(No Model.) 2 Sheets—Sheet 1.

R. T. PALMER, Jr.

BRUSHING MACHINE.

No. 443,179. Patented Dec. 23, 1890.

Fig. 1.

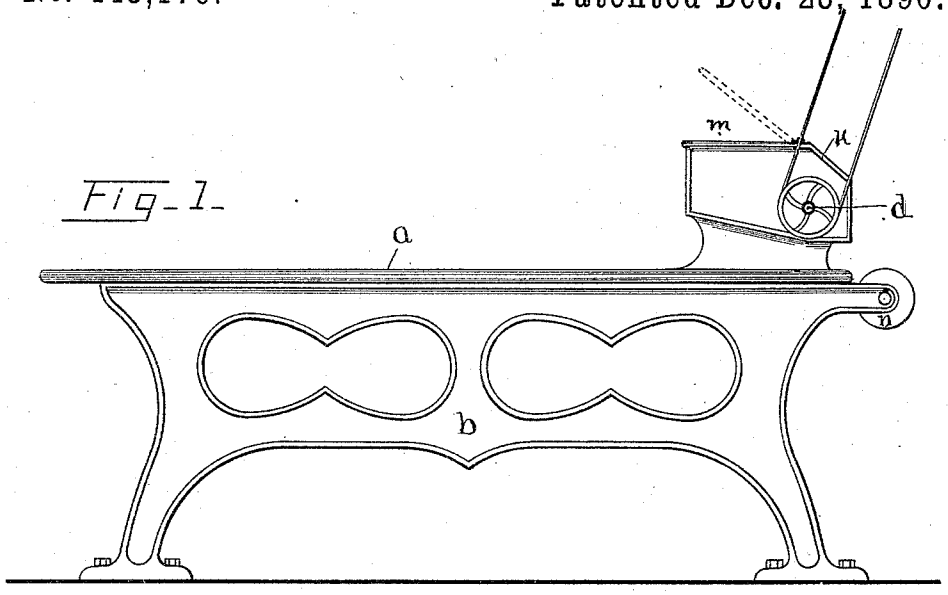


Fig. 2.

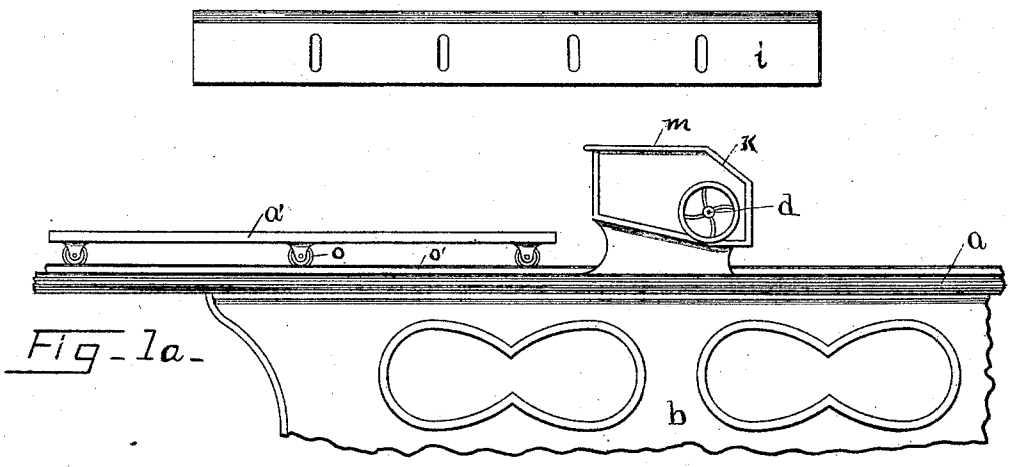


Fig. 1a.

Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

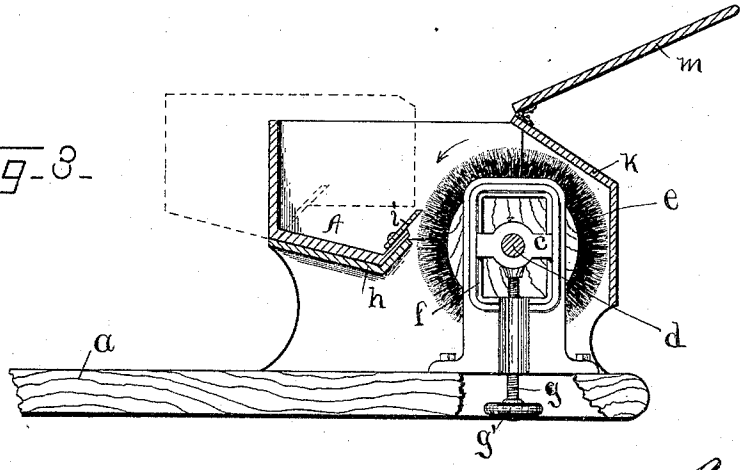
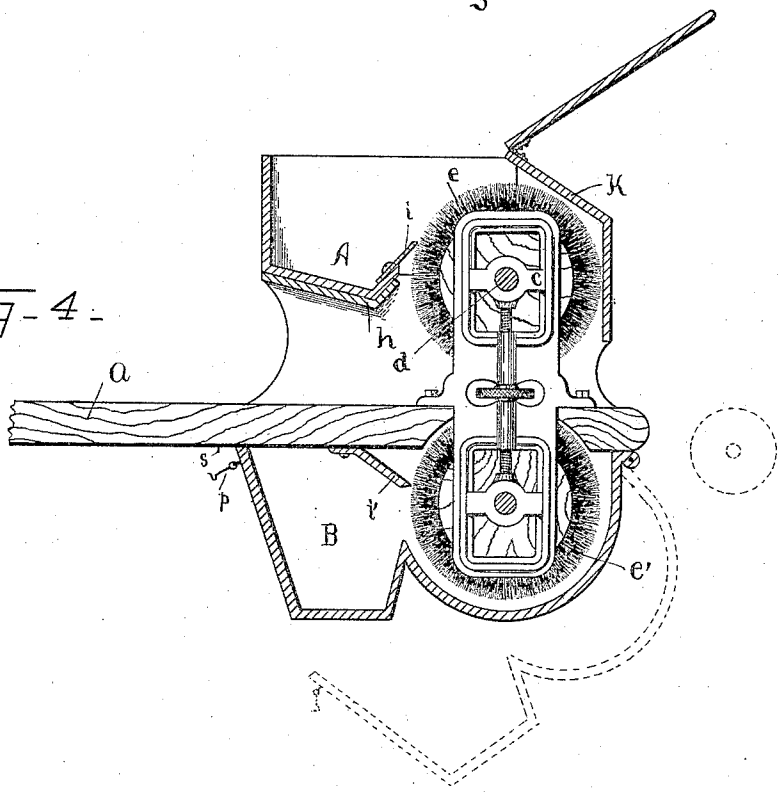


Fig. 4.



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UNITED STATES PATENT OFFICE.

REUBEN T. PALMER, JR., OF NEW LONDON, CONNECTICUT.

BRUSHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 443,179, dated December 23, 1890.

Application filed June 14, 1890. Serial No. 355,419. (No model.)

To all whom it may concern:

Be it known that I, REUBEN T. PALMER, Jr., a citizen of the United States, and a resident of the city and county of New London, and State of Connecticut, have made certain new and useful Improvements in Brushing-Machines, which improvements are fully set forth and described in the following specification, reference being had to the accompanying two sheets of drawings, in which—

Figure 1 is a side elevation of a machine of my simplest construction, and Fig. 1ª portions of a similar machine in which the table that supports the work to be brushed is supported on a tramway in such manner that it may be passed under the brush, as hereinafter explained. Fig. 2 is a detached face view of the plate employed to strip the dirt and lint from the brush. Figs. 3 and 4 are enlarged views of the brush mechanism, partly in vertical section, illustrating the manner of supporting and adjusting the brush or brushes and also the provision made for emptying the dust box or boxes. In the former of said figures (3) a single brush is used, as in Fig. 1, while in the latter figure (4) two brushes are shown.

The object of my invention is to provide in simple and substantial form a machine for brushing manufactured fabrics of considerable size, such as bed-comfortables. With this object in view I have produced a machine having one or more revolving brushes, (with dust-collecting boxes,) across or past which brushes the fabric may be moved.

In the several figures of the drawings, the letter *a* denotes the machine-bed, and *b* a suitable supporting-frame to which the bed is firmly fastened. Supported in journal-bearings *c*, secured to said table, is a shaft *d*, that carries a circular brush *e*, the said journal-bearings being preferably arranged to slide on ways *f* and controlled by a screw *g* and hand-wheel *g'*. Provision is thus made for raising or lowering the brush to allow the passage of fabrics of greater or lesser thickness.

At one side of the brush-shaft is a dust-receptacle A, which I prefer to form as a box that may be simply supported (in proper relation to the brush) on brackets *h*, of angular form, as shown in Figs. 3 and 4, thus forming a pocket in which the dust-box may rest with no inclination to become displaced by the jar of the machine when in use.

On the inner side of box A, adjacent to the brush, is a plate *i*, (with beveled edge,) secured to the bottom of said box tangentially to the perimeter of the brush and in contact with said brush. As the brush revolves, the dust and lint removed from the fabric are stripped from the brush by plate *i* and thrown into box A. When said box becomes filled or partially filled, it may be lifted from brackets *h*, as indicated by dotted lines in Fig. 3, and emptied without disturbing the various other elements of the machine. On the opposite side of the brush from the dust-box is a hood or shield *k*, that serves to protect and conceal the brush, and which has hinged to its upper portion a board *m*, that may serve as a cover for the dust-box to prevent the escape of the contents of said box.

A roller *n* is suitably journaled (in Fig. 1) at the end of the machine where the brush is located, the highest point of the circumference of said roller being in line with the top of table *a*. When a machine of the described construction is put to use, the brush is caused to revolve swiftly in the direction indicated by arrow *l* in Fig. 3, and the bed-comfortable or other work to be brushed is spread out on table *a*. An attendant on each side of the machine then grasps the work and moves its edge into contact with the brush, holding said work by the corners most distant from the brush and allowing it to be slowly drawn forward As the work passes the brush, it rides easily over roller *n*, and remains suspended over or on said roller until drawn back by the attendants, against the force of the brush, onto the table *a*. It may then be overturned and the opposite side fed forward and brushed. When the work (which we assume is a bed-comfortable) has been thus brushed on both sides, it is inspected and suitably folded while lying on table *a*, and is then ready for packing and shipment. The described roller *n* provides simple and inexpensive means for taking care of the work after it has passed the brush and allows said work to be drawn back onto the table *a*

without undue friction. It also serves to keep said work smoothly extended instead of allowing it to pile up in the rear of the brush, as would result if the table were simply continued in place of said roller. In Fig. 1ª this roller *n* is dispensed with and the table extended; but a supplemented table *a'* is therein provided for carrying the work, said table being supported by flanged or grooved rollers *o* on rails *o'* in such manner that the said supplemental table and any work supported thereon may be carried under the brush.

Fig. 4 shows the brush mechanism of a machine in which both sides of comfortables may be brushed, an additional brush *e'* being supported beneath the machine-table in bearings substantially like those above referred to in connection with the upper brush. With this lower brush is a dust-box B, that is preferably hinged to the table *a*, and thus adapted to be swung downward, as shown in dotted lines in Fig. 4, to remove the accumulation of dust, &c., in said box B. When in use, said box may be fastened in position by a hook *p* and eye *s*, or by any similar suitable locking device. A stripping-plate *i'* is secured to bed *a*, and serves to strip the dust from brush *e'* and cause it to enter box B. So far as I am familiar with the manufacture of comfortables it has heretofore been a common practice to brush them by hand before folding and packing them away for shipment or storage, the labor and expense consequent upon such a slow method being a considerable item in large manufactories of this class of goods; but with one or more brushing-machines of the above description the operation of brushing becomes a comparatively rapid and inexpensive one, besides furnishing a convenient table on which such comfortables may be inspected and folded.

I do not seek to secure to myself the exclusive use of a revolving brush and an adjacent dust-receptacle; but

I do claim as of my invention—

1. In a brushing-machine, the combination, with a work-supporting table, of a revoluble brush suspended over the table, brackets forming a pocket adjacent to said brush, a dust-receptacle in said pocket, and a plate for stripping the dust from the brush and causing it to enter the receptacle, substantially as described.

2. In combination with a work-supporting table, a revoluble brush suspended over said table, angular brackets adjacent to the brush, and a dust-receptacle supported in said brackets, substantially as set forth, and free to be removed to empty its contents.

3. In a brushing-machine, the combination, with a work-supporting table, of a revoluble brush over the table, a removable dust-receptacle adjacent to the brush, and a plate secured to the bottom at the inner side of the receptacle tangentially to and in contact with the surface of the brush, substantially as described.

REUBEN T. PALMER, JR.

Witnesses:
FRANK H. ALLEN,
ALONZO M. LUTHER.