

T. A. DUGDALE.
WASHING MACHINE.

No. 18,720.

Patented Nov 24, 1857.

Fig. 1.

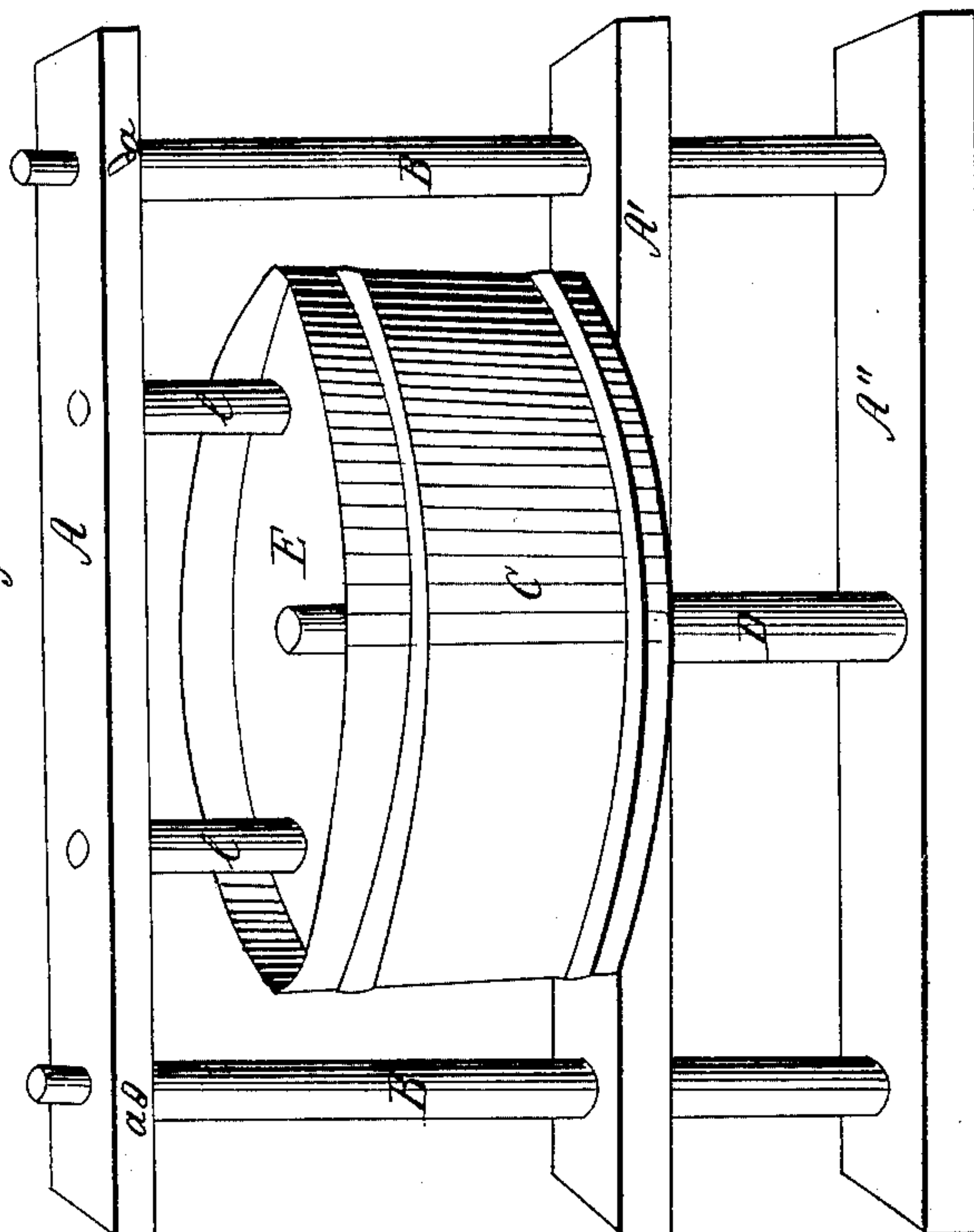


Fig. 3.

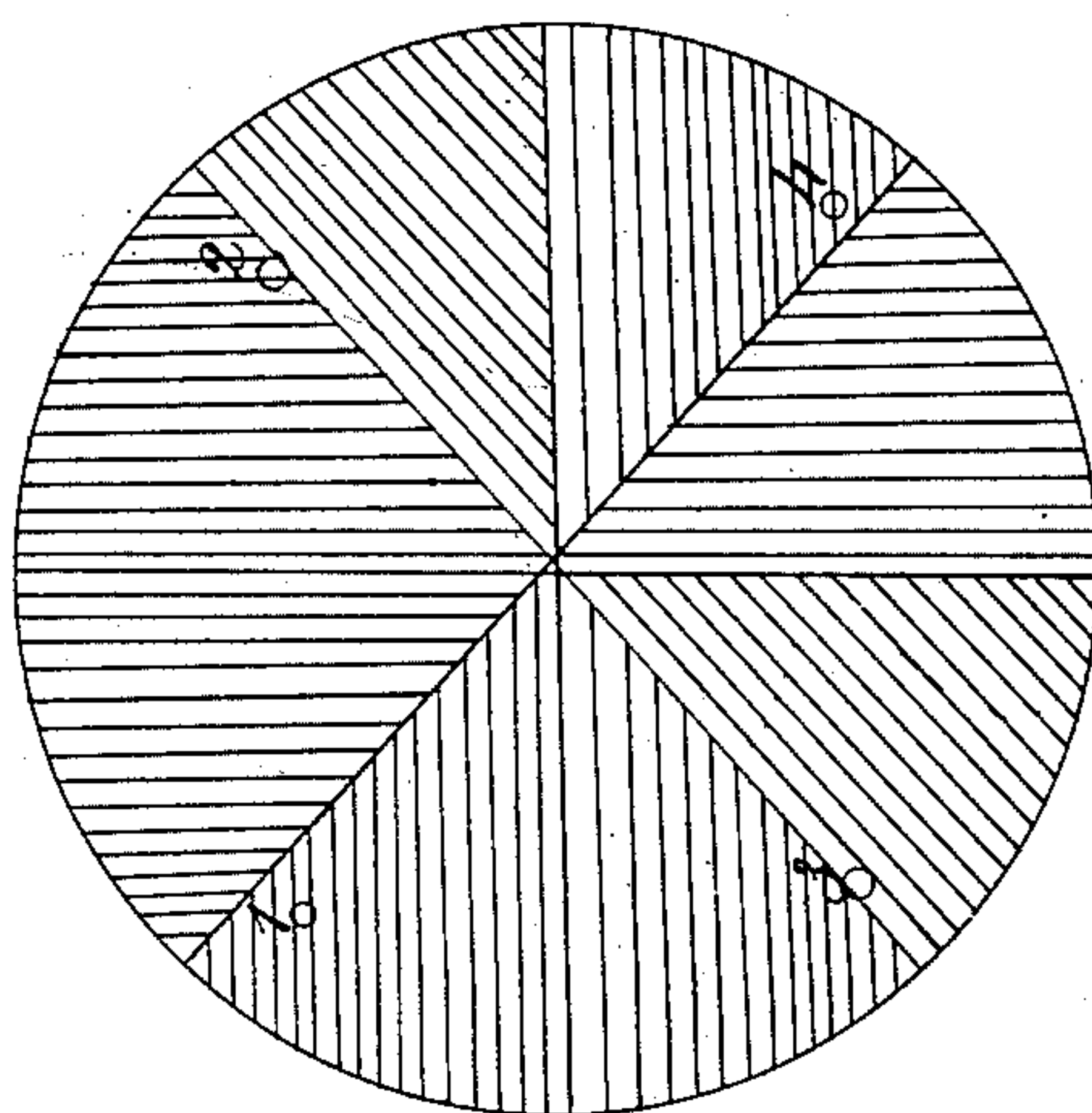
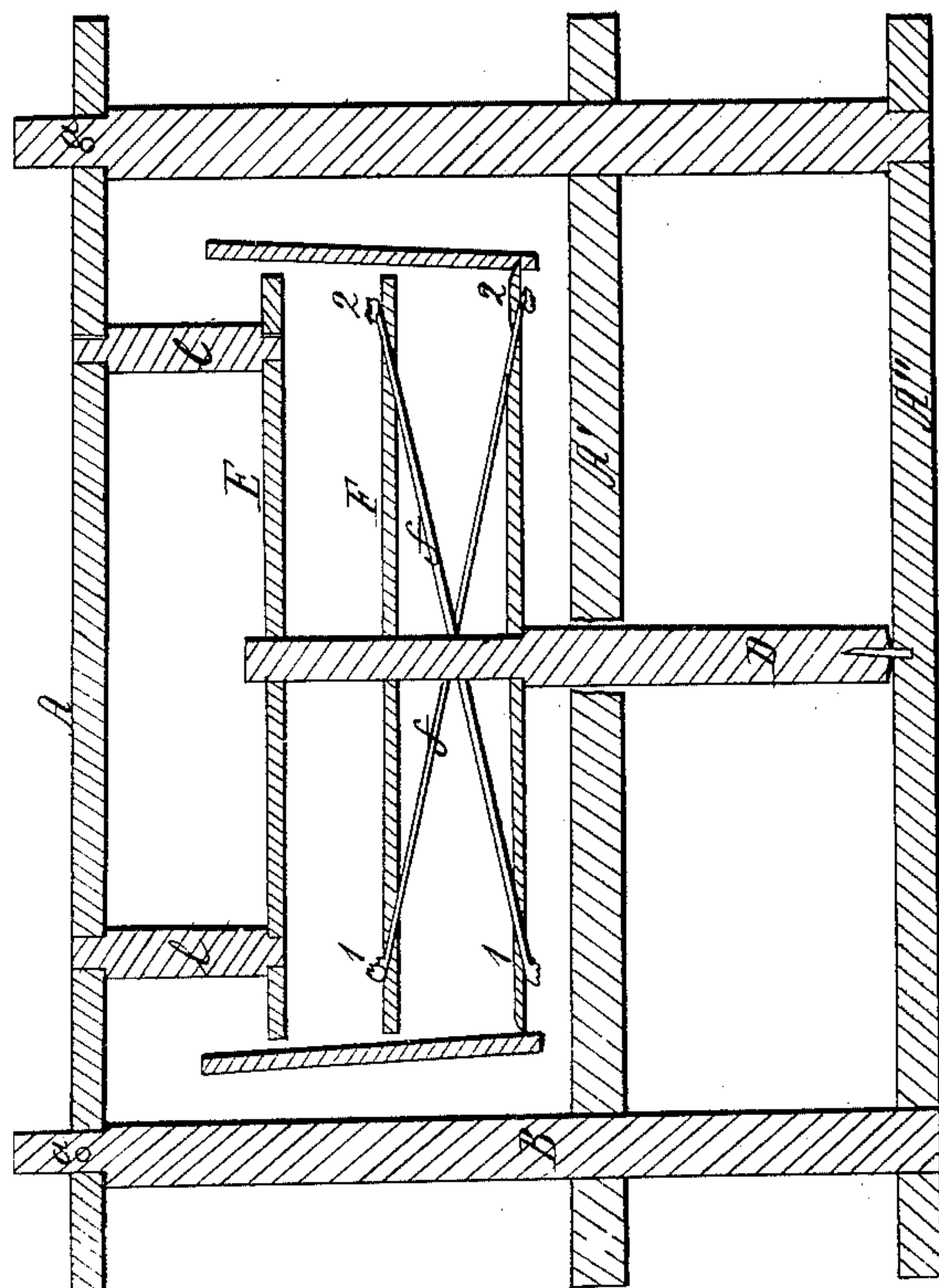


Fig. 2.



UNITED STATES PATENT OFFICE.

THOS. A. DUGDALE, OF RICHMOND, INDIANA, ASSIGNOR TO HIMSELF AND GEORGE TAYLOR, OF SAME PLACE.

WASHING-MACHINE.

Specification of Letters Patent No. 18,720, dated November 24, 1857.

To all whom it may concern:

Be it known that I, THOMAS A. DUGDALE, of the city of Richmond, in the county of Wayne and State of Indiana, have invented
5 a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full and exact description of its construction and operation, reference
10 and to the letters of reference marked thereon.

The nature of my invention consists in placing in the bottom of a vibrating tub with a fixed lid, a floating or false bottom so
15 arranged that it floats freely to a certain height and also moves promptly with the vibration of the tub, the object thereof being to make uniform pressure upon the clothes whether there be many or few in
20 the tub.

Figure 1 is a perspective view of my improvement. Fig. 2 is a vertical section longitudinal with the frame. Fig. 3 shows the perforations in the false bottom F, for the
25 cords *f, f*.

A, A', A'', are horizontal bars which receive the uprights B, B, as shown forming a compact frame.

C, is the tub which is of the form of a
30 common wash tub. D, is a spindle or shaft upon which it vibrates. This shaft, D, passes through the bottom of the tub, and extends up through disks, F, and E. It is secured in bars A' A'' as shown in Fig. 2,
35 vibrating freely.

E, is the lid or upper rubbing disk. It is secured to the upper bar, A, by means of the pieces, *e, e*, and may be lifted from the tub at pleasure by first removing the pins, *a, a*,
40 which hold the bar A in position.

F, is a false bottom or lower rubbing disk which floats in the water in the tub. It is connected with the tub by means of four cords *f, f, f, f*, two only of which are shown
45 in the drawing. There are four holes in the disk F, situated as shown in Fig. 3. There are also four holes in the tub bottom exactly correspond with those in disk F. They are similarly marked, 1, 2, 3, 4, in
50 both the disk and tub bottom. Through each of the holes in the disk, a cord passes diagonally to a hole in the tub bottom. Thus a cord passes from 1, in the disk to 2, in the tub and from 2 in the disk to 1 in

the tub. The cords are also similarly passed 55 from 3, to 4, and from 4, to 3. This arrangement allows the disk, F, to adjust itself readily to the bulk of clothes between it and disk E, thereby securing a uniform pressure whether the bulk be small or great 60 between the disks. Also the cords, *f, f, f, f*, passing diagonally secure a prompt movement of disk F when the tub is vibrated. Instead of using cords, *f, f, f, f*; shaft, D, may be squared, and a square mortise 65 through F, will produce the same result. Or slats may be nailed upright on the inside of the tub with corresponding gains in F.

This invention though apparently identical with the patent of Josiah Munford and John W. Wilson, of Oct. 28th, 1856, is yet quite distinct therefrom, and herein; for whereas they obtain pressure upon the clothes by means of a disk resting or float- 75 ing on the water, still they depend upon the weight of the disk and not its buoyancy for pressure. Their floating disk is above the clothes while mine is below them. No motion is communicated to their floating disk 80 while mine has the same motion as the tub, and acts upon the clothes by its buoyancy alone and not by its weight. The difference between the two devices will be best understood when it is noted that an increase 85 of the amount of water lessens the pressure in their machine by separating the clothes, while if it produces any sensible effect in mine it is to increase the pressure.

Operation: The operation of this machine 90 is so like some now in use, a detailed description is deemed unnecessary.

I am aware that vibrating tubs with stationary lids or disks are now in use, such parts therefore of themselves I do not 95 claim; but

I do claim as new and useful and desire to secure by Letters Patent—

The combination of the floating disk F, cords, *f, f, f, f*, and vibrating tub, C, with 100 the stationary disk, E, substantially in the manner and for the purposes herein set forth.

THOS. A. DUGDALE.

Attest:

JOHN FINLEY.
GEO. TAYLOR.