

(No Model.)

S. FORD.

CLEANING ATTACHMENT FOR TYPE WRITING MACHINES.

No. 480,257.

Patented Aug. 9, 1892.

Fig 1.

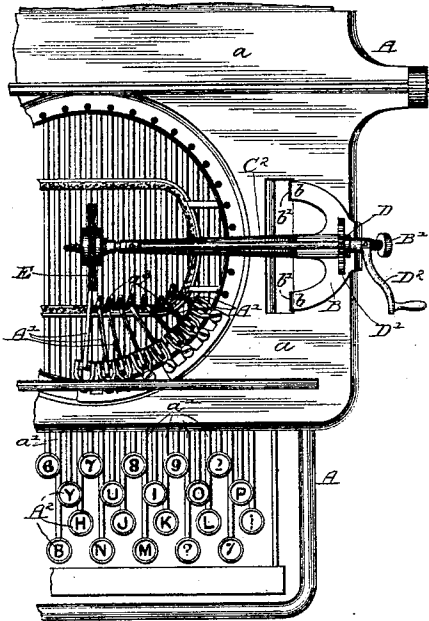


Fig 2.

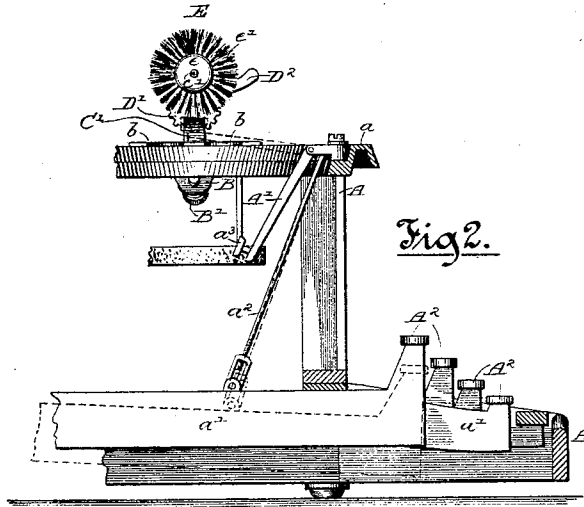
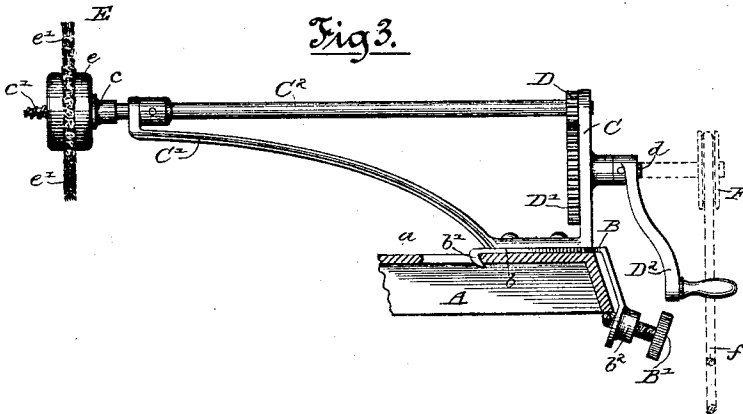


Fig 3.



Witnesses

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CLEANING ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 480,257, dated August 9, 1892.

Application filed July 16, 1890. Serial No. 358,965. (No model.)

To all whom it may concern:

Be it known that I, SUMMERFIELD FORD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cleaning Attachments for Type-Writing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to attachments for type-writing machines. Its purpose is to produce a device which may be quickly and easily attached to the frame of a type-writing machine and which will have a brush so secured to the attachment that it may be readily operated for the purpose of cleaning the several type of the machine, said device being extended out over that portion of the basket of the machine where the several type are successively brought to the same spot when printing.

The invention will be more readily understood by reference to the accompanying drawings, in which I have illustrated the device as being attached to the frame of what is commonly known as a "Remington" type-writing machine.

In the drawings, Figure 1 is a plan view of a portion of the machine to which my type-cleaning device has been attached. Fig. 2 is a transverse sectional view of a portion of the machine, showing the cleaning-brush in position. Fig. 3 is an enlarged side view of the attachment proper.

A is the main frame of the machine, the upper table *a* of which is provided with a circular opening around the edge of which the several type-arms *A'* are secured in a familiar manner.

*A*² are the keys, mounted upon the forward ends of the levers *a'*, which levers are connected to the several type-arms by the links *a*³.

As will be readily understood, the adjustment of the machine is such that the type-faces *a*³, when the keys *A*² are depressed, are brought to the same position at a point slightly above the upper surface of the table *a* of the frame of the machine. The printing-roller supports the paper at this point and receives the impact of the type. When it is desired to

clean the type, I place a brush roller or wheel over this same spot, the paper-holding roller being removed therefrom temporarily.

B is a frame or yoke provided with two or more arms *b*, having at their outer ends depending flanges *b'*. At the central and rear portion of the plate B is a depending arm carrying at its lower end a suitable boss or hub having an interiorly-screw-threaded opening therein.

B' is an adjusting-screw adapted to enter the opening in the boss *b*², so that the end of said screw will press against the frame A of the machine. It will be readily understood by reference to Figs. 1 and 3 of the drawings that the said frame B of the attachment is rigidly secured to the frame A of the machine by means of the said depending lugs *b'* and the said set-screw B'. The shape of this frame B is such as to conform to the contour of the frame of the machine to which it is to be attached. For example, in making my attachments for Remington machines I employ the shape of the frames shown in the drawings herewith. It will be readily understood, however, that the Yost machine, the Caligraph, and other styles of machines have different-shaped frames and that it will be necessary to alter the particular contour and shape of the frame B in adapting my device for such other machines. I therefore do not desire to be limited in this specification to the particular form of frame herein shown.

Secured to the frame B are two journal-bearing arms C C', the former substantially vertical, the latter curved and extending out horizontally. The upper end of each of these arms C C' is provided with a bearing in which a spindle C² is revolvably secured therein. Near one end of the spindle C² is a small spur-pinion D. Upon the arm C is a spindle *d*, upon the inner end of which is mounted a relatively large spur-wheel D', the teeth of which intermesh with the teeth of the small pinion D. Upon the other end of the spindle *d* is a crank or handle D², by which the said spindle and the wheel D' may be rotated. Upon the end of the spindle C², opposite that to which the pinion D is secured, is mounted a suitable bristle brush, so secured to the end of said spindle as to rotate therewith. In the drawings the spindle is provided at its end

with an enlarged hub or shoulder *c*, from the center of which a screw end *c'* projects. The brush E consists of a wooden hub *e*, having a screw-threaded central opening there-
 5 through, into which the screw end *c'* is engaged, and having upon its periphery a series of bristles or brushes *e'*. Other forms of brush may be employed, but that here shown is very cheap in construction, easy of ma-
 10 nipulation, and is preferable.

In some cases power may be furnished from a treadle or from other sources, and I may find it convenient to dispense with the crank *D*², in which case power is applied to
 15 the spindle *d* by means of a suitable rope or leather cord *f*, leading from the source of power and passing over the small sheave F, located on the end of the spindle *d*. When this form of power is applied, the spindle *d* is
 20 generally longer than is shown in the drawings herewith. I have illustrated this modified form in the dotted lines in Fig. 3.

It will of course be understood that the arms C and C' may be made integral with
 25 the base-plate B, if desired, and in fact in adapting the base-plate to fit other machines than the Remington this will be necessary. It will also be noted that the attachment may be applied to the machine from either side.

The manner of using my attachment is as follows: I first raise the traveling carriage containing the paper-supporting roller so that the basket of type-arms is exposed to view. I then place the plate B upon the
 30 main frame A of the machine and secure it thereto by means of the set-screw B'. I then raise the several type by pressing successively upon the several keys A², thus bringing the said type-faces into position immediately beneath the spindle C² and in contact with the brush E, and while in that position I rotate the crank-handle D², which move-
 40 ment rotates the brush very rapidly, cleaning the face of the type perfectly. It will be observed that by reason of the difference in size of the pinion D and the wheel D' the former is rotated many times to every single rotation of the latter. Thus a very rapid motion is attainable at the brush, which results in very effective
 45 and speedy work. It will also be observed that while the face of the type is in contact with the brush the latter, instead of being rotated, may be partially rotated or oscillated first in one, then in the other direction, by simply oscillating the spindle C² through the
 50 medium of the crank-arm D². This reversing or oscillatory movement of the brush causes the bristles to enter all the spaces in the type-face and thoroughly clean the same.

It will be observed that in the use of this device the hands of the operator do not come in contact at all with either the type or the type-arms forming the basket, which latter are usually covered with ink deposited thereon
 65 by the ribbons.

I claim as my invention—

1. The combination, with the printing-types of a type-writing machine arranged in a circle and the frame of said machine provided at its top with a circular opening through
 70 which the types operate, of an attachment for cleaning the types, consisting of a frame adapted to be secured to the top of the machine-frame, a shaft mounted on said attachment-frame and supported at its inner end
 75 by said overhanging arm, a revolving brush mounted on the shaft at the center of the said circular opening, and means located at the outer end of the shaft for giving rotary or oscillating motion thereto, consisting of a crank-
 80 shaft mounted upon said attachment-frame and gearing connecting the crank-shaft with the brush-shaft, substantially as described.

2. The combination, with the printing-types of a type-writing machine arranged in a circle and the frame of said machine provided at its top with a circular opening through
 85 which the types operate, of an attachment for cleaning the types, consisting of a frame adapted to be secured to the top of the machine-frame and having a rigid arm which overhangs the central opening of said machine-frame, a shaft mounted in the attachment-frame and supported at its inner end
 90 by said overhanging arm, a revolving brush mounted on the shaft at the center of the said opening in the machine-frame, and means located at the outer end of the shaft for giving rotary or oscillatory motion thereto, substantially as described.
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3. The combination, with the printing-types of a type-writing machine arranged in a circle and the frame of said machine provided at its top with a circular opening through
 105 which the types operate, of an attachment for cleaning the types, consisting of a frame having a rigid arm which overhangs the central opening of the machine-frame, a shaft mounted in the attachment-frame and supported at its inner end by said overhanging arm, a revolving brush mounted on the shaft at the center of said opening in the machine-frame, means for giving rotary or oscillatory motion to the shaft, and a clamp upon the attachment-frame adapted to engage the machine-
 110 frame, substantially as described.

4. An attachment for cleaning the type of type-writing machines, comprising the base B and set-screw B', the arms C and C', the spindle C², mounted in said arms, a brush E, mounted
 120 upon the other end of said spindle, a wheel D', supported upon the arm C, larger than and in engagement with the pinion D, and means for imparting a rotary or oscillatory movement to said wheel D', substantially as described.
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In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

SUMMERFIELD FORD.

Witnesses:

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 GEORGE W. HIGGINS, Jr.