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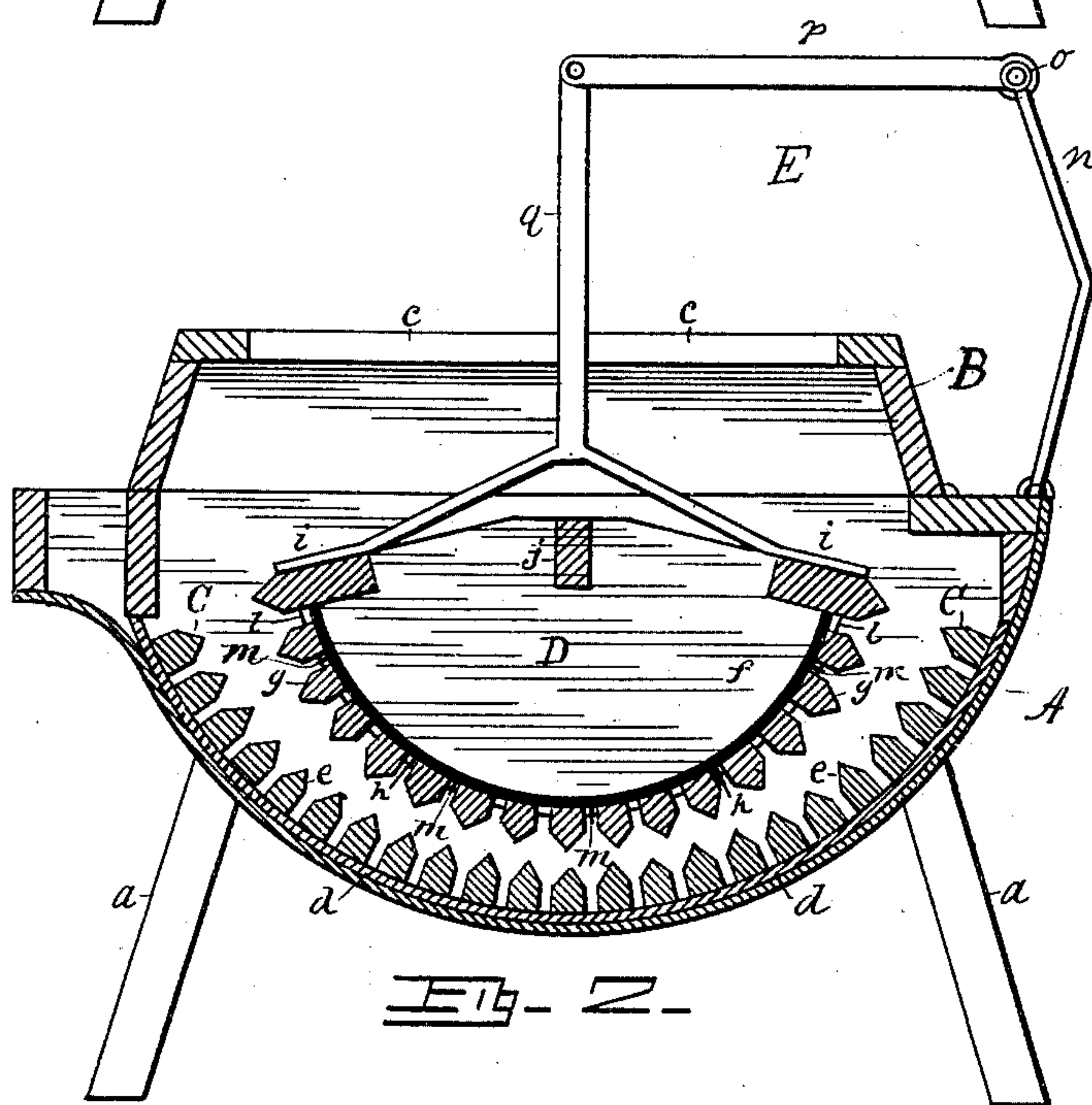
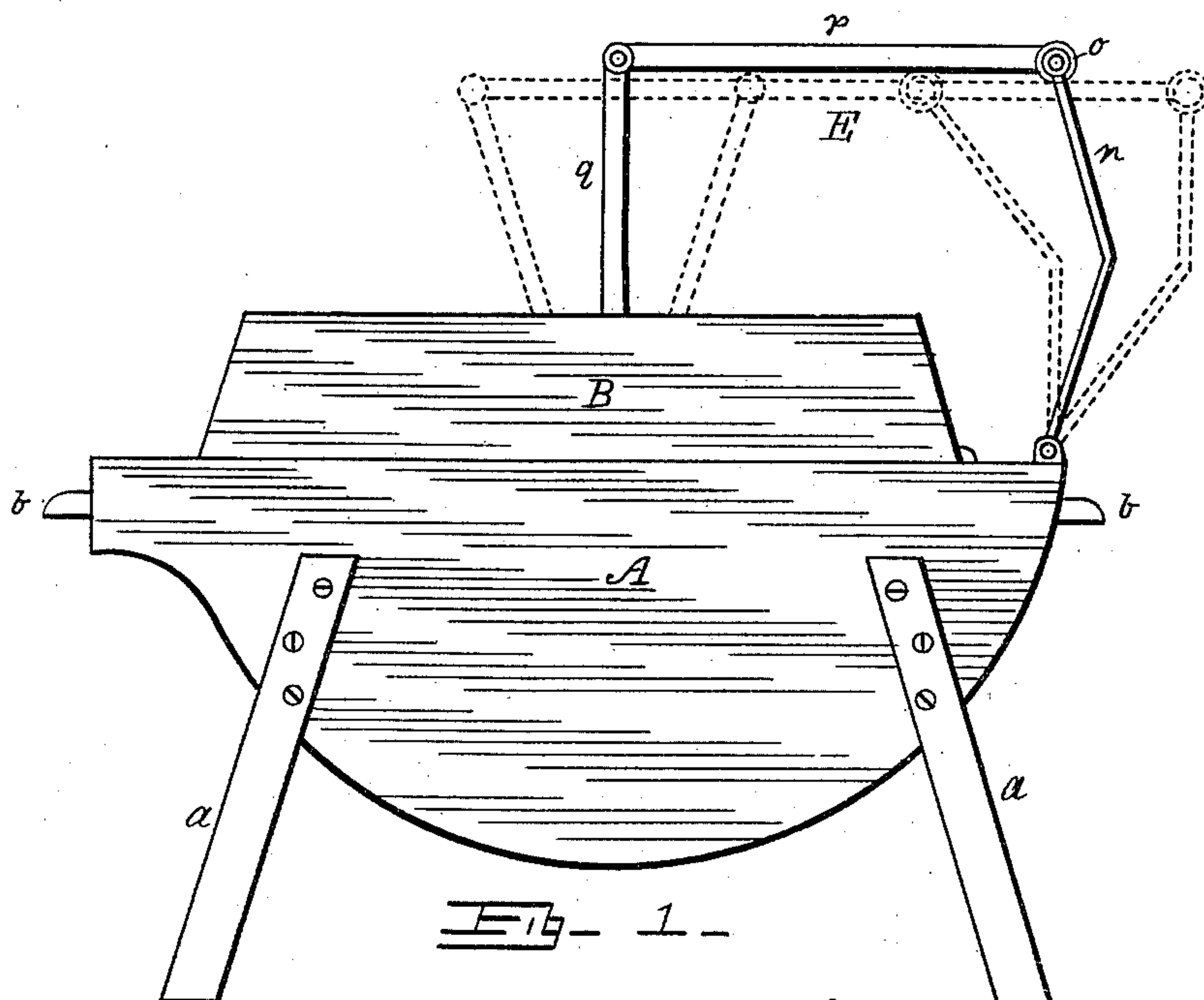
Patented Apr. 15, 1902.

W. W. TATRO.  
WASHING MACHINE.

(Application filed Sept. 6, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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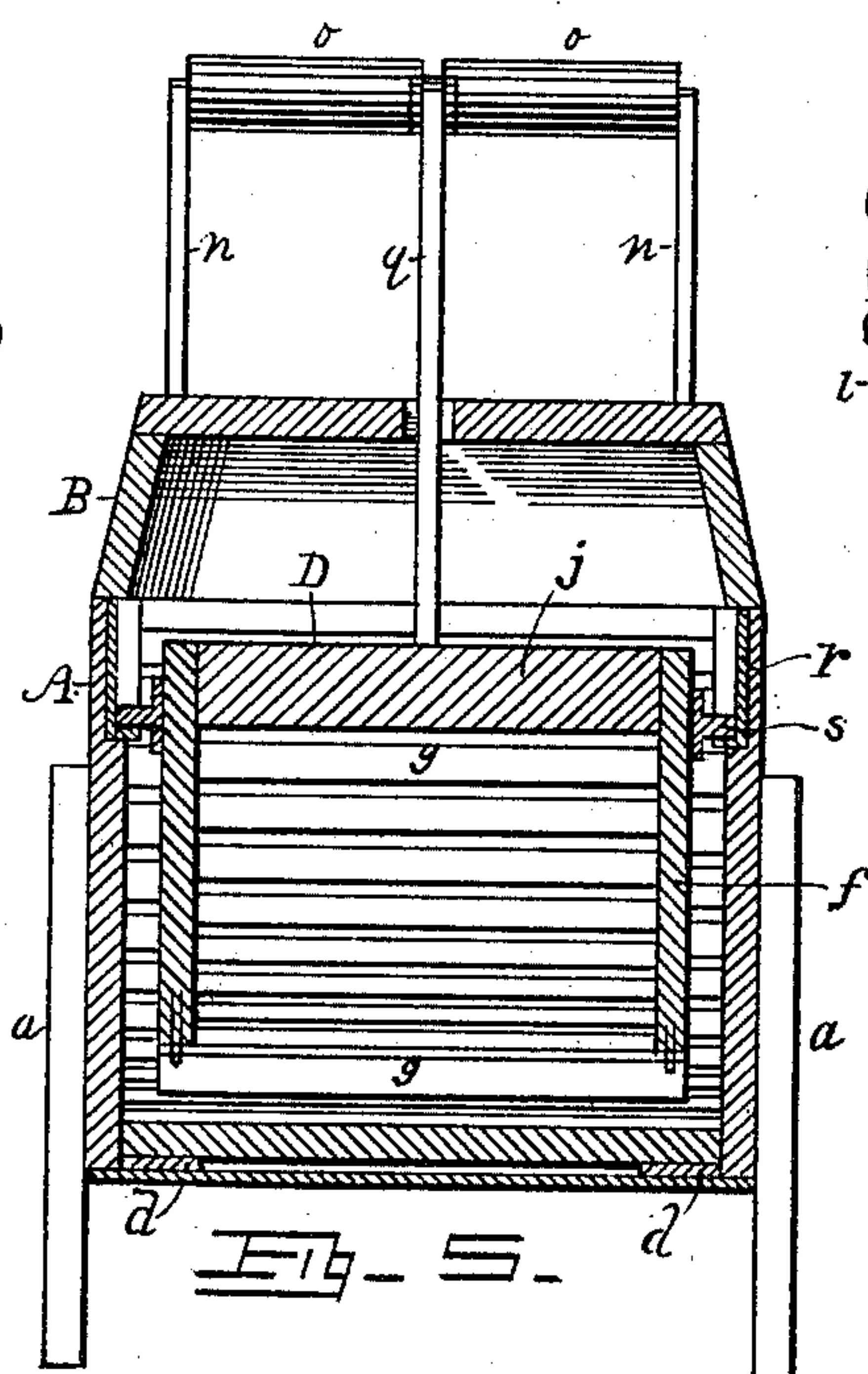
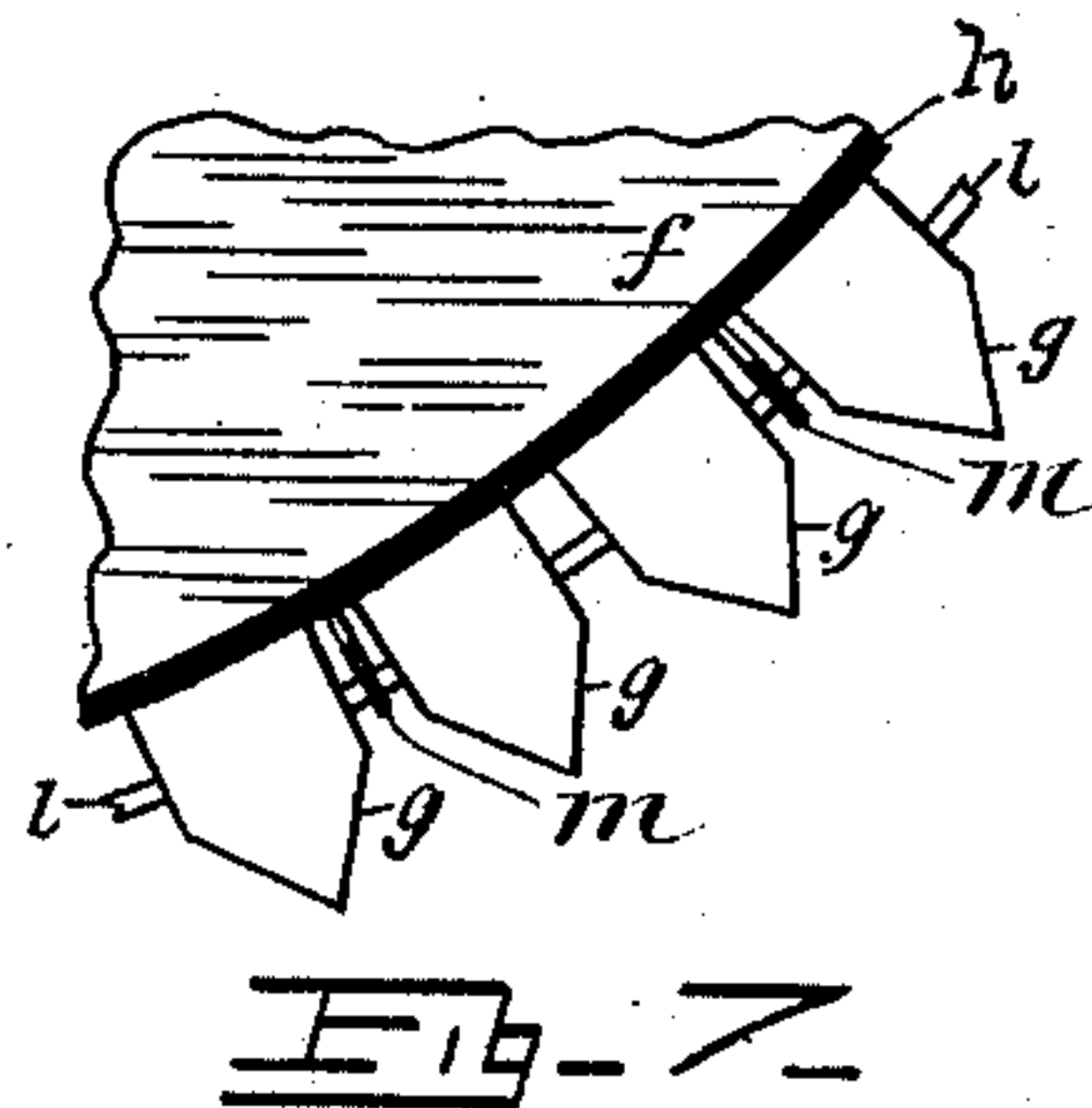
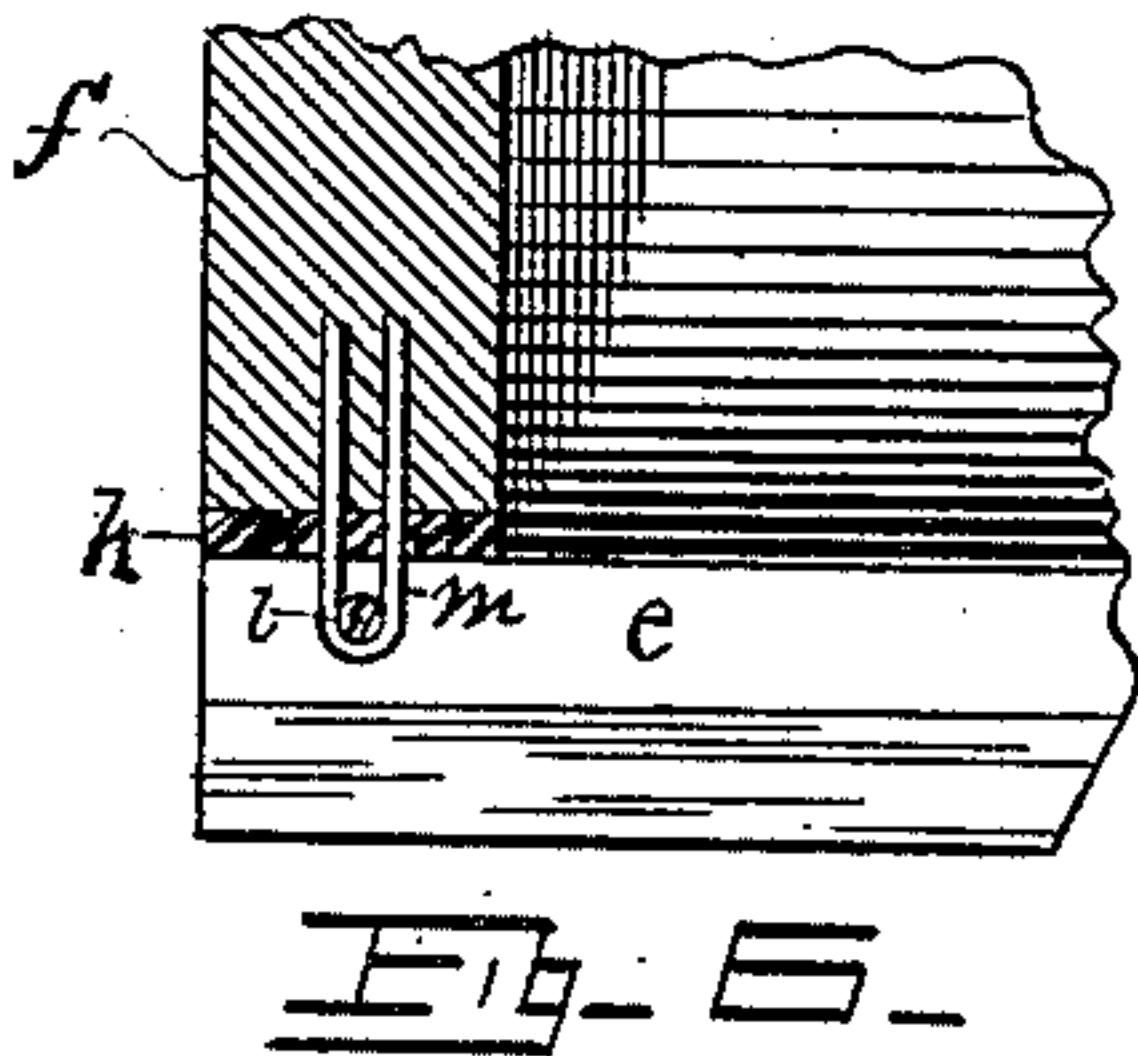
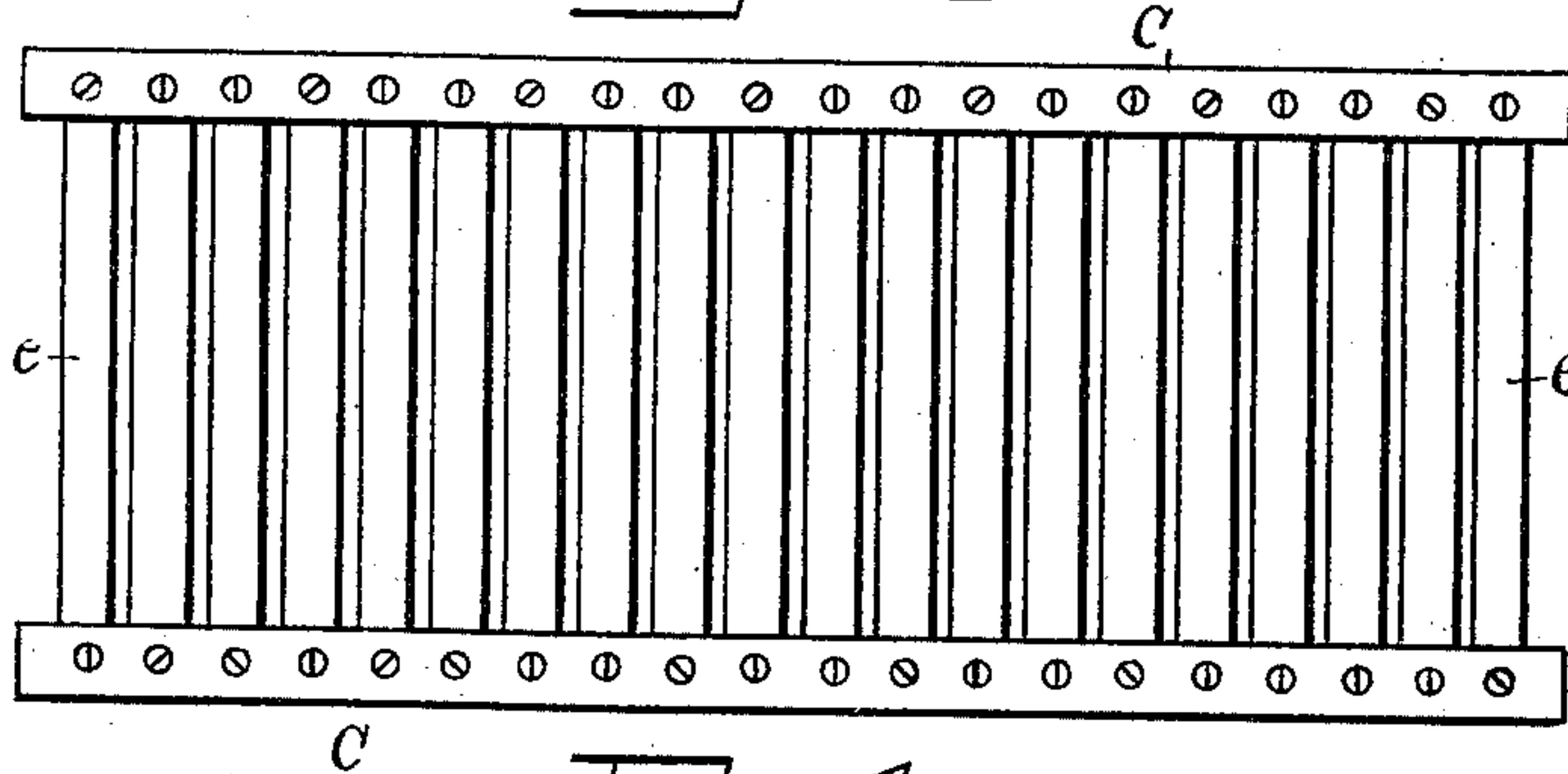
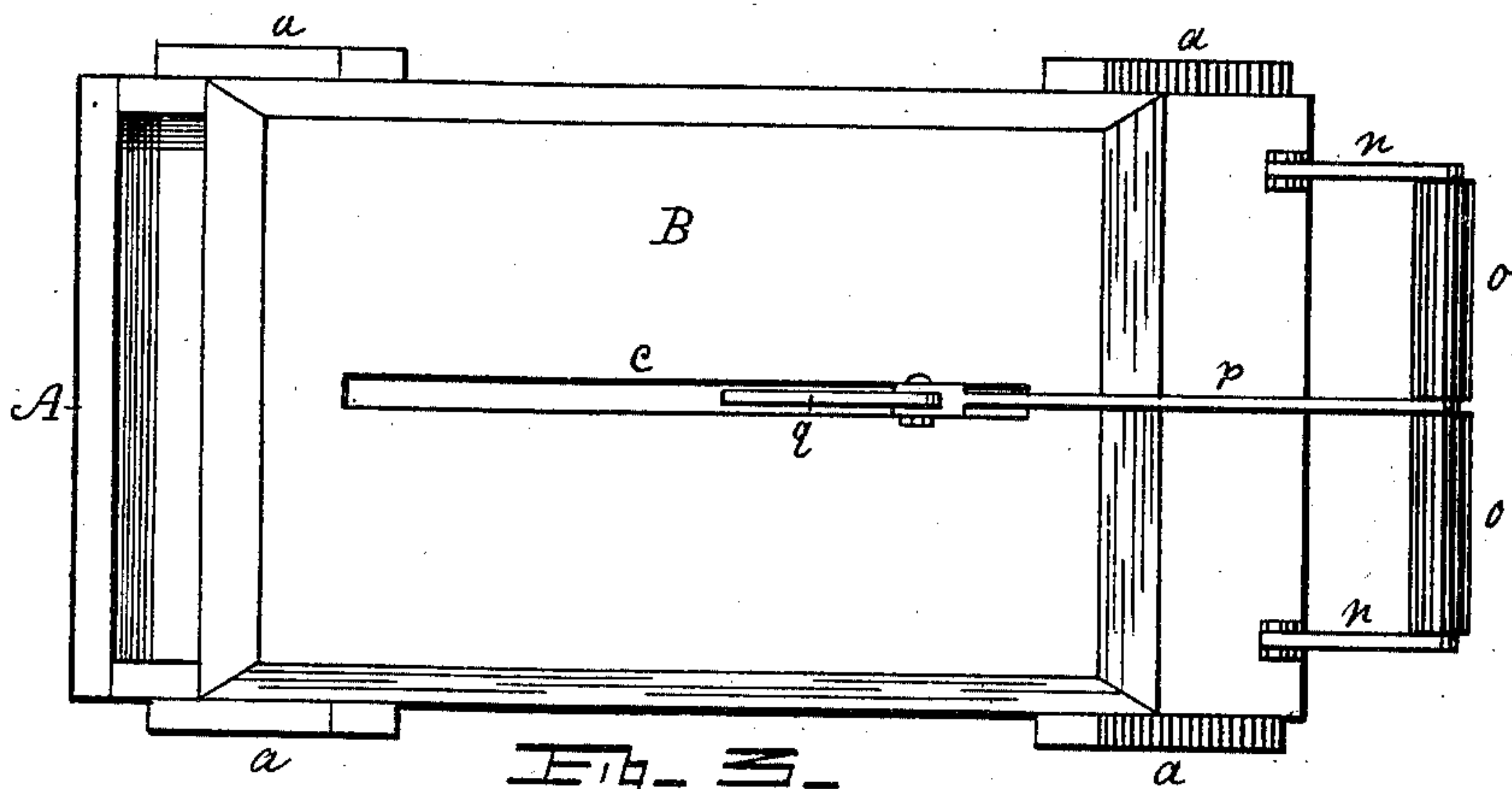
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# UNITED STATES PATENT OFFICE.

WILBER W. TATRO, OF MINNEAPOLIS, MINNESOTA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 697,758, dated April 15, 1902.

Application filed September 6, 1901. Serial No. 74,554. (No model.)

*To all whom it may concern:*

Be it known that I, WILBER W. TATRO, a citizen of the United States, residing at No. 1618 Hillside avenue, in the city of Minneapolis, county of Hennepin, and State of Minnesota, have invented certain new and useful Improvements in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved washing-machine; Fig. 2, a longitudinal section thereof; Fig. 3, a top view; Fig. 4, a bottom view of the rubbing-board detached; Fig. 5, a vertical cross-section; Fig. 6, a detail, being a section of the rocker or rubbing-block; and Fig. 7, another detail, being an end view of the rocker or rub-block.

Similar letters refer to similar parts throughout the several views.

A is the tub or case; B, the cover therefor; C, the rubbing-board; D, the rocker or rubbing-block, and E the brake or operating mechanism.

The tub or case A is not unlike many others now in use, being a semicylindrical water-tight box mounted upon the legs *a* and provided with the handles *b*. The cover B is likewise common, being hinged to the case A in the usual manner and provided with the central longitudinal slit *c*, through which a portion of the brake extends.

The rubbing-board C consists of the parallel sheet-metal strips *d*, (sheet-copper being best adapted to the purpose,) upon which is affixed a number of transversely-arranged parallel rubbing-bars *e*. In practice I affix the rubbing-bars *e* to the sheet-metal strips *d* by means of nails or screws, which I drive through the said strips and into the said bars, leaving a space of about a quarter of an inch between each and every bar, thereby providing openings through which the water may circulate freely, or I may affix them in the manner in which I affix similar rubbing-bars to the rub-block frame hereinafter described.

The rocker or rubbing-block D consists of the two semicircular side pieces *f*, the rubbing-bars *g*, and the interposed cushions *h*. The side pieces *f* are united and held parallel by means of the transverse slats *i*, affixed thereon, and the interposed bar *j*, secured

thereto, these parts constituting a frame upon which I affix transverse rub-bars *g*, the whole forming a cage-like rocker, through which the water may circulate freely.

The manner of affixing the rubbing-bars *g* to the semicircular edges of the parallel side pieces *f* of the rocker or rubbing-block D is an important feature of my invention and is as follows: The slats *i*, which constitute a part of the rocker or rub-block frame, have their outer edges (the edges which extend beyond the curved edges of the side pieces *f*) reversely chamfered or made V-shaped in conformity with the rubbing-bars *g*, of which they form a part. These slats *i* and the rubbing-bars *g* I laterally pierce near their ends (about one-half inch therefrom) and pass wires *l* (preferably copper or brass) through the said lateral perforations, (both the slats and bars,) which wires I now secure to the edges of the parallel side pieces *f* by means of the staple *m*, which staples serve triple purposes. First, they secure the wires *l* to the side pieces *f*; second, they hold the bars *g* a suitable distance apart, and, third, they hold the interposed cushion *h* in place between the edges of the parallel side pieces *f* and the rubbing-bars *g*. These cushions *h* consist of strips of elastic material (rubber being adapted to the purpose) and serve to impart elasticity to the rub-block D.

The brake or operating mechanism E consists of the rocker-arms *n*, the handle-bar *o*, the connecting-rod *p*, and the arm *q*. Its construction is as follows: The lower ends of the rocking arms *n* are pivotally affixed to the tub or case A and their upper ends connected to the handle-bar *o*. The connecting-rod *p* is loosely mounted upon the handle-bar *o*, extends to and is pivotally affixed to the upper end of the arm *q*. The lower bifurcated end of the arm *q* (it is fashioned in the form of an inverted Y) is rigidly affixed to the rocker D, the whole forming a brake, the horizontal vibrations of which impart an oscillatory movement to the rocker or rub-block D.

Open boxes *r* are affixed in the interior faces of the parallel side pieces of the tub or case A, which boxes *r* are adapted to receive the horizontal trunnions *s* of the rocker or rub-block D, upon which the latter oscillates.

The following is the manner in which I op-



erate my machine: Placing a suitable amount of goods—say four sheets or their equivalent in other articles—within the tub or case A and upon the rubbing-board C, I pour in about  
5 ten gallons of very hot water, in which I have previously dissolved a suitable quantity of soap, and grasping the handle-bar *o* I oscillate it, swinging it backward and forward, thereby (through the medium of the connect-  
10 ing-rod *p*) imparting an oscillatory movement to the rocker or rub-block D, swinging the latter backward and forward upon its trunnions *s*, making perhaps forty or fifty strokes per minute for about ten minutes, during  
15 which time I have turned the clothing perhaps two or three times, and as four sheets are the equivalent of one-sixth of a family washing it is apparent that the week's washing may be done in about two hours. When  
20 opening the tub A to put in the soiled clothing or to remove the cleansed clothing, I grasp the arm *q* and therewith raise the cover B, when the rub-block D, connected there-

with by means of the operating mechanism E, will be swung upward and out of the tub 25 and leaving its interior accessible.

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

In a washing-machine of the character here- 30 in shown, the combination in the rocker thereof, of the parallel pieces forming the sides thereof, the laterally-pierced rubbing-bars forming the curved face or bottom thereof, wires extending laterally through the later- 35 ally-pierced bars, staples driven over the said wires, between the said bars and into the said side pieces, and cushions lying between the said rubbing-bars and the said side pieces; said cushions being secured in place by means 40 of the said staples, substantially as shown and for the purposes specified.

WILBER W. TATRO.

Witnesses:

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E. E. KELLY.