

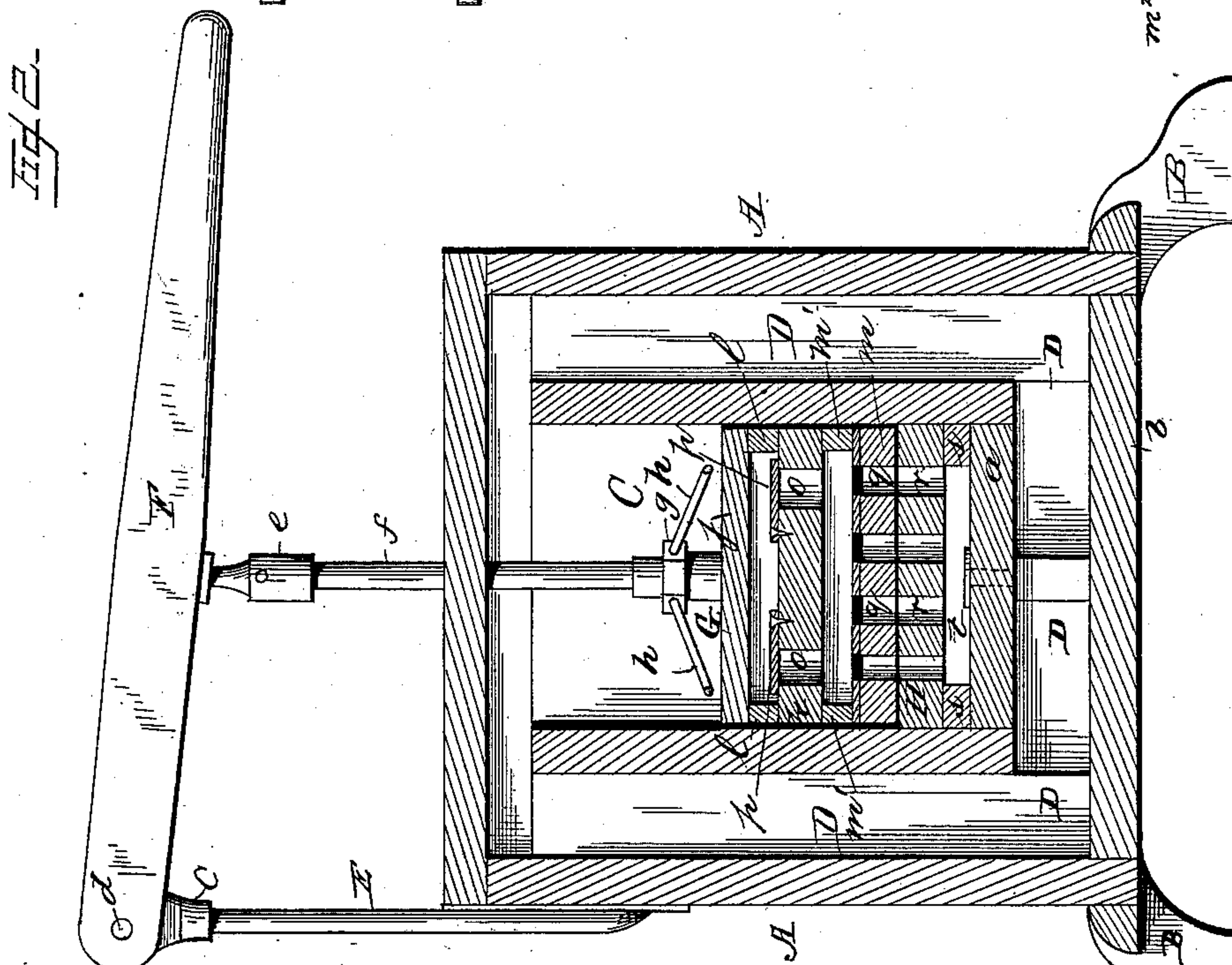
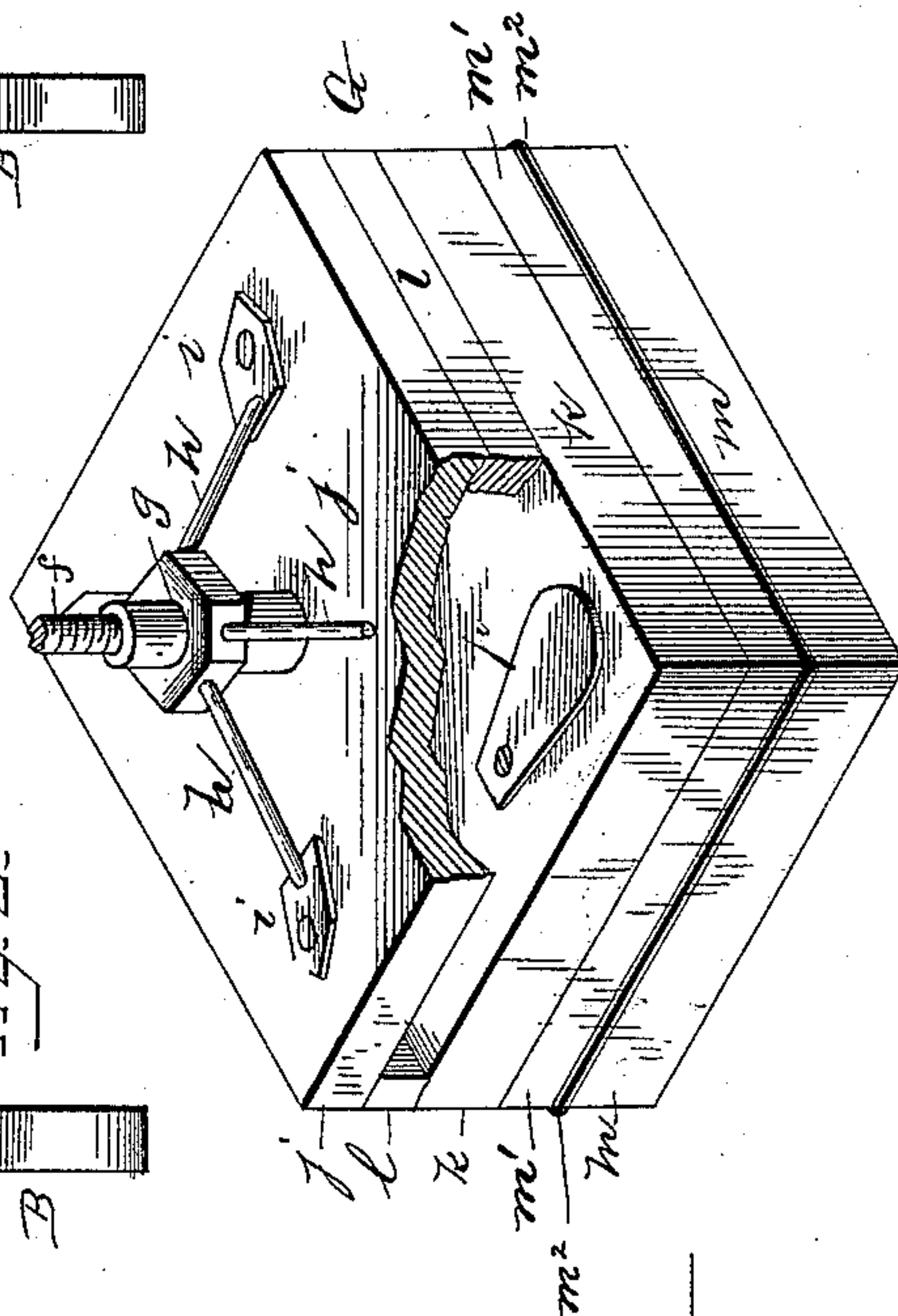
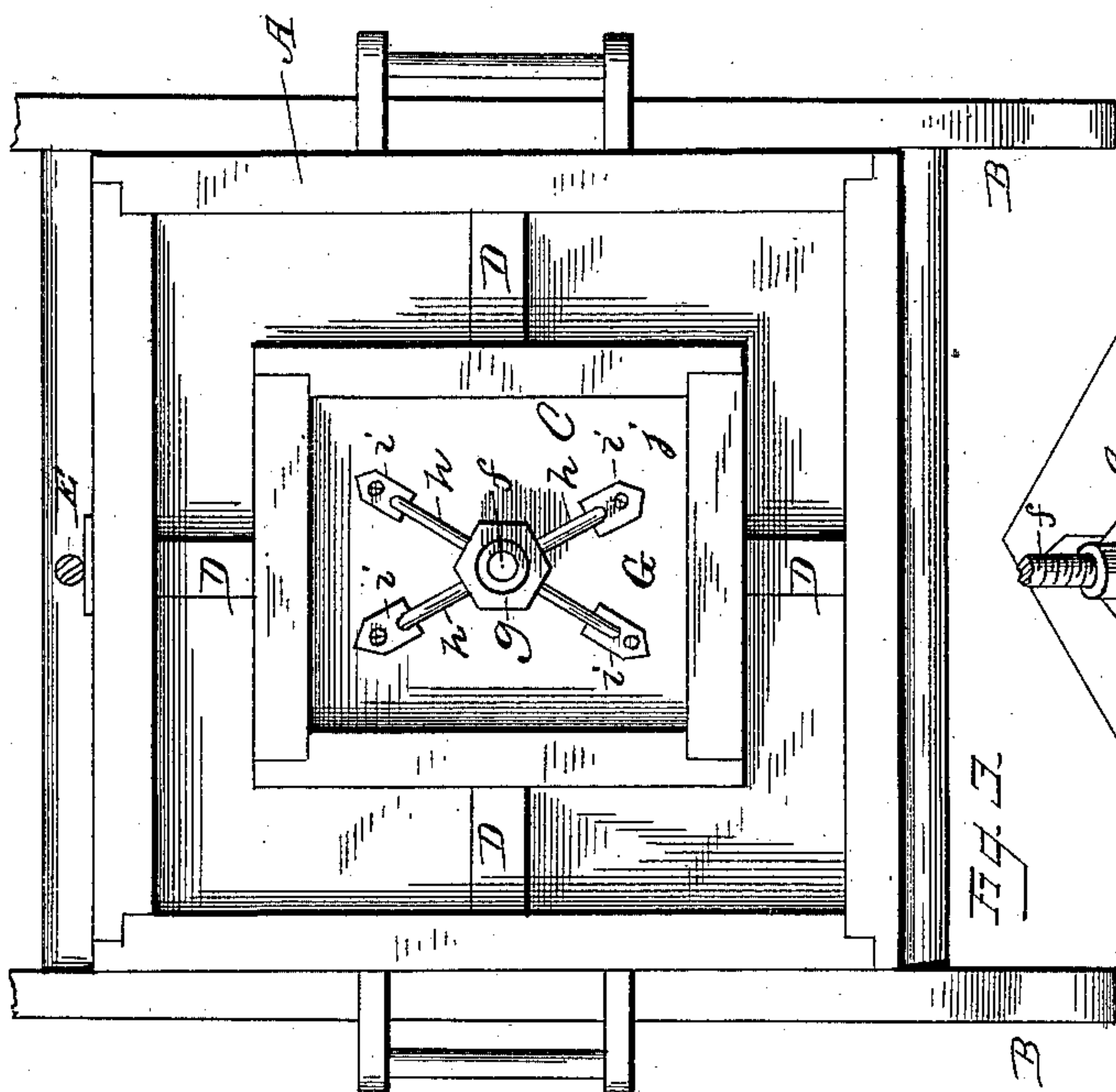
(No Model.)

J. W. ROBERTS.

WASHING MACHINE.

No. 359,519.

Patented Mar. 15, 1887.



WITNESSES
Frank L. Curand
E. M. Johnson

Fig. 7.

INVENTOR
J. W. Roberts
Attorney

UNITED STATES PATENT OFFICE.

JOHN W. ROBERTS, OF CLARINDA, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 359,519, dated March 15, 1887.

Application filed May 22, 1884. Serial No. 132,419. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. ROBERTS, a citizen of the United States of America, residing at Clarinda, in the county of Page and State of Iowa, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to washing-machines; and it consists in the improvements hereinafter described and set forth, whereby clothes may be readily and effectively washed with but a comparative slight exertion.

In the accompanying drawings, forming part of this specification, Figure 1 is a central section of a washing-machine embodying my improvements. Fig. 2 is a plan of said washing-machine; and Fig. 3 is a detail perspective view of the plunger or piston, a portion of the same being removed to illustrate the upper valve arrangement of the same.

As illustrated, my improvement consists of a rectangular tub, A, suitably supported upon feet B, and having centrally suspended within the same a chamber, C, the bottom *a* of which is located a short distance above the bottom *b* of the tub. The said chamber C is maintained in a central position within the tub A by means of sections D, arranged vertically between each side of the chamber C and the inner faces of the sections composing the sides of the tub A.

At the upper portion of one of the sides of the tub A is secured the lower end of a vertical standard, E, which extends above the tub A, and terminates at its upper end in a head, *c*, to which is pivotally attached by a pin, *d*, an operating-lever, F, the free end of which is reduced to form a handle.

Centrally on the under side of the said handle F is secured a socket, *e*, with which engages the upper end of the rod *f*, which extends downwardly therefrom into the chamber C, so as to engage a nut, *g*, which is centrally braced above the plunger G by inclined braces *h*, which are connected both to said nut *g* and

to plates *i*, secured on the upper side of said plunger. The said plunger G is of such dimension as to rest within the chamber C and completely fill the same in cross-area. The plunger consists of a top plate, *j*, and a plate, *k*, which is separated from said top plate by the intervening bars or rim, *l*, so as to provide a space between the top plate, *j*, and the plate *k*. The bottom plate, *m*, is also separated from the plate *k* by intervening bars or rims, *m'*, so as to form a space below said plate *k*, and I prefer to interpose a washer, *m''*, between the plate *m* and rims *m'*, which washer projects outwardly in contact with the walls of the chamber C. This washer may entirely cover plate *m*, vents being provided to register with perforations *q* in said plate *m*, or may be otherwise arranged. The spaces below and above said plate *k* communicate with each other through openings *o*, formed in the plate *k*, the said openings being closed on the upper side of the said plates *k* by means of valves *p*, secured on the upper side of said plate *k*.

The plate *m* is provided with a series of perforations, *q*, which register vertically with a series of like perforations, *r*, formed in a false bottom, H, arranged and supported in the chamber C above the bottom *a* thereof by means of strips *s*.

The bottom *a* of the chamber C is centrally perforated to receive the shank of a disk-valve, *t*, which is adapted by its vertical movement to admit water from beneath the bottom *a* into the space below the false bottom H of said chamber.

The operation of the invention is as follows: The plunger G is removed from the chamber C to permit the clothes and articles to be washed to be placed upon the false bottom H. The handle E is then worked upon its pivot to rapidly move the plunger G up and down in the chamber C. As the plunger is elevated the suction causes the valve *t* to be lifted, and the water passes from the tub into the chamber C and saturates the clothes and articles. The downward movement of the plunger locks the valve *t* on its seat and forces the water out of the clothes and articles, thereby purging the same from impurities, and the water also lifts the valves *l* from their seats and circulates in the space above the plate *k*, and upon

the elevation of said plunger passes from the said space through the openings in the sides of the plunger and escapes over the top of the chamber C and again back in the tub. The arrangement of the rod-connecting devices with the handle F and plunger G permits the length of said rod to be readily regulated, while the said handle may be readily operated under the pivotal connection with said rod.

10 I do not herein limit myself to the precise construction and arrangement described and illustrated, as the same may be subject to various modifications and changes and still remain within the scope of my invention. Moreover, the particular configuration or form of the structure is not essential to its practical operation. Furthermore, I do not desire to be limited to any particular material in the construction of the said improvement.

20 I claim—

1. The combination, in a washing-machine, of a tub suitably supported and arranged, a central chamber supported within said tub, a valve located on the bottom of said chamber and controlling communication between said chamber and said tub, a lever pivoted to one side of said tub and having extended centrally therefrom a pivoted depending rod, and connections for attaching said rod to a plunger located within said chamber, and provided with

a perforated plate having valves secured on the upper side of the same, substantially as set forth.

2. The combination, in a washing-machine, of a tub suitably supported and arranged and braced by vertical sections D, a valve, *t*, arranged on the upper side of the bottom of said chamber, a perforated false bottom, H, arranged within said chamber, a plunger, G, playing within said chamber and provided with a perforated valved plate, *k*, and perforated plates *m*, and a pivoted lever with connections for vertically moving said plunger in said chamber, substantially as set forth.

3. The combination, in a washing-machine arranged and operating substantially as described, of a lever, F, pivoted to one side of the tub A, and provided centrally on its under side with a pivoted socket threaded to receive the upper end of a depending rod, *f*, and a plunger, G, having centrally secured and braced on its upper side a nut, *g*, threaded to engage the lower end of said rod *f*, as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. ROBERTS.

Witnesses:

E. W. JOHNSON,
JOHN E. BEALL.