

(No Model.)

2 Sheets—Sheet 1.

B. F. CRISENBERRY.
WASHING MACHINE.

No. 477,246.

Patented June 21, 1892.

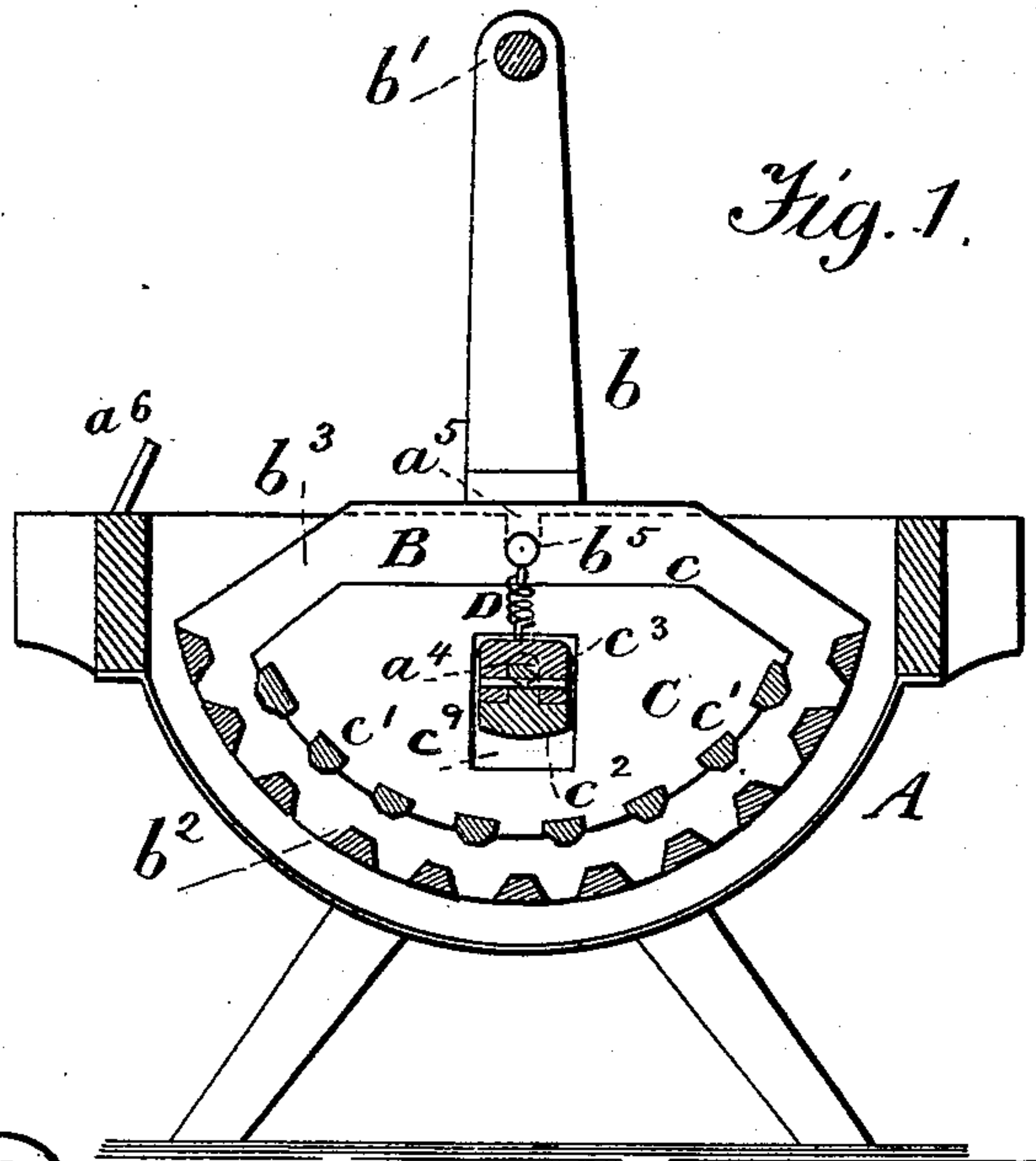


Fig. 1.

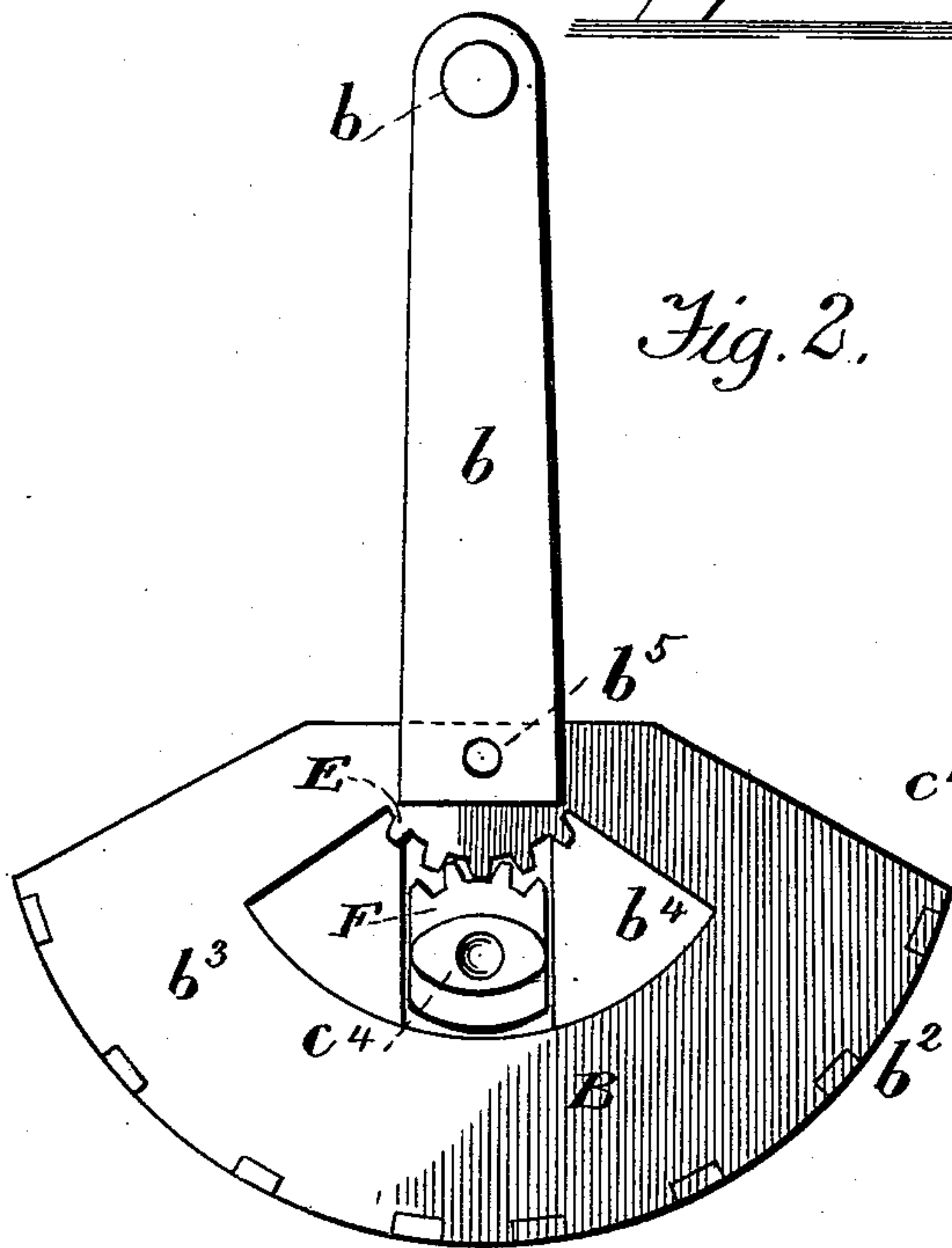


Fig. 2.

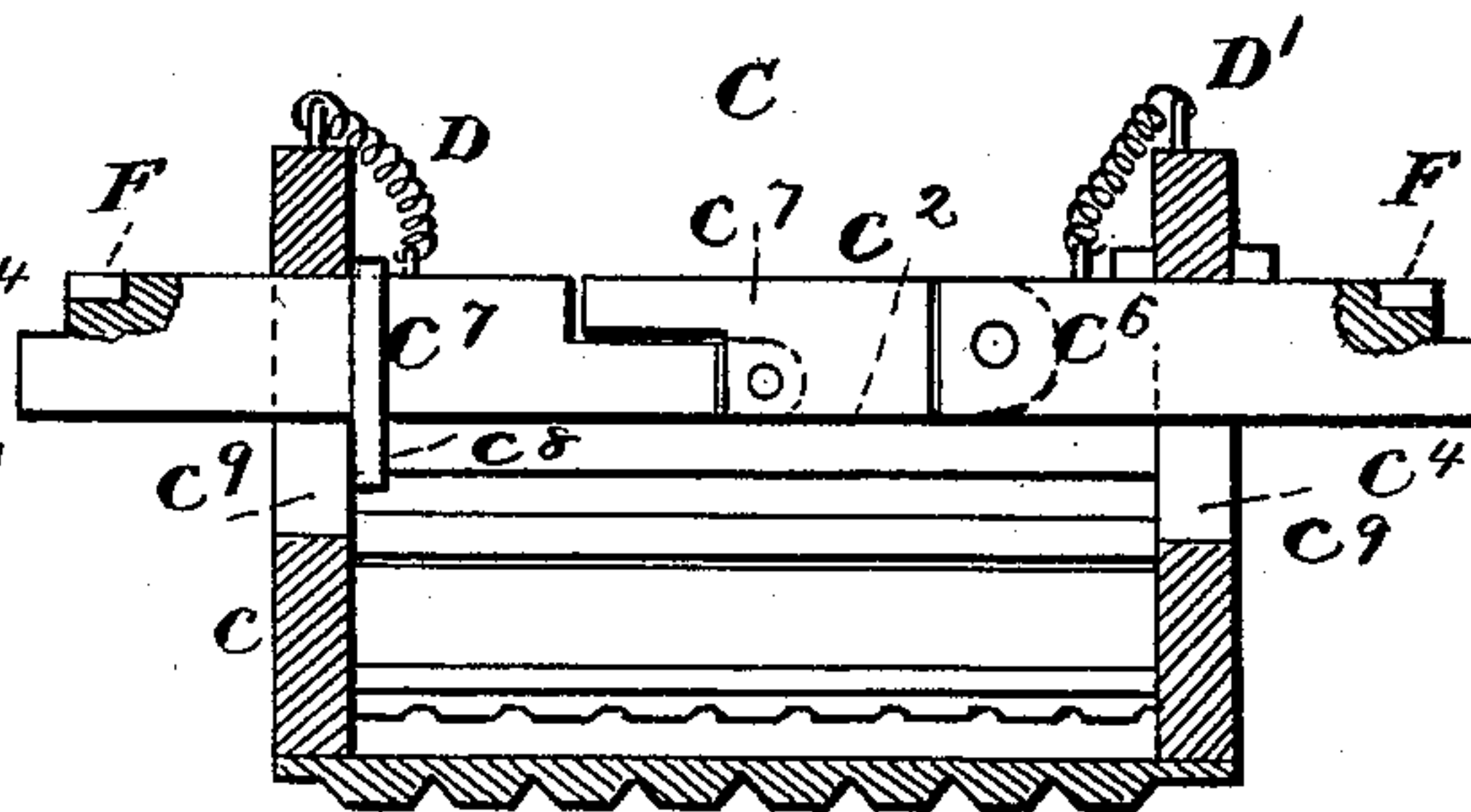


Fig. 3.

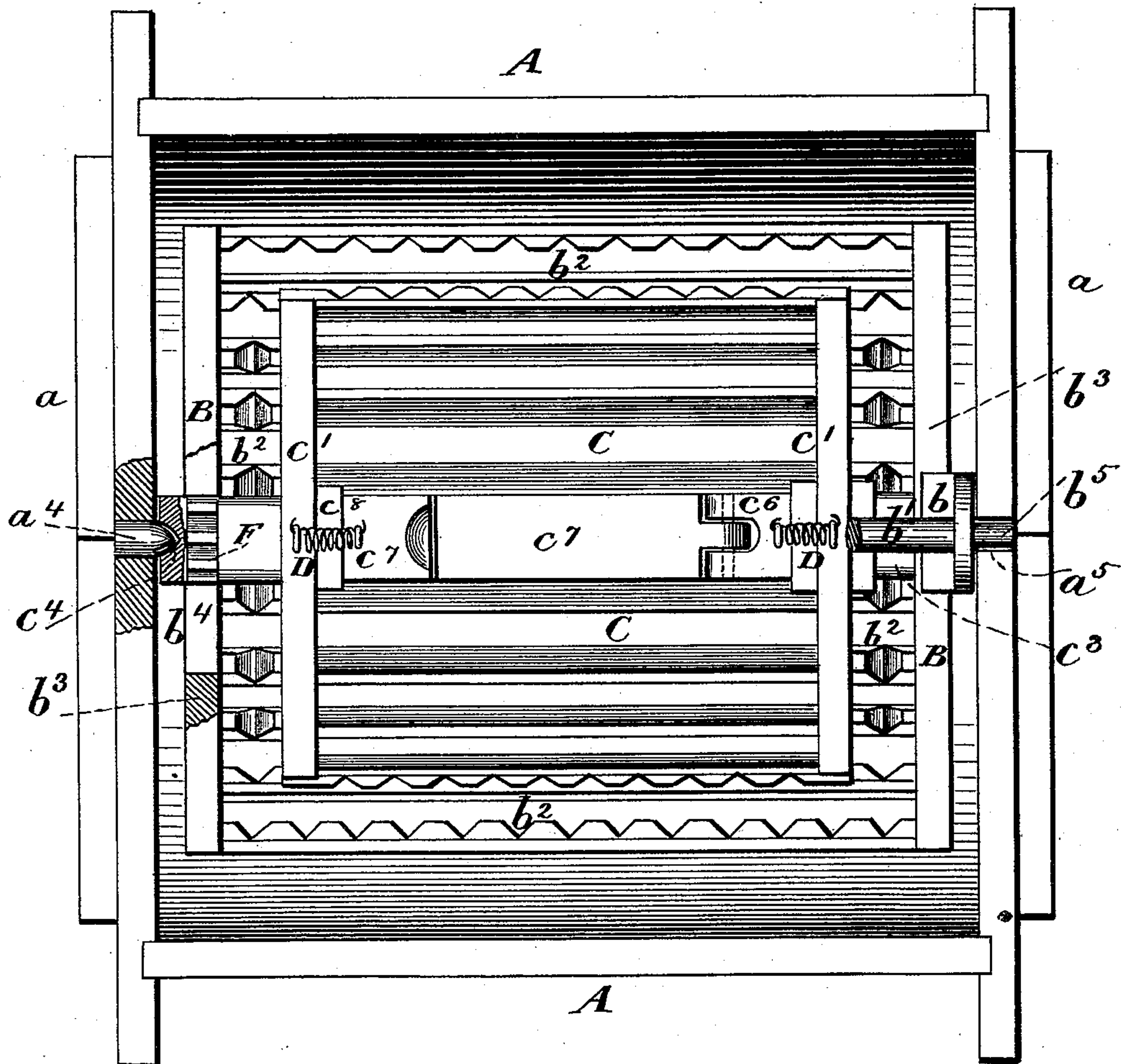
Witnesses.
A. Ruppert,
G. B. Towles

Inventor.
Benjamin F. Crisenberry
Per
Thomas T. Simpson
Atty

2 Sheets—Sheet 2.

Patented June 21, 1892.

Fig. 4.



Inventor:
B. F. Eisenberg,
Per
Thomas P. Simpson,
att'y.

UNITED STATES PATENT OFFICE.

BENJAMIN F. CRISENBERRY, OF BOYLESTON, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 477,246, dated June 21, 1892.

Application filed May 1, 1891. Serial No. 391,199. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CRISENBERRY, a citizen of the United States, residing at Boyleston, in the county of Clinton and State of Indiana, 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.

The special object of the invention is to make a washing-machine in which two rubbers are moved in opposite directions with the clothes between them.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

Figure 1 of the drawings is a vertical section of the case and both rubbers connected together; Fig. 2, an end elevation of the two rubbers; Fig. 3, a cross-section of the upper rubber. Fig. 4 is a plan view.

In the drawings, A represents the tub in which the hot water and soapsuds are placed.

B is the lower rubber, which has standards $b\ b$ connected at the top by a handle b' , with which the operator oscillates this rubber directly and also the upper one indirectly. The rubber B has slats b^2 fastened at intervals about the periphery of arc-shaped heads b^3 to form a receptacle for the clothes and for the upper rubber. The heads $b^3\ b^3$ are provided with openings $b^4\ b^4$ and near the top with the trunnions $b^5\ b^5$, which turn in open bearings a^5 of the tub.

C is the upper rubber, which is made to correspond in form to the lower one, but made on a smaller scale to fit within it, the opposite faces of their slats, between which the clothes are rubbed, being similarly notched to enable them to bite on the clothes. The heads $c\ c$ are connected by the slats c' , while the horizontally-flat bar c^2 is made fast to the under side of the part c^6 of the shaft c^3 and held to the part c^7 by the strap c^8 . The part c^7 is a toggle consisting of two pieces pivoted together and one jointed to the piece c^6 , the pieces c^6 and c^7 forming the shaft c^3 , which

has end bearings $c^4\ c^4$ to turn on the stud-pivots $a^4\ a^4$ of the tub after passing through the holes $c^9\ c^9$ in the heads. When the toggle c^7 is aligned, the shaft c^3 is supported by and turns on the stud-pivots a^4 , but when drawn up to form nearly a right angle said shaft, with the upper rubber, may be taken out of the washer.

D D' are springs which exert a yielding pressure on the top rubber, so that it automatically adjusts itself to the clothes beneath it, the toggle passing through slots in the rubber to admit of the said adjustment. The upper and lower rubbers are connected by the racks E F, so that the oscillation of the lower one may actuate the upper one in an opposite direction. When lifting out the lower rubber with the clothes, the drippings all fall back into the tub, while by exerting the power on the lower rubber and making that operate the upper one an undue pressure on the clothes is impossible. The latter has long been quite a desideratum in washing-machines.

In order that the drippings from the upper rubber may go back into the tub when removed, the angle of the toggle or its joint which admits the formation of an angle is hooked over a peg a^6 on the end piece of the tub, thus letting the oval or slot part pass inward, so that the drip will be into the tub. Although in this way the toggle takes up room in the tub, yet it is a matter of great convenience to prevent the drip from reaching the floor.

I am aware that it is not broadly new to use two rubbers moving in opposite directions; but heretofore the upper has been oscillated and made to oscillate the lower by means of two connecting part pinions, while I oscillate the lower one and through it the upper one by a pinion connection. This is productive of the following advantages: The handles on lower rubber allow the upper to adjust itself automatically to the garments beneath it, so that they are not injured, roughened, or worn by the friction; secondly, it is more convenient for handling the lower one; thirdly, better leverage is obtained in working the rubbers.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

- 5 In a two-rubber washing-machine, the upper one provided with a shaft consisting of the piece c^6 , the flat bar c^2 , strap c^8 , and toggle c^7 , the ends of shaft having holes or bear-

ings adapted to fit over studs a^4 a^4 on the inside of tub, as and for the purpose set forth. 10

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

BENJAMIN F. CRISENBERRY.

Witnesses:

THOMAS F. KEENER,

JAMES T. CRISENBERRY.