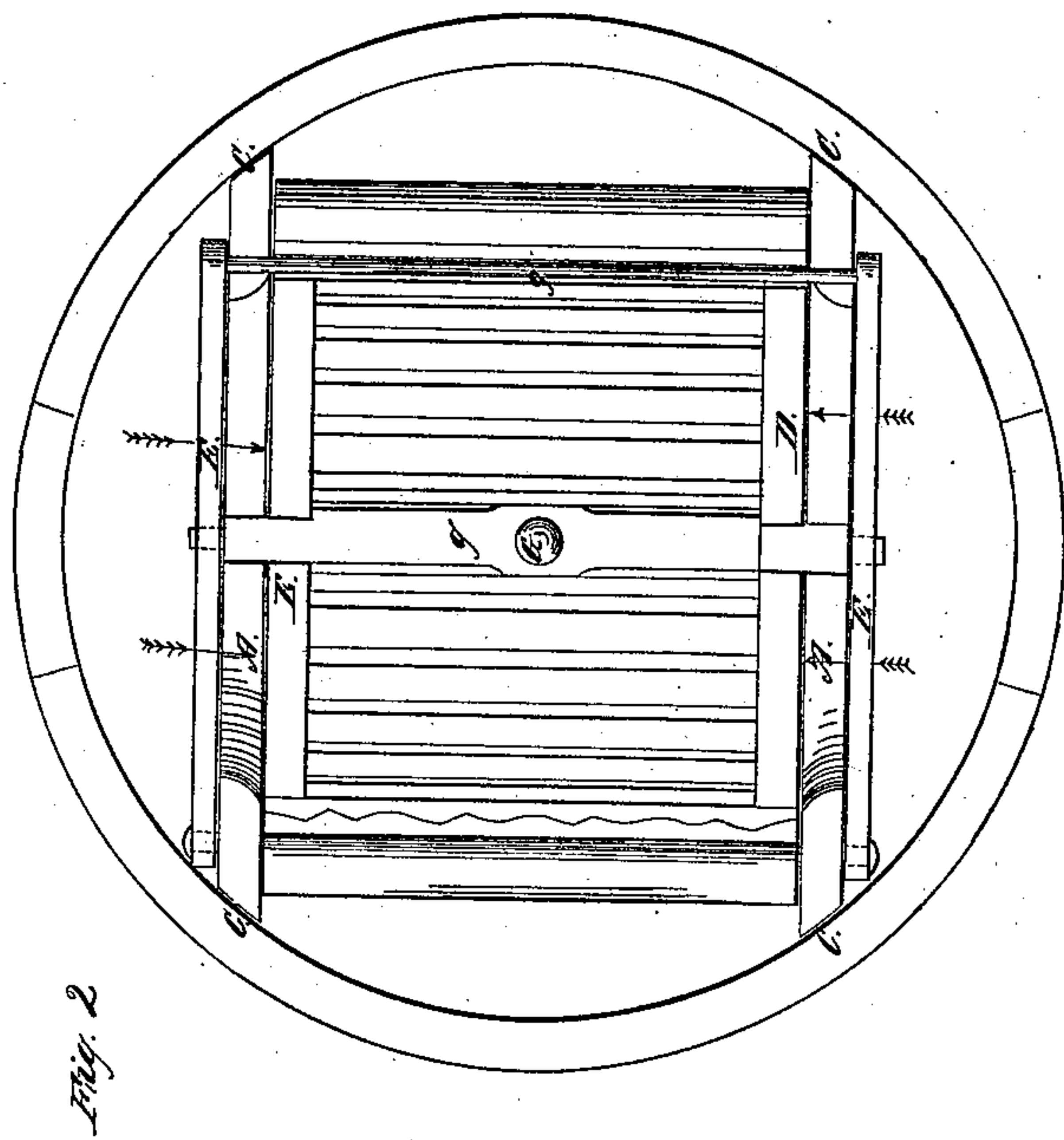
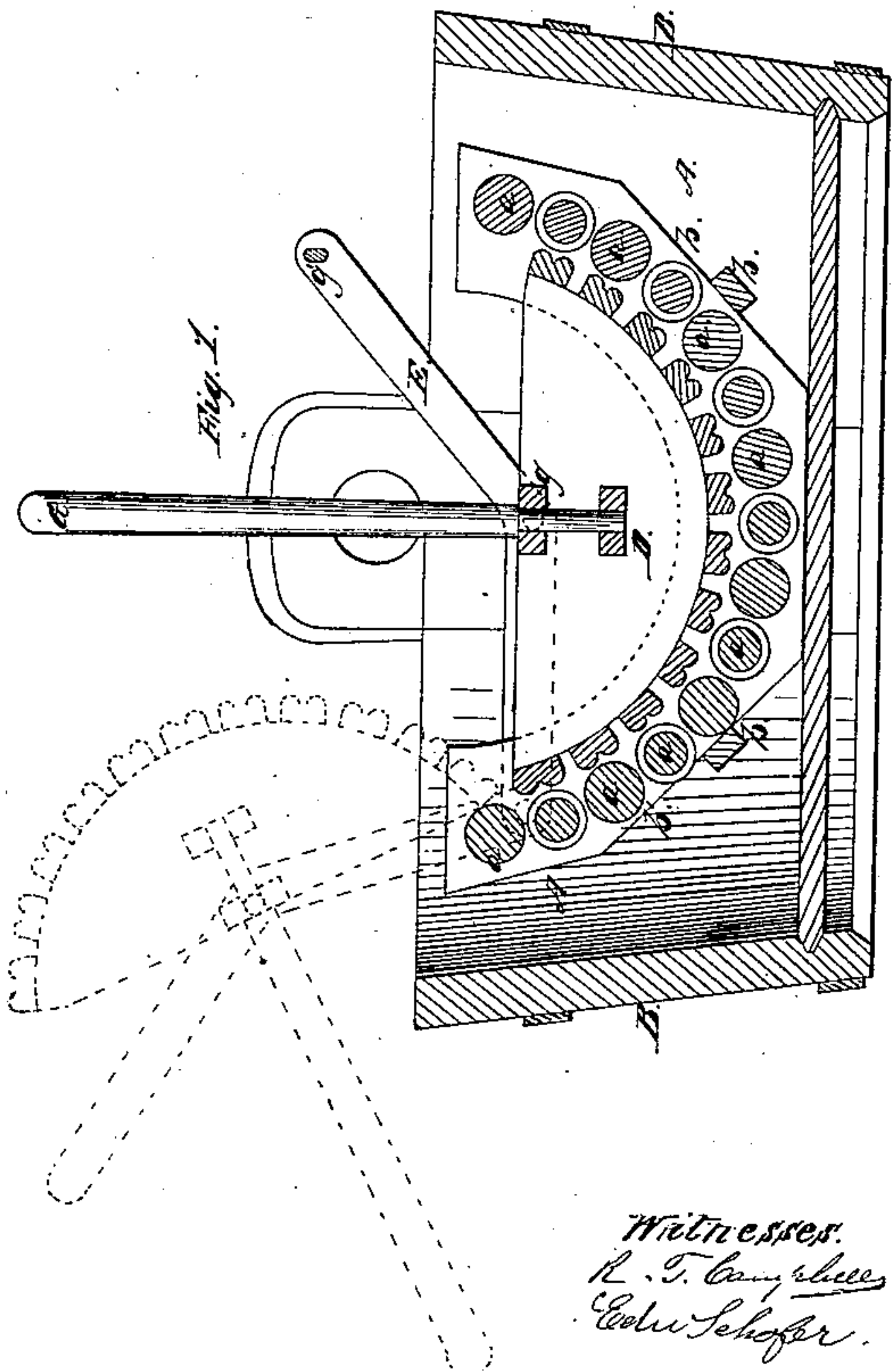
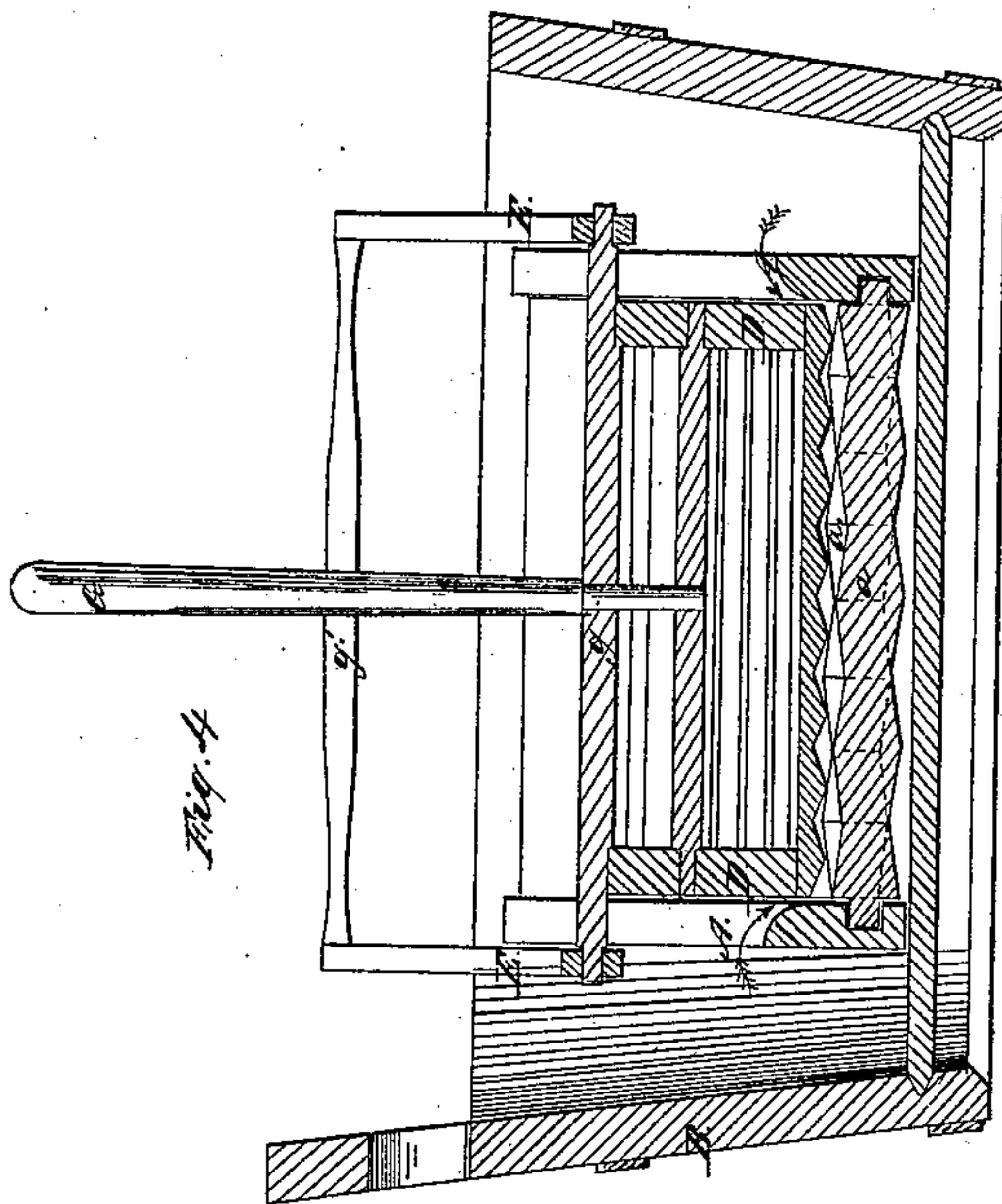
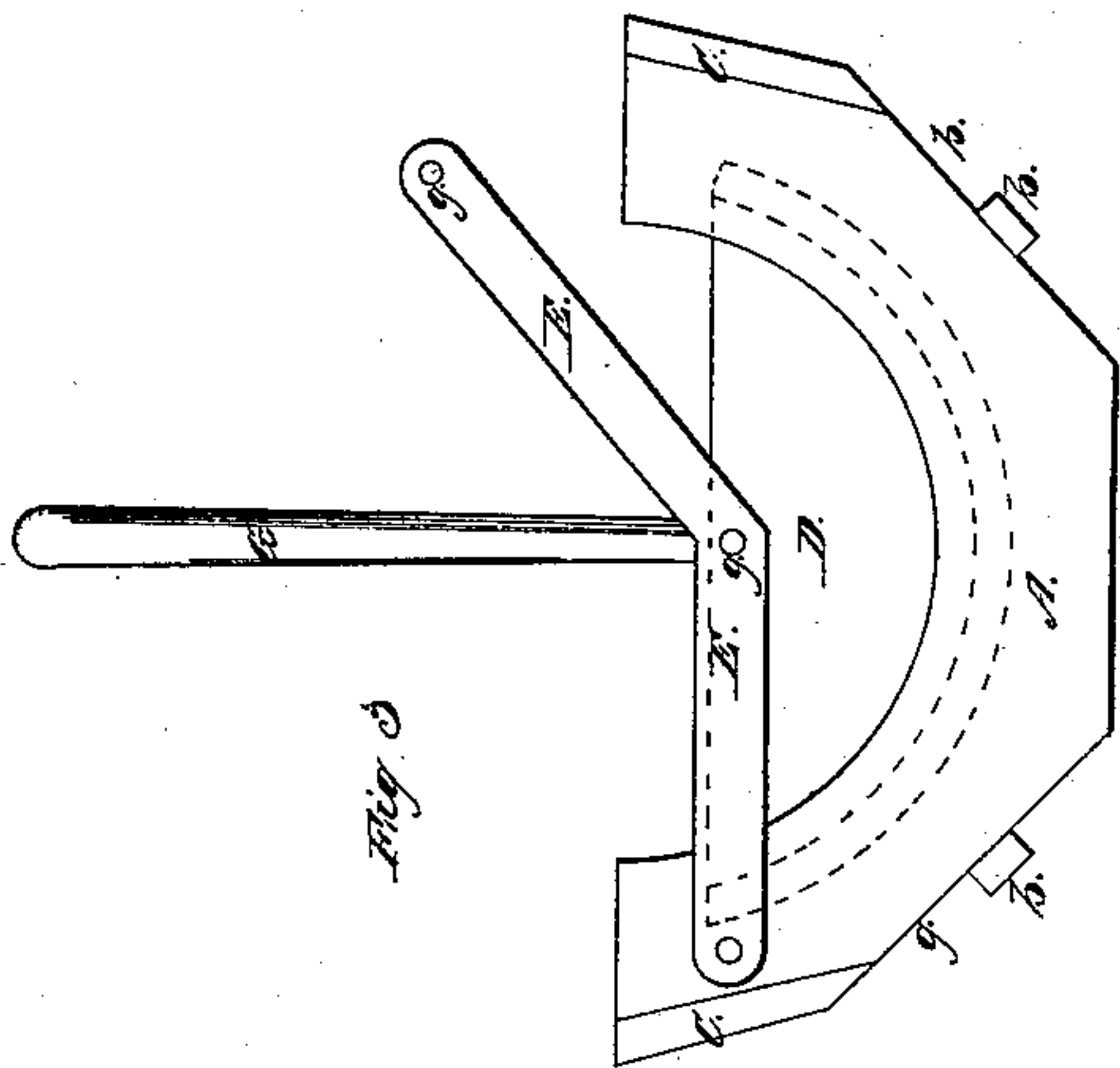


J. S. Lash,

Washing Machine

N^o 53,311.

Patented Mar. 20, 1866.



Witnesses.
R. T. Langbein
Edw. Scholer.

Inventor.
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UNITED STATES PATENT OFFICE.

JOHN S. LASH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 53,311, dated March 20, 1866.

To all whom it may concern:

Be it known that I, JOHN S. LASH, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new Tub Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section through my washing-machine applied to a common washing-tub. Fig. 2 is a top view of Fig. 1. Fig. 3 is an elevation of one side of the machine removed from the tub. Fig. 4 is a transverse section taken in a vertical plane through the machine arranged in a tub.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to the oscillating class of washing-machines, or those which have open oscillating rubbers that are applied to concave beds in such manner that the rubbers can be elevated from the beds at pleasure for the purpose of obtaining access to the interior of the machine for introducing or removing articles; and it consists in adapting such machines to be used in the common circular washing-tubs, and to be held securely therein without making any change whatever in the tubs, said machines being so constructed that they shall allow of the free circulation of water into and out of all sides of the concave bed, and at the same time afford a firm support for this bed, the circular flaring sides of the tub serving as a lateral brace for preventing any displacement of the rollers or the straining of any of the parts of the machine, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The concave bed of rollers *a a* is provided with open sides *A A*, the openings being of a semicircular form, so that the pieces which are sawed out shall serve as the sides for the oscillating rubber. The two sides *A A* of the concave bed are adapted to serve as end bearings for the rollers *a a*, and these sides are held together in planes parallel to each other by means of cross-strips *b b*, which are nailed to the inclined edges *b' b'* of the said sides, as shown in Figs. 1 and 3.

The inclined ends of the side boards, *A A*,

are beveled, as shown at *c c*, Figs. 2 and 3, the bevel being greater or less acute according to the diameter of the wash-tub into which the machine is to be fitted, and the inclination of these ends will be more or less according to the flare which the tub has. This frame of rollers is intended to fit snugly into a common washing-tub, *B*, which may be made of a circular or elliptical form, and the size of the frames will be regulated to the size of the tubs into which they are to be fitted, so that in the sale of the washing-machines, the size of the tubs being given, a machine of a proper size can be furnished.

All machines which have an oscillating rubber have hitherto been constructed with a rectangular tub or box as a necessary part of them, said tub forming the side supports for the concave bed of rollers.

It is the object of my invention to so construct the concave bed of rollers and the oscillating rubber that these parts can be applied to or removed from an ordinary washing-tub without the necessity of altering the tub in any manner. The parallel side boards, *A A*, being constructed with beveled inclined ends, will fit into a circular tub, *B*, of the proper diameter, upon the principle of a wedge; hence the tub not only serves as the vessel for containing water, but it also serves as a lateral brace and support for the sides of the concave bed of rollers, and prevents this bed from moving laterally or tilting during the operation of oscillating the rubber. The circular form of the tub *B* also affords two side chambers at the sides of the concave bed of rollers, for allowing a free lateral circulation of water into and out of the said bed, and also for the reception of parts of large articles which could not all be received at the same time beneath the rubber. Said chambers also afford room for a person to conveniently handle the articles while in the tub.

With a concave bed of rollers which is adapted for the common circular washing-tubs, as above described, it is necessary to provide a support for the oscillating rubber which will admit of this rubber being thrown up out of the way when it is desired to introduce articles into the tub upon the concave bed or to remove articles from the tub. It is also necessary or desirable that the rubber and concave should be attached permanently together.

For this purpose the ends of the oscillating brace *g* of the rubber *D* have their bearings in two arms, *E E*, which are pivoted to the sides *A A* of the bed. These arms curve upward and are connected together at their upper ends by means of a hand-bar, *g'*, which is in a convenient position to a person standing at the tub, who can press the rubber *D* down upon the articles with greater or less force with one hand while this person oscillates the rubber with the other hand grasping the handle *G*. By means of these rubber supporting-arms the attendant can place the rubber in the position indicated in red lines, Fig. 1, thus exposing the entire roller-bed. The arms *E E*, which carry the rubber, can be arranged on the outside of the side pieces, *A A*, as there will be sufficient space for them when the machine is arranged within a circular washing-tub, as shown in Figs. 2 and 3. This will enable me to make the rubber *D* the full width of the space between the two side boards, *A A*, and the openings which are made between these side boards, *A A*, will allow the rubber to be brought

down closely upon the concave bed for washing small articles.

The rollers *a a* of the bed may have the form of a series of cones united alternately by their bases and apices, as shown in Fig. 4, and the slats on the rubber may be notched in such a manner that these notches will conform to the enlargement of all the rollers *a a*. The number of notches in the slats will correspond to the number of elevations and depressions in each roller.

What I claim as my invention, and desire to secure by Letters Patent, is—

The construction of the washing-machine, as herein described, with the stationary concave *A a*, convex vibrating rubber *D G*, and swinging lever-frame *E*, all in such manner that the machine is adapted for use in a common wash-tub, as set forth.

JOHN S. LASH.

Witnesses:

J. PLANKINTON,
FRANK R. CHESSMAN.