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Patented Dec. 20, 1898.

J. OPPENHEIM.

TYPE CLEANER FOR TYPE WRITING MACHINES.

(Application filed Aug. 19, 1897. Renewed Nov. 21, 1898.)

(No Model.)

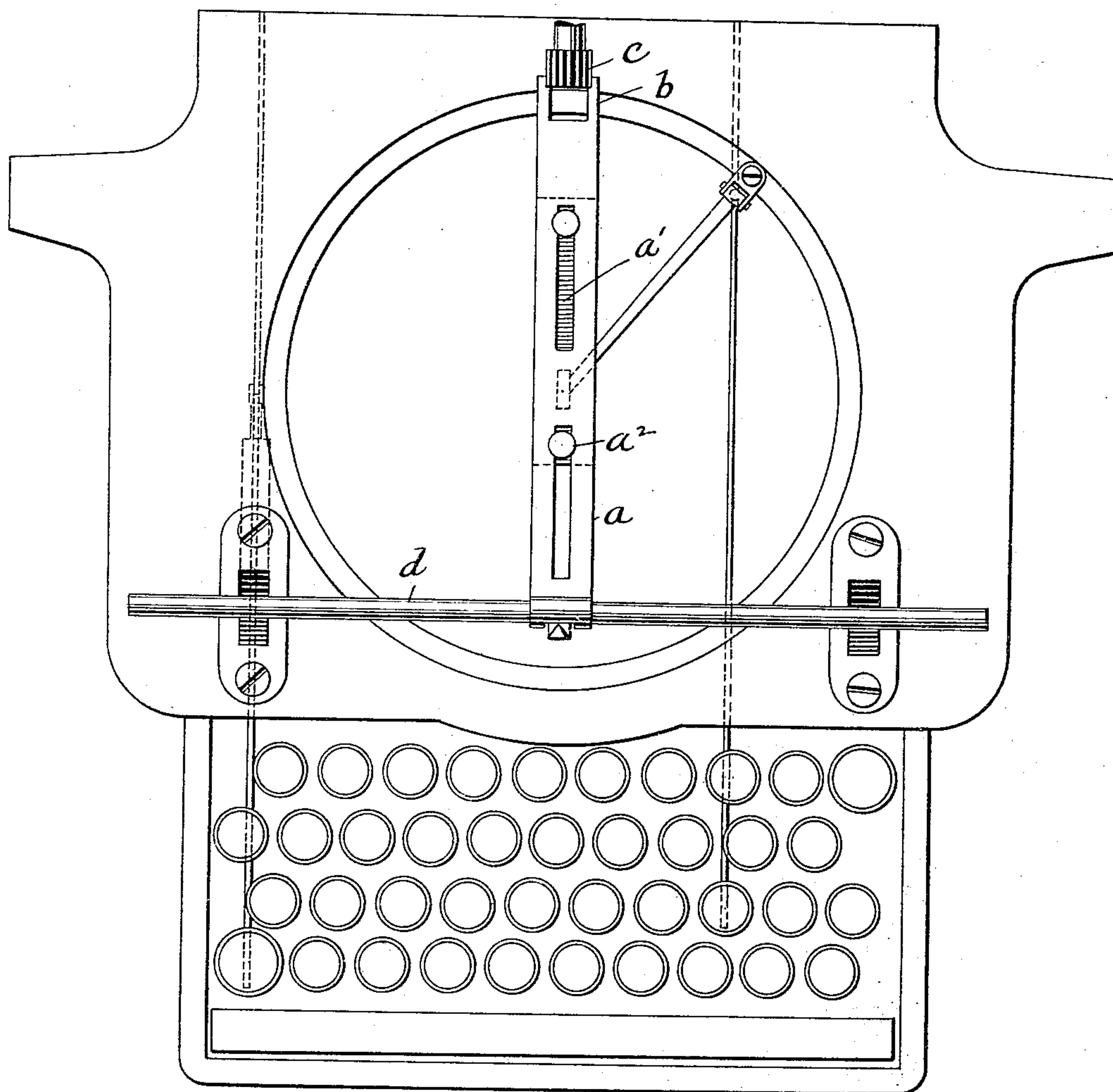


Fig. 1.

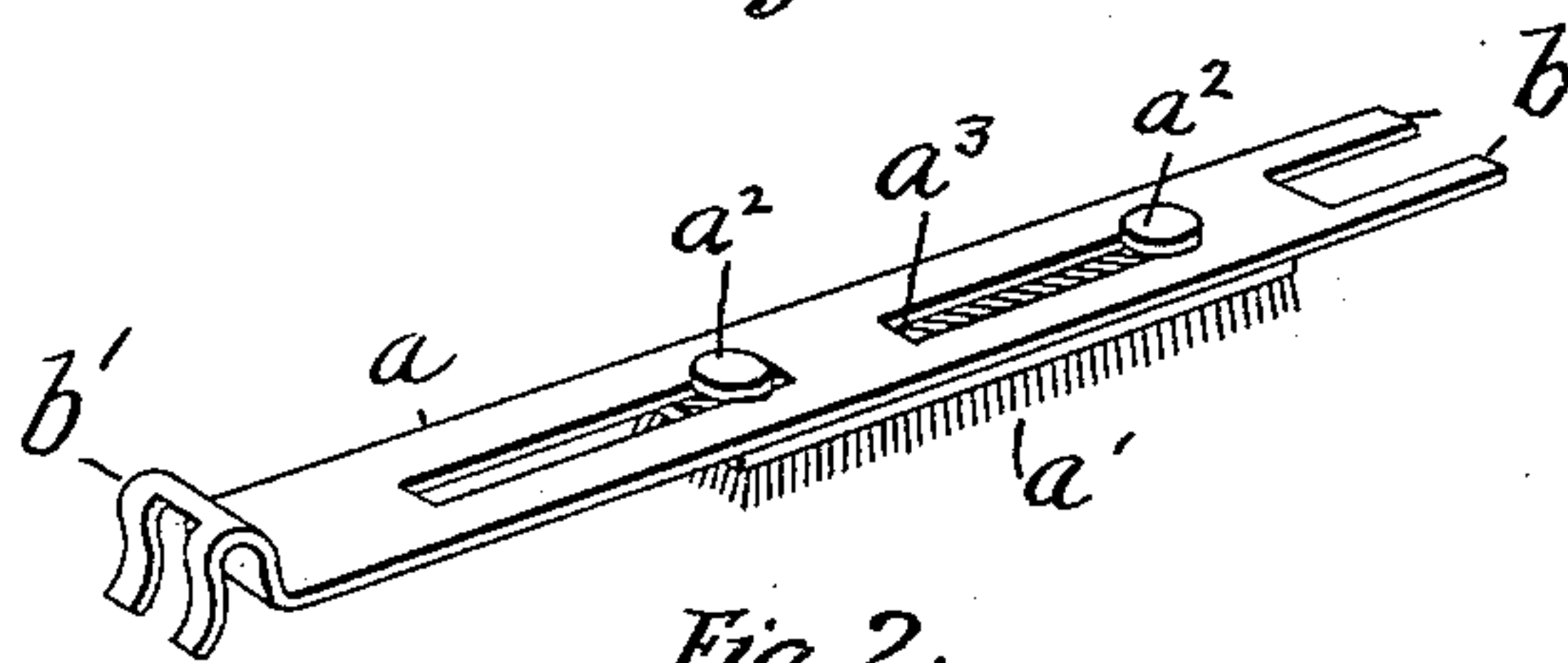


Fig. 2.

WITNESSES:

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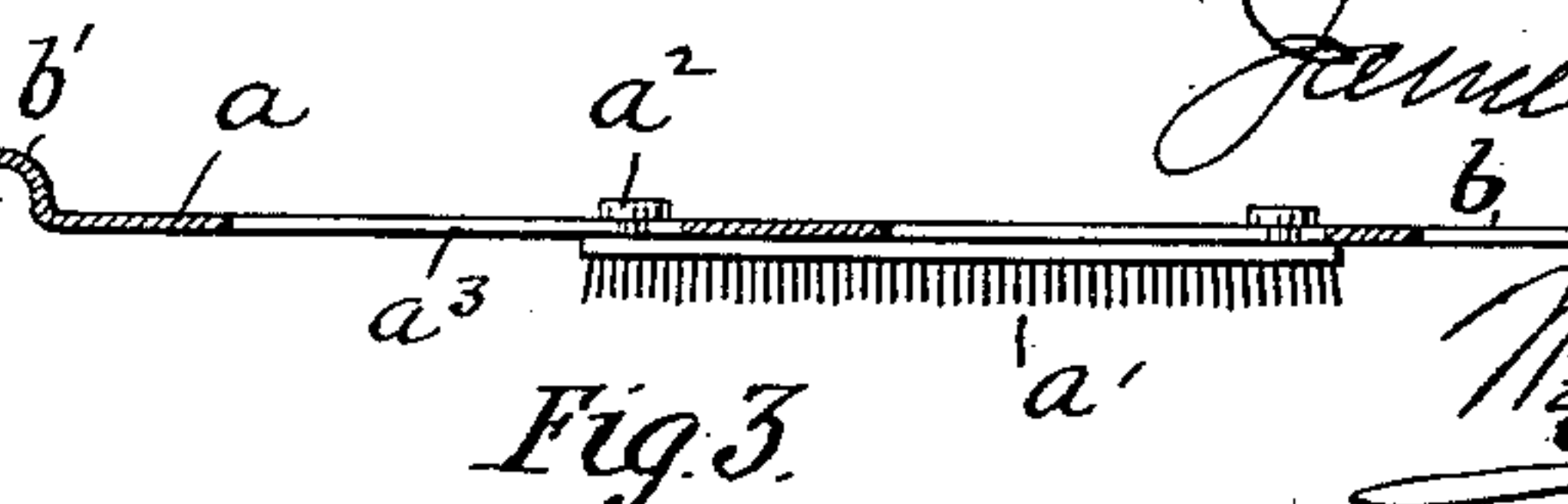


Fig. 3.

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## TYPE-CLEANER FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 616,422, dated December 20, 1898.

Application filed August 19, 1897. Renewed November 21, 1898. Serial No. 697,033. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES OPPENHEIM, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Cleaners for Type-Writing Machines, of which the following is a full, clear, and exact description.

This invention relates to type-cleaners for type-writing machines, the object being to provide a simple and cheap device by which the type of a type-writer may be cleaned dextrously and with facility.

The invention will be described with reference to the accompanying drawings, in which—

Figure 1 is a plan of the frame of a Remington type-writer, the paper-carriage being removed and some parts being omitted for the sake of clearness and my improved type-cleaner showing in operative position. Fig. 2 is a perspective view of the type-cleaner, and Fig. 3 is a longitudinal central section thereof.

The type-cleaner itself consists of a bar or plate *a*, carrying on its under side a brush *a'*, the bristles or pile of which are quite short. I prefer to make the brush separate from the bar *a* and to connect it therewith by means of the headed pins *a<sup>2</sup>* and the slot *a<sup>3</sup>*, as this permits me to shift the brush lengthwise of the bar and so bring different portions of it into working position, and thus prolong the life of the brush. This pin-and-slot connection is friction-tight, so that when the brush is adjusted longitudinally it will stay in any position where it may be left. At one end of the bar *a* two prongs *b* are formed, while at the other end a bifurcated spring-hook *b'* is provided. These formations at the extremities of the cleaner are made for the purpose of engaging with certain parts of the machine to hold the cleaner in place while it is in use. The parts of the machine thus utilized are the shift-rail (represented by *d*) and the pinion which engages with the letter-spacing rack at the rear of the machine and under the carriage. This pinion is lettered *c*.

To apply the cleaner to a type-writer, the ribbon is lifted and the cleaner inserted fore

and aft under it with the brush facing downward. The prongs *b* are adjusted over the pinion *c* so as to embrace it, while the bifurcated spring-hook is adjusted over the middle of the shift-rail *d*. The bifurcations of the hook straddle the indicator *d'*, which is attached to the shift-rail at this point. The spring-hook grasps the rod tightly and holds the cleaner in place, while the prongs at the rear of the carrier and the two arms of the hook prevent lateral movement of the cleaner by engaging with the pinion and the indicator, respectively.

The operation of cleaning the type is as follows: With the cleaner in the position described a type-key is pressed downward to lift the type-bar and carry the type against the brush *a'*. While the type is held in this position, the shift-key *e* or *f* is operated rapidly a number of times, which causes the shift-rail *d* to move back and forth and reciprocate the cleaner, causing the brush to rub against and clean the type held in contact with it. This operation is repeated for each of the types of the machine.

The type-writing machine described is known as the "Remington No. 6," and the formations at the ends of the cleaner are particularly adapted for this machine; but it is obvious that with slight modifications the cleaner could be applied to most any machine having a rocking member equivalent to the shift-rail *d*.

My invention is not limited to the use of an adjustable brush upon a bar *a*, as a cheaper article could be produced by attaching the brush fixedly to the bar *a*. It will also be understood that the bar *a* may be bent or otherwise shaped to bring the surface of the brush to the proper level to suit the machine upon which the cleaner is to be used.

Having thus described my invention, I claim—

1. The combination with the shift-rail of a type-writer, of a type-cleaning brush removably attached thereto and extending fore and aft of the machine, whereby the movements of the shift-rail will reciprocate the brush, substantially as described.

2. In a type-writing machine the combina-

tion of a shift-rail *d*, the letter-spacing pinion *c* and a type-cleaner attached to the shift-rail and guided by the pinion, substantially as described.

- 5 3. A type-cleaner for type-writing machines consisting of a bar *a* having a bifurcated spring-hook at one end and a pair of prongs at the opposite end and carrying a lon-

gitudinally-adjustable brush, substantially as described.

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

JAMES OPPENHEIM.

Witnesses:

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