

(No Model.)

3 Sheets—Sheet 1.

W. C. BRAMWELL.

FEEDING MECHANISM FOR CARDING ENGINES.

No. 246,065.

Patented Aug. 23, 1881.

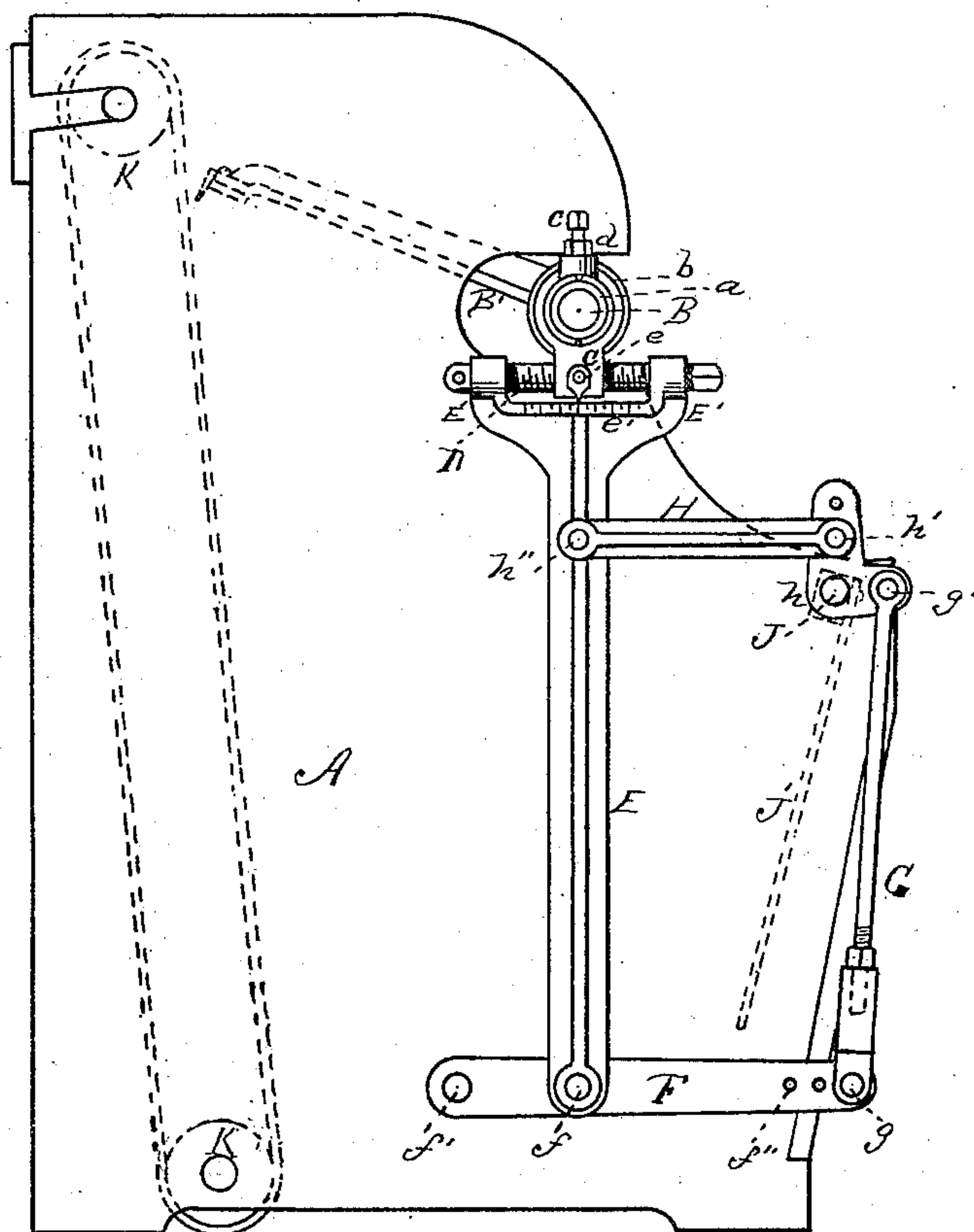


Fig. 1.

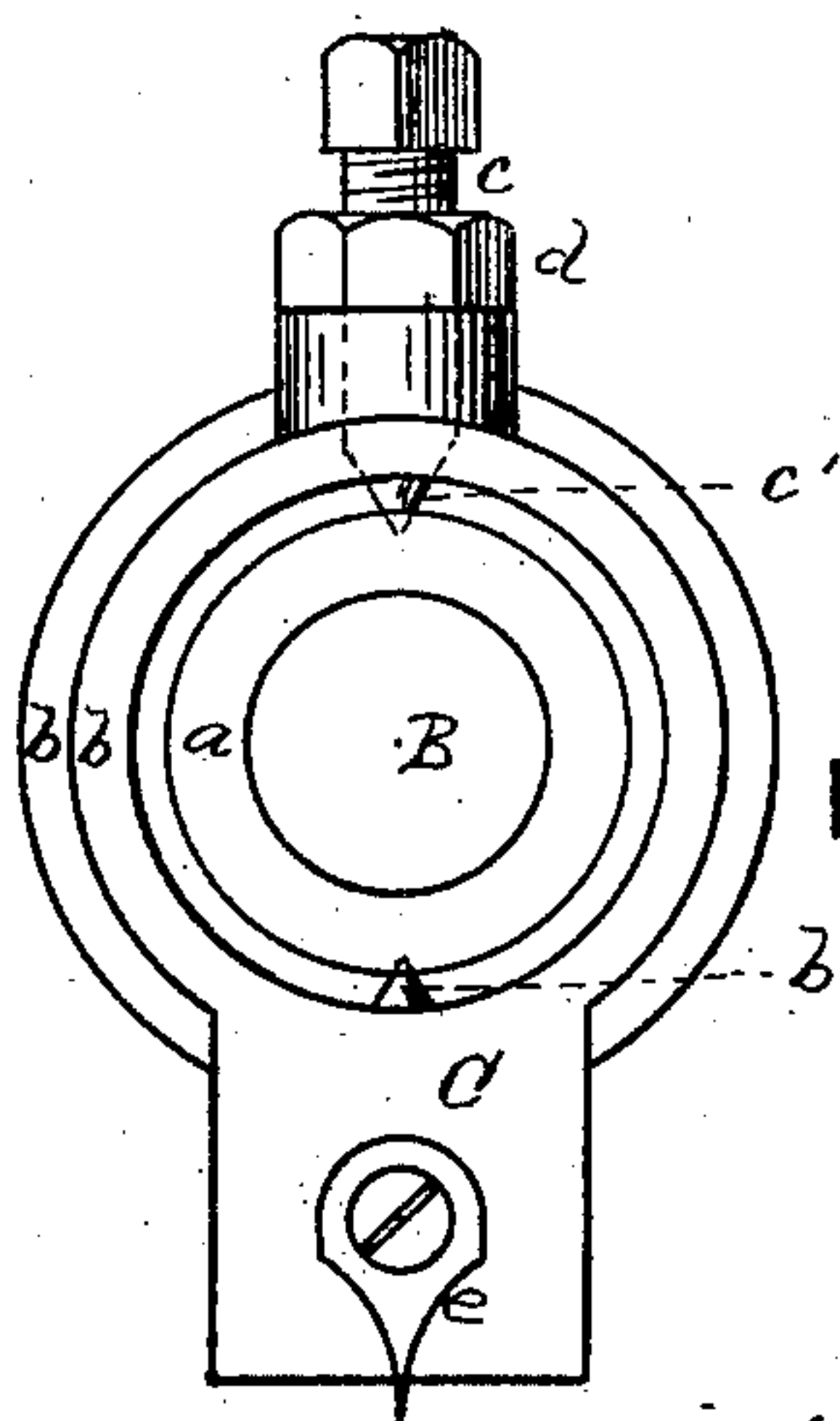


Fig. 2.

WITNESSES

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By his Atty.
Henry W. Williams

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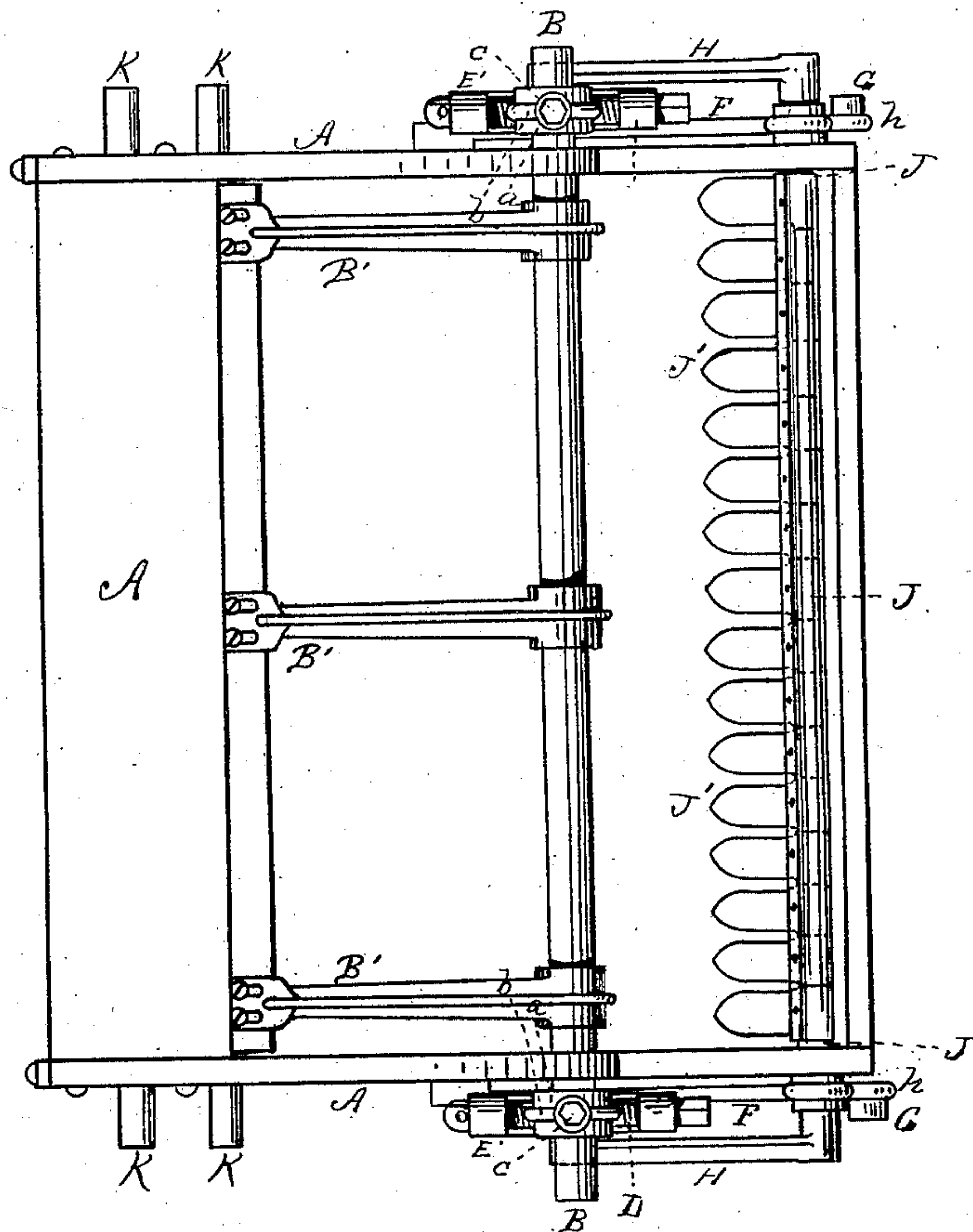


Fig. 3.

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3. Sheets—Sheet 3.

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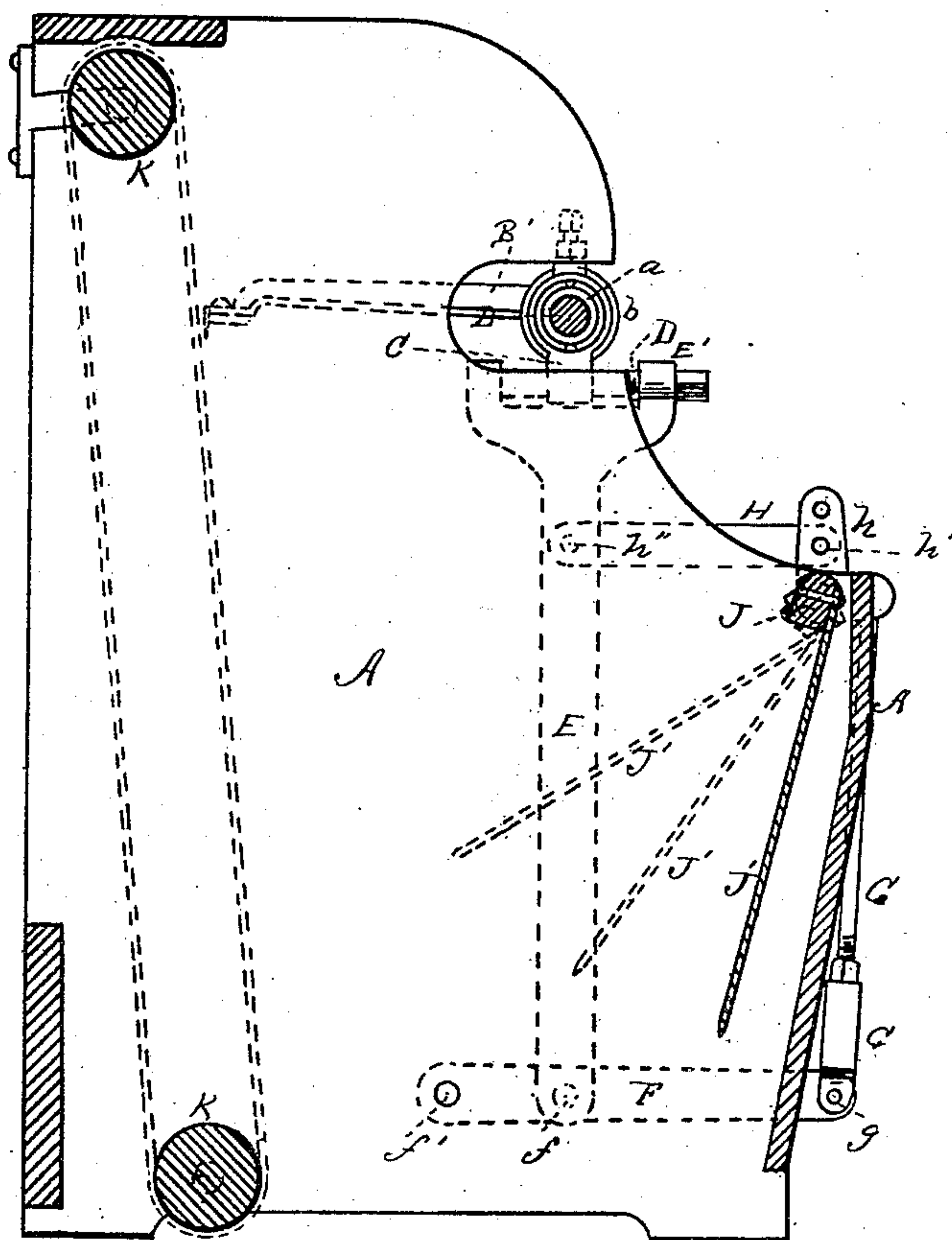


Fig-4.

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM C. BRAMWELL, OF HYDE PARK, MASSACHUSETTS.

FEEDING MECHANISM FOR CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 246,065, dated August 23, 1881.

Application filed February 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CALVERT BRAMWELL, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Feeding Mechanisms for Carding-Engines, of which the following is a specification.

This invention relates to improvements in the feeding-machine for which Letters Patent numbered 216,373 were granted to me June 10, 1879, to which Letters Patent I now refer in order to more clearly explain the present improvement. Therein is shown a case or receptacle for containing fibrous substances—such as wool, &c.—and an elevating toothed apron in the rear of the case. The teeth of the apron raise the wool until brought under the action of an oscillating comb, also provided with teeth. My improvements relate particularly to means for regulating the position of this comb.

In Figures 2 and 3 of the drawings making a part of said patent the comb and toothed apron are clearly shown, and it will be noticed that the comb-shaft is carried in bearings at each end, which are secured to the frame-work of the machine, so that the teeth of the comb always remain at one fixed distance from the teeth of the apron. Provision is made for altering this distance; but when it has been altered the bearings of the shaft are secured to the frame-work, and there remain.

Experience has demonstrated that while the distance of the comb from the apron might be fixed to answer well for the wool when first put into the case in a tangled and unprepared condition, such distance would not be so suitable after the wool had become more opened out and prepared. I have sought to overcome this difficulty by arranging the comb-shaft so that it shall automatically move toward the teeth of the apron when fresh wool is thrown into the case, and then gradually move farther away as the wool becomes more prepared, or the quantity in the case becomes less. It will be observed that the wool itself is the governing element controlling the distance between the comb and apron, and consequently the increased or diminished action of the comb on the fibrous materials is in proportion to the need of such action on them.

Although I have referred to a comb as being attached to the shaft, it must be understood that I do not restrict myself to the application of my improvement to a comb alone, for a cylinder might be fixed to the shaft, or a fan, or an apron, and other devices; nor do I restrict myself to the specific form or arrangement of the levers, fingers, &c., herein shown and described, as other devices may be employed by those skilled in the art that might substantially carry out my invention.

In the accompanying drawings, in which similar letters of reference indicate like parts, Fig. 1 is a side elevation. Fig. 2 is an enlarged elevation of the journal, &c., of the comb-shaft. Fig. 3 is a plan. Fig. 4 is a transverse vertical section.

A represents the case or receptacle, and B the shaft of the oscillating comb B'. The comb-shaft B has its bearings in the collars *a*. Each collar may form a part of a self-adjusting bearing, if desired, in which case it is swiveled in the ring *b* by means of the pivot *b'* and the pointed end *c'* of the bolt *c*, provided with the nut *d*. (See Fig. 2.) Whether the bearing be an adjustable one or not, the boss C forms a part of it, and contains a screw-thread fitting upon the adjusting-screw D. A pointer, *e*, is fixed upon the face of the boss C, and serves to indicate the position of the shaft by means of the graduated scale *e'*. Thus the shaft B may be made parallel with the finger-bar and roll, or either end moved a given amount ahead of the other, as desired. It is on account of such possible movement that an adjustable bearing may be desirable. The screw D is journaled at each end in the arms E' of the upright lever E, and is squared at one end, so as to admit of being turned by a wrench. The lever E is pivoted at *f* to the horizontal lever F, which is pivoted at *f'* to the frame A, and is provided at its other end with one or more holes, *f''*, in any one of which a connecting-rod, G, is swiveled, as at *g*. The upper end of the rod G is loosely connected at *g* with the bell-crank lever *h*, at its lower arm, and the connecting-rod H is similarly connected to the upper arm at *h'*, and has its opposite end connected at *h''* to the upright lever E. Each bell-crank *h* is fixed to one end of

the bar J, which extends horizontally through the case. The levers, &c., above described, on each side the case A, are exactly similar. Thus the shaft B is caused to move the same amount
5 at either end, and in the same direction, and all its parts simultaneously.

The bar J has fixed to it, inside the case, a series of fingers, J', projecting downward, and against these fingers the pressure of the wool, &c., is exerted when the case is filled. The
10 normal position of these fingers is forward, or toward the rolls K K, which carry the apron, (represented by broken lines in Fig. 4,) and they are so maintained by the weight of the
15 parts described, as will be readily seen. In Fig. 4 of the drawings the fingers J' are represented by full lines as at their lowest point—*i. e.*, farthest from the apron-rolls K K. They are also represented in broken lines as at their
20 highest point, and as at half-way between their lowest and highest points—*i. e.*, when empty and partly empty.

It will be observed that the comb-shaft B will thus be moved nearer to or farther from
25 the rolls K K in proportion to the movement of the fingers, but in the opposite direction—

that is to say, when the fingers are pressed back against the front of the case, or nearly so, (as, for instance, when the case is full,) the comb-shaft will be moved toward the apron-rolls, and as fast as the wool is used, and the pressure upon the fingers thereby relieved, the shaft B will be withdrawn in the same proportion from the apron-rolls, and the action of the comb or other device rendered less and less as
30 the necessity for such action on the material diminishes. 35

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is— 40

The combination, with the bar J, provided with fingers J', and the rotary or oscillating shaft B, having movable bearings, of a system of levers and connections, substantially as described, intermediate of said bar J and shaft B, whereby the position of the latter will be
45 changed by the movement of said fingers, for the purpose set forth.

WILLIAM CALVERT BRAMWELL.

Witnesses:

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GEORGE V. MALLON.