

(No Model.)

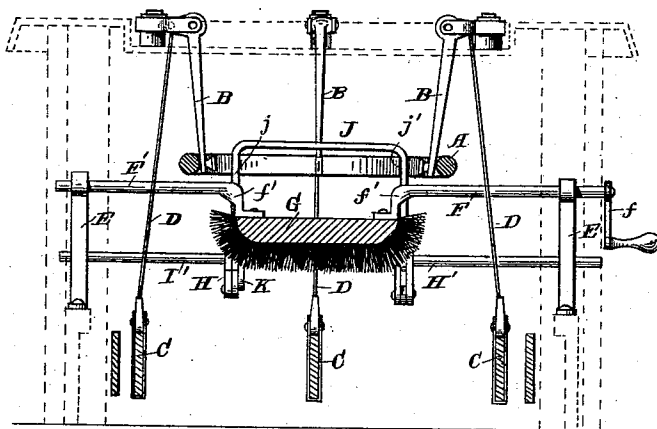
2 Sheets—Sheet 1.

B. H. HOLMES & J. H. RALSTON.
TYPE CLEANER FOR TYPE WRITING MACHINES.

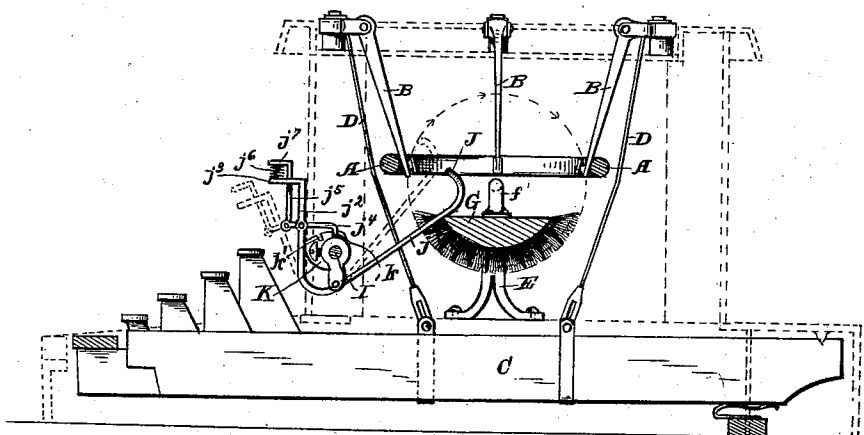
No. 472,760.

Patented Apr. 12, 1892.

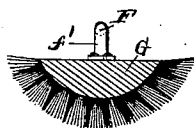
—FIG I—



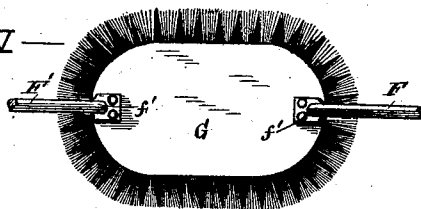
—FIG II—



—FIG III—



—FIG IV—



WITNESSES:

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INVENTORS:

B. H. Holmes and J. H. Ralston
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(No Model.)

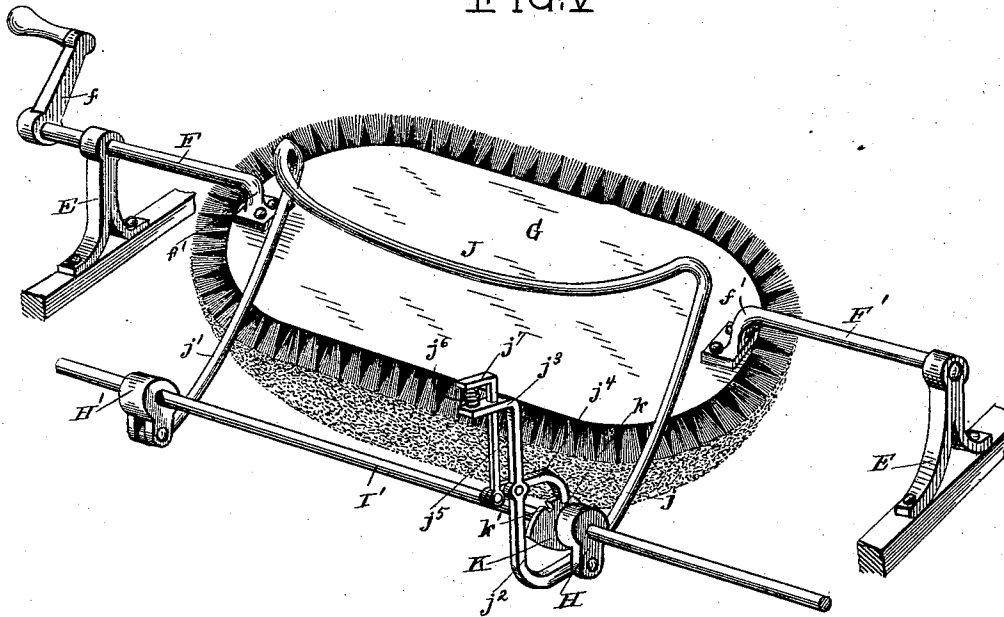
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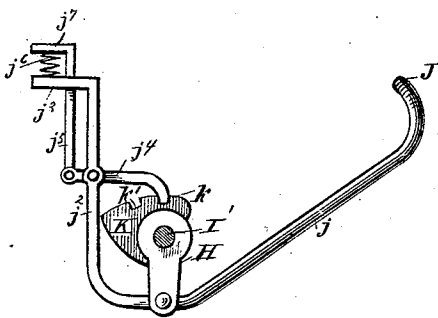
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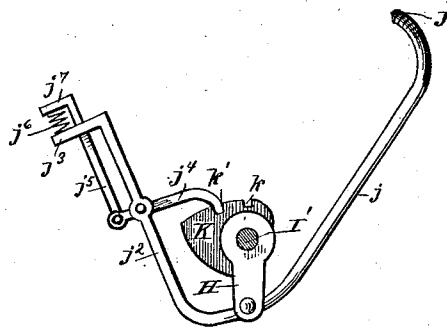
— FIG. V —



— FIG. VI —



— FIG. VII —



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UNITED STATES PATENT OFFICE.

BUCKLEY H. HOLMES AND J. HUSS RALSTON, OF GOSHEN, INDIANA.

TYPE-CLEANER FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 472,760, dated April 12, 1892.

Application filed August 2, 1890. Serial No. 360,845. (No model.)

To all whom it may concern:

Be it known that we, BUCKLEY H. HOLMES and J. HUSS RALSTON, citizens of the United States, residing at Goshen, in the county of Elkhart, in the State of Indiana, have invented a new and useful Type-Cleaner for Type-Writing Machines, in which the type are attached to movable rods or bars, of which device the following is a specification.

Our invention relates to improvements in type-writing machines by providing them with a type-cleaning attachment, by means of which the type can be thoroughly and expeditiously cleaned.

The objects of our invention are to provide an improved brush for cleaning the type of type-writing machines which will revolve upon a horizontal axis and come in contact with the entire set of type at each revolution, and to provide improved means for retaining the type-levers in position while the brush is revolving against them.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In such annexed drawings, Figure I represents a longitudinal vertical section of a type-writing machine provided with our improvements, the frame of the machine being illustrated by dotted lines; Fig. II, a transverse vertical section; Fig. III, a transverse section of the brush; Fig. IV, a top plan view of the brush; Fig. V, a perspective view of the device detached from the machine, and Figs. VI and VII side views of the adjusting device for the type-lever retaining-bar, respectively showing the bar tilted down and raised up.

In the drawings, the letter A indicates the ring against which the ends of the type-levers rest, B indicates the type-levers, and C the key-levers, which are connected to the type-levers by the connecting-rods D. All of these parts form no part of our invention and may be of any form, being simply illustrated to show the application of our device, which may be applied to any type-writing machine having

its type arranged in a round series or in a so-called "type-basket."

Two brackets E E are secured upon the sides of the machine-frame and have bearings in their ends, in which a divided shaft F F' is journaled. One part F of said shaft has a crank *f* for revolving it, and the inner ends of the shaft-sections are slightly bent, as shown at *f'*, and secured upon the back of a brush G, the face of which is curved toward the sides and ends and covered with bristles or other brushing substance. The curves of the brush-face toward the sides are segmental and have the shaft for their centers, and the entire curves of the face are so formed that the brushes will come in contact with all the types in the machine at each revolution.

Two brackets or hangers H and H' are secured upon the rod I', upon which the ribbon-shifting mechanism is secured, or upon a rod suitably placed across the front of the machine-frame, and the curved arms *j j'* at the ends of a curved bar J are pivoted with their forward ends in said hangers to swing said bar upward to bear against the inner sides of the forward type-levers in the type-basket and downward out of the way of the type-levers. The curved arm *j* of the type-lever retaining-bar extends forward of its pivotal point and is formed into an upwardly-projecting arm *j*², the upper end *j*³ of which is bent forward to form a finger-piece. A dog *j*⁴ is pivoted upon the upwardly-projecting arm *j*² or handle, and its downwardly-bent rear end engages notches *k* and *k'* in the edge of a collar K, secured to the side of the hanger, and a rod *j*⁵ slides in a perforation in the finger-piece *j*³, and is pivoted at its lower end to the forward end of the dog. A spring *j*⁶ is interposed between the finger-piece *j*³ of the handle and the finger-piece *j*⁷ of the rod *j*⁵, serving to raise said rod and to thus force the bent end of the dog into the notches in the collar.

When the device is to be used, the type-lever retaining-bar is tilted upward by pressing the finger-pieces together and thereupon tilting the handle forward until the dog engages the forward notch in the collar. This

will lock the curved bar in position to hold the forward type-levers in the type-basket from flying upward when the brush is revolved, said brush being revolved so as to bring it from below upward over the faces of the types in the front portion of the type-basket.

The types will be completely cleaned by a few revolutions of the brush, and the latter will be out of the way of the type when at rest with the flat back upward, the dropped or bent inner ends of the shaft-sections dropping the brush out of the way of the type-levers. The type-lever retaining-bar is tilted down and locked in that position when the brushing is finished, and the machine is again ready for printing.

Other modes of applying the principle of our invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism herein set forth, provided the principles of construction respectively recited in the following claims are employed.

We therefore particularly point out and distinctly claim as our invention—

1. A device for cleaning the type of type-writing machines, consisting of a brush rotatory upon its horizontal axis and having a brushing-surface formed on curves concentric upon the axis of rotation and curved toward the ends, whereby the brush may come in contact with all the types of a type-writing machine at each rotation, substantially as set forth.

2. The combination, with the types of a type-writing machine, of a brush rotatory upon its horizontal axis and having an outline corresponding to that of the type-basket, so as to sweep over the entire set of type at each rotation, 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 pivoted bar adapted to bear against the inner sides of the type-levers at one side of the type-basket, substantially as set forth.

4. In a device for cleaning the type of type-writing machines, the combination, with two horizontally-journaled shaft-sections formed with bent inner ends, of a brush secured with its back to said bent ends and having a brush-surface curved to the sides and ends, the curves to the sides being segments of circles centered in the line of the shaft-sections, substantially as set forth.

5. In combination with a type-writing machine, brackets secured upon the side pieces of the machine-frame, a horizontal shaft journaled in said brackets, and a brush secured to said shaft and having a curved brush-surface corresponding to the outline of the type-basket, substantially as set forth.

6. In combination with a type-writing ma-

chine, brackets upon the sides of the machine-frame, a shaft horizontally journaled in said brackets, and a brush secured to said shaft with its back at a distance from the line of the shaft and having a curved brush-surface corresponding to the outline of the type-basket, substantially as set forth.

7. In combination with a type-writing machine and a rotatory brush for cleaning the type of the same, a curved type-lever retaining-bar pivotally supported upon the machine-frame, and a locking device connected to said bar to adjust the latter in position against the type-levers, substantially as set forth.

8. In combination with a type-writing machine and a rotatory brush for cleaning the type of the same, a curved type-lever retaining-bar having arms pivotally supported in the machine-frame and having one arm extended to form a handle for rocking it, a notched collar upon the machine-frame, and a pivoted dog upon the handle and engaging the notches of said collar, substantially as set forth.

9. In a type-cleaning device for type-writing machines, the combination of brackets adapted to be secured upon the side pieces of a type-writing-machine frame, two shaft-sections journaled in said brackets and formed with bent inner ends and one of said sections provided with a crank, and a brush having a flat back secured to the bent ends of the shaft-sections and having a brush-surface curved to the sides and ends, substantially as set forth.

10. In combination with a type-writing machine having a horizontal rod at its forward side and a rotatory brush for cleaning the type of said machine, hangers secured upon the horizontal rod, a curved type-lever retaining-bar having arms at its ends pivoted in said hangers, a handle at the end of one of said arms and formed with a finger-piece, a notched collar upon the horizontal rod and at the sides of one of the hangers, a dog pivoted upon the handle and having a bent end engaging the notches, a rod pivoted to the other end of said dog and sliding in the finger-piece of the handle and having its end bent into a finger-piece, and a spring interposed between the two finger-pieces, substantially as set forth.

11. In a device for cleaning the type of type-writing machines, the combination of a type-cleaning brush having movement in a vertical plane, with a bar adapted to bear against the inner sides of the type-levers to retain the same in position while the brush is moved, substantially as set forth.

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