

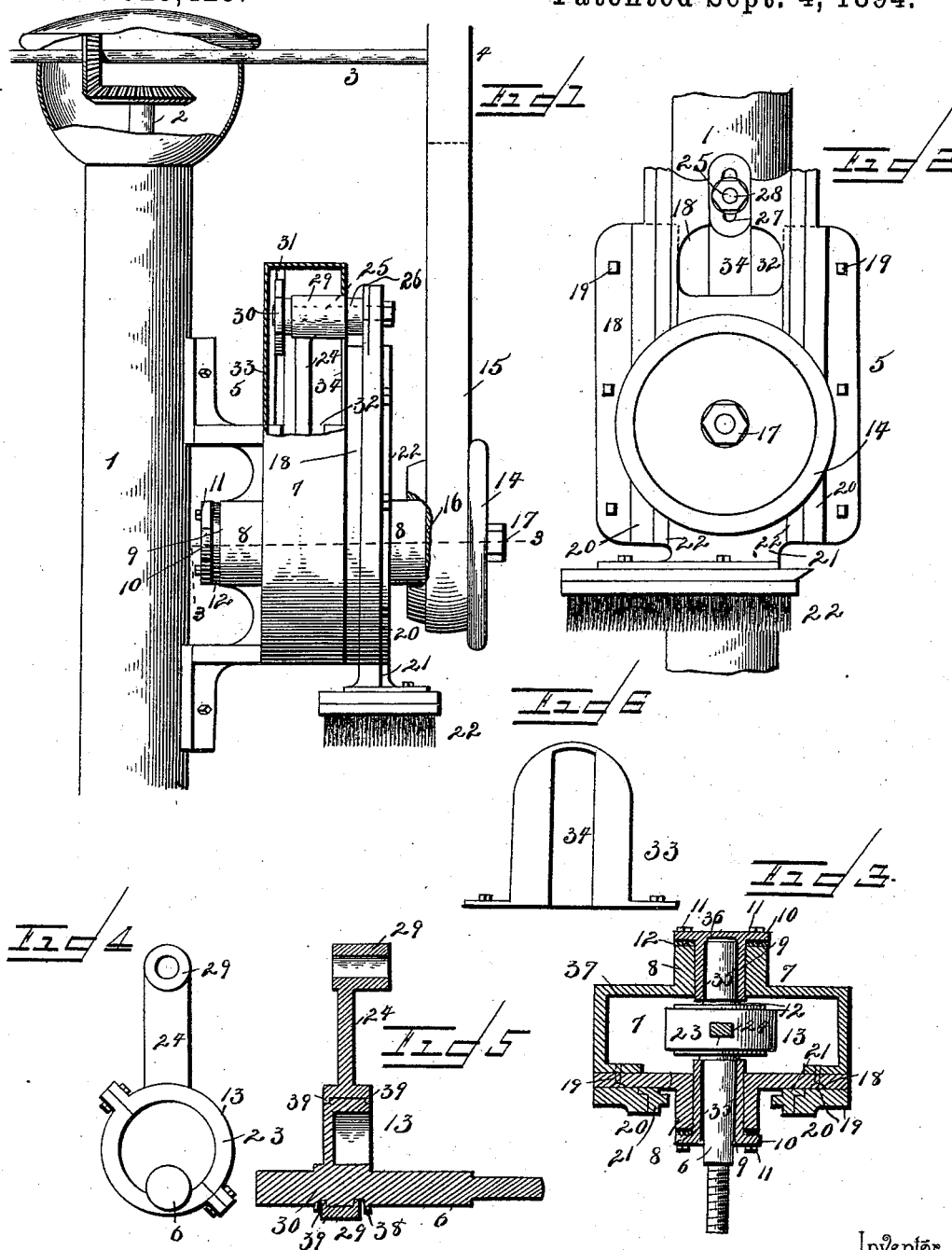
(No Model.)

I. RUSHWORTH.

DABBING BRUSH APPARATUS FOR WOOL COMBING MACHINES.

No. 525,429.

Patented Sept. 4, 1894.



Inventor

Isaac Rushworth.

Witnesses

W. E. Schneider.
[Signature]

By his Attorneys.

Chas. H. [Signature]

UNITED STATES PATENT OFFICE.

ISAAC RUSHWORTH, OF JAMESTOWN, NEW YORK.

DABBING-BRUSH APPARATUS FOR WOOL-COMBING MACHINES.

SPECIFICATION forming part of Letters Patent No. 525,429, dated September 4, 1894.

Application filed September 28, 1893. Serial No. 486,555. (No model.)

To all whom it may concern:

Be it known that I, ISAAC RUSHWORTH, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Dabbing-Brush Apparatus for Wool-Combing Machines, of which the following is a specification.

My invention relates to dabbing brush apparatus for wool combing machines, and it has for its object to provide a construction whereby the apparatus may operate with the minimum friction to avoid undue wearing of the parts and consequent lost motion; and in the attainment of this object I employ a certain novel construction, combination and arrangement of devices which are fully described hereinafter, the novel features being particularly pointed out in the appended claim.

In the drawings, Figure 1 is a side view of an apparatus embodying my invention. Fig. 2 is a front view of the same. Fig. 3 is a horizontal section, on the line 3—3 of Fig. 1. Fig. 4 is a view of the eccentric and eccentric rod detached from the apparatus. Fig. 5 is a vertical section of the latter. Fig. 6 is a detail view of the splash cover.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 represents a hollow pillar of the construction found in machines of this class, through which passes an axial shaft 2, to convey motion to the driving shaft, 3, which is mounted horizontally in the upper enlarged end of the pillar and is provided with a belt pulley, 4.

5 represents a box-bracket which is secured to the pillar at an intermediate point, and 6 an eccentric shaft which is mounted in bearings formed in the opposite sides of the cylindrical casing, 7, forming a part of said bracket. The casing is provided with hollow integral collars, 8, in which are adjustably fitted the bushings, 9, having exterior flanges, 10, secured to the outer ends of the collars by the screws or bolts 11, and held out of contact with said ends of the collars by the interposed compressible washers, 12, which are preferably of leather or similar material, said flanges being also disposed in a line flush with the exterior periphery of said collars. The eccentric, 13, is integral with this shaft and

operates within the casing, and the belt pulley, 14, which is secured upon the exterior portion of the shaft, and is connected by the belt 15 to the belt-pulley 4, is provided in its inner side with a recess or cavity, 16, to receive and fit the contiguous end of the adjacent collar, 8, to provide an additional bearing to prevent vibration and undue or irregular friction upon the bushing as clearly shown in Fig. 1, in which the pulley 14 is broken away to show the cavity and the arrangement of the collar 8 therein. It will be understood that as the collar is stationary and fits snugly in the cavity formed in the pulley, said pulley will be held from excessive lateral vibration even when the bearing becomes worn sufficiently to allow vibration of the eccentric shaft. The pulley 14 is secured to the shaft by means of a nut 17.

The front or outer side of the casing consists of a removable face-plate, 18, which extends vertically above the upper side of the casing, and to the outer surface thereof are secured, by means of screws 19, the parallel rabbeted guides 20. Between these guides is mounted the brush-carrying slide 21, the side edges of which are rabbeted to correspond with the guides, and to the lower end of which is attached the brush, 22, of the ordinary or any preferred construction.

23 represents an eccentric strap, fitted upon the eccentric and carrying the arm, 24, which is provided at its upper end with a forwardly extending pin, 25, having a collar 26 to bear against the rear side of the slide 21. The extremity of said pin projects through a vertical slot, 27, in the upper end of the slide and is engaged in front of the latter by the nut, 28, whereby the slide may be vertically adjusted, with relation to the arm 24 to cause the brush to strike deeper into the rotary comb, (not shown.) The pin 25 fits loosely in a sleeve 29 which is formed integral with the upper end of the arm 24, and is provided at its rear end, beyond said sleeve, with a guide-head, 30, fitting slidably between the parallel ways, 31. Thus, the pin is guided at both ends, respectively by the ways 31 and the slide 21, and the connection thereto of the upper end of the eccentric arm is loose to enable the parts to operate with a minimum amount of friction. An opening, 32 is formed

in the top of the casing to permit free movement of the eccentric arm, and the upper portion of the latter, with the co-operating parts, are covered by the splash cover, 33, which carries the ways, 31 at its opposite inner sides. This splash cover is provided, in its front side with a vertical slot, 34, through which the pivot pin, 25, projects. The splash cover is firmly secured to the upper side of the casing. Horizontal oil ducts, 35, are formed in the bores of the bushings and communicate with cavities, 36, at the extremities of the eccentric shaft, and communicating with said ducts are oil channels, 37, formed in the inner surfaces of the walls of the casing, which receive the oil as the latter is splashed by the eccentric strap at each revolution of the eccentric, and convey it to the bearings of the shaft and contiguous operating parts of the apparatus. The surface of the eccentric, as shown in Fig. 5, is rabbeted at 38, and the contacting surface of the strap is provided with ribs, 39, to engage and operate in said rabbets, the eccentric shaft being provided with integral rims or flanges which are arranged contiguous to the opposite faces of the eccentric to lie upon opposite sides of the strap.

From the above description it will be seen that the parts are connected to avoid unnecessary friction upon contacting surfaces, and guide the moving members to prevent lateral strain, twisting, &c.

Having thus described my invention, I claim—

In a dabbing-brush-apparatus, the combination of the casing provided with opposite

side bearings and a top opening, a horizontal shaft journaled in the opposite bearings of the casing and provided with an integral eccentric working therein, a separate splash cover mounted on top of the casing over its top opening and extending there-above, said splash cover being provided at its front side with a vertical slot and at opposite inner sides within the same with opposite vertical ways 31, a removable face plate secured to the front side of the casing and extending there-above in front of the splash cover and provided with exterior parallel guides, a brush carrying slide working between said guides, an eccentric strap working on the shaft eccentric and provided with an arm extending through the top opening of the casing into the splash cover and having an integral sleeve at its upper end, a pivot pin loosely mounted in said sleeve and adjustably connected at its outer end to the upper end of the brush carrying slide, and a guide head 30 fitted to the inner end of said pivot pin at one side of said sleeve and having its opposite side edges sliding in said vertical ways 31, the movements of said sleeve end of the strap arm and the guide head 30, being accommodated entirely within the splash cover into which the oil is splashed, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ISAAC RUSHWORTH.

Witnesses:

HARRY R. LEWIS,
LAWRENCE W. WILTSIE.