

(No Model.)

J. R. FROST.

TYPE CLEANING DEVICE FOR TYPE WRITING MACHINES.

No. 467,797.

Patented Jan. 26, 1892.

Fig. 1

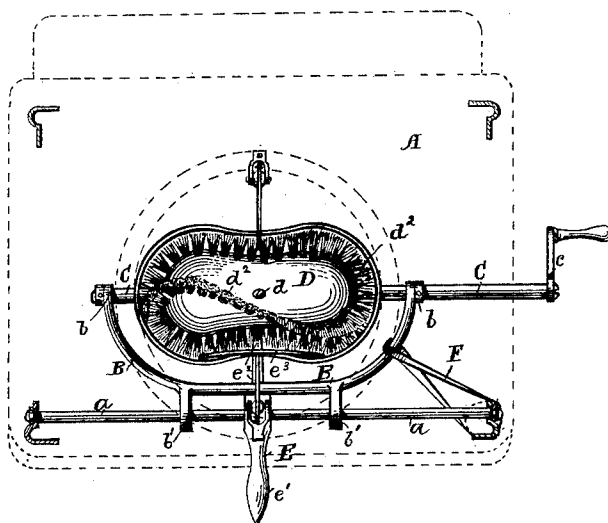


Fig. 2

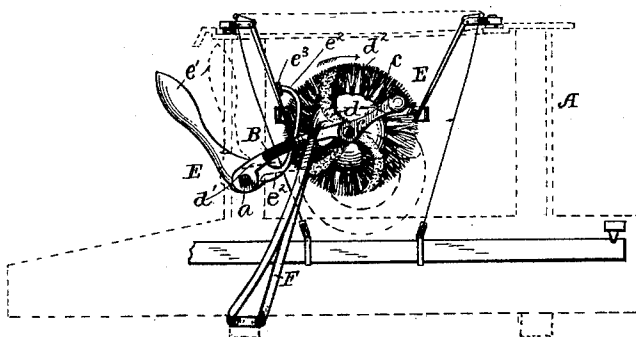
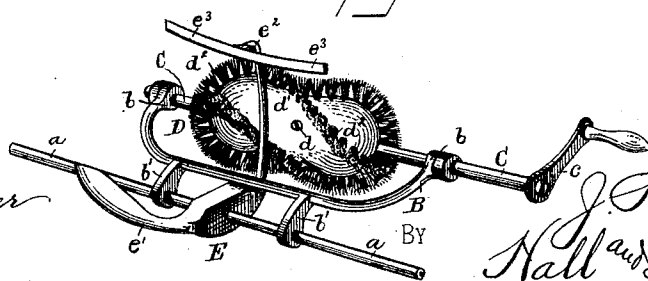


Fig. 3



WITNESSES

A. C. Turner
M. H. Fay

INVENTOR

J. R. Frost
Hall and Fay
his ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES R. FROST, OF CLEVELAND, OHIO.

TYPE-CLEANING DEVICE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 467,797, dated January 26, 1892.

Application filed September 25, 1890. Serial No. 366,063. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. FROST, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Type-Cleaning Devices for Type-Writing Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

Referring to the drawings, Figure 1 represents a top plan view of my improved type-cleaning device, showing it in operative position, the type-writing machine being illustrated in dotted outline; Fig. 2, an end elevation showing the machine in vertical section by dotted lines, and Fig. 3 a perspective view of the device detached from the machine.

In the drawings, the letter A indicates the frame of a type-writing machine of the class having the types secured upon the ends of arms or hammers which are actuated by suitable connections to keys, and the machine illustrated in the drawings is of the form known as the "Remington." A curved frame B, semi-elliptical, or nearly so, in shape, is supported with two forwardly-projecting perforated lugs or ears *b* upon the horizontal rod *a* of the ribbon-shifting device in the machine and has horizontal transverse bearings *b'* in the ends of its arms, which embrace the lever-operating rods. A shaft C, having a crank *c* upon one end, is journaled in said bearings and has the brush D secured upon it by a set-screw *d*, the brush fitting with an axial bore upon the said shaft. Said brush consists of a cocoon-shaped body *d'*, having the bristles arranged in approximately spiral or S-shaped rows *d''* upon it, said rows extending from one end of said body to the other. A lever E is pivoted with a transverse perforation *e* upon the rod *a* and has a handle *e'* and a curved inner arm *e''*, formed with a slightly-curved cross-head *e'''*, upon its upper end. Said curved arm *e''* projects upward beneath the middle of the curved frame B.

When the brush is not in use, the lever E is tilted, with its handle toward the type-basket, so that the curved inner arm will press against the brush and will be out of the way

of the type-arms and depress the brush and its frame so that the brush will rest upon the top of the key-levers, as shown in dotted lines in Fig. 2 of the drawings, a rubber band F, attached to the curved frame and to the machine-frame, serving to draw the brush down into its position at rest.

When the brush is to be used, the handle of the lever E is tilted outward. The curved inner arm of the lever raises the curved frame and the brush so that the latter has its shaft immediately beneath the lined ring *a'*, against which the type-arms rest. The cross-head of the curved arm will bear against the type-arms at the forward portion of the type-basket, as clearly shown in Fig. 2, and will prevent said arms from being tilted up by the brush being revolved in the direction indicated by the arrow. As the brush is revolved in a vertical plane, it will sweep lengthwise of the type-faces and will sweep into the openings in the type in a more thorough manner, sweeping parallel with the majority of the lines in the type than a horizontally-revolving brush. On account of the approximately spiral arrangement of the rows of bristles, said bristles will have a partly lateral sweep upon the type-faces when the brush is revolved and the entire circumference of the brush will successively present bristles without being entirely covered by the same, which latter fact involves a saving in bristles in the construction of the brush. On account of the form of the brush, which exactly corresponds to the form of the ring against which the types rest, and on account of bristles being presented by all points of the revolving brush all the types will be equally and thoroughly brushed and cleaned.

When the brush is employed in a machine in which the types are arranged in a circular or differently-shaped row from the manner in which they are arranged in the Remington, the shape of the brush is changed to present a corresponding shape in horizontal axial section.

The supporting-frame E and its means of attachment may of course be changed to suit the construction of the machine in which it is to be employed.

I do not make any claim, broadly, for the combination, with the type of a type-writing

machine, of a horizontally-journaled brush having an outline corresponding to that of the type-basket, so as to sweep over all the types at each revolution, nor for the combination, with a horizontally-journaled rotatory brush, of a pivoted bar adapted to bear against the inner side of the type-levers at one side of the type-basket.

I therefore particularly point out and distinctly claim as my invention—

1. A device for cleaning the type of type-writing machines, consisting of a rounded body rotatory upon its horizontal axis and having bristles arranged in rows approximately spiral to the axis of rotation and extending around the rounded ends of said body, substantially as set forth.

2. The combination, with the row of types of a type-writing machine, of a type-cleaning device consisting of a rounded body rotatory upon its horizontal axis in the plane of said row of type to fill out the entire space between the faces of said row of type and having bristles arranged in rows approximately spiral to the axis of rotation and extending around the rounded ends of said body, substantially as set forth.

3. In a device for cleaning the type of type-writing machines, the combination of a horizontally-journaled rotatory brush with a lever pivoted upon the front of the machine and having a curved arm projecting into the type-basket and provided with a cross-head adapted to bear against the inner sides of the front type-levers, substantially as described.

4. In a device for cleaning the type of type-writing machines, the combination of a curved frame pivoted in the side of the machine and embracing the type-lever-operating-rods, a rotatory brush having its shaft journaled in the arms of said frame, and a lever pivoted in the side of the machine and

having a curved arm projecting under the middle of said frame and into the type-basket and provided with a cross-head adapted to bear against the inner sides of the type-levers upon that side of the machine, substantially as described.

5. In a device for cleaning the type of type-writing machines, the combination of a transverse rod in the front of the machine, a curved frame having forwardly-projecting ears pivoted upon said rod and formed with horizontal bearings in its arms, a shaft journaled in said bearings, a brush secured upon said shaft within the type-basket, and a lever pivoted upon said transverse rod and formed with a handle and with a curved arm projecting beneath said frame and having a curved type-lever-retaining cross-head, substantially as described.

6. In a device for cleaning the type of type-writing machines, the combination of a transverse rod in the front of the machine, a curved frame having forwardly-projecting ears pivoted upon said rod and formed with horizontal bearings in its arms, a shaft journaled in said bearings and provided with a crank at one end, a brush upon said shaft, and an axial section corresponding to the shape of the row of types and having bristles arranged in rows approximately spiral to the shaft, and a lever pivoted upon said transverse rod and formed with a handle and with a curved arm projecting beneath said frame and having a curved type-lever-retaining cross-head, substantially as described.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 20th day of September, A. D. 1890.

JAMES R. FROST.

Witnesses:

J. B. FAY,

G. A. SNOW.