

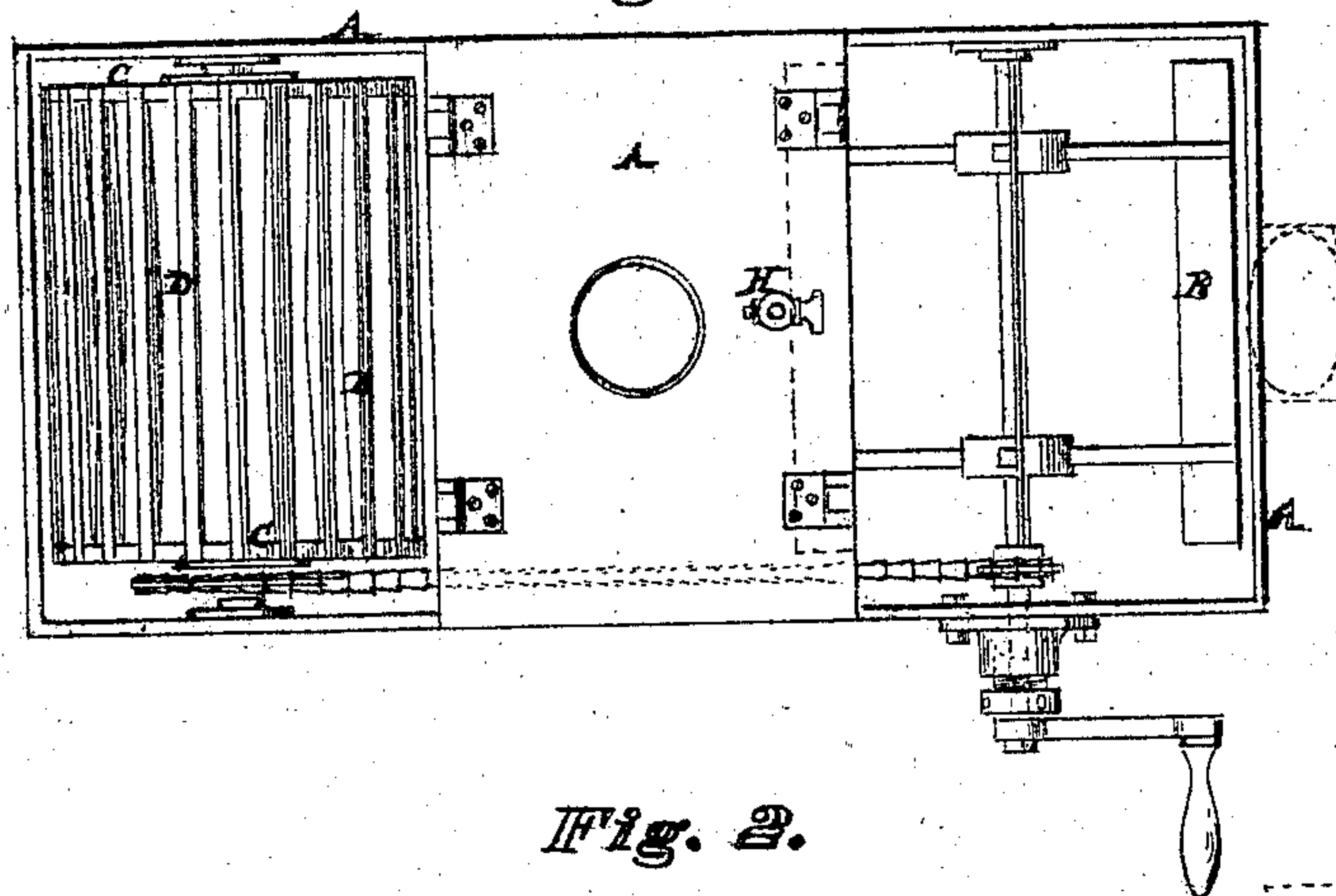
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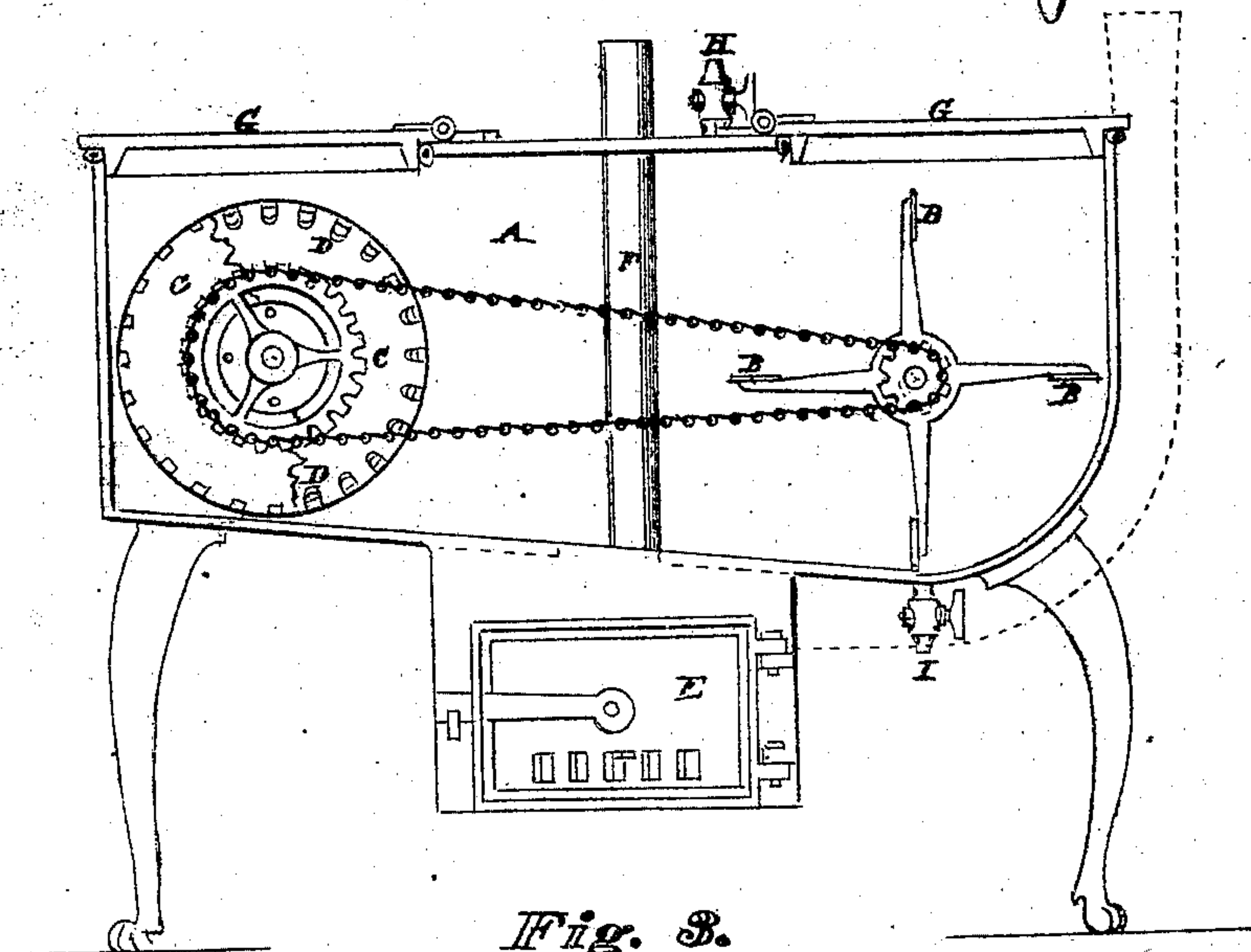
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*D. E. SOMES'*  
*Washing Machine.*

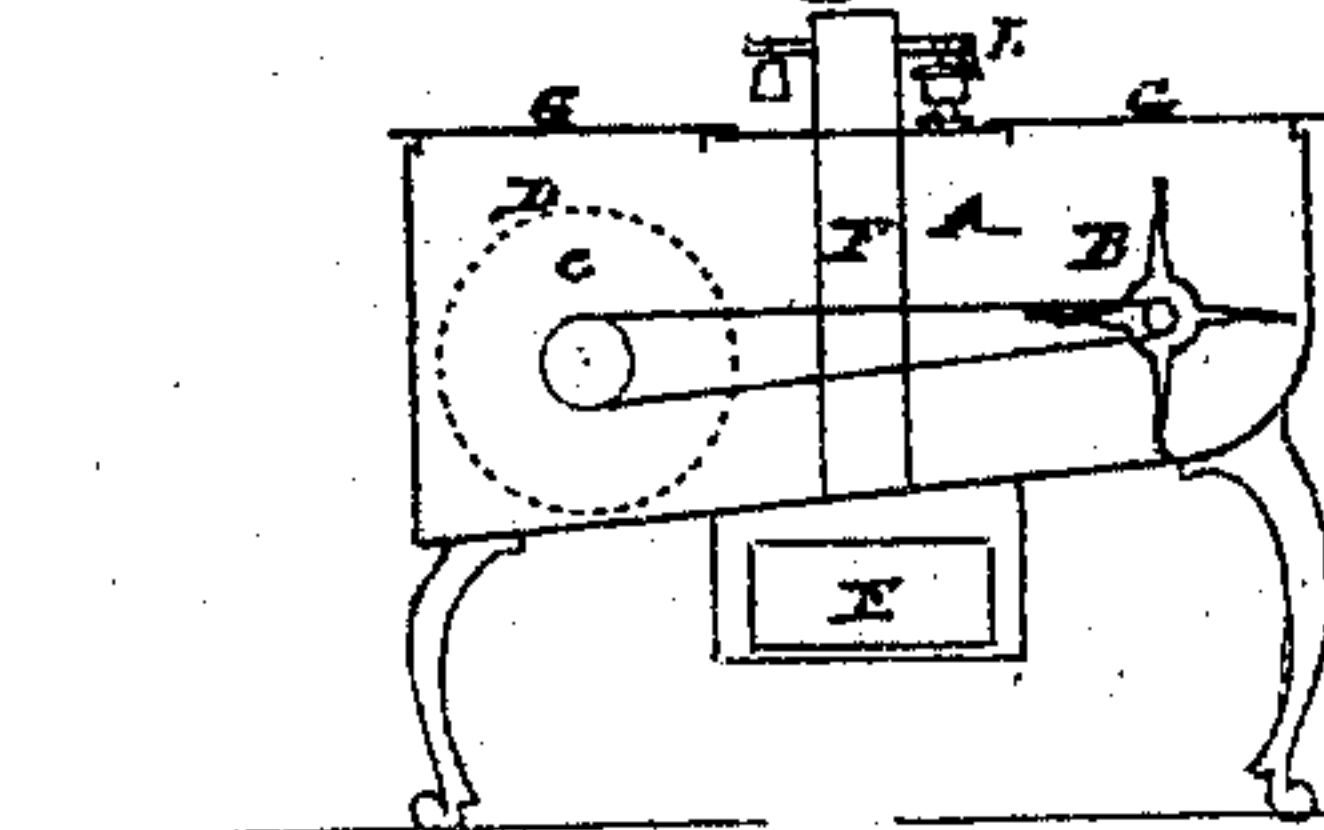
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



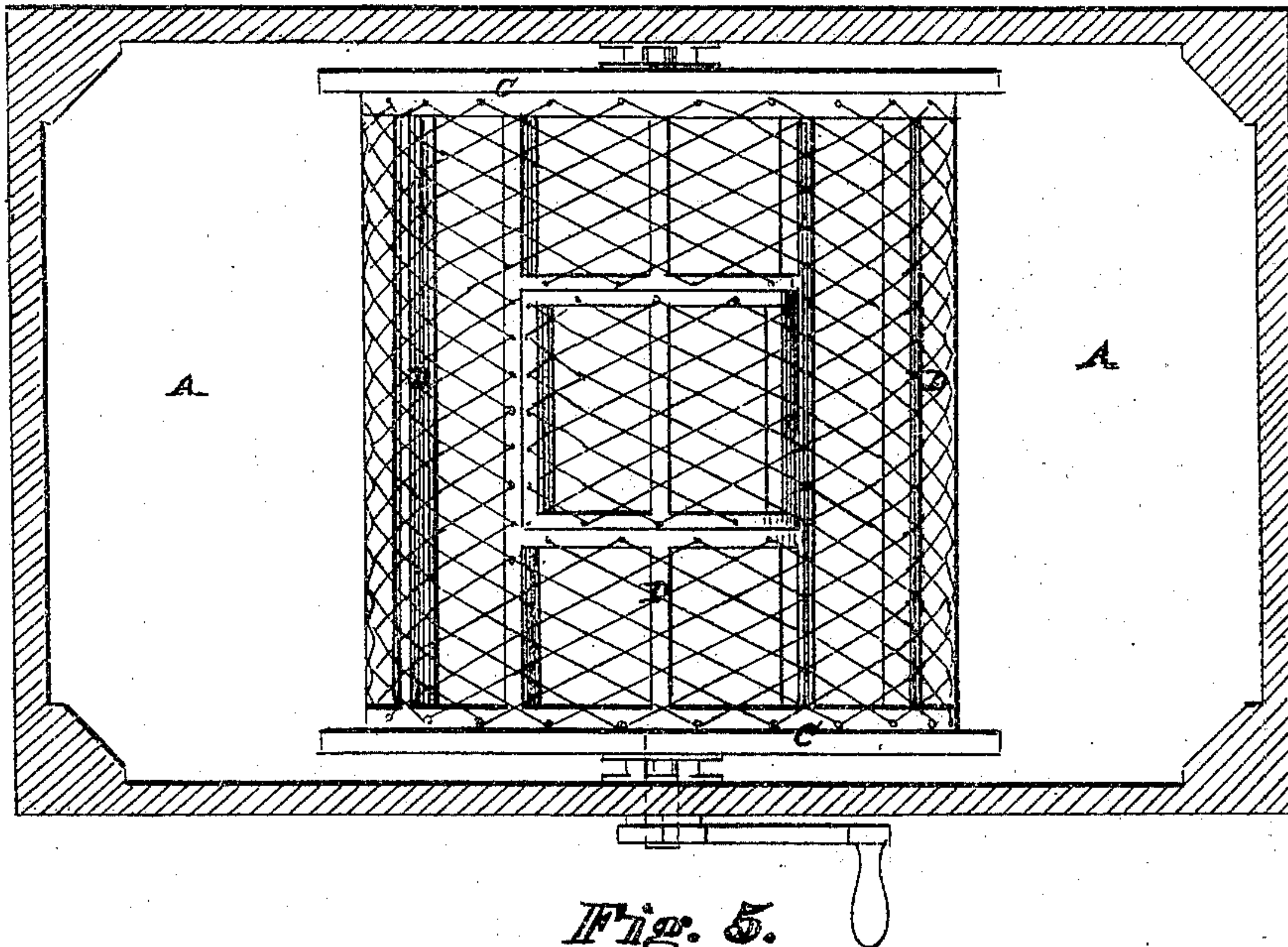
*Inventor*

*D. E. Somes*

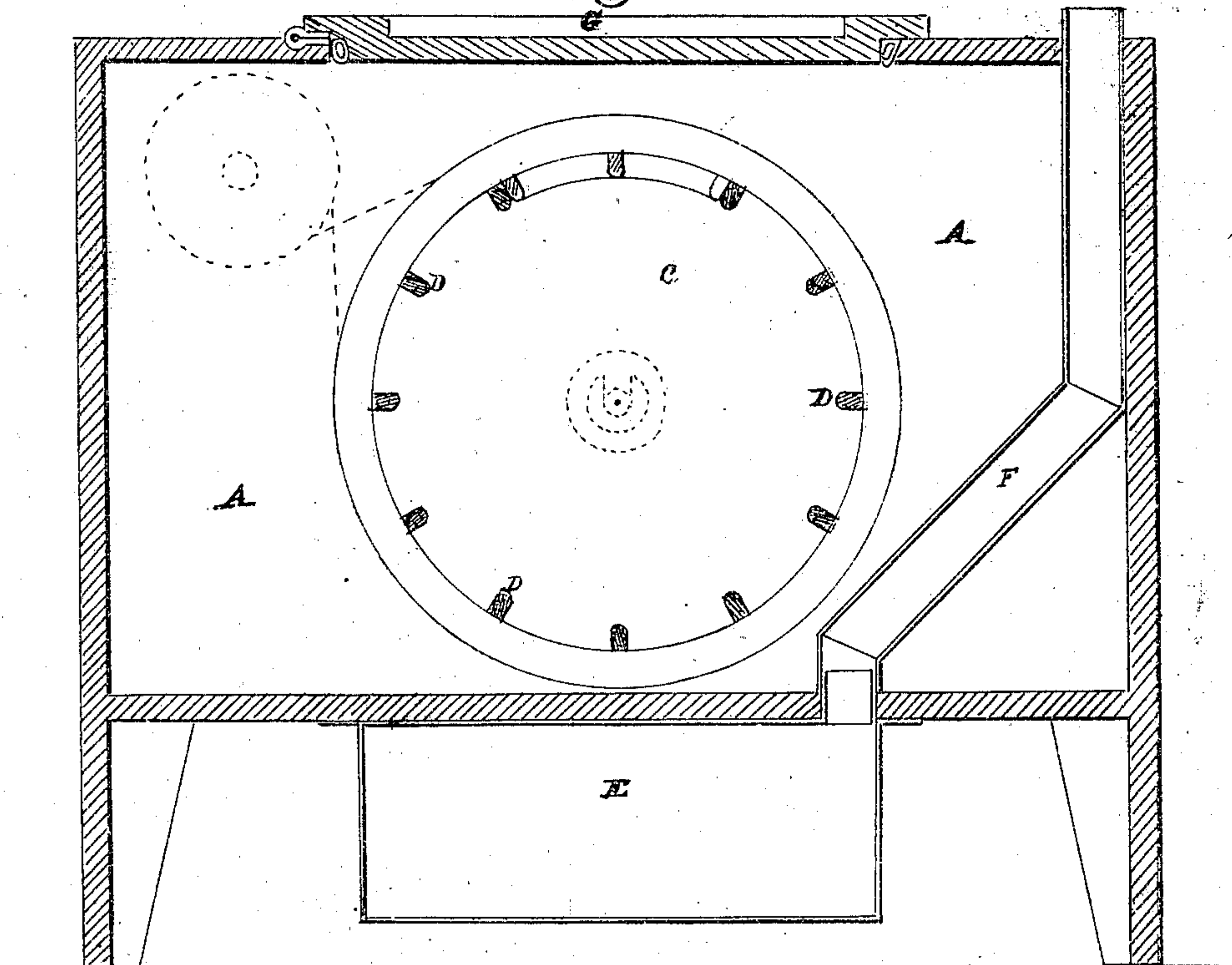
*Witness*  
*Chas. C. Humphries*  
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*D. E. SOMES'*  
*Washing Machine.*  
*Patented Feb 25-1868*

*Fig. 4*



*Fig. 5.*



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*D. E. Somes*



# United States Patent Office.

DANIEL E. SOMES, OF WASHINGTON, DISTRICT OF COLUMBIA.

*Letters Patent No. 74,949, dated February 25, 1868.*

## IMPROVED WASHING-MACHINE.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, DANIEL E. SOMES, of Washington, in the county of Washington, and District of Columbia, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan or top view of my machine, with the covers removed.

Figure 2, an elevation of the same, with one side removed, for the purpose of showing the interior.

Figure 3, a profile, showing a modification of my machine; and

Figures 4 and 5 are respectively a plan and elevation of another modification to be hereafter particularly referred to.

A A is a case or box, of wood or other suitable material, and of dimensions to be determined by circumstances, within which, near one end, is placed a paddle-wheel, B, having two or more buckets. One end of the shaft of this wheel is supported in a socket or journal box, on the inside of the box A, and the other end of the shaft passes through a stuffing-box, in the opposite side of the box A, so that no leakage may occur, of either water or vapor, around it, and is fitted to receive a crank, as shown in fig. 1, or a pulley, if driven by other than hand-power. There is also placed in the box A, near the opposite end from the wheel B, a receptacle for the articles to be washed, consisting of two disks, C C, connected by bars D D, so as to form a cage, as shown. By unfastening one or more of the bars D D, at either or both ends, an opening may be obtained, through which the articles to be washed may be placed inside, or a door may be constructed, to shut between trimmers, as shown in figs. 4 and 5. Each disk, C C, has an arbor attached to its centre by a flange or plate, on which the whole may revolve in sockets fixed on the inner side of the box A. Motion is given to the cage C D by an endless chain, as shown, which connects it with the paddle-wheel B, or by a belt, or cord, or by gearing. I place within the cage or cylinder two or more strips or shelves, which perform the office of carrying the clothes to a considerable height and then permitting them to fall; whereby the suds are partially expressed therefrom, and a new supply absorbed as the cylinder revolves. The disks C C may be connected, and the space between them enclosed by a cylinder of wire gauze, with coarse meshes, or by a strong, coarse netting stretched between them, over the bars D D, which, in such case, will be fewer in number than when used without such covering, (see figs. 4 and 5.) That end of the box or case A in which is placed the wheel B, will be curved to correspond with the sweep of the wheel, which will pass very near it at the bottom, from whence the bottom of the box will have a slope upwards to the under side of the cage C D, or its equivalent. A fire-chamber, E, or box, for a spirit-lamp, or other means of heating, will be attached to the under side of the box A, and a flue or chimney, F, will pass through the said box to the open air, through and above its top; or, when occasion may require, the flue may be constructed to pass from the chamber E up and around the end of the box on its outside, as shown by dotted lines in figs. 1 and 2. Two covers, G G, are hinged and fitted to the top of the box A, so as to be steam-tight when closed, and will be large enough to permit the removal of any of the parts within the box. A stop-cock, H, or safety-valve, L, is attached to the box A, to allow the escape of steam, when desirable, and another stop-cock, I, will be placed at the lowest part of the interior, whereby the water may be drawn off at will.

In the operation of my machine, the clothes are placed in the cage, and a small quantity of water or suds is placed in the box A. A rapid revolution is given to the wheel B, and the water or suds are dashed violently among the clothes, through the interstices of the cage C D, which, by its revolution, lifts and rolls the clothes, working them over and over, and causing them to press each other by their weight, squeezing out the water they continually receive, which flows down the sloping floor, to be again dashed in spray upon them so long as the rotation is continued. The heat from the fire or lamp in the chamber E converts a portion of the spray into steam as it comes in contact with the flue F, and this steam, in permeating the articles in the cage, still further conduces to rapidly cleanse them.

In fig. 3 the bottom of the box A is shown as sloping in a direction contrary to that of figs. 1 and 2, so that the clothes may fall continuously into the suds or water, which will be high enough in the box A to permit the wheel B to operate, as hereinbefore described.

Figs. 4 and 5 are respectively a plan and section, showing the box A as enclosing only the cage C D, covered with a netting, and furnished with a door for the reception of articles to be washed, which will be effected without the assistance of spray from a wheel, B. The cage in this case may be turned by a crank, as shown in fig. 4, or may be belted to and receive motion from a pulley inside the box, as shown in fig. 5 by dotted lines. Instead of the revolving wheel, I may use a rock-shaft, with one or more floats or paddles, vibrating near the floor of the box. If hung in the centre of the box, I use two cylinders or cages, which are turned partially round or vibrated by means of a chain or belt, or gearing, as above set forth. As the rock-shaft is vibrated the floats strike the suds, and dash them, in form of spray, into the cylinder and against the clothes or other articles therein.

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

1. The wheel and cylinder, as described, when operated together, substantially as and for the purpose set forth.
2. The inclined floor of the box, in combination with the wheel and cylinder, substantially as and for the purpose set forth.
3. The combination of the box, wheel, and cylinder, with or without netting or gauze, as and for the purpose set forth.
4. The wheel or rock-shaft, with buckets, and the cylinder, with means for heating the suds or generating steam, substantially as and for the purpose set forth.
5. A washing-machine, substantially as described, with means for heating the suds and generating steam, in combination with a safety-valve attached to said machine, substantially as and for the purpose set forth.

D. E. SOMES.

Witnesses:

GUY C. HUMPHRIES,  
CHARLES HERRON.