

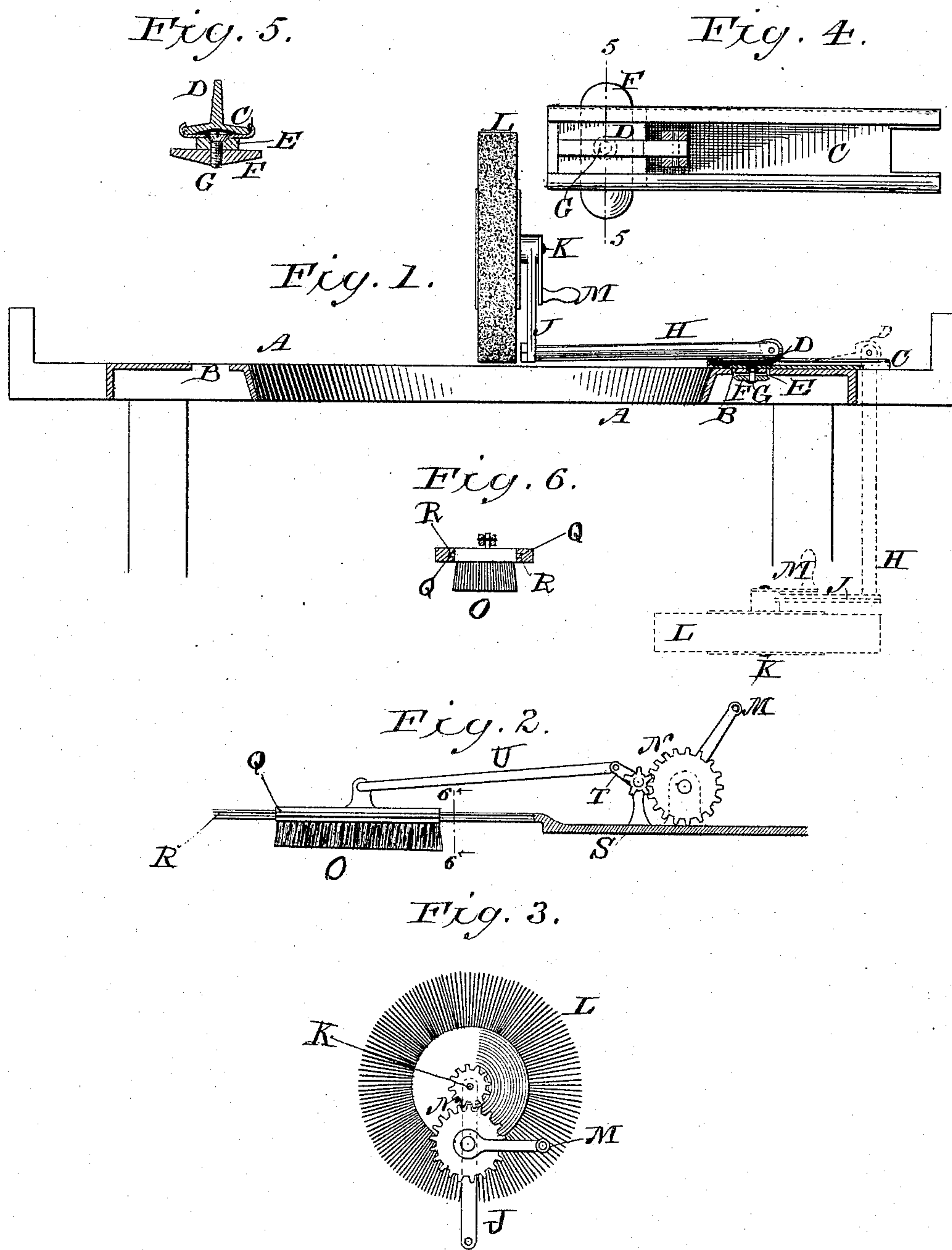
(No Model.)

G. E. GRAFF.

TYPE CLEANING APPLIANCE FOR TYPE WRITING MACHINES.

No. 474,733.

Patented May 10, 1892.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE E. GRAFF, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNOR TO
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TYPE-CLEANING APPLIANCE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 474,733, dated May 10, 1892.

Application filed July 20, 1889. Serial No. 318,139. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. GRAFF, of the city of Williamsport, county of Lycoming, and State of Pennsylvania, have invented certain new and useful Improvements in Type-Cleaning Appliances for Type-Writing Machines, of which the following is a specification, reference being had to the accompanying drawings.

10 The object of my invention is to provide an appliance of simple construction for cleaning the type of type-writers, and also one which may be applied with facility to any ordinary machine. In such a device it is desirable that it may be ready for use at any
15 time and that it may be removed entirely out of the way of the operator when not in use.

Heretofore appliances of this sort have consisted of a revolving brush set down into the
20 body of the machine between the type as they lie at rest and adapted to be revolved against the face of them in that position. An objection to such devices is that the dust which accumulates in quantities from the use of a
25 type-writer settles upon the brush and soon renders it unfit for use. More than that, in those devices the brush is placed so as to prevent the operator from seeing the face of the type while cleaning it. Hitherto, also, type-
30 cleaning appliances could not be adapted to all kinds of machines, and special arrangement was required to accommodate them to any machine.

My device is intended to avoid the objections above stated. It can be readily attached
35 to any machine in general use, and being adapted to be fastened outside of the machine is free from any unusual accumulation of dust. It will clean each type separately and
40 is so arranged that at any time the face of the type may be examined and the brush applied as needed.

In the accompanying drawings, Figure 1 is a side elevation of my cleaner attached to a
45 type-writing machine, which is shown in section, the cleaner being shown in the position it occupies when not in use by dotted lines. Fig. 2 is a view of a modification of my invention, shown partly in section. Fig. 3 shows

another modification. Fig. 4 is a plan view of 50 a part of my invention detached. Fig. 5 is a section on the line 5 5 of Fig. 4, and Fig. 6 is a section on the line 6 6 of Fig. 2.

Referring to the letters on the drawings, A indicates the top plate of an ordinary type- 55 writer—for instance, a Remington machine—B the ribbon-slot in the same, and C a way within which a slide D travels. In place of the slide and its way any other combination for affording a connection, preferably a mov- 60 able one, between the parts may be used.

E indicates a spacing-block secured to the way C and adapted to hold it in position at right angles to the slot B, to which my device is preferably attached. 65

F indicates a button adjustably secured to the way C beneath the spacing-block E by the screw G.

The above-described device is for securing the way to the machine and is a simple and 70 convenient one; but any other suitable means may of course be employed.

Pivoted to the slide D is an arm H, upon the free end of which, at right angles to it, is fastened another arm J, journaled at its upper 75 end to receive the axle K of the circular brush L. Upon the opposite end of said axle is provided a crank M, adapted to rotate the brush. The free end of the arm H, the arm J, secured thereto, and the brush borne on the arm J are 80 adapted to be carried substantially over the central opening of a type-writer of that general class in which the type-bars are fastened in the form of a circle to the machine and are adapted to be lifted by the keys to strike a 85 central point within this circular aperture. The brush is located directly over this central point, so that when the type are raised one after another the brush being operated against the face of each individual type cleans 90 it, as is hereinafter set forth. Instead of the direct connection between the said crank and the revolving brush multiplying gears N (see Fig. 3) between the crank and the brush may be used to increase the speed of the latter. 95

In place of the circular brush a flat brush and mechanism to impart reciprocating motion to it may be employed. In Fig. 2, which

illustrates this modification of my invention, O indicates a flat brush provided with side bearings Q, which slide in the grooves R of the frame S. T indicates a crank connecting
5 the gears N with the brush O by means of the pitman *u* to impart reciprocating motion to the brush.

The way C is cut away at its outer end, so as to receive the arm H and allow the brush
10 to enter the space beneath the top plate of the machine and be out of the way when the cleaner is not in use.

In applying and operating my device, the carriage being first raised, the sliding way C
15 is secured by the button F to the top plate A and the slide D moved along until the brush L is directly over the center of the machine. Then, striking the keys successively, as in writing, each type is raised until it touches
20 the brush, which is operated against the face of it until cleaned. In this way all the type of the machine can be cleaned or only such as need cleaning.

One of the advantages of my invention I
25 hold to be is its adaptability to old machines; but it may be, of course, built into new machines. In that case some of the elements

which render it attachable to all machines may be, if desired, omitted.

What I claim is—

1. The combination, with printing-types of
30 a type-writing machine arranged in a circle and the frame of said machine provided at its top with a circular opening through which the types operate, of an attachment for cleaning
35 the types, comprising a frame adapted to be secured to the top of the machine-frame and extending over the said central opening thereof, a brush mounted upon said frame at
40 the center of said opening and over the point at which the type strike when lifted, and means for giving motion to said brush, substantially as set forth.

2. In a type-writing machine, the combination, with the sliding way C, removably se-
45 cured thereto, of the slide D, arms H and J, brush L, and crank M, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

GEORGE E. GRAFF.

Witnesses:

SETH T. MCCORMICK,
WALLACE ROBB.