(No Model.)

F. M. McGLOTHLEN.

TYPE WRITING MACHINE.

No. 464,985. Patented Dec. 15, 1891.

Fig. 1.

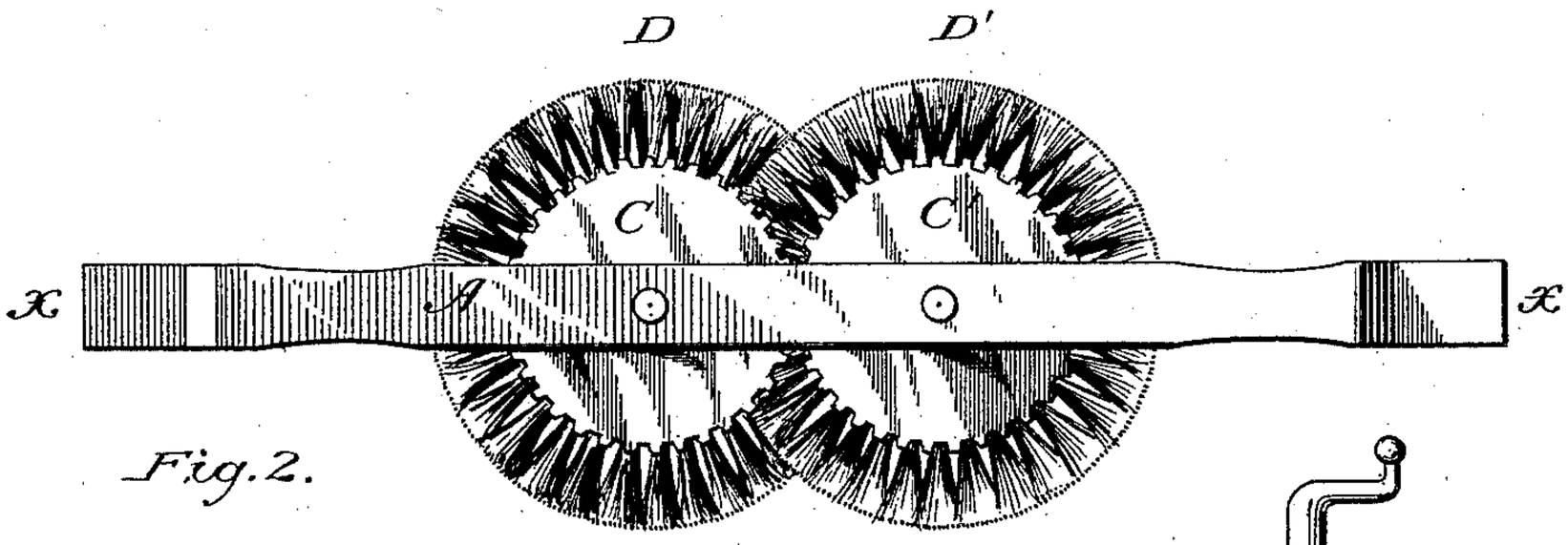


Fig. 2.

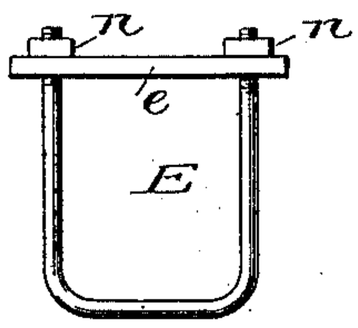


Fig. 4.

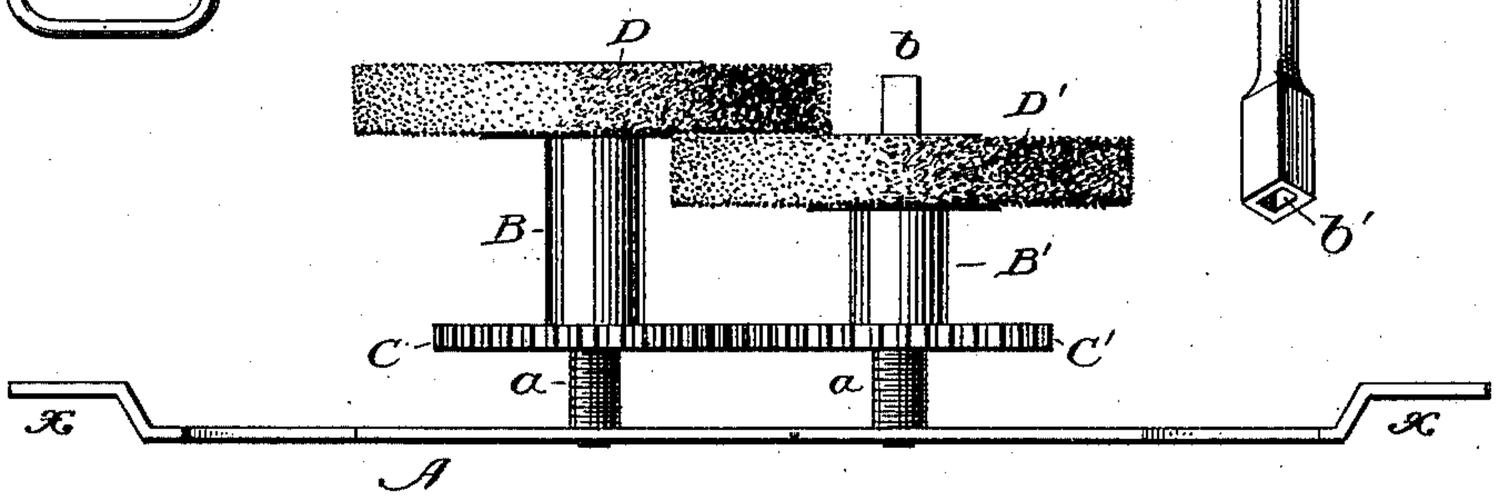


Fig. 3.

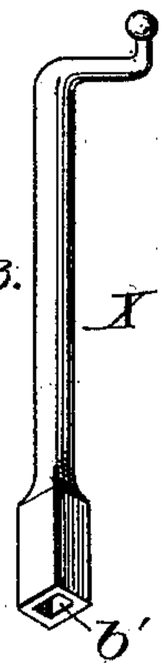


Fig. 5.

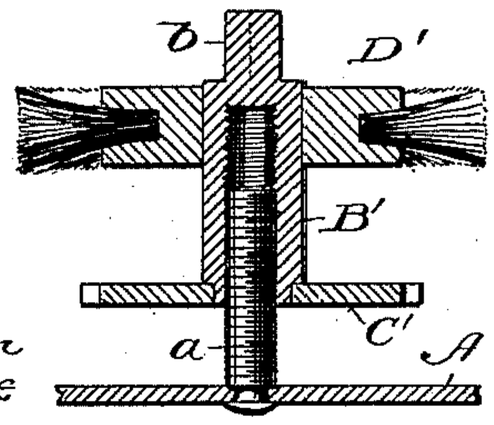
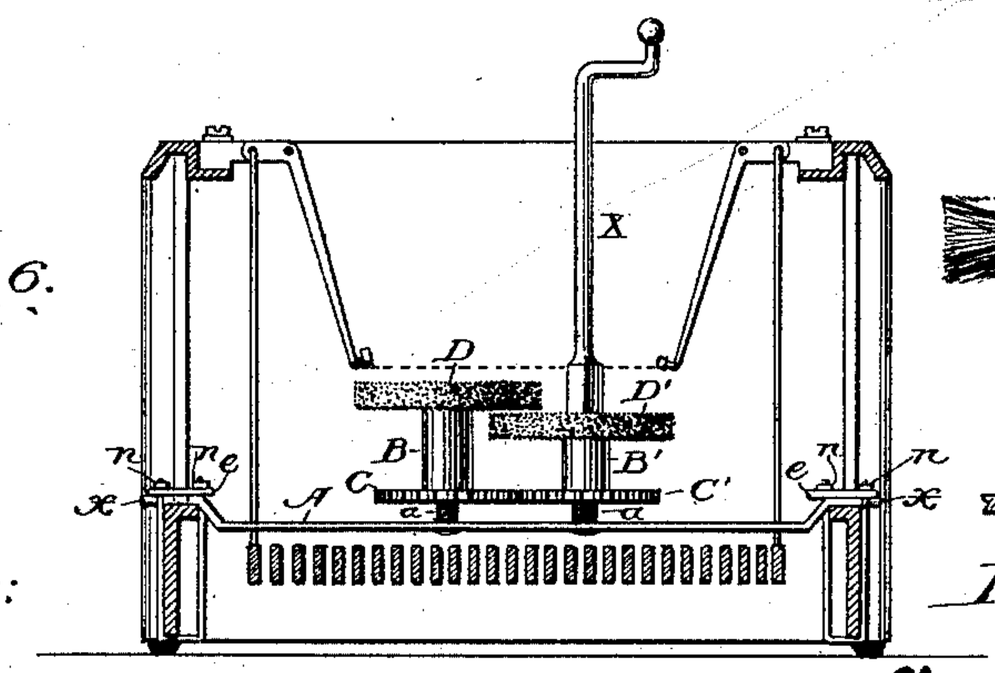


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANCIS M. McGLOTHLEN, OF SIOUX CITY, IOWA.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 464,985, dated December 15, 1891.

Application filed April 18, 1891. Serial No. 389,535. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. McGLOTHLEN, a citizen of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented certain new and useful Improvements in Duplex Revolving Cleaners for Type-Writing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to improvements in type-writing machines; and the object is to provide a duplex revolving type-cleaner which cleans the type in a speedy and thorough manner without soiling the hands of the operator.

My invention therefore consists in the novel construction and arrangement of the parts and the combination thereof, as will be hereinafter fully described, and specifically pointed out in the claims.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a side view of my invention. Fig. 2 is a view showing clamp used to secure my invention to the frame of a machine. Fig. 3 is a view showing crank used to operate the brushes. Fig. 4 is a plan view of duplex revolving type-cleaner. Fig. 5 is a vertical central section of one of the brushes and its rod. Fig. 6 is a view of the cleaner in operative position in the type-writing machine.

Referring now to the illustrations, wherein like parts are designated by similar letters of reference, A designates a flat bar or rod having its ends bent at right angles, as shown, and being of sufficient length to extend from one side to the opposite side of the frame, said bar or rod being provided with suitable openings to receive the threaded rods *a a*.

a a designate short threaded rods having their inside ends secured to the bar A, their opposite ends being left free to allow said rods to revolve freely in the hollow shafts B B′.

B B′ designate hollow shafts mounted on the threaded rods *a a*, said shafts having a circular core threaded to conform to threaded rods, the inside ends of said shafts and the outside end of shaft B′ being made smaller in circumference and squared, as shown at *b*.

C C′ designate gear-wheels rigidly mounted on the squared inside ends of the shafts B B′, said gear-wheels being provided with square openings to receive the squared inside ends of said shafts. These wheels gear with each other to revolve the shafts.

D D′ designate the brushes. These brushes each consist of a circular wooden disk having its periphery supplied with suitable bristles. Each of said disks is provided with a circular opening conforming in size to the outer ends of shafts B B′, upon which shafts said brushes are rigidly mounted, brush D being mounted flush with the end of shaft B, and brush D′ being mounted on shaft B′ at a little distance from the outer end of the shaft.

My invention is secured to the frame of a type-writing machine as follows: The duplex type-cleaning brushes, shafts, gear-wheels, and threaded rods being arranged and connected to bar A, as shown, the whole device is placed inside of the ellipse formed by the arrangement of the type in an elliptical shape, as is the case in several well-known machines, the ends *x x* of bar A being secured to the sides of the bottom frame of the machine by means of clamps similar to clamp E of the drawings, the U shape of the clamp being adapted to fit around the bottom of a side frame, and the rod *e* adapted to lie across the upper side of a side frame and an end *x* of the bar A and to hold said bar end rigidly on said side frame, and rod *e* being adapted to be rigidly held in place by means of nuts *n n*, the upper ends of the side pieces of the clamp being threaded to receive said nuts. By means of nuts *n n* the rod *e* may be tightened or loosened when desired.

The crank used to operate my type-cleaner is a crank of ordinary construction, as shown in Fig. 3, the lower end being provided with a square opening *b′* to engage the squared end *b* of shaft B′.

The type-cleaner being placed in a machine, as described, its position will be that shown in Fig. 4 of the drawings, the bar A intended to extend horizontally from side to side of the frame of the machine, the threaded rods *a a* and shafts B B′ assuming a vertical

position, and the gear-wheels C C′ and brushes D D′ assuming a horizontal position.

The operation of my device will readily be perceived. When the type need cleaning, the carriage of the machine is thrown back, a crank, as X, is passed down in the opening between the type-bars at the top of the machine, and the squared opening *b′* at the lower end of the crank is adjusted to engage the squared end of shaft B′. By means of the crank the shafts are revolved, causing both brushes to revolve up and down on the threaded rods *a a*. As the brushes pass the type they clean them. If the type are not exceedingly dirty, one passage of the brushes up and down past the type will be sufficient. If the type are extra dirty, several passages of the brushes may be given in a moment's time and the type be thus thoroughly and speedily cleaned. After the type are cleaned the brushes can be revolved downward on the threaded rods and be left out of the way of the type, the crank withdrawn, and the operator has cleaned his type in a moment's time without soiling his hands and is again ready for writing.

Having thus fully and clearly described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a type-writing machine, a device for cleaning type, composed of the following parts, viz: a flat bar A, having its ends bent at right angles, as shown, the threaded rods *a a*, secured to said bar, the hollow threaded shafts B B′, mounted on said rods, gear-wheels C C′, mounted on the inside ends of said shafts, brushes D D′, also mounted on said shafts, as shown, the bar A, adapted to be secured at its ends to the frame of a machine, and the brushes on the shafts adapted to revolve up and down with the shafts when said shafts are made to revolve on the threaded rods, all substantially as set forth.

2. In a type-writing machine, in combination with its type and type-bars, two circular-shaped brushes, as D D′, adapted to revolve with shafts, as B B′, provided with gear-wheels, as C C′, said shafts being mounted on threaded rods, as *a a*, said brushes being capable of being revolved up and down with the shafts on the threaded rods by means of a crank, as X, said threaded rods being secured at their lower ends to a bar, as A, which extends horizontally across the machine under the type and is secured at its ends to the side of the frame, and the opposite ends of said rods being free and adapted to revolve freely on the shafts, all substantially as set forth.

3. In a type-cleaning device, the combination of the bar A, bent at the ends, as shown, the threaded rods *a a*, shafts B B′, gear-wheels C C′, brushes D D′, clamps E E, and a crank X, all arranged as set forth.

4. In a type-writing machine, the combination, with the machine, of a bar A, bent at its ends, as shown, said ends being adapted to be secured to the sides of the frame of the machine by means of suitable clamps, as E, the threaded rods *a a*, vertically secured to said bar, the threaded shafts B B′, mounted in a vertical position on said rods, the gear-wheels C C′, and brushes D D′, mounted in a horizontal manner on said shafts, the shaft B′ being squared at its outer end, adapted to be engaged by a crank, as X, by means of which said shaft is made to revolve, causing the gear-wheels to revolve and to operate the other shaft, and the brushes adapted to revolve up and down with the shafts and to engage the type and clean them as the brushes pass and repass the type-circle, all substantially as set forth.

5. The combination, with the printing-types and frame of a type-writing machine, of an attachment for cleaning types, comprising two circular type-cleaning brushes mounted on two hollow threaded shafts provided with suitable gear-wheels gearing together to cause both shafts to revolve at once, said shafts being in turn mounted vertically upon threaded rods and adapted to revolve thereon, the lower ends of said rods being secured to a horizontally-set bar A, adapted to be secured to the frame of a machine by means of suitable clamps, and the brushes adapted to revolve up and down with the shafts upon which they are rigidly mounted and to clean all the type of the machine at once, all substantially as set forth.

6. The combination of the bar A, bent at its ends, as shown, the threaded rods *a a*, secured to said bar, the shafts B B′, mounted in a vertical position on said rods, the core of said shafts being threaded to engage the threads of the rods and to revolve freely thereon, the gear-wheels C C′, mounted on the squared inner ends of said shafts and adapted to gear with each other to revolve the shafts, the brushes D D′, also mounted on said shafts, as shown, said brushes adapted to revolve up and down with said shafts upon the threaded rods when a crank is used to revolve the shaft B′, the clamps E E, adapted to secure the ends of bar A to the sides of the frame of the machine, and the brushes adapted to clean the type as they revolve up and down past the type, all as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS M. McGLOTHLEN.

Witnesses:

GUY C. RICH,

S. L. CARPENTER.