

No. 648,527.

Patented May 1, 1900.

J. H. RICHARDS.

ROTARY BRUSH.

(Application filed Aug. 31, 1899.)

(No Model.)

Fig. 1.

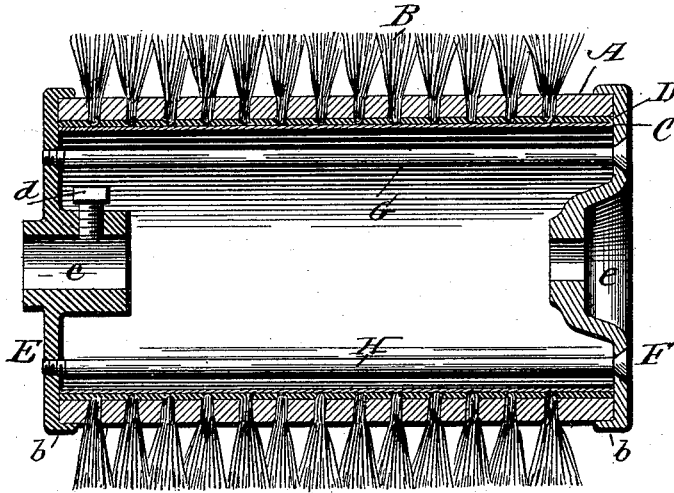


Fig. 2.

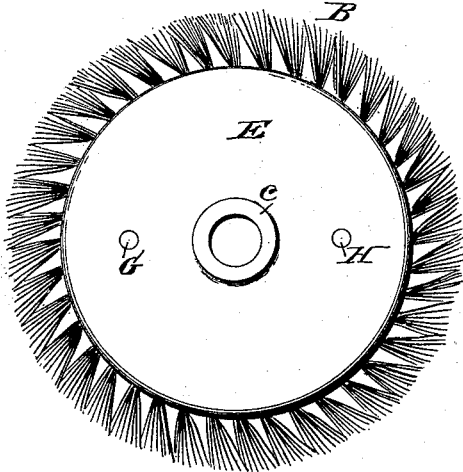
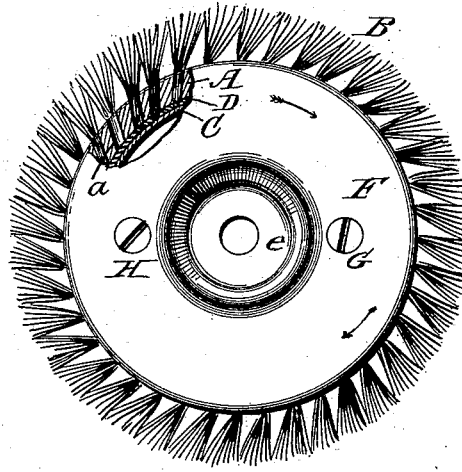


Fig. 3.



Witnesses:

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JOSIAS H. RICHARDS, OF ELMIRA, NEW YORK.

ROTARY BRUSH.

SPECIFICATION forming part of Letters Patent No. 648,527, dated May 1, 1900.

Application filed August 31, 1899. Serial No. 729,041. (No model.)

To all whom it may concern:

Be it known that I, JOSIAS H. RICHARDS, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Rotatable Brushes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has relation to rotatable brushes especially adapted for use in a machine for removing the fins or burs from type.

The fins or burs between the letters which result from the casting of a slug or line of type by the linotype or other similar typesetting machine without their removal by breaking or bending same below the face of the letters would leave an impression of these fins or burs on the print.

It is the purpose of the invention to provide means whereby these fins or burs may be effectively and expeditiously removed by forcing the same below the face of the letters without injury thereto, thereby insuring a sharp and clean impression upon the print.

The invention consists in a rotatable brush of special construction that will act upon the fins or burs with a "kicking" or pushing motion as the bristles are brought in contact therewith, as will be hereinafter described and claimed.

Figure 1 of the drawings is a longitudinal section of a rotatable brush constructed in accordance with my invention; Fig. 2, an end view thereof; Fig. 3, a view showing the opposite end with the metal head partly broken away.

In the accompanying drawings the body of the brush consists in part of an outer cylinder A of any suitable diameter and length and of paper, strawboard, or other suitable material. This cylinder has a plurality of holes *a* around the same, these holes being inclined to the radius of the brush, as shown in Fig. 3 of the drawings. The bristles B when inserted in these holes *a* and fastened in place will assume an angle or incline corresponding to the incline of the holes. A

second but thinner cylinder C is used, and between these cylinders is interposed a filling D, of glue, resin, or a suitable cement, to give a solid backing, so that when pressure is applied to the ends of the bristles they will not push through the holes into which they are secured.

In the construction of the body of the brush the cylinder A, after the bristles are secured in place in the holes *a*, may have a thick coating of glue, resin, or cement, and afterward the thinner cylinder C secured in place by its adhesion to the cement or whatever may be used as the interposed filling. The above construction provides a very strong and durable body to the brush, which is especially adapted to the use for which the brush is designed.

The ends of the body of the brush are provided with metal heads E F, having inwardly-extending circumferential flanges *b*, which extend over and tightly fit the cylinder A. The metal head E has a central hub *c*, projecting outwardly and inwardly beyond the plane of the head, that portion of the hub extending inwardly having a set-screw *d* for securing the hub to the rotatable shaft to which the brush is connected. The opposite head E has a cup-shaped central depression *e* and a hole therethrough to receive the end of the rotatable shaft. This enables a fastening-nut to be engaged with the screw-threaded end of the shaft and seat itself in the depression flush with the outer side of the metal head, thereby providing a fastening for the brush upon the shaft at both ends of the cylinder or body of the brush.

When the brush is in motion, the bristles thereof being disposed on an incline to the radius of the brush when brought in contact with the type will depress or bend down the fins or burs below the face of the letters by a kicking or pushing action. It should be understood that the brush rotates in the direction of the arrow shown in Fig. 3 of the drawings, the greatest resistance to the bristles being in that direction. If the bristles were disposed radially with the axis of the brush-cylinder instead of on an incline to the radius thereof, the bristles would pass over the face of the type with comparatively little resistance and would not effect the object sought—viz., the kicking or pushing action

of the bristles against the fins or burs, which is absolutely necessary to remove the fins or burs by breaking or bending them below the face of the letters.

5 The heads E F are held in contact with the ends of the cylindrical body of the brush by means of the rods G H, which clamp the heads tightly against the same, said rods being headed upon one end and screw-threaded
10 upon the opposite end to engage with screw-threaded holes in the head E, thereby providing screw-threaded clamping-rods that will securely hold the heads in place.

It is the purpose to place the cylindrical
15 bodies with the bristles connected thereto on the market independent of the metal heads, so that when the bristles of the body become worn and useless the heads may be removed therefrom and a new cylindrical body with its
20 bristles may be substituted in place thereof, using the metal heads indefinitely with new bodies as said bodies become useless by wear.

Having now fully described my invention, what I claim as new, and desire to secure by
25 Letters Patent, is—

1. A cylindrical body for rotatable brushes,

consisting of an outer cylinder and an inner cylinder, and an interposed filling of a suitable cement, said outer cylinder having a plurality of holes disposed on an incline to
30 the radius to said body, and bristles secured therein, substantially as and for the purpose described.

2. A rotatable brush, consisting of a suitable cylindrical body, bristles connected there-
35 to and disposed on an incline, metal heads and clamping-screws for detachably securing the heads to the ends of the body of the brush, one of said heads having an inwardly-projecting hub, and the opposite head a cup-shaped
40 depression with hole for the end of the rotatable shaft to which the brush is connected, both the heads having inwardly-projecting flanges, substantially as and for the purpose
45 set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSIAS H. RICHARDS.

Witnesses:

F. B. WEAVER,
A. S. CARTER, Jr.