

(No Model.)

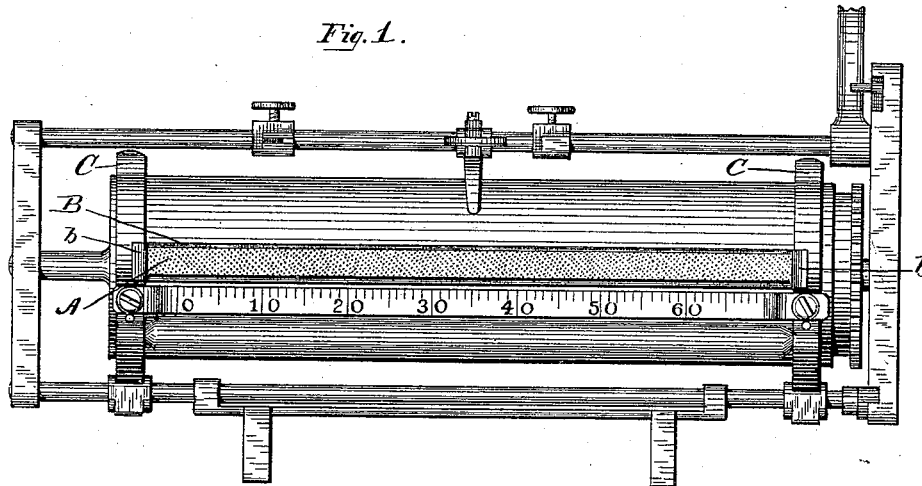
W. B. NORTHROP.

TYPE CLEANING ATTACHMENT FOR TYPE WRITING MACHINES.

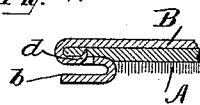
No. 450,473.

Patented Apr. 14, 1891.

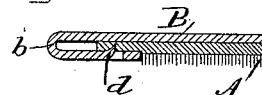
*Fig. 1.*



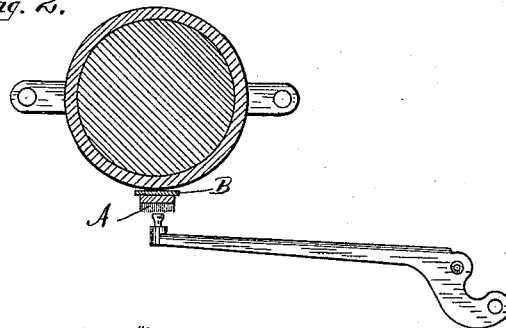
*Fig. 4.*



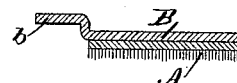
*Fig. 5.*



*Fig. 2.*



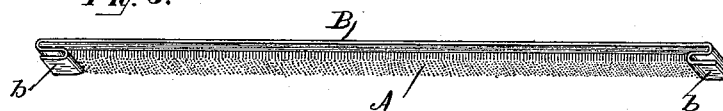
*Fig. 6.*



*Fig. 7.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

WILLIAM B. NORTHROP, OF CHARLESTON, SOUTH CAROLINA.

## TYPE-CLEANING ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 450,473, dated April 14, 1891.

Application filed March 27, 1890. Serial No. 345,496. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM B. NORTHROP, of the city and county of Charleston, in the State of South Carolina, have invented certain new and useful Improvements in Type-Cleaning Attachments for Type-Writing Machines, of which the following is a specification.

My invention relates to certain improvements, as hereinafter claimed, in that class of devices for cleaning the faces of the types of type-writing machines in which the cleaning devices are carried by and partake of the movements of the paper-carriage of the machines. A device of this class is shown by United States Letters Patent granted to me April 8, 1890, No. 425,387. By my present invention I simplify and economize in construction and facilitate the attachment and removal of the cleaner.

In the accompanying drawings, which show my improvements as applied to the paper-carriage of a "caligraph" machine, Figure 1 is an elevation of the paper-carriage detached and in the position it would occupy when attached to the machine and elevated or thrown back with the type-cleaner in place. Fig. 2 is a view, partly in elevation and partly in vertical section, showing a type in the position it would occupy when elevated to strike against the cleaner. Fig. 3 is a view in perspective of the cleaner, and Fig. 4 a longitudinal section of a portion thereof on an enlarged scale. Fig. 5 is a similar view showing a modification; Fig. 6, a like view of another modification, and Fig. 7 a section on the line 7 of Fig. 6.

The type-cleaner consists of a facing or strip A, of suitable brush-like material, such as bristles, felt, or napped cloth, card-cloth, &c., and a back or carrier B, which I prefer to make of springy or yielding material, as steel, with forks or hook-like supporters *b b* at its opposite ends and integral therewith. These end supporters adapt the cleaner to be engaged with or supported by and suspended from the paper-guides C C of the paper-carriage of the machine in position to be struck by the actuated type. The cleaner-supporters *b b* are readily made by bending the ends of the cleaner first inward or back

upon itself first inward and then outward, as clearly shown in Figs. 3 and 4, a very secure attachment of the brush facing or strip being attained by clamping its ends between the body of the back and the inturned end portions thereof. Instead, however, of depending solely upon mere clamping pressure to secure the brush-like strip in place, spurs or projections *d* may be struck from the cleaner-back to engage each of the clamped ends of the brush-strip of the cleaner.

In applying the cleaner to the machine in position to be struck by the actuated type it is only necessary to lift or throw back the paper-carriage, spring or bow the cleaner, so as to lessen the distance in a straight line between its ends, adjust it to the paper-guides by engagement therewith of the loops or openings of its end supporters, release the pressure on the cleaner that it may straighten out and snap into place, as will readily be understood, and then adjust the carriage to the working position, while to remove the cleaner it is only necessary to spring or bow it sufficiently to clear it from the paper-guides after lifting the carriage.

My improved cleaner may obviously be employed in connection with other type-writing machines than the caligraph—such as the Remington and the Yost machines—simply by properly varying the dimensions of the cleaner.

Although I prefer the cleaner constructed as above described, I do not wish to be understood as confining myself to the precise details set forth, as my improvements may be modified in some respects. For instance, while still retaining that essential feature of my invention which relates to supporting the cleaner by connection with the paper-guides of the paper-carriage, the cleaner may be made as indicated in Figs. 5, 6, and 7, in accordance with which construction it is not necessary that the cleaner be adapted to bend or bow in applying and removing it.

As will be understood from inspection of Fig. 5, the cleaner is adapted by loop-like end supporters *b* to be fitted over the ends of the paper-guides and slid along them into position. By the modification shown in Figs. 6 and 7 the end supporters *b* of the cleaner are

adapted for engagement with the paper-guides by being inserted between them and the impression-roller of the paper-carriage. In this instance the cleaner-brush facing or strip is secured to its back or carrier by clamping the edges of the strip by the turned-down edges *e e* of the carrier.

As the paper-guides are located quite near the impression-roller, the end supporters of the cleaners, when constructed as above described, are made to project but slightly from the sides of the cleaners with the surfaces of these supporters which engage with the paper-guides extending parallel with the backs or carriers of the cleaners, and in line, or nearly so, with the brush-like material thereof.

I claim as my invention--

1. The cleaner for the type of type-writing machines, consisting of the brush-like material and its back or carrier having the end supporters for engagement with the paper-guides of the paper-carriage of the machine,

with the engaging surfaces of said supporters extending parallel with the cleaner-back, and in line, or nearly so, with the brush-like material thereof, substantially as set forth.

2. The cleaner for the type of type-writing machines, consisting of the brush-like strip having the springy or yielding back, with the end supporters having the loops or openings extending parallel with the cleaner-back, and in line, or nearly so, with the brush-like material thereof, said cleaner being adapted to be bowed or sprung for engagement by the loops or openings of its end supporters with the paper-guides of the paper-carriage, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

WM. B. NORTHROP.

Witnesses:

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