

No. 692,954.

Patented Feb. 11, 1902.

J. A. WHITING.

TYPE CLEANING DEVICE FOR TYPE WRITING MACHINES.

(Application filed Oct. 25, 1901.)

(No Model.)

3 Sheets—Sheet 1.

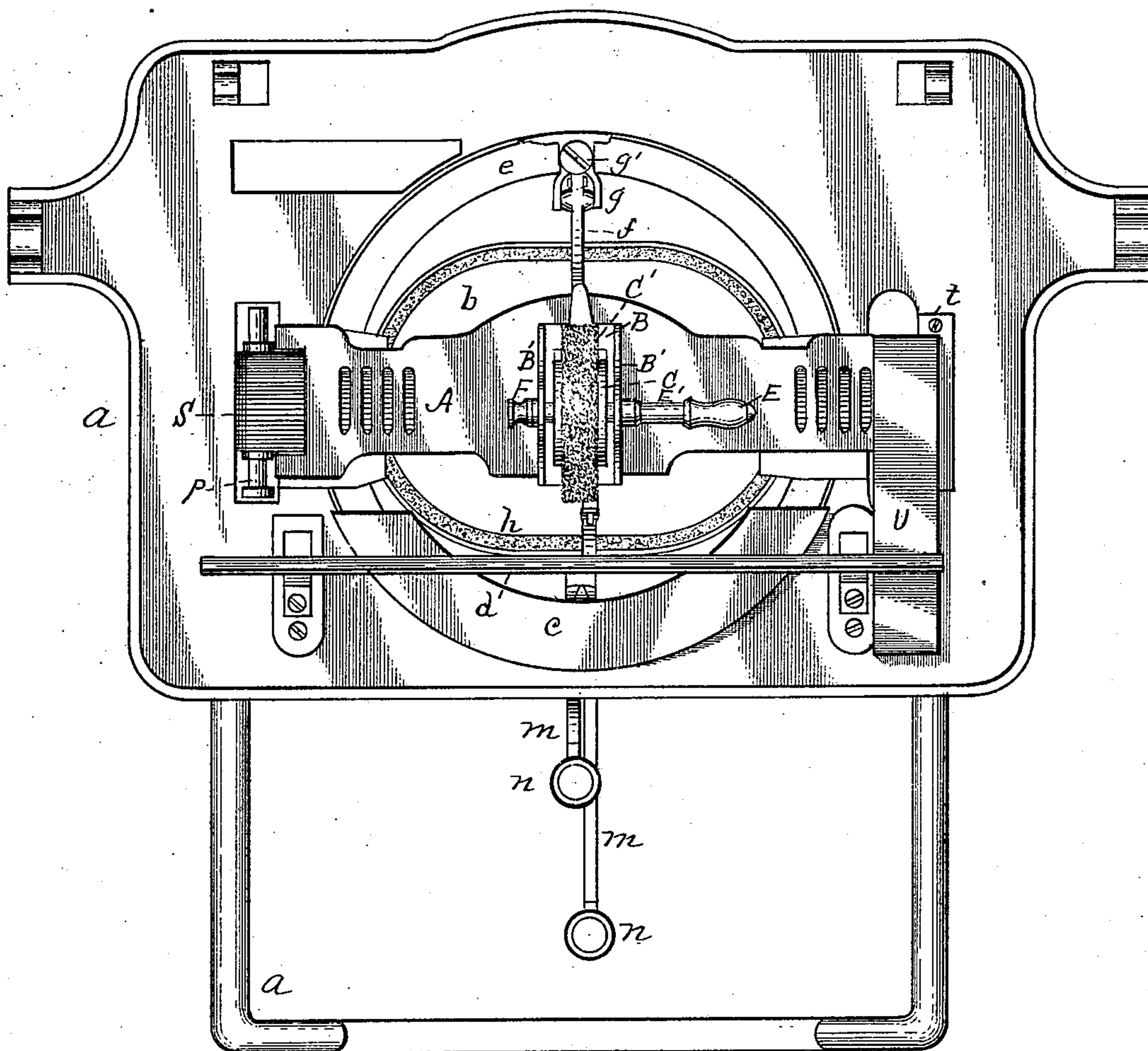


FIG. 1

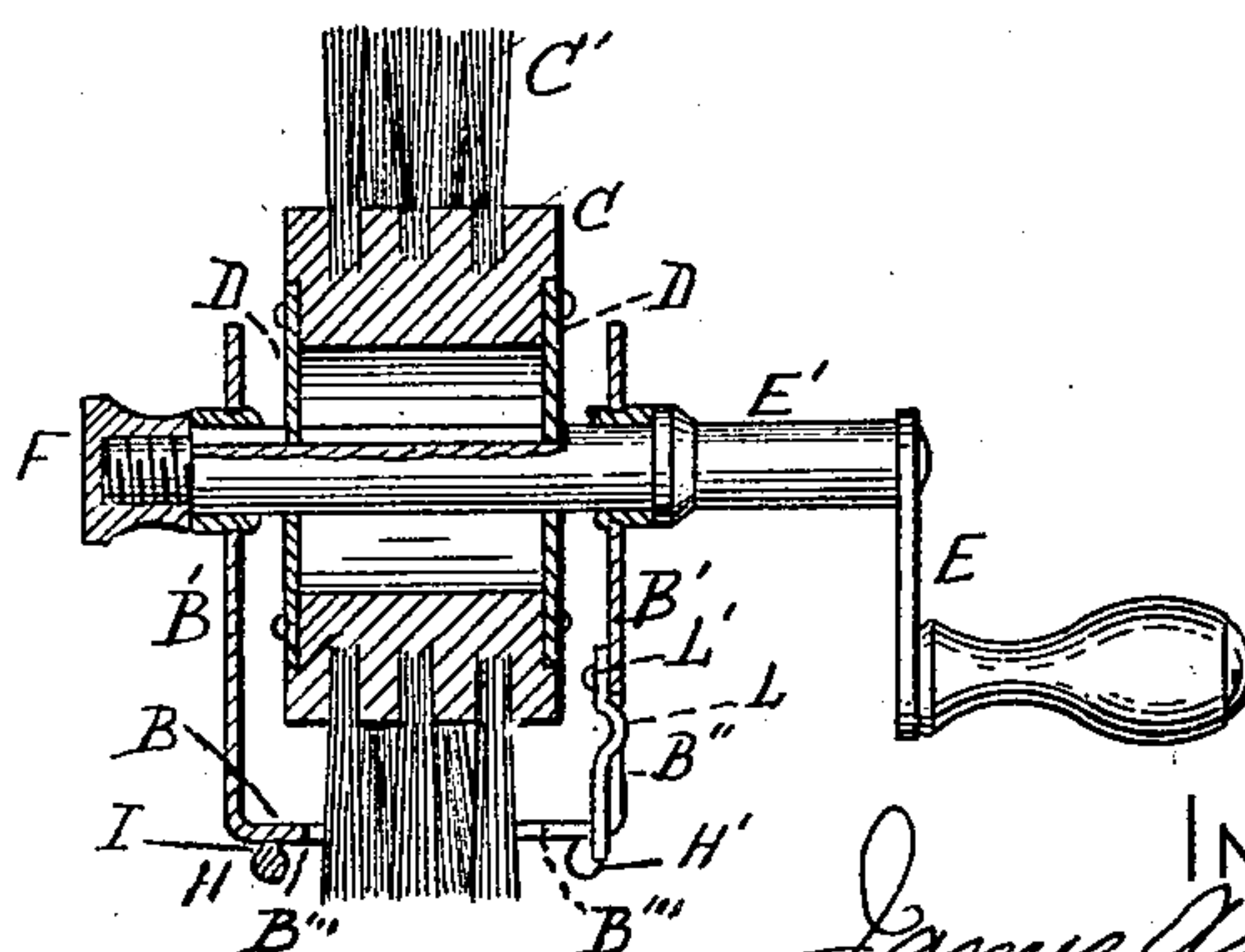


FIG. 2

WITNESSES

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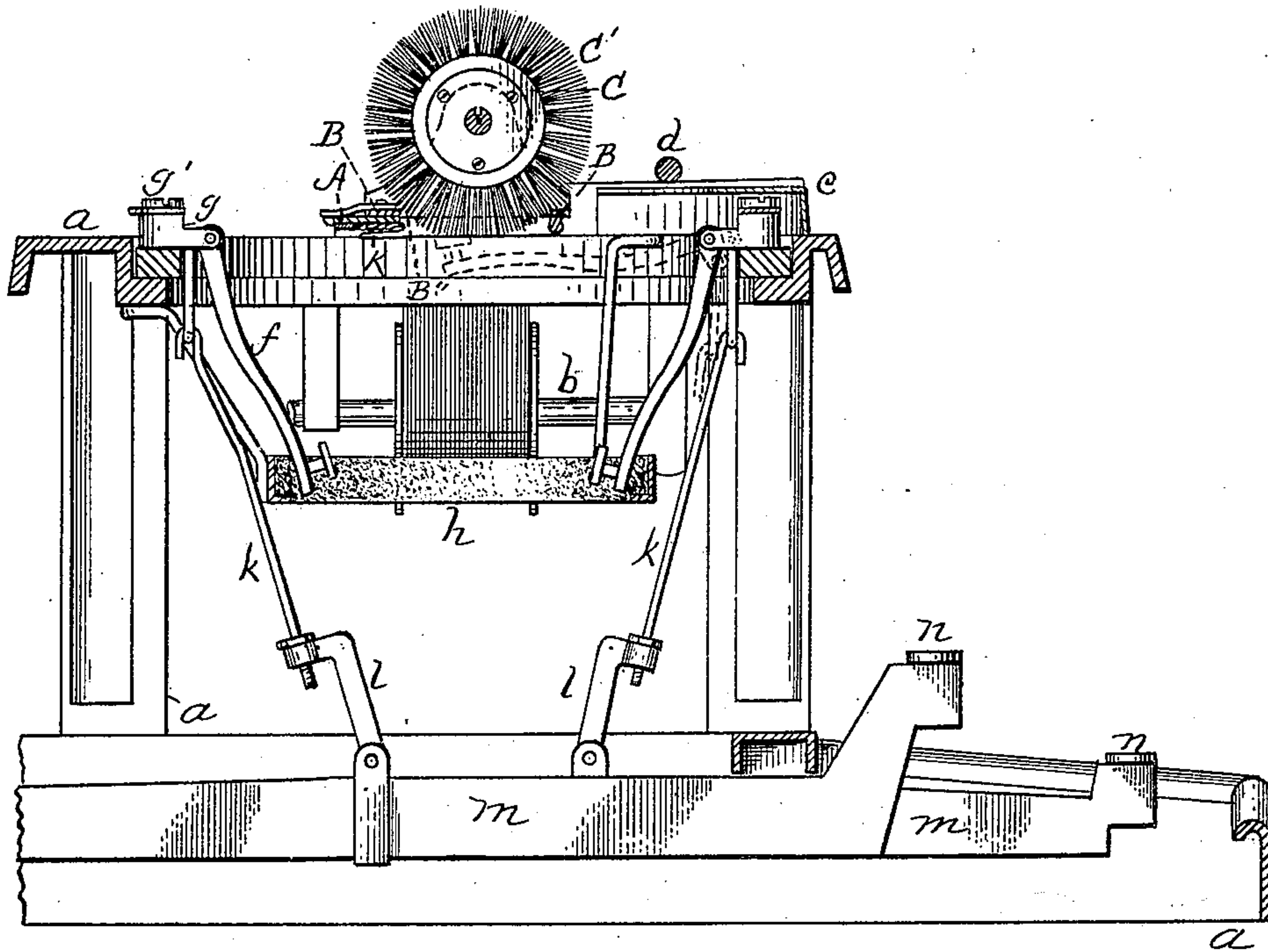


Fig. 3.

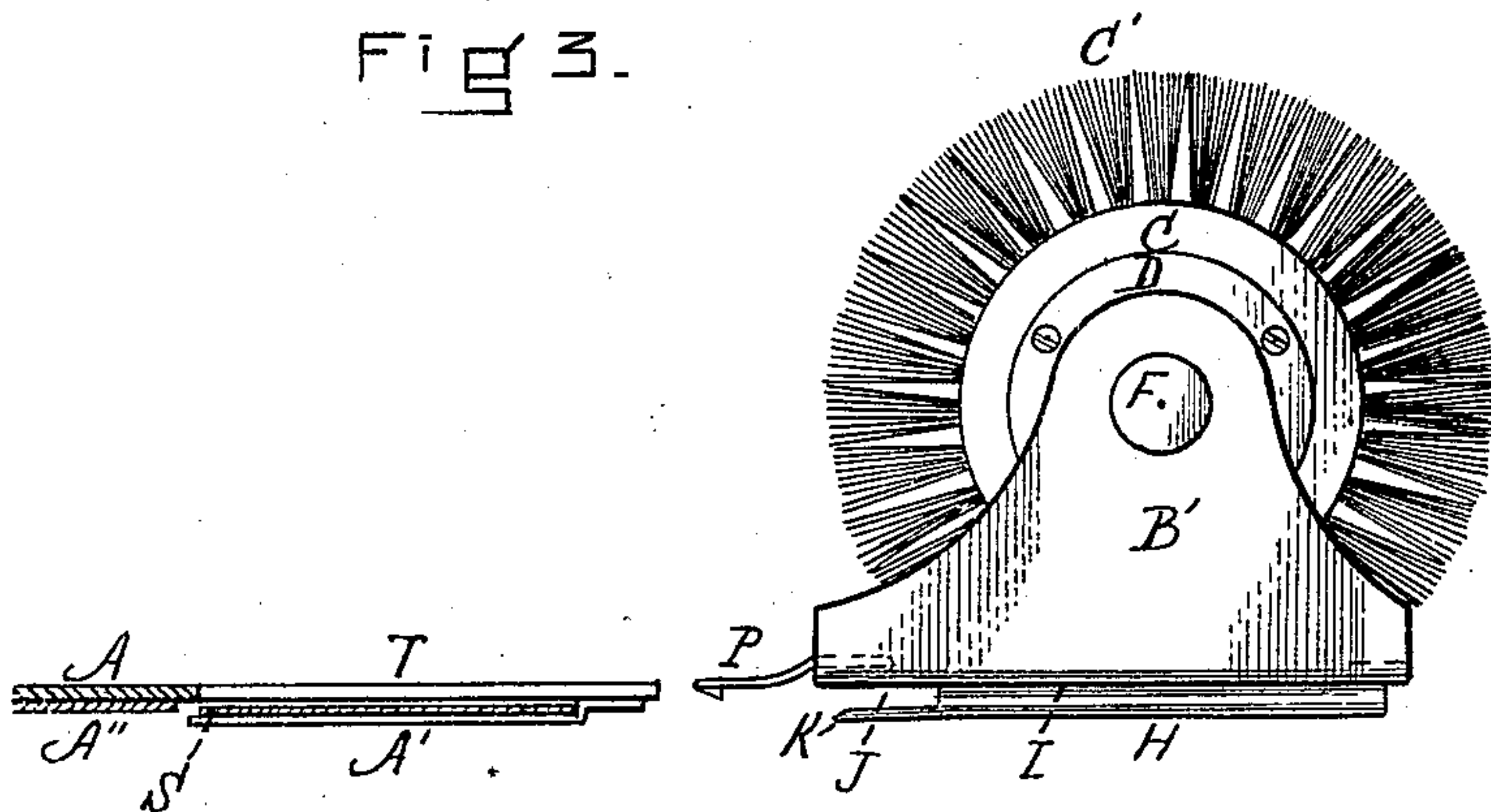


Fig. 4.

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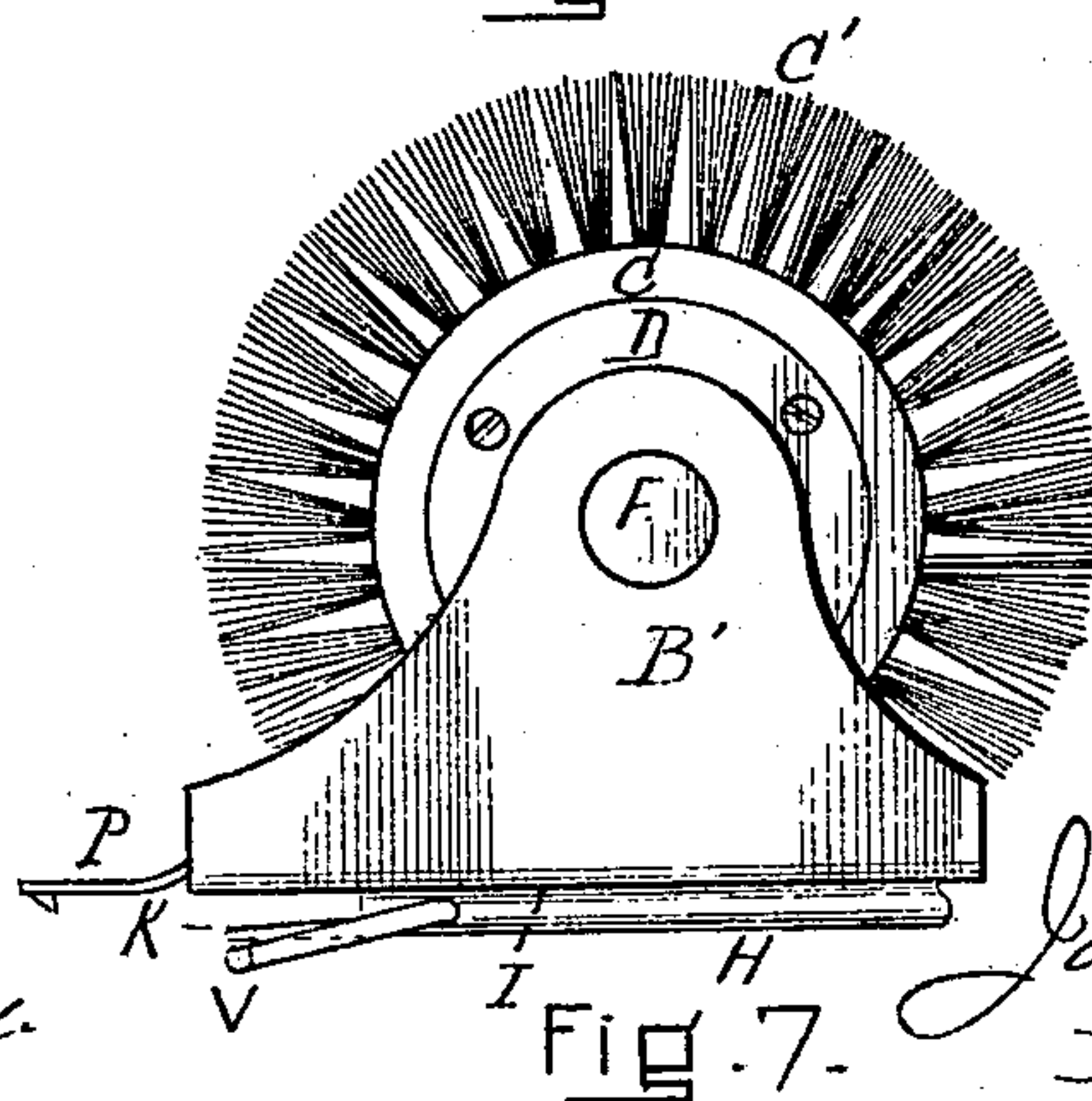
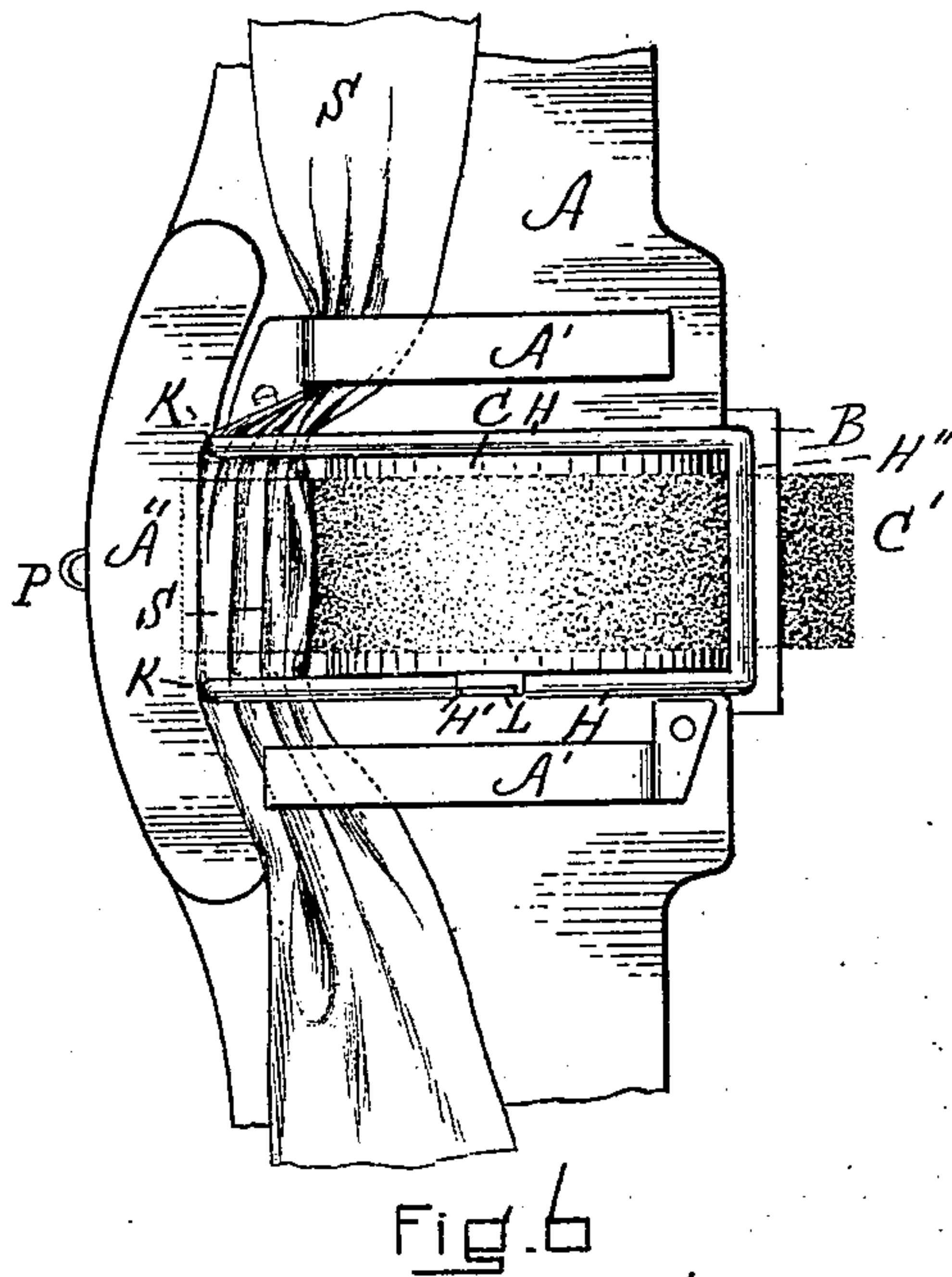
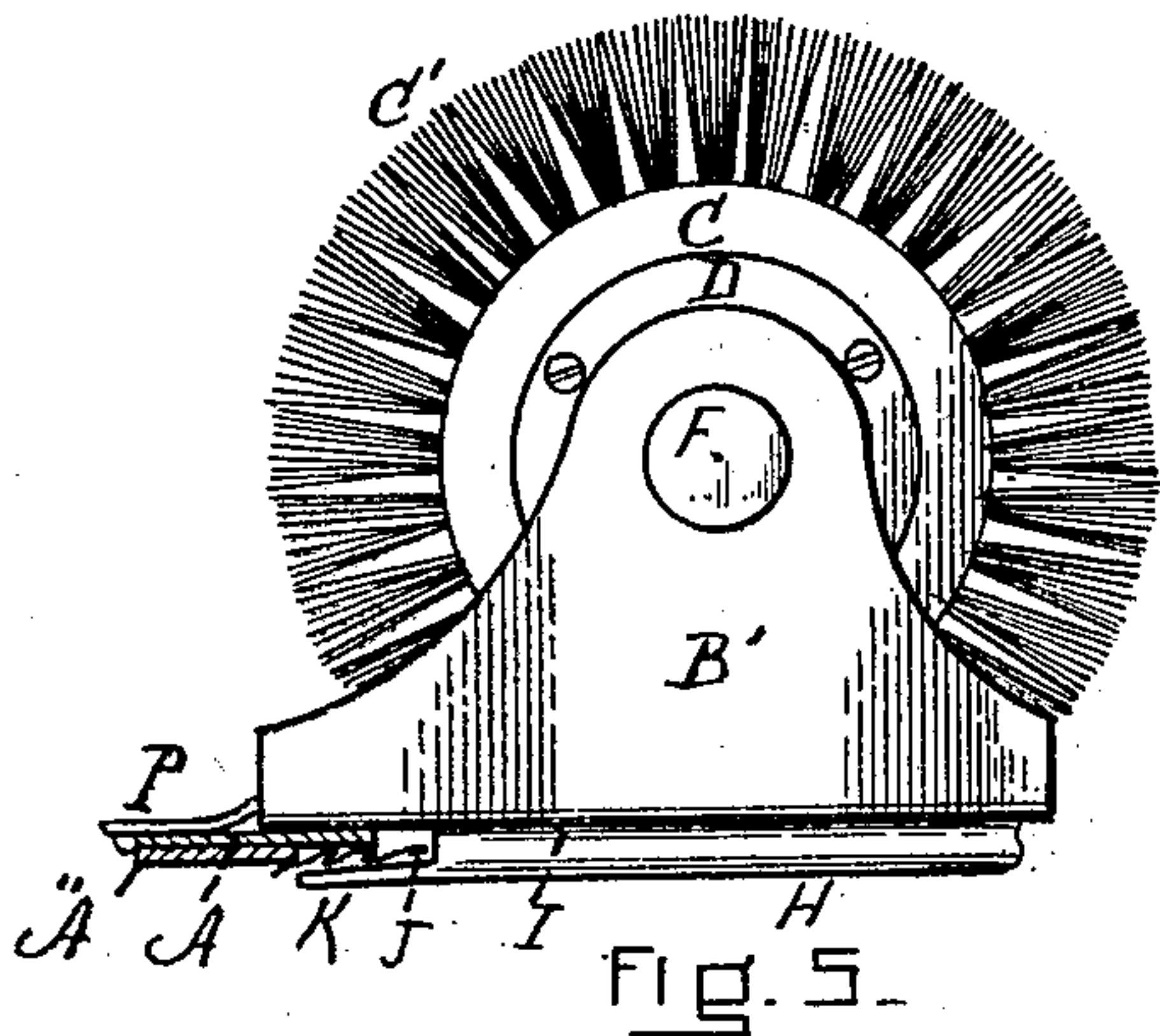
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TYPE CLEANING DEVICE FOR TYPE WRITING MACHINES.

(Application filed Oct. 25, 1901.)

(No Model.)

3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

JAMES A. WHITING, OF BOSTON, MASSACHUSETTS.

## TYPE-CLEANING DEVICE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 692,954, dated February 11, 1902.

Application filed October 25, 1901. Serial No. 79,932. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. WHITING, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Type-Cleaning Devices for Type-Writing Machines, of which the following is a specification.

This invention is especially adapted for application to the type-writing machine known as the "Remington" type-writer, and more particularly to "Models 6, 7, and 8." The device, however, may be used in connection with any kindred machine having a central ribbon plate or guard.

In order to use the type-cleaning contrivances in the market at present, it is necessary, as far as my observation extends, either to remove the ribbon in order to render the type accessible or to clean the type at the under portion of the machine or when it is lying at or near the point of rest of the type-bar in the "basket." In this invention or improvement my type-cleaning device is applied laterally and centrally to the ribbon-plate and when applied mechanically pushes back the ribbon to allow the type access to the brush. There is no handling of the ribbon, therefore, as the contrivance itself removes the ribbon out of place. The cleaning mechanism is hence not located in the basket, as is commonly the case with type-cleaning devices applicable to the Remington type-writer, and the type is cleaned from the base to the top—that is to say, actually horizontally, but lengthwise of the type.

The nature of the invention is fully described in detail below, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a sufficient portion of a Remington type-writer with my invention applied thereto to illustrate the operation of the device. Fig. 2 is an enlarged section and elevation of the cleaning device removed. Fig. 3 is a cross vertical section of enough of the type-writing machine to illustrate the operation of my invention, which is shown applied thereto. Fig. 4 is an enlarged elevation of the type-cleaning device in position to be applied to the ribbon-plate, which is shown in cross-section. Fig. 5 is an elevation of the type-cleaning device applied to

the ribbon-plate and in position thereon. Fig. 6 is a plan view of the under side of the type-cleaning device and the adjacent portions of the ribbon-plate, to which it is applied, illustrating the manner in which the ribbon is pushed back to afford the type access to the brush. Fig. 7 is a side elevation showing a slight modification.

Similar letters of reference indicate corresponding parts.

*a* represents portions of the frame of a Remington type-writing machine. *b* represents the basket. *c* is the type-bar shield. *d* is the shift-rail. *e* is the type-bar disk, showing one of the type-bars *f*, of which *g* is the hanger and *g'* the screw. *h* is the type-bar rest, *k* the connecting-wires, *l* the swivels, *m* the key-levers, and *n* the keys, (two only being shown,) all constructed as usual. *S* is the ribbon. *A* represents the ribbon plate or guard, constructed as usual in the Remington type-writer and supported at one end by the ordinary ribbon-plate-carrier shaft *p* and at the other end by the track-plate *t*. The ribbon plate or guard is provided on its under surface, Fig. 6, with the ordinary ribbon-guides *A'* and reinforcing-plate *A''*. All the above-named parts, including the ribbon-plate *A*, are constructed as usual in Remington type-writers of the models named.

My improvement or attachment comprises a frame the central portion or base *B* of which is flat and provided with a large substantially rectangular opening *B''*, which corresponds generally in shape with the ordinary central opening *T*, Fig. 4, in the ribbon-plate *A* and is of suitable size and width to allow a portion of the periphery of the brush mounted in the frame to extend through it. From this central portion *B* parallel sides *B'* are bent up perpendicularly, and mounted in the sides in any desired manner is a brush which comprises a circular hub *C* and radial bristles *C'*, extending therefrom. The preferable construction of this brush is illustrated in Fig. 2, in which a hollow hub has its opening closed by plates *D*, which are directly mounted on a shaft *E'* of the crank *E*, said shaft having its bearings in the sides *C* and being held in position by a suitable nut *F*.

Formed on the under side of the central



portion or bottom plate B are a pair of parallel ribs or guides H, producing grooves I, whereby the device is slid into the central opening in the ribbon-plate, the opposite edges of said opening extending into said grooves. These ribs or guides are recessed at their forward ends at J, Figs. 4 and 5, thus producing horizontal extensions K. One of the ribs H is centrally recessed at H', Figs. 2 and 6, and the corresponding side plate B' is coincidentally cut away at B'', whereby a spring L, secured at its upper end at L' to the side plate B', is accommodated, said spring extending down, as shown, and being adapted to bear against the edge of the ribbon-plate when the brush is in position, the said recesses H' and B'' allowing space for the play of the spring. P, Fig. 5, is a spring-hook extending centrally forward from the end of the central plate B.

When it is desired to clean the type, the device is applied to the machine by slightly swinging up the ribbon plate or guard A, placing it in front of the ordinary central opening T in said plate, as shown in Fig. 4, and then sliding it into said opening, so that the edges of the opening enter the grooves I. The device is then pushed into the opening as far as it will go, a rib H'', Fig. 6, acting as a stop, and the device assumes the position indicated in Figs. 1, 3, 5, and 6, the spring-hook P catching over the rear edge of the ribbon-plate and the spring L bearing against one of the edges of the opening in the plate. As the brush mechanism is slid into position the extensions K underlap the ribbon S and push it back, as indicated in Fig. 6, until it is entirely out of the way, and by this means the type is enabled to be lifted into contact with the brush instead of into contact with the ribbon by pressing the corresponding key. By turning the crank E the type is cleaned as it is swung up by the key, such cleaning being from base to top of the type. Thus it will be seen that the type is cleaned without manually removing the ribbon from the path of the type, said ribbon being pushed back by mechanical means. Moreover, the type is not down in the basket while it is being cleaned, and it is cleaned laterally or up and down the type, and hence in a direction which will not bend the type-bar and displace the alignment. The operation is very rapid, the type being pressed up one after another by the fingers of one hand while the crank is turned by the other.

In order to prevent the lifting of the ribbon-plate, I preferably push a wedge U over it and between it and the shifting rail d, as shown in Fig. 1.

In the modification illustrated in Fig. 7 a wire bale V is connected with the ribs H and extends at a downward angle therewith, so that its forward ends are somewhat lower than the ends of the extensions K. By this means the ribbon can be taken up if it should sag below the extensions.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. In combination with the ribbon plate or guard of a type-writing machine, a type-cleaning device adapted to slide into position on said ribbon-plate; and means for mechanically pushing the ribbon out of the path of the type as the type-cleaning device is moved into such position.

2. In combination with the ribbon plate or guard of a type-writing machine, a type-cleaning device adapted to slide laterally into position on said ribbon-plate; and means making a part of said type-cleaning device whereby the moving of said device into engagement with the ribbon-plate removes the ribbon mechanically out of the path of the type.

3. In combination with the ribbon plate or guard of a type-writing machine, a type-cleaning device comprising a frame and a rotative brush; and means connected with said frame whereby the moving of said device into position on the ribbon-plate removes the ribbon mechanically from the path of the type.

4. A type-cleaning device for type-writing machines, comprising a frame; a rotative brush mounted on said frame; grooved ways for engagement with the edges of the central opening in the ribbon-plate; and means for mechanically pushing the ribbon out of the path of the type as the device is slid into connection with the ribbon-plate.

5. A type-cleaning device for type-writing machines, comprising a frame; a rotative brush mounted on said frame; grooved ways for engagement with the edges of the central opening in a ribbon-plate; and extensions projecting forward from the frame, whereby as the device is slid into connection with the ribbon-plate said extensions underlap the ribbon and push it out of the path of the type.

6. A type-cleaning device for type-writing machines, comprising a frame; a rotative brush mounted thereon; grooved ways for engagement with the edges of the central opening in the ribbon-plate; projections for underlapping and pushing forward the ribbon as the device is applied to the ribbon-plate; and means for locking said device to the ribbon-plate.

7. A type-cleaning device for type-writing machines, comprising a frame; a rotative brush mounted thereon; the ribs H on the underside of the frame providing grooves I; the hook P extending forward from the frame; the underlapping extensions K projecting forward from the ribbon-plate; a spring for preventing side shake of the frame; and a suitable stop, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES A. WHITING.

Witnesses:

HENRY W. WILLIAMS,  
A. N. BONNEY.