(No Model.)

A. PURSELL.

CLEANING ATTACHMENT FOR TYPE WRITING MACHINES.

No. 457,620. Patented Aug. 11, 1891.

Fig. 1.

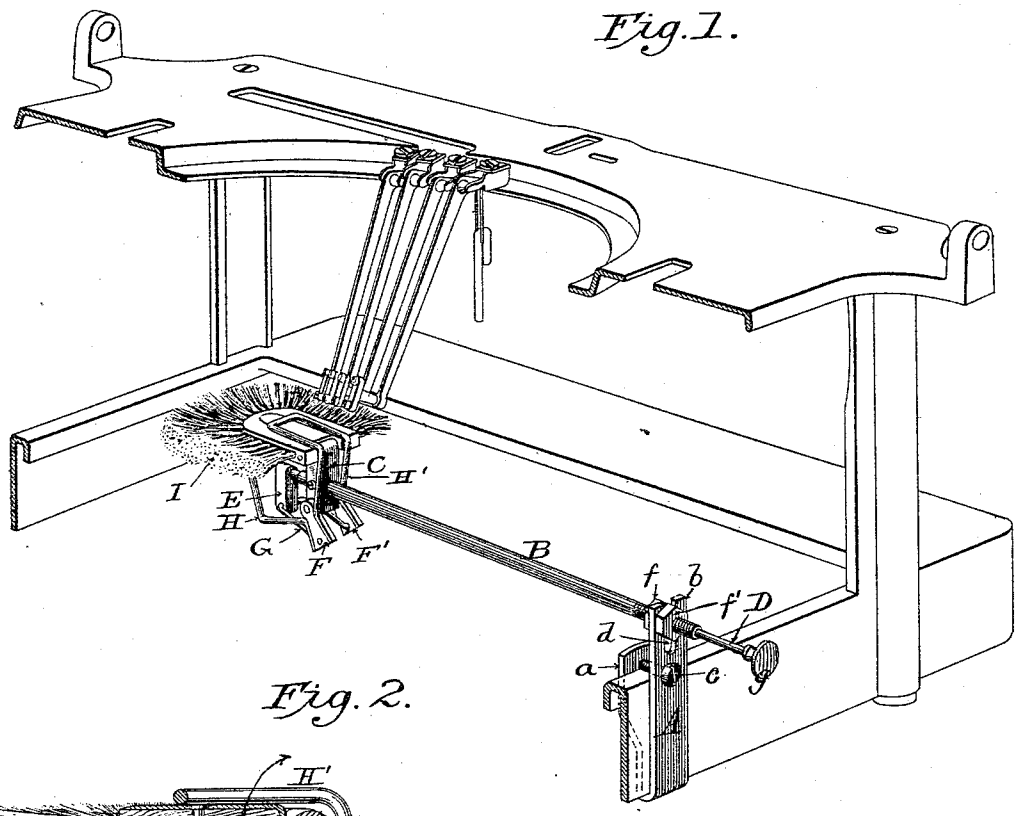


Fig. 2.

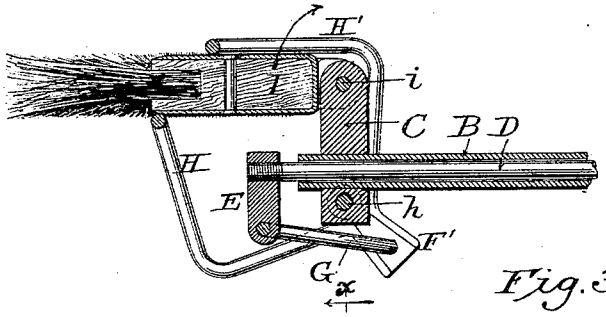
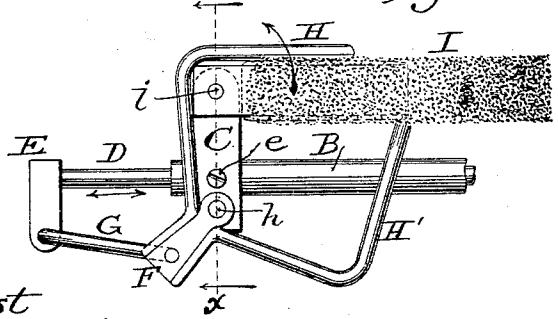


Fig. 3.



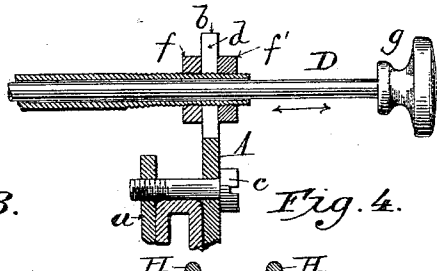
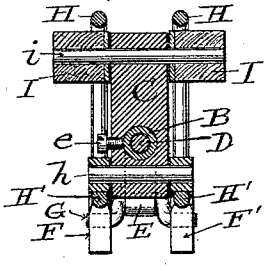


Fig. 4.



Attest

Sidney P. Hollingsworth

Horace A. Dodge.

Inventor

AUGUSTUS PURSELL,

by Dodger Sons, attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AUGUSTUS PURSELL, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO MATHIAS E. TAYLOR, OF SAME PLACE.

CLEANING ATTACHMENT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 457,620, dated August 11, 1891.

Application filed March 27, 1891. Serial No. 386,680. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS PURSELL, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Cleaning Attachments for Type-Writing Machines, of which the following is a specification.

My invention relates to devices for cleaning the types or printing characters of type-writing machines; and it consists in various features and details hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a sectional perspective view of a portion of a type-writing machine, showing my improvements applied thereto; Fig. 2, a longitudinal sectional view of my improved cleaning device; Fig. 3, a side or end view of the brush and the actuating mechanism, and Fig. 4 a vertical transverse sectional view on the line *x x* of Fig. 3.

I desire to state here that I am aware that various cleaning devices have been applied to type-writing machines, and that in some instances the cleaning device has been applied to the platen or paper-carriage and in other instances has been secured to the frame of the machine and received a rotary motion about its axis.

A indicates a U-shaped bracket, the two arms *a* and *b* of which embrace one of the side bars of the frame of the machine and are connected and drawn together against said frame by means of a screw *c*, as shown in Figs. 1 and 2. By removing the screw *c* the bracket may be readily removed from the machine.

The upper end of the arm *b* of the bracket A is slotted, as at *d*, to receive a tube or sleeve B, which carries at its inner end a block C, which latter is adjustably and removably affixed to the sleeve or tube by means of a set-screw *e*. (Shown in Figs. 3 and 4.)

The outer end of the tube or sleeve B is threaded externally, as shown in Figs. 1 and 2, to receive nuts *f f'*, which, by bearing upon opposite faces of the arm *b* of the bracket A, hold the tube or sleeve B fixed in position relatively to the bracket. It will be seen from this construction that the tube or sleeve B may be adjusted longitudinally or vertically with reference to the bracket and that the bracket and the tube or sleeve carried thereby may be moved forward and backward toward or away from the front of the machine, thereby insuring the accurate adjustment of the cleaning device relatively to the types or printing characters to be cleaned.

Mounted and free to slide within the tube or sleeve B is a rod or stem D, carrying at its outer end a knob or thumb-piece *g*, and screwing at its inner end into a block E, which is shown in all of the figures. This block E is connected by means of a link G with the lower ends of two arms F and F', which latter are pivoted at their upper ends to the lower end of the block C, the construction and arrangement being such that as the rod or stem D is moved lengthwise through the tube or sleeve B the said rod will, acting through the connections E G, cause the arms F and F' to swing upon their pivot *h*, the arms being shown in their different positions in Figs. 2 and 3.

Secured to one side of the arms F and F' is an angular arm H, while secured to the opposite side of the said arms F F' is another angular arm H', the said arms H H' embracing between their free upper ends the brush I, which is pivoted to the upper end of the block C, as clearly shown in Figs. 2 and 3.

Of course as the pivoted arms F F' are swung back and forth upon their pivot *h* they will carry with them the angular arms H H', and through the latter cause the brush to be reversed—that is, rocked alternately to opposite sides of its pivot or axis *i*. In other words, if the parts be in the position represented in Fig. 2 and the rod or stem D be moved inward, the arms F F' will swing and the angular arm H, attached to the arms F F', will, acting upon the under face of the brush I, lift the latter and throw it over to the opposite side of its pivot, the angular arm H in the meantime moving away from its position above the brush. After the inward movement of the rod or brush has been completed the position of the parts in Fig. 2 will

be found to have been reversed and the position represented in Fig. 3 assumed. By the rapid reciprocation of the rod or stem D the brush will be reversed or rocked backward and forward upon its pivot *i*, and in thus rocking or reversing will, by reason of the central location of its pivot relatively to the types or other printing characters, thoroughly and effectually clean said types.

The brush I is advisably of a form corresponding in outline to that of a part, at least, of the line formed by the type when at rest, so that when the brush is rocked or reversed first from one side of its pivot to the other all of the types or printing characters will be brushed and cleaned.

One of the advantages of the present construction resides in the fact that the brush need not be removed from the machine when it is desired to use the latter, for, as will be seen upon reference to Fig. 1, the upper face of the brush is advisably entirely below the lower edges of the types and will not interfere with their actuation.

By the vertical adjustment described provision is made for the use of a brush somewhat larger than the opening of one side or half of the type-basket. It will not be found necessary to trim this half-brush to closely fit the irregularity of the positions assumed by the type, particularly noticeable in some machines, and also that as the brush is worn away and reduced in size the tube B may be raised and adjusted so as to bring the brush again into a position to effectually cleanse the type. In case, however, it should be desired to remove the brush, the block C, to which the said brush is pivoted, and the arms pivotally connected to said block, it is only necessary to loosen the screw *e*, securing the block C to the tube or sleeve B, and to unscrew the rod or stem D from the block E. All of the parts mounted upon the inner end of the tube or sleeve E can then be readily removed and the tube or sleeve D allowed to remain in position, or by simply loosening the nut *f'* on the tube B the whole device may be readily removed without separating its various parts.

While I have shown in the drawings two arms F F', I do not wish to restrict myself to this number, as it is obvious that one arm will, though not with such good results, answer for the purposes of the present invention. So, too, the description heretofore given would imply that the arms H H' were separate from the arms F F', and were attached thereto. This, however, is not essential, and such illustration and description is due solely to the fact that it is perhaps cheaper to construct the device in this way than it would be to make the arm or arms F F' integral with the upward extensions or arms H and H'. The use of the word "arms" in the claims is therefore not to be construed as a limitation to the precise construction shown, but is intended to cover such constructions as those to which I have just referred.

The construction shown in the drawings is preferred for the reason that there is less wabbling and easy means are provided for affording a good broad bearing of the arms or extensions H H' upon opposite faces of the brush.

Having thus described my invention, what I claim is—

1. In combination with a support fixedly located at or about the center of the type-basket, a brush pivoted thereto, so as to rock or reverse first from one side of its pivot and then from the other, and means, substantially as shown and described, for thus rocking the brush within the limits of a semicircle.

2. In a cleaning device for type-writing machines, the combination, with a bracket adapted to be applied to the machine, of a tube carried by said bracket, a block carried by the tube, a brush pivoted to the block and adapted to rock first from one side of its pivot and then from the other, and a rod or stem passing through a tube or sleeve and provided with devices, substantially such as shown, for actuating the brush.

3. In combination with bracket A, a tube or sleeve B, secured thereto and provided with a block C, a brush pivoted to the upper end of the block C, a pair of arms F F', pivoted to the block and provided with angular upward extensions H H', a rod or stem D, mounted within the tube or sleeve B, a block E, secured to the inner end of the stem, and a link or bail G, connecting the block E with the arms F F'.

4. In combination with bracket A and tube B, a block C, a set-screw *e* for securing the block to its tube, a brush pivoted to the block, a pair of arms F F', also pivoted to the block and provided with upward angular arms or extensions H H', a rod or stem D, mounted within the tube or sleeve and screwing into a block E at its inner end, and a link or bail G, connecting the said block E with the arms F F'.

5. In an attachment for type-writing machines, the combination, with the bracket A, provided with a slot *d*, the tube B, carrying at its inner end a cleaning-brush and suitable actuating mechanism and threaded at its outer end, and nuts *f f'*, applied to the outer threaded end of the tube and embracing the slotted arm of the bracket.

6. In combination with a support fixedly located at or about the center of the type-basket, a half-brush pivoted to the support and arranged horizontally with its pivot approximately at the center of the type-basket, and means for throwing the brush first from one side of its pivot and then from the other.

7. In a cleaning attachment for type-writing machines, the combination, with a half-brush arranged horizontally with its pivot approximately at the center of the type-basket, of

means for reversing the position of the brush from one side of its pivot to the other alternately, a bracket for supporting the brush and its operating mechanism, and an adjustable connection between the bracket and the said brush-supporting devices, whereby the brush may be adjusted vertically, as desired.

In witness whereof I hereunto set my hand in the presence of two witnesses.

AUGUSTUS PURSELL.

Witnesses:
JNO. F. LAEDHIN,
J. T. FREDERICKS.