

G. W. GATES & B. F. POTTER.
Carpet-Sweeper.

No. 226,512.

Patented April 13, 1880.

Fig. 1.

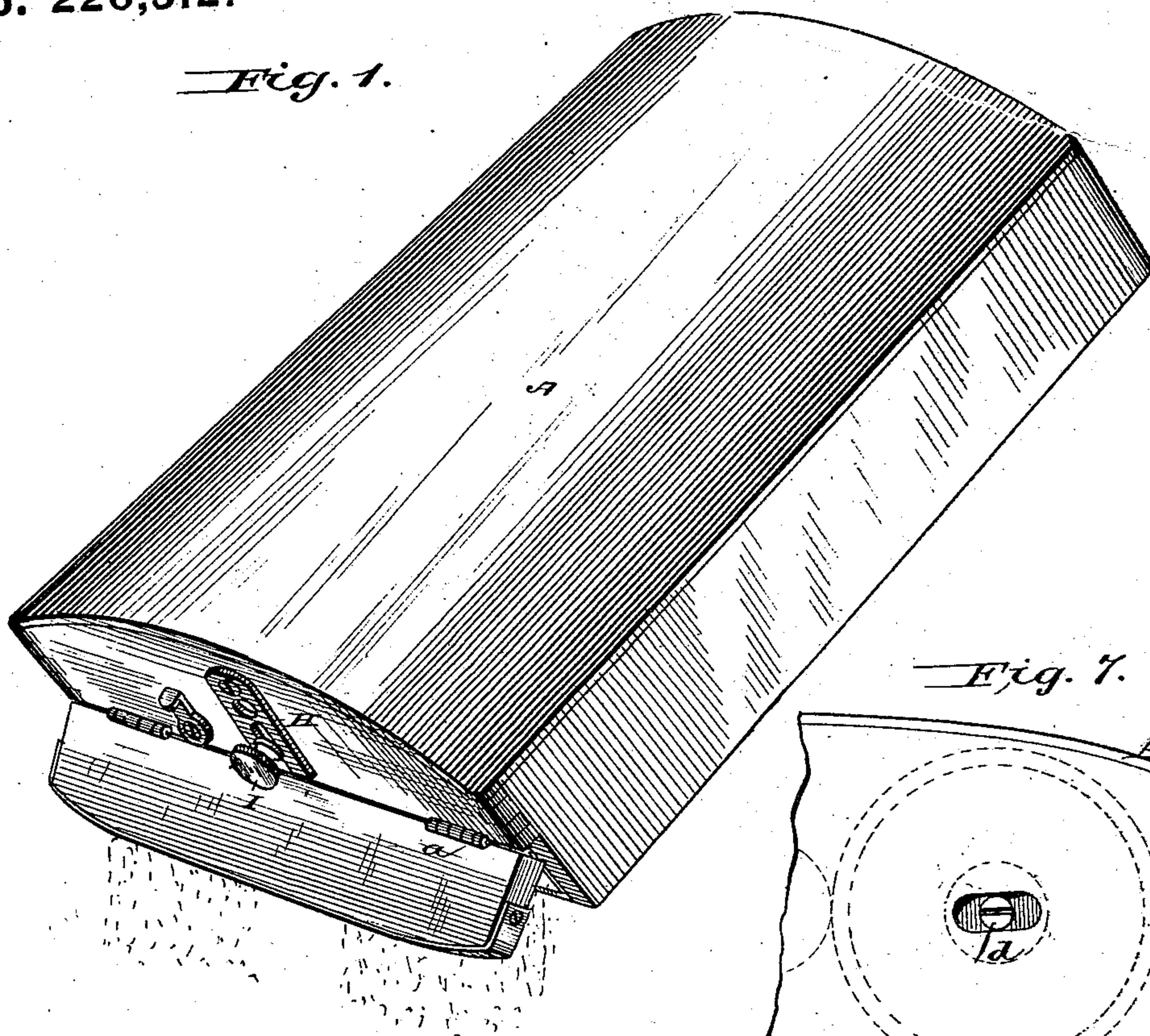


Fig. 7.

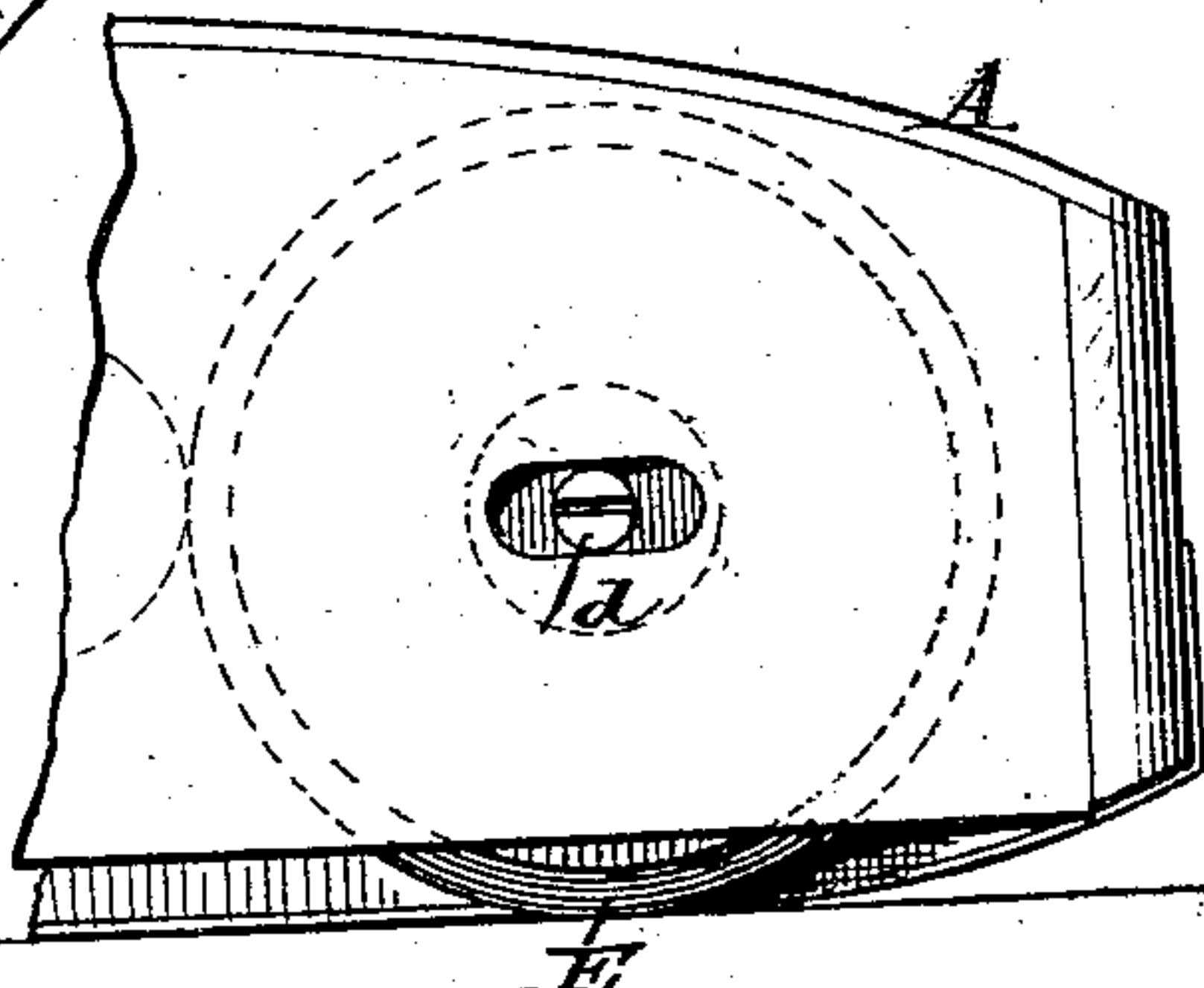
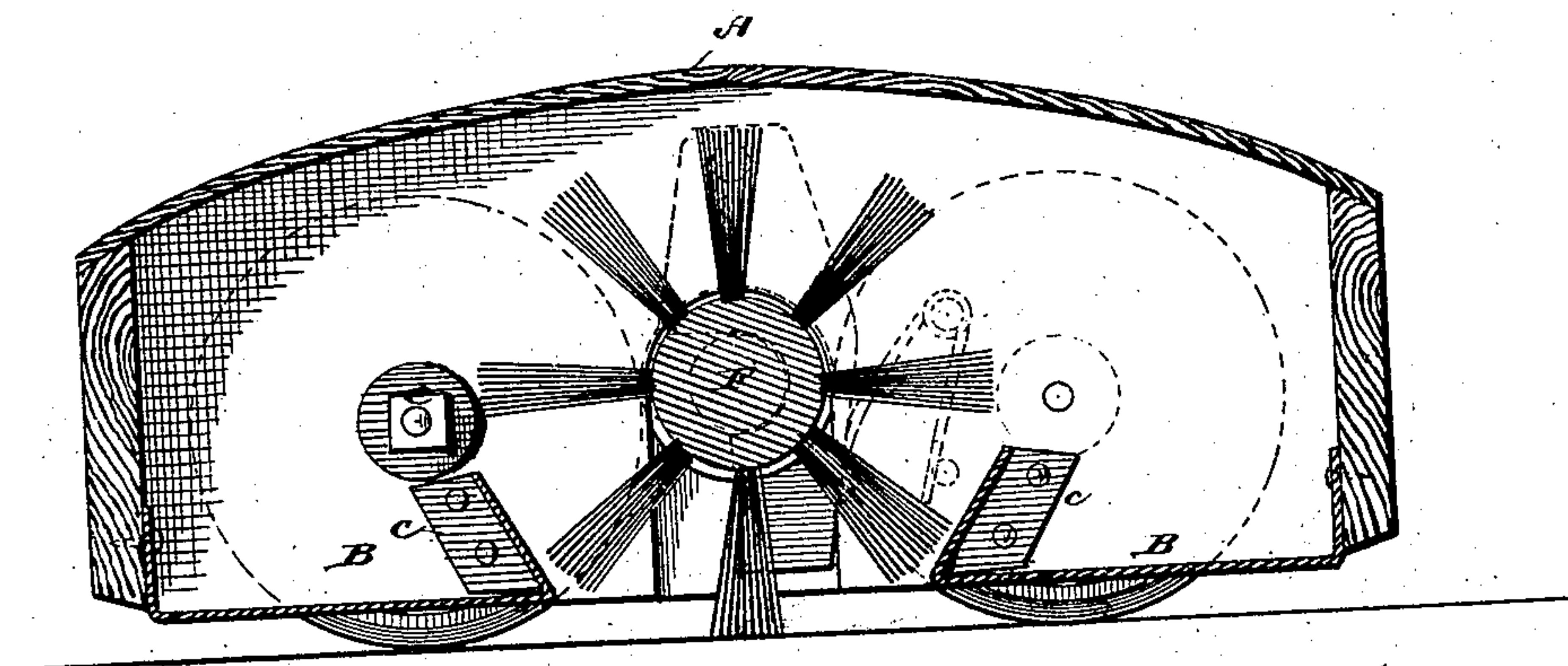


Fig. 2.



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Fig. 3.

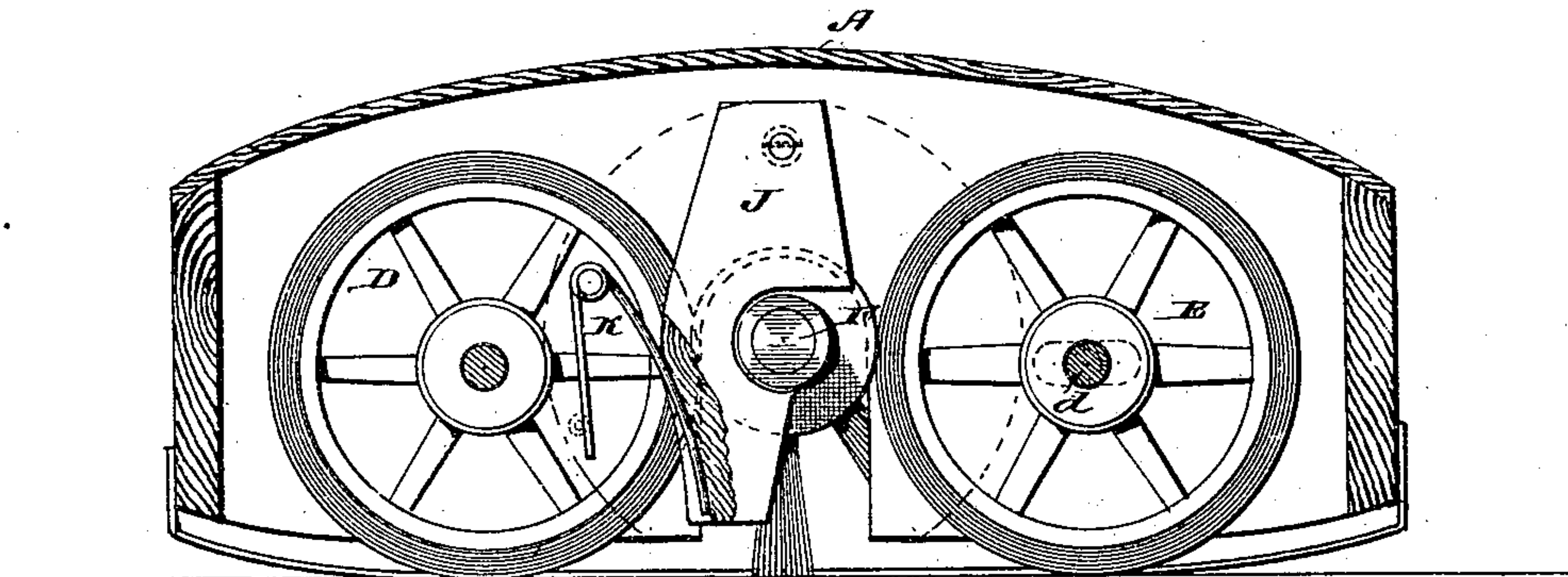


Fig. 4.

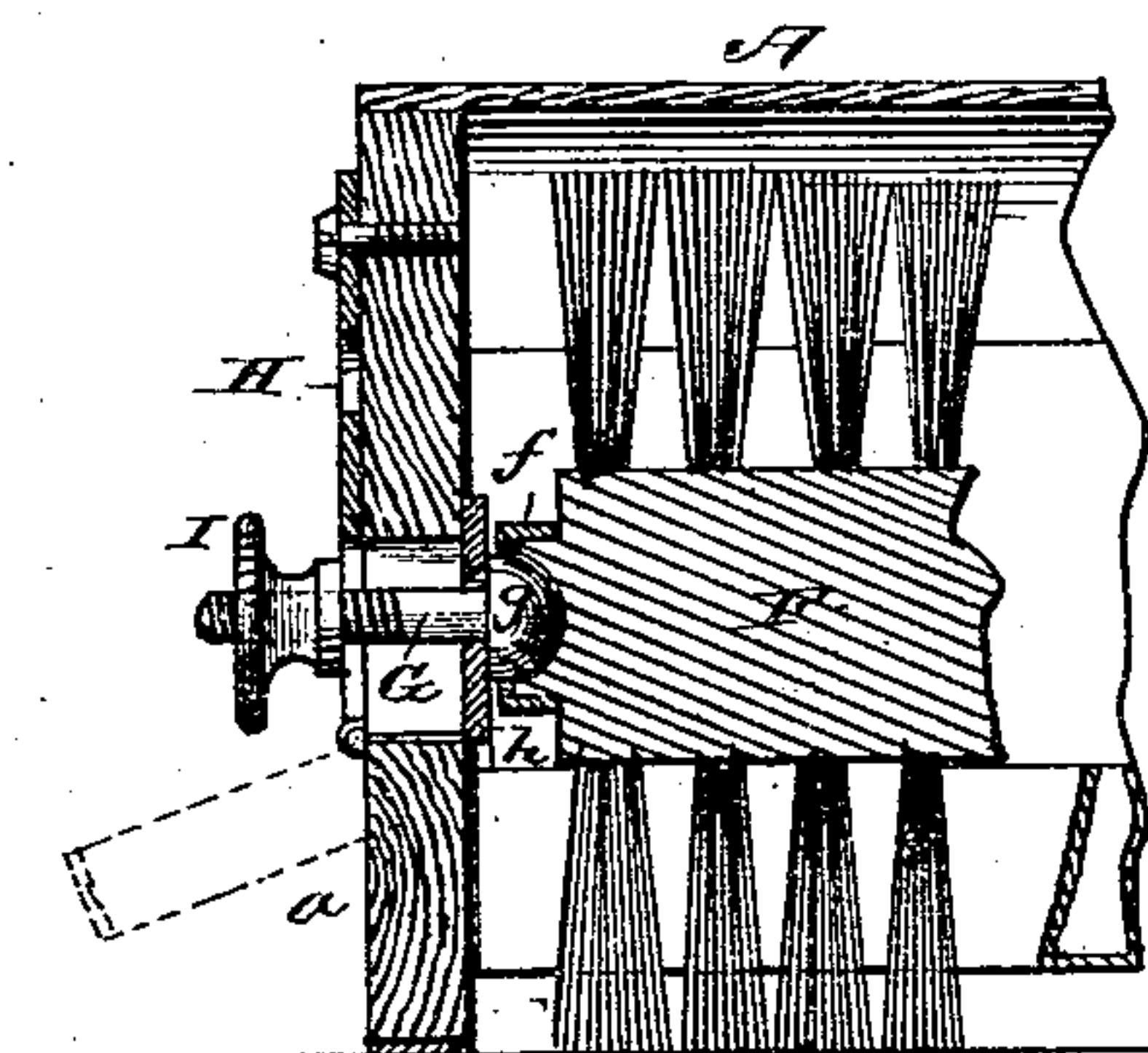


Fig. 5.

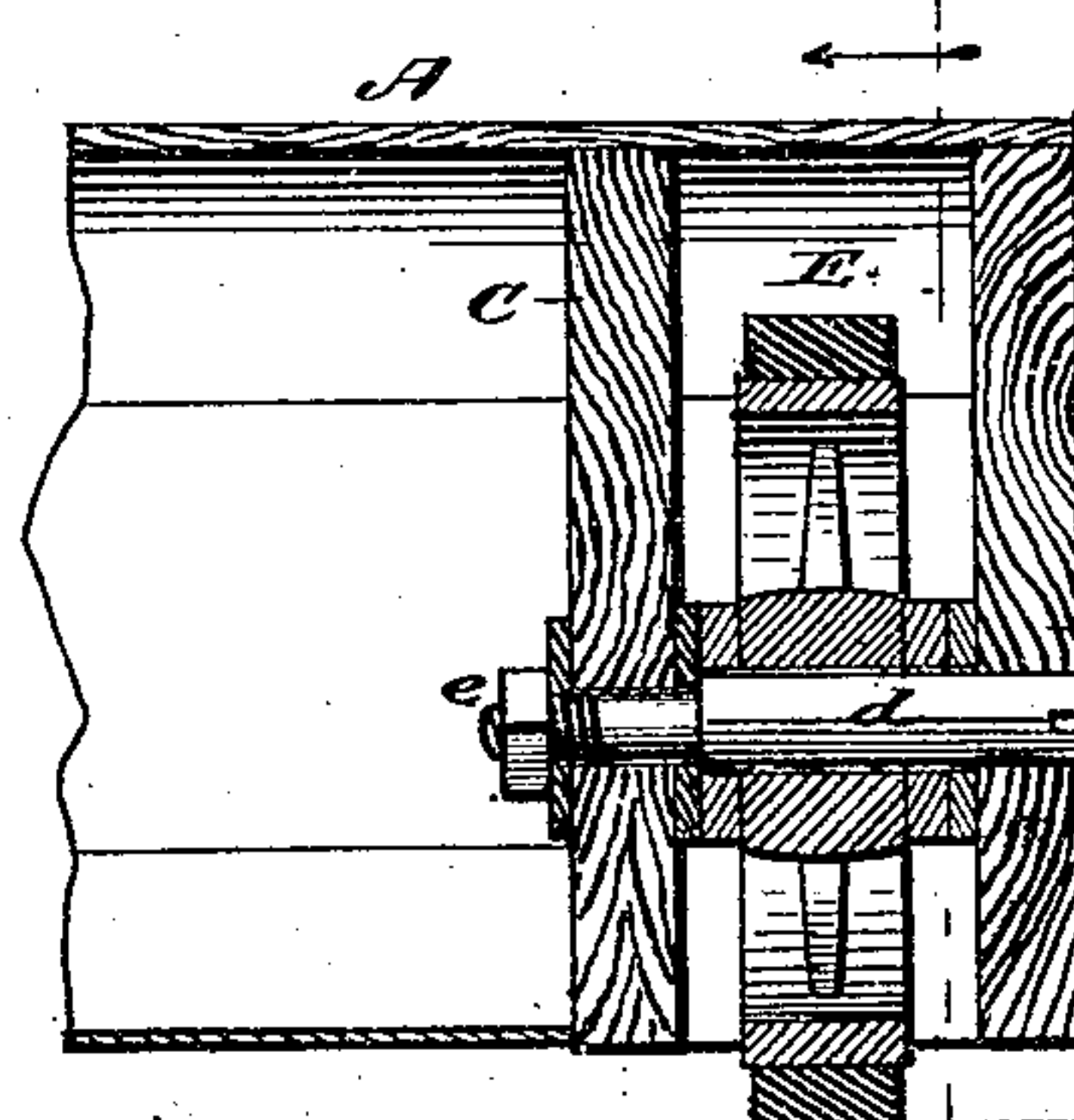
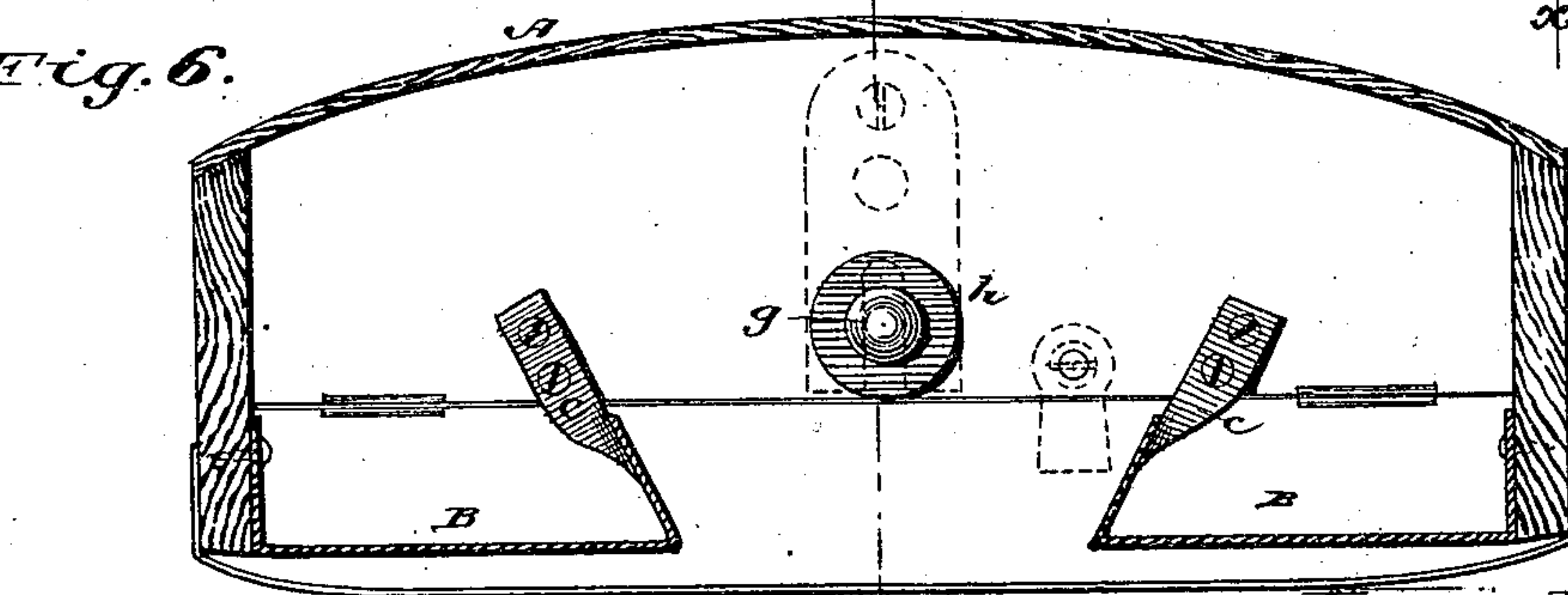


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE W. GATES AND BENJAMIN F. POTTER, OF GRAND RAPIDS, MICH.,
ASSIGNORS OF ONE-HALF OF THEIR RIGHT TO CHARLES B. JUDD.

CARPET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 226,512, dated April 13, 1880.

Application filed December 26, 1879.

To all whom it may concern:

Be it known that we, GEO. W. GATES and BENJAMIN F. POTTER, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Carpet-Sweepers; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective of the sweeper, showing the end flap turned up so as to let the sweepings fall out of pans; Fig. 2, a cross-section through middle of sweeper; Fig. 3, a cross-section, *x x*, of Fig. 5; Fig. 4, a longitudinal section through *y y* of Fig. 6, a section of the box being broken away; Fig. 5, a longitudinal section, looking in the direction of the arrow, taken through the horizontally-adjustable drive-wheel, a portion of the box being broken away; Fig. 6, a cross-section through the box of the sweeper, looking in the direction of the arrow, the brush-shaft being removed, and Fig. 7 an end view, part broken away, showing a slot in one end of the box and the axle of one drive-wheel journaled therein.

Our invention relates to carpet-sweepers; and it consists in the construction of parts hereinafter particularly specified.

In the accompanying drawings, the letter A indicates the box or shell of the sweeper, made principally of wood, and preferably with a paper-board top, and provided at one end with a hinged flap, *a*, which, when turned down, serves as a shoe for the sweeper to run on. Within this shell, to both sides thereof, there is secured a dust-pan, B, which is nailed to the sides of the shell, and its forward part upheld by a plate, *c*, or its equivalent, screwed or otherwise secured to the side or other part of the shell. The end of these pans next to the flap end of the shell is open, so that when the sweepings are to be removed from the pans the end flap has only to be thrown upward and the other end of the shell tilted, so as to

throw the sweepings to the open end, out of which they fall.

A partition, C, is formed near one end of the shell, and in the compartment formed by it and the end of the shell the drive-wheels are located. These wheels are indicated by the letters D and E, and are both journaled in the end of the shell and the partition C, and are provided with rubber or other flexible or noiseless face.

The wheel D is stationary, while the wheel E is adjustable horizontally, and can be held at any point within the range of its adjustability. This wheel turns on its axis *d*, and the axle is journaled in horizontal slots formed in partition C and the end of the shell. The axle *d* is provided near one end with a shoulder, as illustrated in Fig. 5, which end is threaded, while the other end is grooved, as represented. The shoulder on the axle is designed to bear against the partition C, or a washer between the partition and it, so that when the nut *e* is screwed upon the axle the latter will be clamped to the partition and be prevented from turning or from moving horizontally. Metal or other washers may be fitted between the nut *e*, partition C, hub of wheel E, and the end of the shell.

By unscrewing the axle *d* the nut is loosened, and the axle and its wheel can then be moved to or from the brush-shaft, thereby increasing or diminishing the friction between the shaft and drive-wheels and determining the force or friction with which the brush shall move over the carpet or surface to be swept. When the desired friction has been obtained the movable wheel is held to the adjustment given it by screwing up the axle or the nut thereon.

By constructing the parts as described for the accomplishment of the end mentioned the adjustment is rendered very easy and quick, and the outer end of the axle fitting within the end of the shell or on a line therewith, there is no projection to scratch or otherwise injure furniture.

The brush-shaft F is provided with metal ferrules, and the end of the shaft (indicated by the letter *f*) is recessed, as shown, so as to receive the knob *g* of the bolt G, which projects through a plate, *h*, on the inside of the

end of the shell, and then through the shell and plate H, on the outside thereof, and onto the threaded end of the bolt there is screwed a thumb-nut, I. The plate H is slotted vertically, as is also the shell, so as to allow the bolt G to be raised or lowered, whereby the end of the brush-shaft next thereto may be raised or lowered, and by tightening the thumb-nut the shaft will be held at the desired elevation. The other end of the brush-shaft fits into a block, J, made preferably of hard wood, and hung between the drive-wheels D and E from a pivot passed through the block and into the end of the shell. The edge of this block next to the adjustable drive-wheel is recessed, as shown, so as to form an open bearing for the end of the shaft, and the portion of the block below the bearing is cut away, so that the shaft may be easily removed by pressing it down between the drive-wheel and block. A spring, K, connected to the inside of the end of the shell, bears against the block J and presses the brush-shaft or a collar thereon against the adjustable drive-shaft.

The operation of the sweeper and its advantages are apparent from the foregoing descrip-

tion, and a further description and enumeration thereof is unnecessary.

Having described our invention, what we claim is—

1. The brush-shaft F, journaled at one end in the pivoted block J, operated on by a spring, in combination with two drive-wheels for operating the same, substantially as described.

2. The combination of the shell A, horizontally-adjustable drive-wheel E, and nut-axle d, operating as described, for the purpose set forth.

3. The combination, with shell A and partition C, both provided with opposite slots, of the wheel E and its supporting-axle, having a set-nut for the adjustment of the wheel, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

GEORGE W. GATES.
BENJ. F. POTTER.

Witnesses:

FRANK EBLE,
GEORGE WYKES.