and is provided with hooks *h*, which engage a transverse horizontal stop-plate *h'*, secured to and projecting laterally beyond the sides of the standard to limit the forward swing of the flask-support. The crotch of the bifurcated end of the bar K engages the standard to limit the rearward swing of the flask-support.

The operation of the device is as follows:

As before stated, the match-board, with the pattern thereon, is placed on the table and the drag placed on the match-board and the drag portion of the mold formed in the usual manner. The cover-board is then placed on the drag, and the flask is ready to be rolled over. The cover and match boards are secured or held by hand on the drag, and the flask-support is then grasped and swung forwardly until the rear sides of the bearing-sockets on the upper ends of its arms engage the trunnions

at the opposite sides of the flask. By pulling the flask-support forwardly the arms, which are in engagement with the trunnions, slide the flask forwardly on the table until the trunnions bear in the sockets of the support, when by the continued forward movement of the flask-support the flask is lifted off of the table and supported entirely by the flask-support in front of the table. The molder then swings the flask on its trunnions to invert the same and pushes the support and flask rearwardly until the flask is lowered onto the table, after which the flask-support is released and permitted to drop rearwardly out of engagement with the trunnions of the flask, as indicated by dotted lines in Fig. 1.

The flask-support is of exceedingly simple, strong, and inexpensive construction, and does not constitute a permanent part of a large and expensive molding-machine, and can therefore be used to advantage in any foundry, and on account of its adjustability is readily adapted to different molding-tables and flasks of different sizes. The device relieves the molder from the necessity of lifting the mold and greatly facilitates the formation of the mold.

I claim as my invention—

1. The combination with a table for supporting the flask, of a swinging flask-support pivoted at its lower end and provided with separated arms arranged to swing past the table at opposite sides thereof and having bearings at their upper ends to engage parts on the opposite sides of the flask, substantially as set forth.

2. The combination with a table for supporting the flask, of a swinging flask-support pivoted at its lower end and provided with separated arms arranged to swing past the table at opposite sides thereof and having bearings at their upper ends to engage parts on the opposite sides of the flask, and means for limiting the swinging movement of the flask-support, substantially as set forth.

3. A swinging flask-support, pivoted at its lower end and having separated arms provided at their upper ends with bearings to engage parts on the flask, said arms being adjustable laterally toward and from each other, substantially as set forth.

4. A swinging flask-support comprising a lever pivoted at its lower end, and separated arms secured to the upper end of said lever and provided at their upper ends with bearings to engage parts on the flask, said arms being adjustable laterally and also forwardly and rearwardly on said lever, substantially as set forth.

5. A swinging flask-support comprising a lever pivoted at its lower end and provided at the opposite sides of its upper end with split clamping-sleeves, and separated arms having at their upper ends bearings to engage parts

on the flask and at their lower ends horizontally-extending portions which enter and are adjustably secured in said clamping-sleeves on the lever, substantially as set forth.

5 6. A flask-support comprising a lever pivoted at its lower end, and separated arms adjustably secured to said lever, said arms having adjustable extensions provided at their

upper ends with sockets to receive the trunnions on the flask, substantially as set forth. 10

Witness my hand this 1st day of February, 1904.

JOHN C. BRADLEY.

Witnesses:

W. C. HOUCK,
CHAS. W. PARKER.