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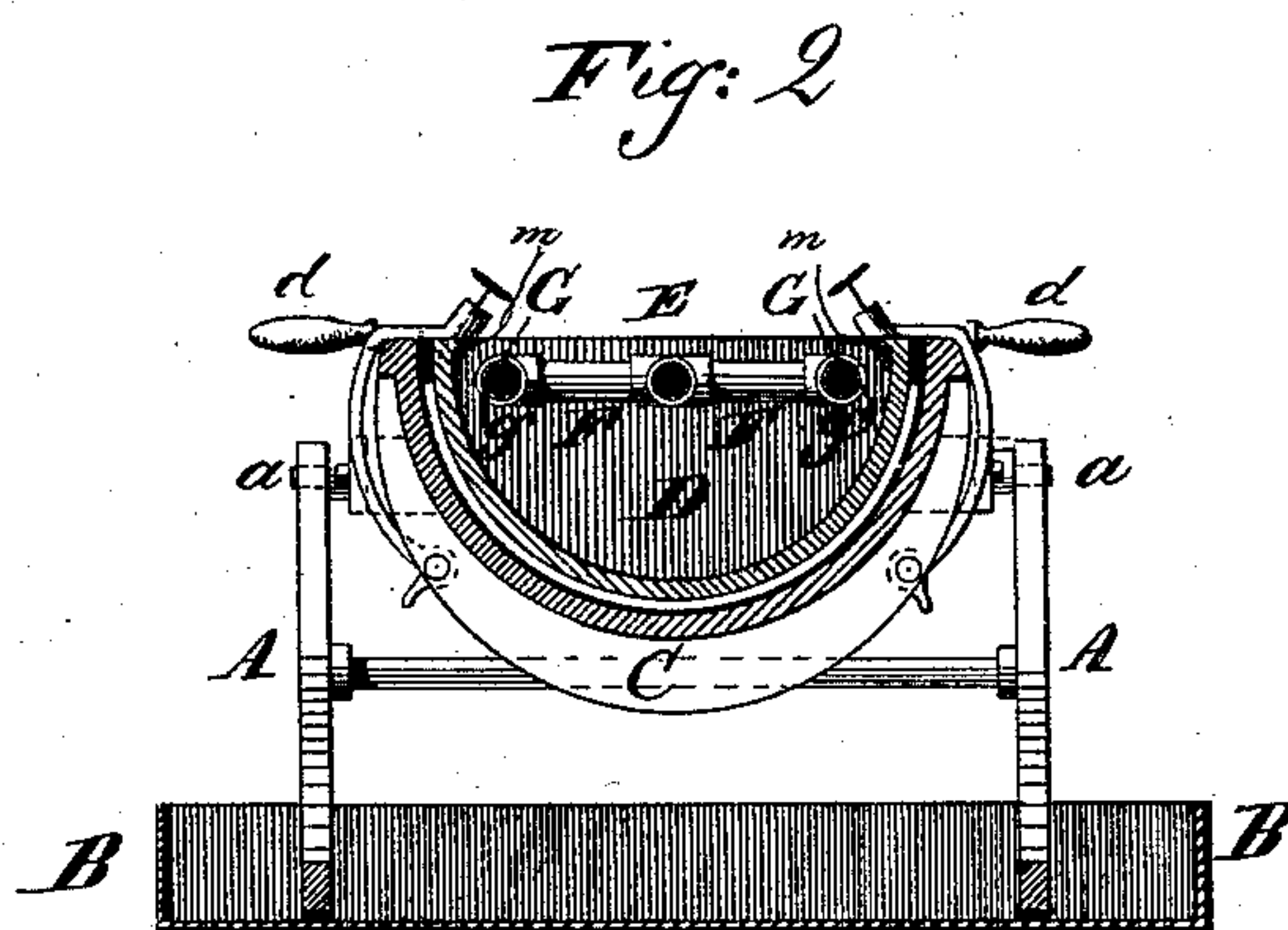
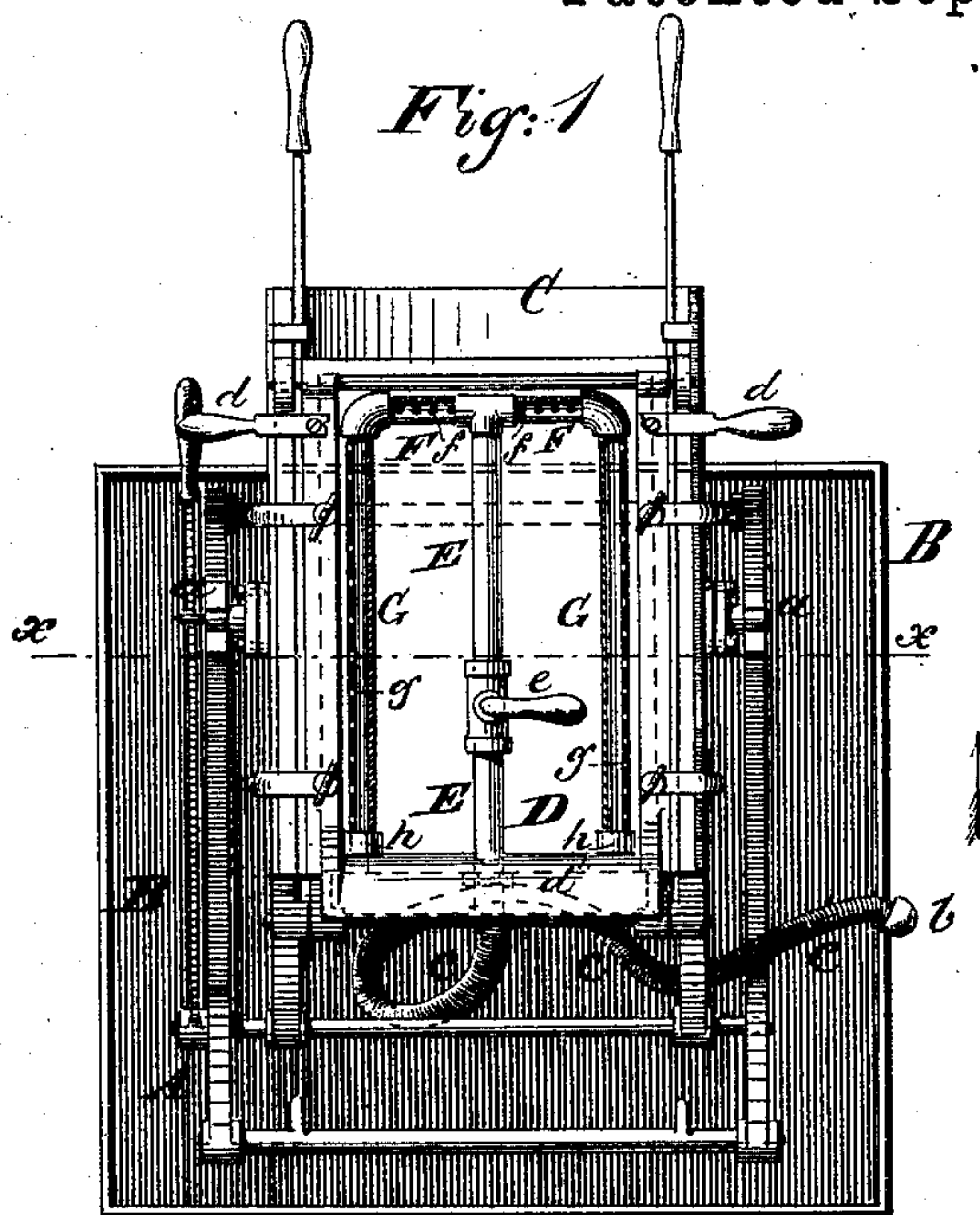
2 Sheets—Sheet 1.

J. THOMPSON.

STEREOTYPE CASTING BOX.

No. 389,673.

Patented Sept. 18, 1888.



~~WITNESSES:~~

WITNESSES:
Heimer Western.
T. M. Crossman.

INVENTOR

INVENTOR
James Thompson
BY A. W. Alving

ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

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Fig: 3

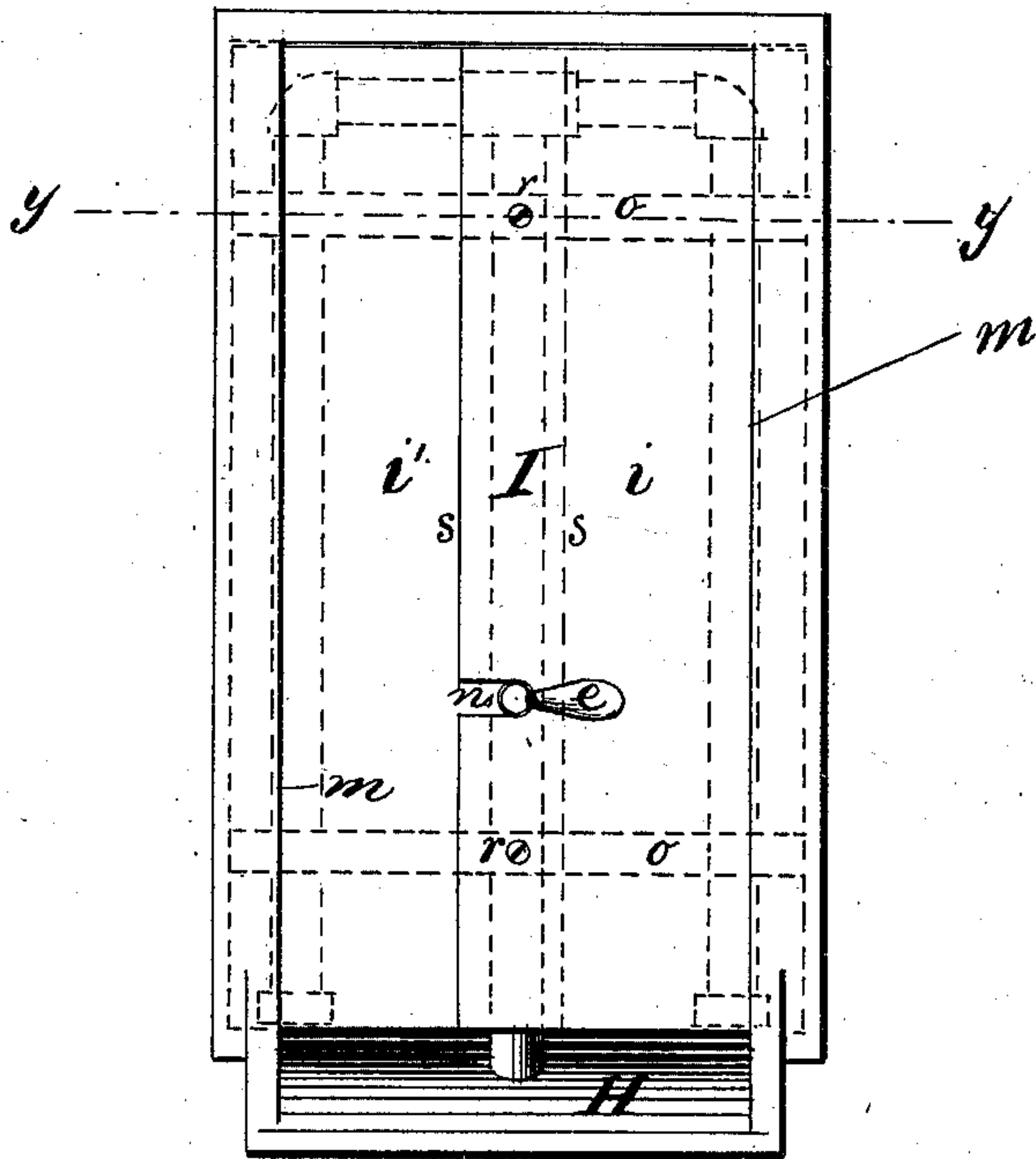
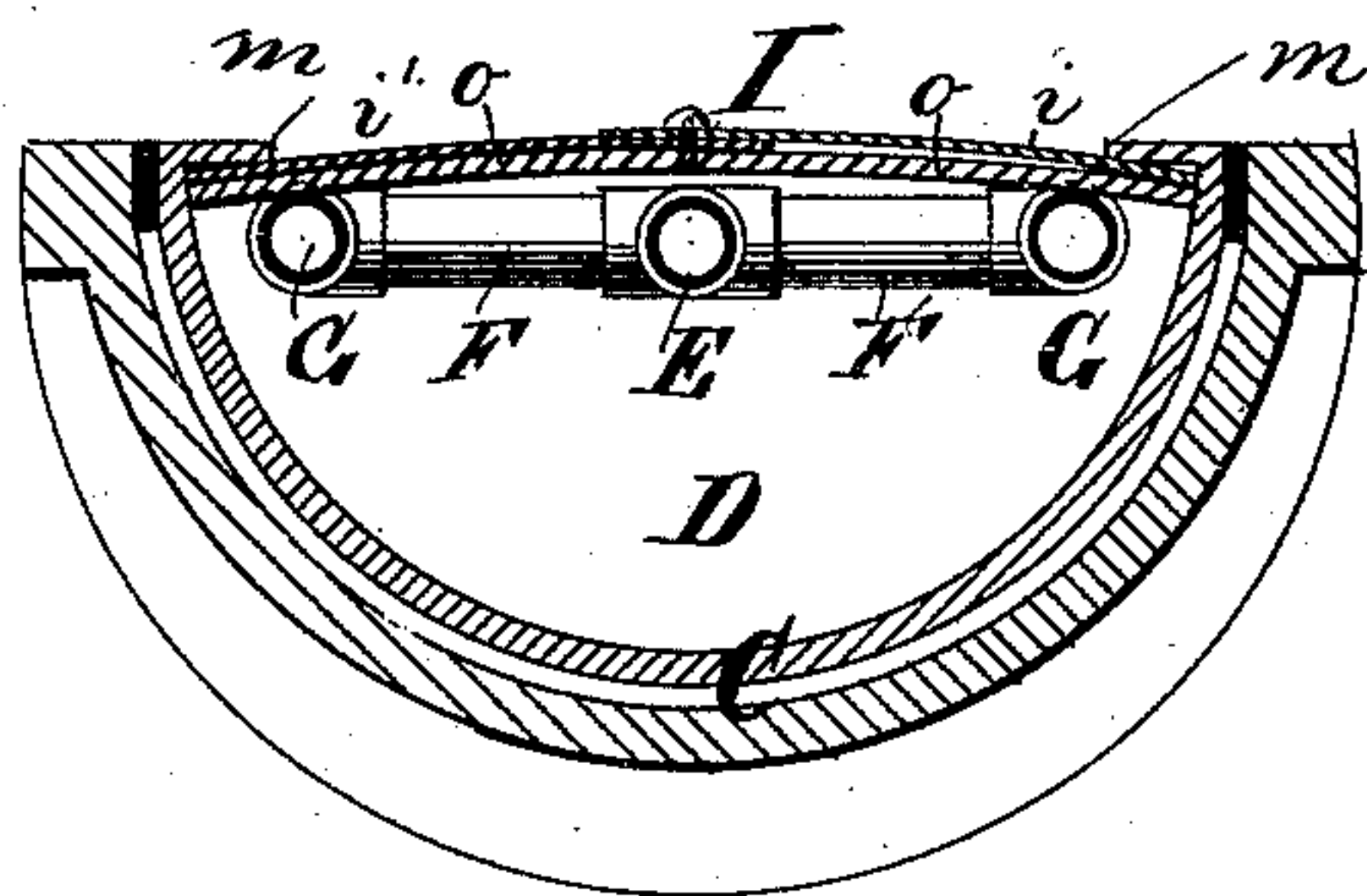


Fig: 4



WITNESSES:

Hermer Werten
John Johnson

INVENTOR

James Thompson

BY *A. W. Almgren*

ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES THOMPSON, OF NEW YORK, N. Y.

STEREOTYPE-CASTING BOX.

SPECIFICATION forming part of Letters Patent No. 389,673, dated September 18, 1888.

Application filed May 13, 1887. Serial No. 238,046. (No model.)

To all whom it may concern:

Be it known that I, JAMES THOMPSON, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented new and useful Improvements in Stereotype-Casting Boxes, of which the following is a specification.

The object of my invention is to provide an improved means for cooling the casting-boxes for stereotype-plates immediately after casting each plate; and it consists in the construction and combination of parts hereinafter described and specifically claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a top or plan view of a box for casting semicircular stereotype-plates for rotary printing-presses. Fig. 2 is a vertical section of the same taken on the line *x x* of Fig. 1, and seen in the direction of the arrow. Fig. 3 is a plan view of the casting-box with cover applied. Fig. 4 is a cross-section through the line *y y* of Fig. 3.

The casting-box is supported by trunnions *a* upon a frame, *A*, above a water-pan, *B*, and is capable of being placed at an inclination, if desired, when casting.

C is the bottom of the box or that in which the paper matrix is placed and formed to the curvature of the box.

D is the top of the box, between which and the matrix placed on the bottom *C* the melted type-metal is poured in to form the stereotype-plate. The paper matrix being a good non-conductor, the bottom *C* of the box remains comparatively cool, while the top *D* in immediate contact with the melted metal, becomes rapidly overheated and has to be cooled off by cold water between each casting. For this purpose it is usual to pour water in the box *D* by means of a dipper. This is not only tedious, but depends upon mere chance if the cooling be uniform, and if any water is spilled over the edge of the top *D*, between the same and the bottom *C*, it will run down upon and spoil the paper matrix, thus wasting labor and time, which latter is the most important factor in newspaper-printing. When, for removing the stereotype-plate cast, the top *D*, grasped by the handle *d*, is raised and tilted, the water runs out into the pan *B* underneath.

The object of my improvement is to provide

for a rapid and uniform cooling of the top *D* of the casting-box without incurring any risk of spoiling the matrix. For this purpose I secure to the trough shaped top *D* a water-pipe, *E*, issuing through the hinged or rear end, *d'*, of the trough and connected by means of a flexible tube, *c*, to a water supply pipe, *b*, in the floor of the building, and provide the pipe *E* with a valve or stop-cock, *e*, for admitting or shutting off the water to and from the pipe in the trough.

The pipe *E* is preferably arranged longitudinally in the middle of the trough, near the top thereof, and to its forward end I connect by a T-joint a pipe, *F*, in proximity to the front end wall of the trough connecting the ends of the pipe *F* by pipes *G*, arranged along and in proximity to the two opposite sides of the trough. The ends of the pipes *G* at the end wall, *d'*, of the trough are closed by caps *h*. The pipes *F G* are provided underneath with a series of perforations, *f g*, pointing outward and downward.

When a casting has been taken, the stop-cock *e* is opened, causing jets of cold water to stream against and down the front end, two sides, and the bottom of the trough until the stop-cock *e* is turned off and the trough or top *D* raised and tilted by the handles *d*, which causes the water in the trough to flow out from the inclined rear wall, *d'*, of the trough and into the pan *B* below, from whence it flows out through a waste-pipe. The tube *c* which connects the pipes *E* and *b* must be flexible, as described, so as to allow the top of the trough *D* to be tilted. By this means fresh and cold water is supplied to rapidly cool the box *D* after each casting. The water is uniformly applied to cool all parts of the top *D* and no risk is incurred to spill water on the matrix, and the tedious operation of pouring on water with a dipper is dispensed with.

When in tilting the box on its trunnions *a* to remove the casting the water which has been used in the trough *D* runs out into the pan *B*, the suddenness of the tilting often causes the water to splash over the pan *B* on the floor around it, which, of course, is not desirable. To prevent this I provide the box or water-trough *D* with a cover, *I*, which covers the water-pipes *G E F* and the whole trough

D, with exception of an opening, H, at the lower end of the trough, as shown in Fig. 3, and for the purpose of getting access to the interior of the trough D when desired, I make the said cover of two parts, *i i'*, separable from each other, so that the cover can easily be taken apart and removed from the box when needed. These parts *i i'* consist simply of thin metallic plates held in place by putting them on top of the pipes G E F and inserting their outer edges underneath the ordinary top flange, *m*, of the box or trough D, so that the inner edges, *ss*, join by overlapping each other in the middle of the trough, a notch, *n*, being cut out of the edge of the plates, so as to clear the valve-plug of the faucet *c*. Two screws, *r*, are then inserted through holes made through the two overlapping edges of the plates and screwed into a threaded hole in bars *o*, which before the plates are applied are placed crosswise of the trough above the pipes with their ends entering underneath the aforesaid flanges *m*. For gaining access to the interior of the trough D it is only necessary to unscrew the small screws *r* and remove the plates *i i'* of the cover I.

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

1. In a box for casting stereotype-plates, the combination of the pipe E, connected by a flexible tube, *c*, to the water-supply pipe *b*, and provided with stop-cock *e*, the perforated cross-pipe F, communicating with the pipe E

and arranged at the end of the trough, and the perforated pipes G, connected to the ends of the pipe F and arranged along the side walls of the trough D, substantially as and for the purpose set forth.

2. In a box for casting stereotype-plates, the combination, with the trough D, of a cover, I, covering the whole top of the same with exception of an opening, H, at the lower end, substantially as specified.

3. In a box for casting stereotype-plates, the combination, with the trough D, having flanges *m* and water-pipes G E F, substantially as shown, of a cover, I, in two parts, *i i'*, the said parts being held at their outer edges underneath the flanges *m* and overlapping and secured together in the middle of the trough.

4. In a box for casting stereotype-plates, the combination, with the trough D, having flanges *m* and water pipes G E F, substantially as shown, of the cross-bars *o* and cover I in two parts, the said parts and the cross-bars being held at their outer edges underneath the flanges *m*, and the said parts overlapping and secured together in the middle of the trough and fastened to the said cross-bars by screws *r*.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of April, 1887.

JAMES THOMPSON.

Witnesses:

T. M. CROSSMAN,

HELMER WESTSEN.