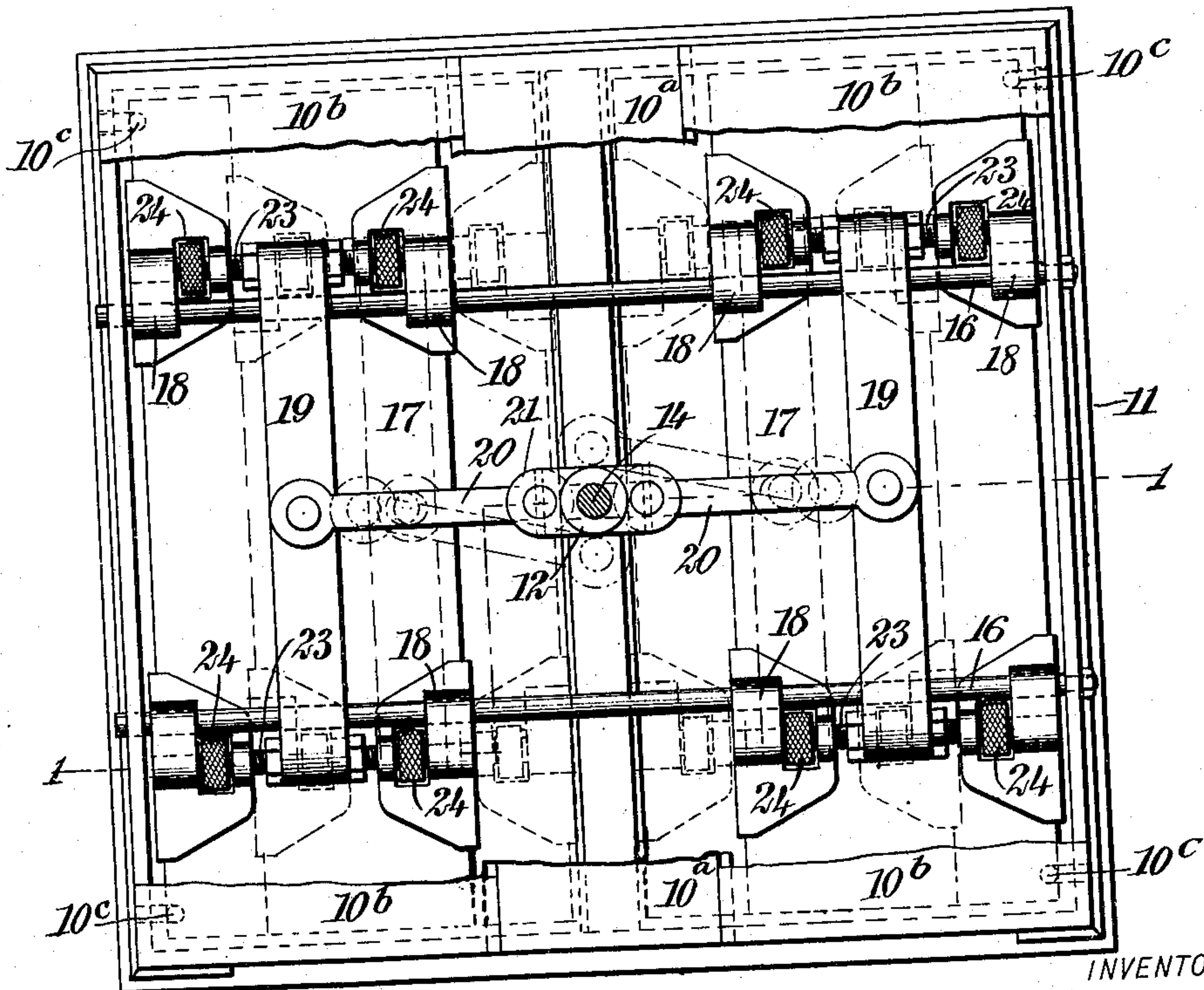
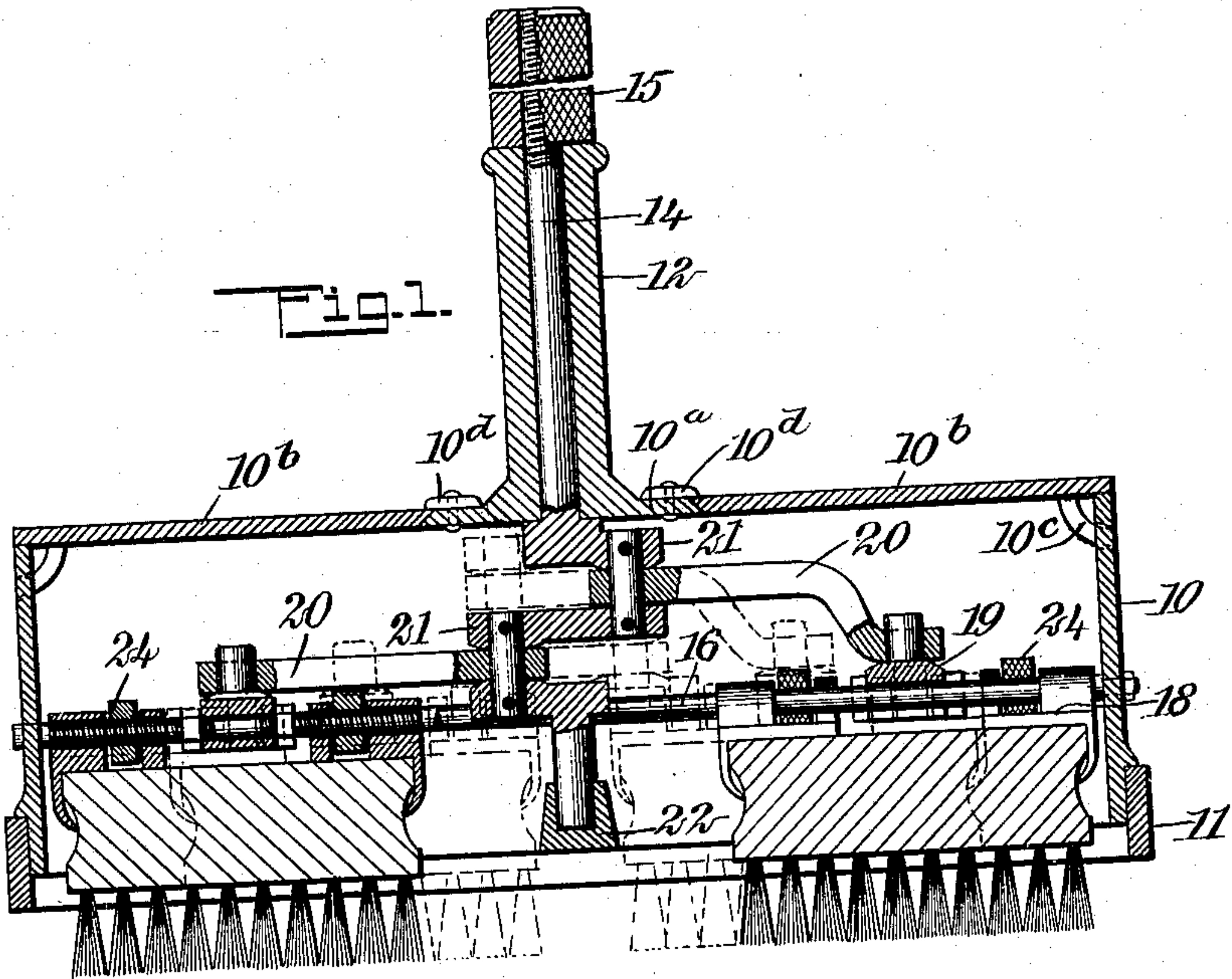


No. 858,940.

PATENTED JULY 2, 1907.

P. H. BACON.  
BRUSHING MACHINE.  
APPLICATION FILED MAR. 29, 1906.



WITNESSES

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# UNITED STATES PATENT OFFICE.

PAUL H. BACON, OF NEW YORK, N. Y.

## BRUSHING-MACHINE.

No. 858,940.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed March 29, 1906. Serial No. 308,678.

*To all whom it may concern:*

Be it known that I, PAUL H. BACON, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county of New York and State of New York, have invented a new and Improved Brushing-Machine, of which the following is a full, clear, and exact description.

My invention relates to a machine designed especially for washing electrotype plates, but useful in many other connections, as will fully appear hereinafter.

Primarily the object of my invention is to provide a machine which may be manually lifted and guided over the work and in which the brushes may be rapidly driven by machine power transmitted through a flexible shaft.

To this end my invention consists in certain special features and combinations of parts, all of which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings which illustrate as an example the preferred embodiment of my invention, in which drawings

Figure 1 is a section on the line 1-1 of Fig. 2; and Fig. 2 is a plan view the top of the box or frame being broken away to more clearly disclose the construction underneath.

10 indicates the frame which is preferably rectangular and in the form of a box, the bottom being open and the top being formed by a rigid cross piece 10<sup>a</sup>, at each side of which are lids 10<sup>b</sup> fastened by pins 10<sup>c</sup> on the lids, and buttons 10<sup>d</sup> on the cross piece 10<sup>a</sup>. These lids are removable and facilitate access to the interior of the box-like frame 10. The lower edge of the frame 10 has a rubber or other skirt 11 fastened to and projecting below it to prevent injuring the electrotype plates or other articles on which the brushing machine is used. The rigid cross piece 10<sup>a</sup> has a tubular handle 12, and through this handle a rotary driving shaft 14 passes loosely.

15 indicates a coupling of any desired sort by means of which the shaft 14 may be removably connected with a flexible shaft or other means for driving the shaft 14.

Fastened in the box-like frame are two transverse guide rods 16. Clamping jaws 18 are arranged to slide on these guide rods 16, and said jaws are connected by screws 23 to cross bars 19 which are one for each brush, and which also slide on the guide bars.

24 indicates nuts by means of which the screws 23 may be operated to draw the jaws 18 in pairs toward each other, and these jaws hold between them the brushes 17 which are preferably two in number. In this manner the jaws 18 hold the brushes and serve, through the medium of the screws 23, to connect the

brushes with the cross bars 19. Said cross bars 19 have links 20 pivoted thereto, and the links 20 are joined to the double crank 21 on the drive shaft 14, the lower end of said shaft being stepped on a suitable bearing formed in the cross bar 22 extending along the bottom portion of the frame 10. It, therefore, follows that rotation of the shaft 14 will cause the links 20 and cross bars 19 to move toward and from each other, the cross bars sliding on the guide rods 16 and transmitting to the brushes corresponding movement through the screws 23 and clamps 18. It will also be seen that by operating the nuts 23 on the screws the jaws 18 may be made to engage the brushes with any degree of firmness, and also to carry brushes of different widths, the bristles of the brushes projecting below the skirt or apron 11 so that they may act freely on the work.

In the use of the invention the shaft 14 is preferably driven by a flexible shaft connected with the coupling 15, and the device may be conveniently handled and moved from place to place by the handle 12. The invention is especially adapted for washing electrotype plates, and when this is done the plates are contained in vats or tanks, and the brushing machine grasped by the handle 12 is dipped into the tank so that the brushes engage the plates. The shaft 14 is then started to operate and the brushes are moved back and forth over the face of the work. At the same time the entire machine may be bodily moved over the plates, thus increasing the brushing action and causing it to be applied to all parts thereof. It will be seen that the invention may be used in various other connections, notwithstanding its special adaptability to the work named.

Having thus described the preferred form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a brushing machine, the combination of a frame, a driving shaft, a guide rod in the frame, clamping jaws arranged to slide on the guide rod and adapted to hold a brush, means for adjusting the clamping jaws, and means connecting the jaws with the drive shaft.

2. In a brushing machine, a frame, brushes arranged at opposite sides of the frame in alinement with each other, a shaft vertically journaled in the frame, crank arms carried by the shaft, and means connecting the crank arms with the brushes to reciprocate them to and from each other.

3. In a brushing machine, a frame, a guide rod fixed in the frame, clamping jaws slidable on the guide rod, a brush secured between the clamping jaws, a shaft vertically journaled in the frame, and connections between the shaft and brush whereby the latter is adapted to be reciprocated.

4. In a brushing machine, a frame, a guide rod secured in the frame, a brush, clamping jaws slidably mounted on the guide rod and engaging the brush, means connecting the clamping jaws for moving them to and from each other, and means for reciprocating the jaws.

5. In a brushing machine, a frame, guide rods therein, a pair of clamping jaws slidably mounted on each guide rod, means securing both pairs of clamping jaws rigidly together, and means for causing the clamping jaws to reciprocate on the guide rods.

6. In a brushing machine, a frame, two guide rods secured in the frame parallel to each other, two sets of clamping jaws slidably mounted on each guide rod, means for rigidly connecting together a set of clamping jaws on

each rod, and means for reciprocating said last-named 10 means as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL H. BACON.

Witnesses:

ISAAC B. OWENS,  
JNO. M. RITTER.