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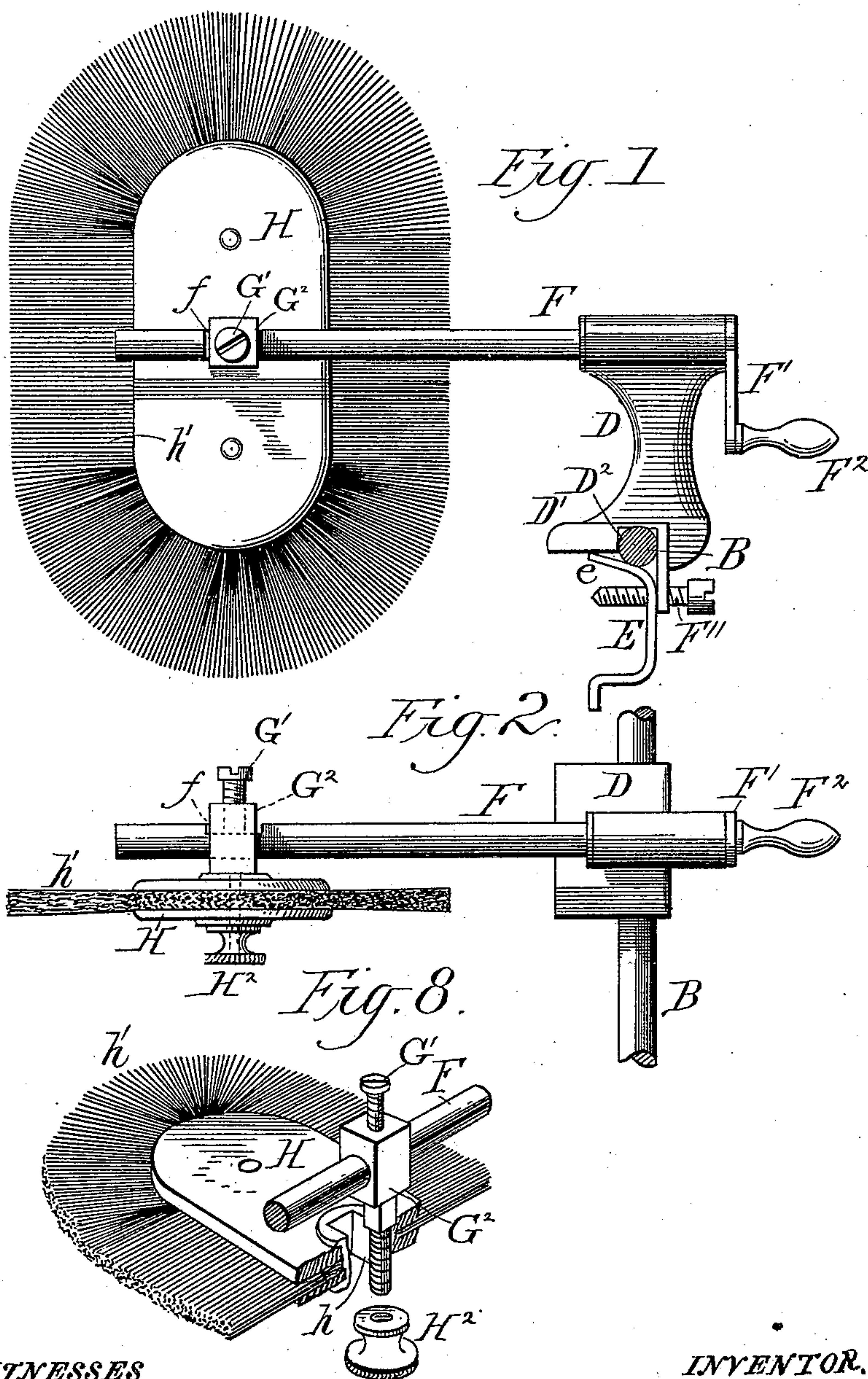
2 Sheets—Sheet 1.

F. VAN FLEET.

TYPE CLEANING BRUSH FOR TYPE WRITING MACHINES.

No. 447,141.

Patented Feb. 24, 1891.



WITNESSES
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(No Model.)

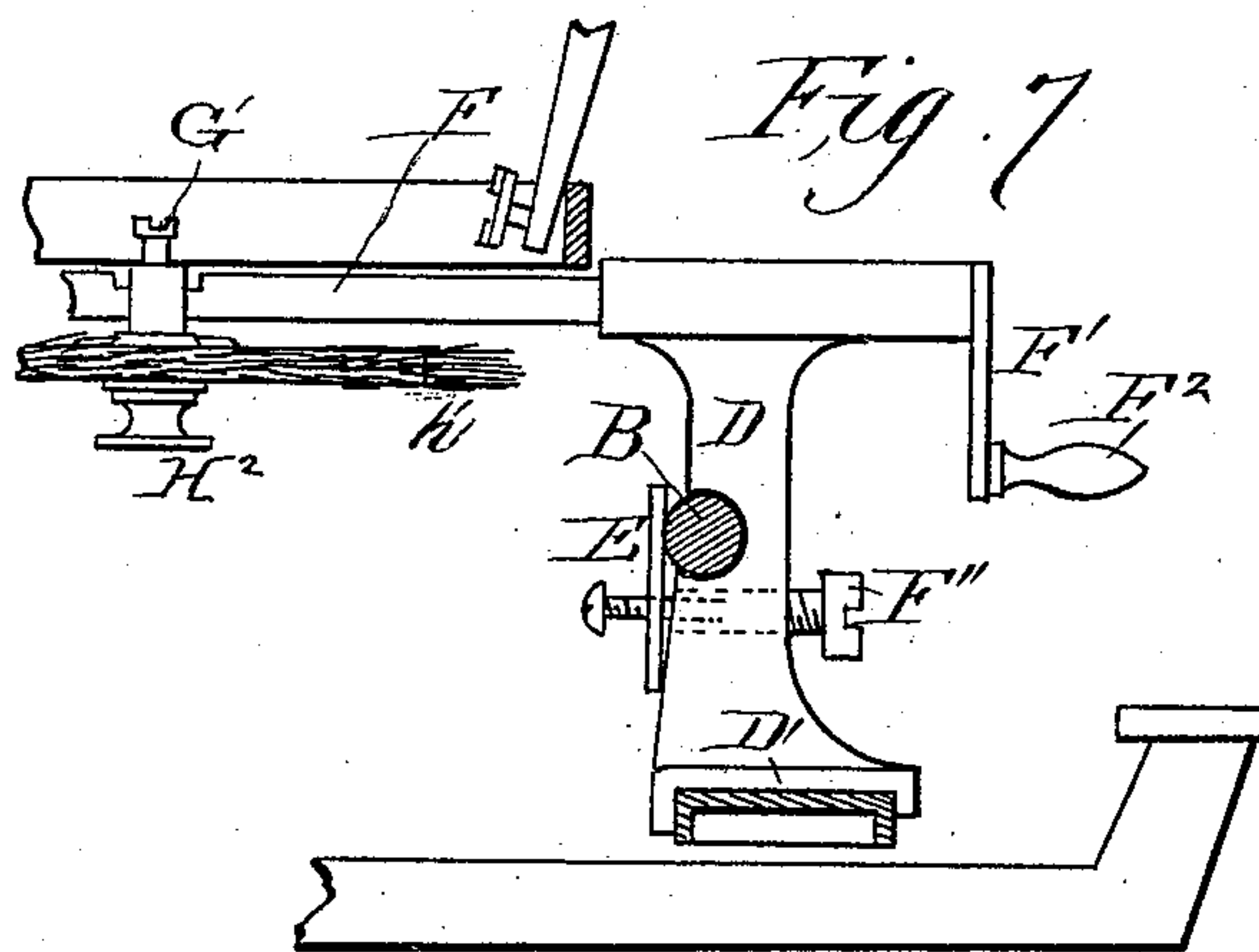
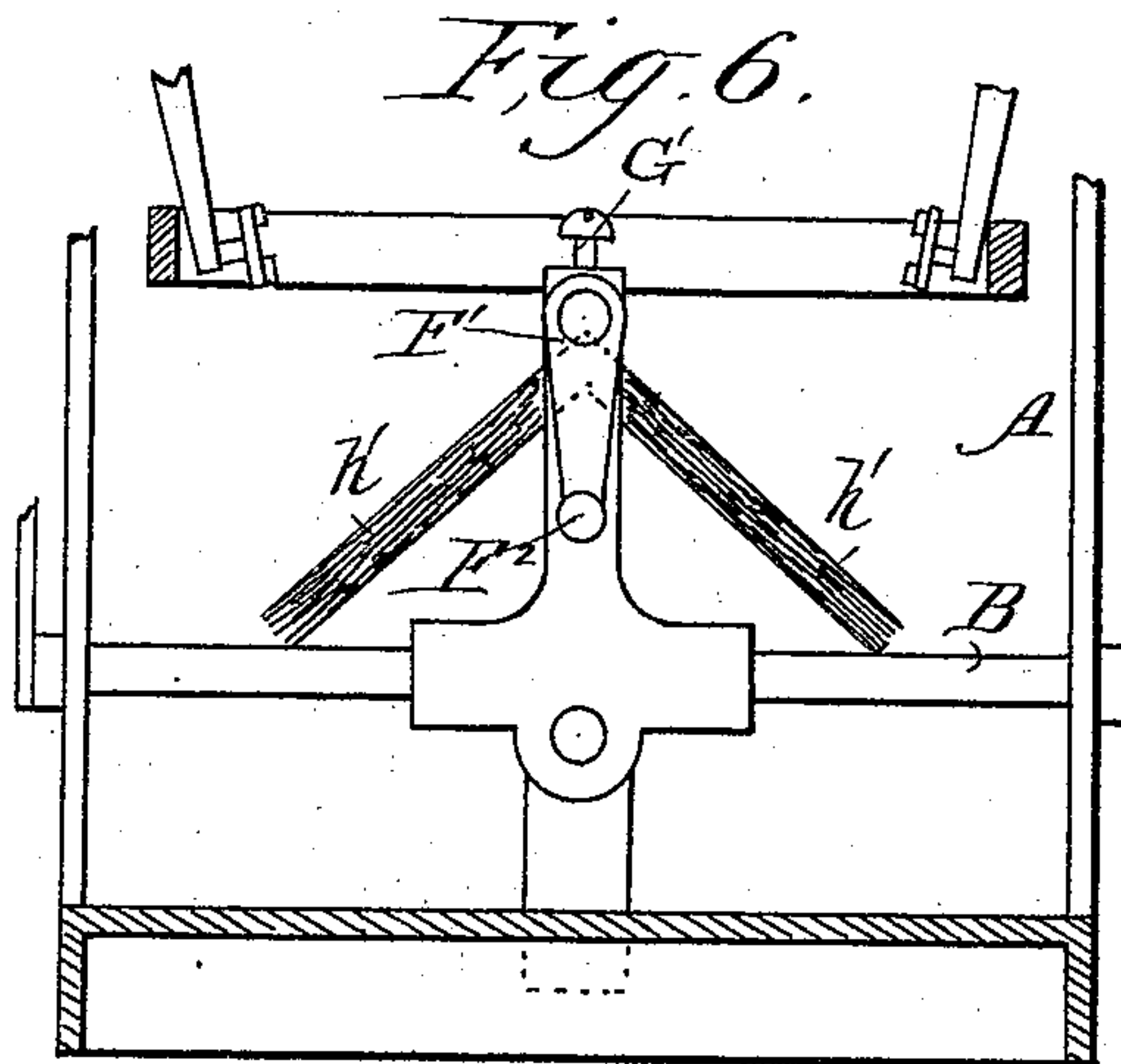
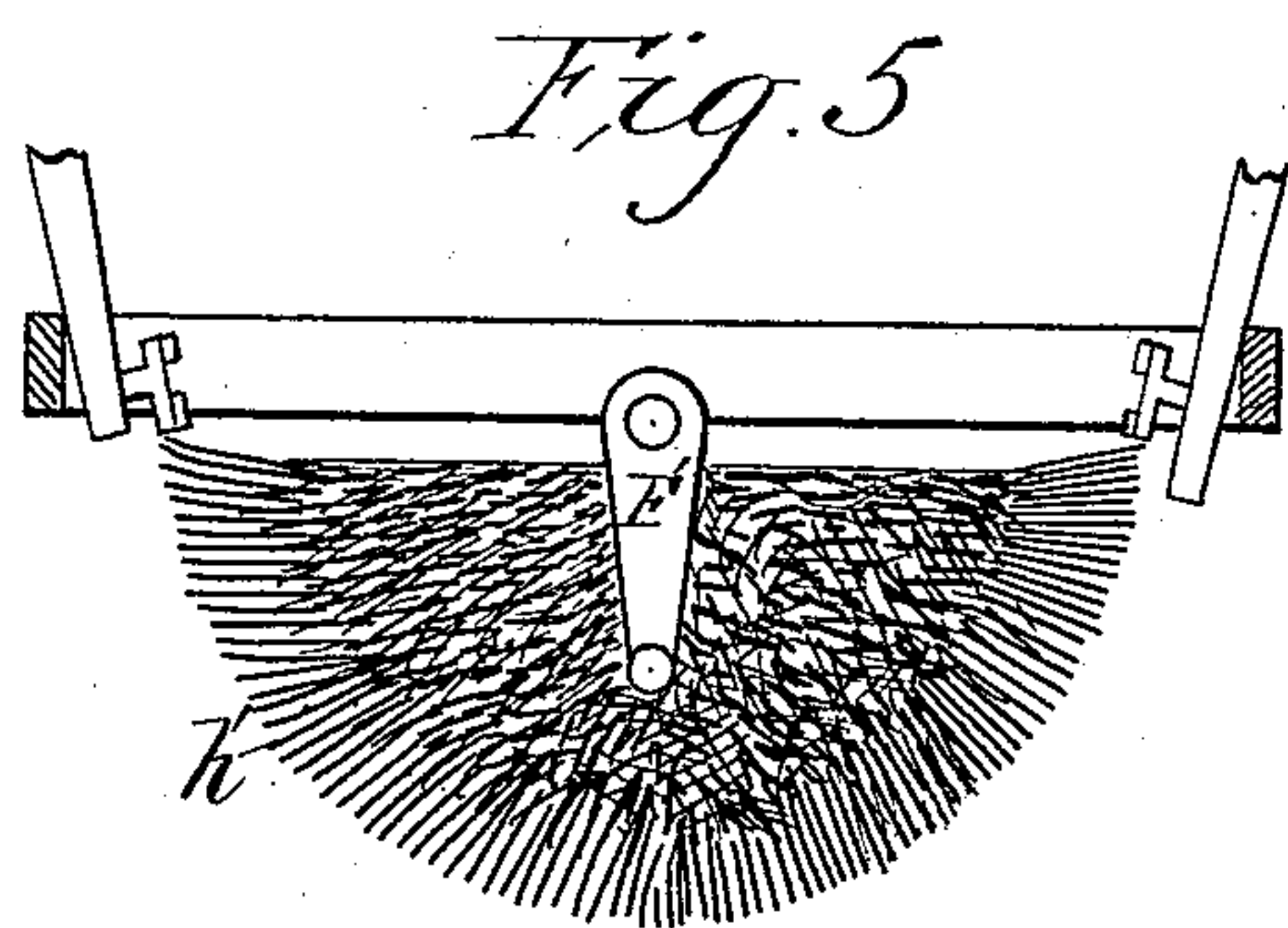
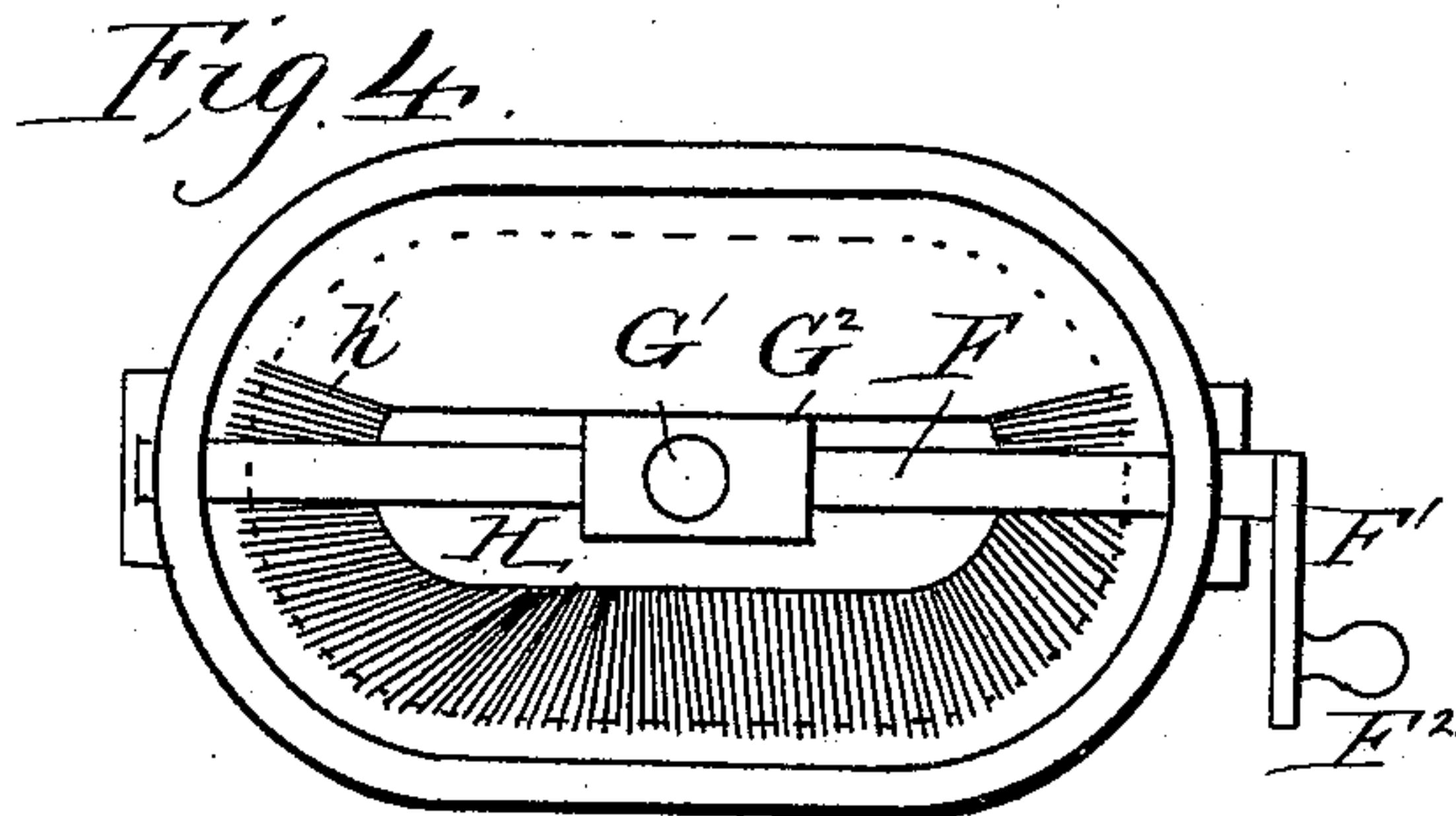
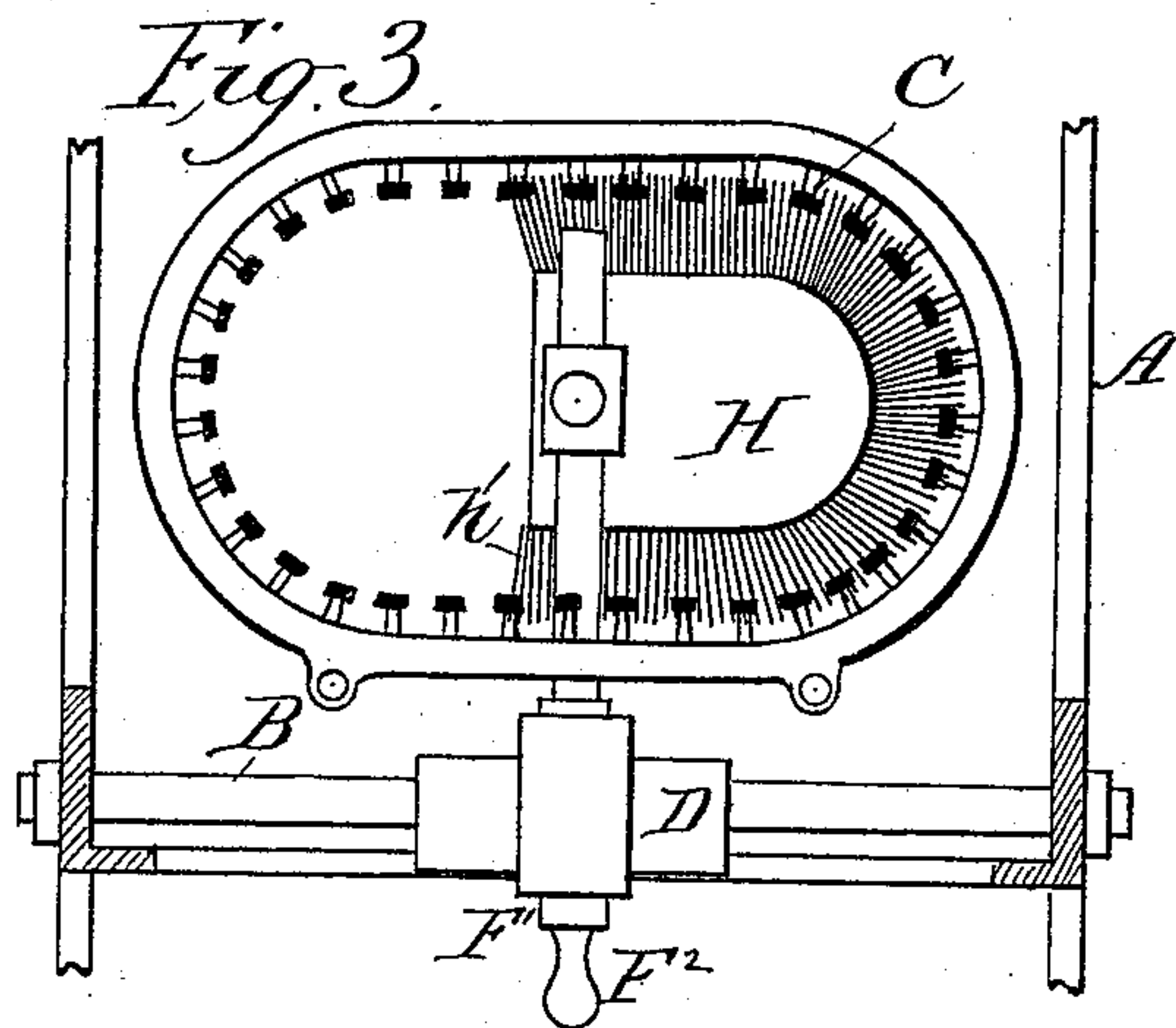
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UNITED STATES PATENT OFFICE.

FRED VAN FLEET, OF WILLIAMSPORT, PENNSYLVANIA.

TYPE-CLEANING BRUSH FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 447,141, dated February 24, 1891.

Application filed November 21, 1890. Serial No. 372,196. (No model.)

To all whom it may concern:

Be it known that I, FRED VAN FLEET, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Type-Cleaning Brushes for Type-Writing 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 object of this invention is to provide a means for cleaning all the types of the type-basket of a type-writing machine by a single rotary motion of the cleaner in a vertical plane, or a plane crossing the plane of said type considered collectively, and to brush the sides as well as the faces of said type.

The invention consists in the combination, with the types of a type-writer, of a brush having the outline of a part at least of the type-opening and rotating across the plane of the latter, said brush being of greater area than the type-opening in order that the sides as well as the face of the type may be brushed.

The invention also consists in additional features, as hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 represents a plan view of a brush and supporting and operating devices embodying my invention. Fig. 2 represents a side elevation of the same. Figs. 3 and 4 represent plan views of modifications. Figs. 5, 6, and 7 represent side elevations of other modifications. Fig. 8 represents a detail view of the brush and its fastening devices separate.

A designates a part of the frame of the machine; B, the front rod, on which, when applied to the Remington type-writer, the brush and its attachments are mounted, and C the types, which, considered collectively, present in the present instance an elliptical outline. Instead of this form of type-basket opening, a circular one may be used, or any other of curved symmetrical outline having two equal and corresponding parts. A standard D is clamped adjustably on said rod B in any one of several ways. For example, as shown in Figs. 1 and 2, said standard may have an angular foot-plate D' formed with it, in the

under side of the horizontal part of which at the angle a groove D² is formed to fit on said rod. A bent clamping-plate E, having its upper part e slightly inclined, is drawn against both the horizontal part and the vertical part of said angular plate by a clamping-screw F''', which passes through the vertical parts of both of said plates. By loosening said screw and clamping-plate the said standard is left free to be moved in the direction of either end of rod B, and when said standard is thus adjusted the said screw and plate may be tightened again; or, as shown in Fig. 7, a groove or recess E' may be made in the side of the standard itself to receive said rod, the clamping-screw F passing through said standard and also through a straight clamping-plate E, which is drawn by said screw against said rod, holding it in said standard. The adjustment is as before described. The upper end of said standard is formed into a cylindrical bearing, in which the brush-shaft F is mounted so as to be free to turn. A crank-arm F' and handle F² are mounted on said shaft outside of said bearing. This shaft extends under the types and type-opening. At a point below the middle of said opening the said shaft is squared or flattened at f to allow a clamping-block G, which is sleeved on said shaft, to be secured in place by a set-screw G'. This block has a downward extension G², the upper part of which is square in section or otherwise prismatic, the lower part being cylindrical and screw-threaded. Said square part fits within a similarly-squared hole h in the center of the metal body H' of the brush, as shown in Figs. 1, 2, and 8. From this body the bristles h' extend outwardly. A clamping-nut H², engaging this screw-threaded part, holds the said brush in place. The brush thus attached, as shown in Figs. 1 and 2, corresponds in its outline to the outline of the entire type-opening, although it is slightly greater than said opening. In Fig. 3 I have shown as a substitute for this a brush corresponding to half or a little more than half the outline of the opening, the division being made transversely, in Fig. 4 a brush corresponding to a little more than half the said opening, the division being longitudinal, in Fig. 5 a semi-spherical brush hung on a crank-shaft below the circular type-opening, and in Fig. 6 two brushes hung from

the same center and following each other in their rotation. In every one of these forms the outline of the brush corresponds to such a part of the curvilinear type-opening that in the course of one rotation of the type-rod the brush will sweep over the faces of all the type, and being slightly larger than the type-opening it will also brush the sides of the type—that is to say, at each rotation of the shaft the brush sweeps over the under side of the half of the types first encountered and the upper side of the other half afterward. By alternating the direction of rotation both sides of every type, as well as its face, may be brushed.

When the brush is at rest in its normal position under the type-basket, it will not in any way interfere with the operation of type-writing or the working of any part of the machine. The brush may be worked while the type-writer is examining his writing. When applied to the "caligraph," the brush and attachments are clamped on the right side of the frame of the machine instead of on the rod B. The brush, if of the form shown in Figs. 1 and 2, is arranged transversely to the position shown in those figures, this change being easily permitted by the square and screw-threaded extension G^2 , the hole h in the brush, and the nut H^2 , before described.

The squared or flattened part f of the rotary brush rod or shaft is made sufficiently long to permit the adjustment of the brush some little distance endwise on said shaft by the aid of clamping-screw G' . This adjusting device, with the one before described on the rod B, forming a part of the frame of the machine, will permit me to regulate the position of the brush to a nicety, thus securing complete and accurate work, so that all the type will be expeditiously and thoroughly cleaned.

The fastening devices hereinbefore described practically attach the brush, Figs. 1, 2, 3, and 4, by its flat side to its shaft instead of attaching it by or through its longitudinal axis or by a shaft passing through it from side to side. This arrangement is important, as by it I am enabled to do the work of cleaning hereinbefore described with a thin plate brush having bristles all around its edges. Although the rotation of the shaft is described as in a vertical plane, this is true only when the type are in a horizontal plane, following the usual arrangement.

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

1. In combination with the types of a type-writer, a brush having the outline of a part at least of the type-opening and rotating across the plane of the latter, said brush being of greater area than the type-opening in order that the sides as well as the face of the type may be brushed, substantially as set forth.

2. In combination with the types of a type-

writer, a brush corresponding to a part at least of their outline collectively considered, and a rod or shaft carrying said brush and rotating so as to turn the latter in a vertical plane across the said type, the said brush being of flat form and attached to said shaft at one of its flat sides, for the purpose set forth.

3. In combination with the types of a type-writer, a brush corresponding in outline with a part at least of the type-opening, devices for adjusting the position of said brush both lengthwise of said opening and transversely thereof, and devices for rotating said brush across the plane of the types, for the purpose set forth.

4. In combination with the types of a type-writing machine, a brush arranged to rotate across the plane of said types and corresponding in outline to that of a part at least of said type-opening, a rotary shaft carrying said brush, a block which is sleeved on said shaft and to which said brush is fastened, and a screw which adjustably secures said block on said rod, substantially as set forth.

5. In combination with the types of a type-writer, a brush arranged to rotate across the plane of said type and corresponding in outline to at least a part of the type-opening, a rotary shaft on which said brush is mounted, and a clamping device allowing the adjustment of said brush endwise with respect to said shaft, substantially as set forth.

6. A rotary type-cleaning brush and its shaft arranged to carry said brush across the plane of the type, in combination with a standard which supports the said shaft, and a clamping device for securing said shaft to the frame of the machine and allowing its adjustment along said frame, substantially as set forth.

7. In combination with a rotary type-cleaning brush and its shaft, a standard affording a bearing for said shaft and recessed to receive a rod or bar of the machine-frame, a clamping-plate adapted to secure said rod or bar within said recess, and a screw passing through said standard and said clamping-plate for the purpose of drawing the latter against the said rod, substantially as set forth.

8. In combination with a type-cleaning brush and its shaft, an attachment of said shaft having a screw-threaded outer part and a square inner part, the latter fitting within a square hole of said brush and allowing its position to be changed, as described, and the said screw-threaded part receiving a clamping-nut, which holds the said brush in either position, substantially as and for the purpose set forth.

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

FRED VAN FLEET.

Witnesses:

W. T. LAEDLEIN,
J. T. FREDERICKS.