No. 658,270. Patented Sept. 18, 1900.

H. MARLES.

BRUSH ATTACHMENT FOR WOODWORKING MACHINES.

(Application filed Mar. 1, 1900.)

(No Model.)

Fig. 1.

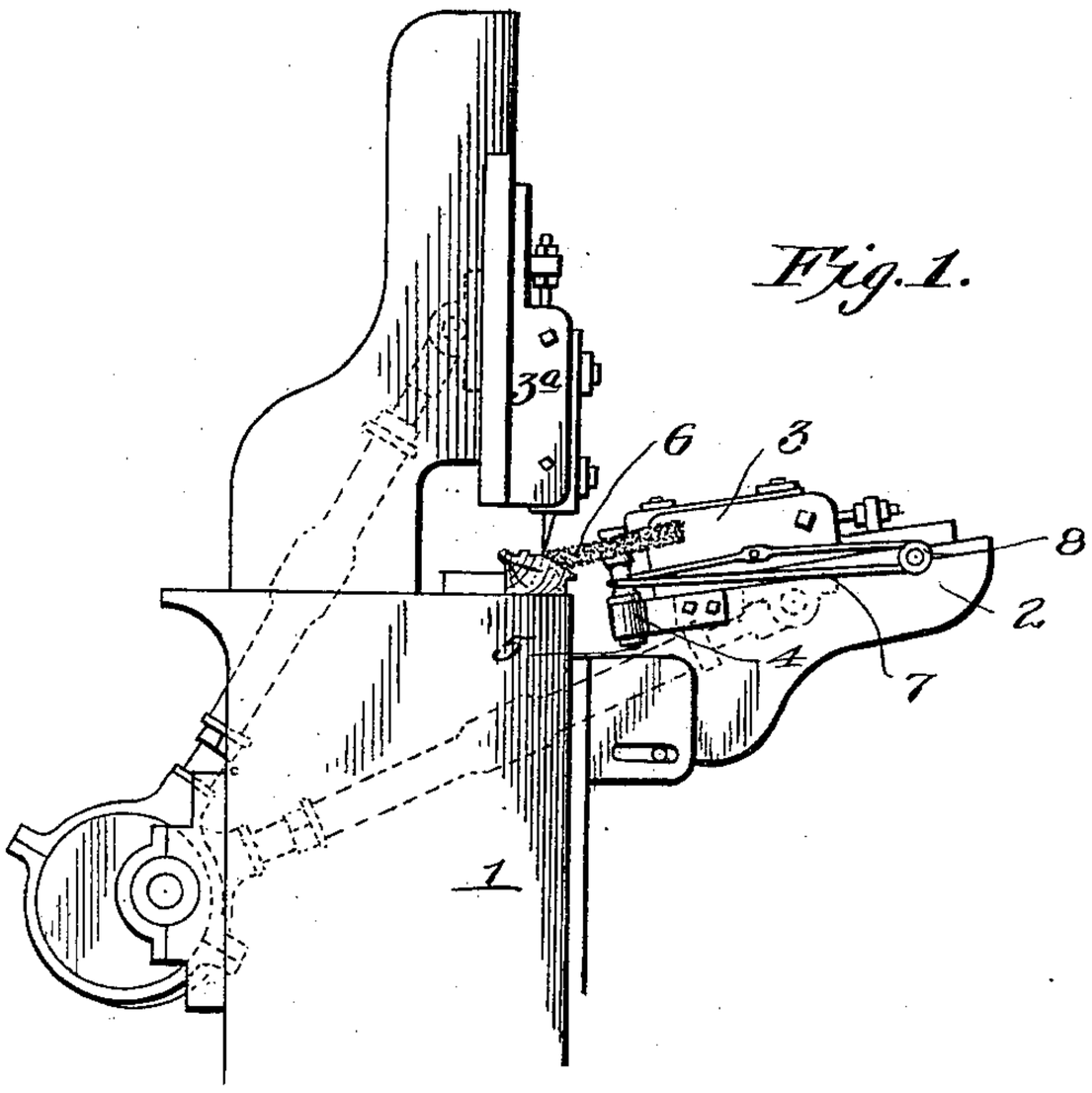

Fig. 2.

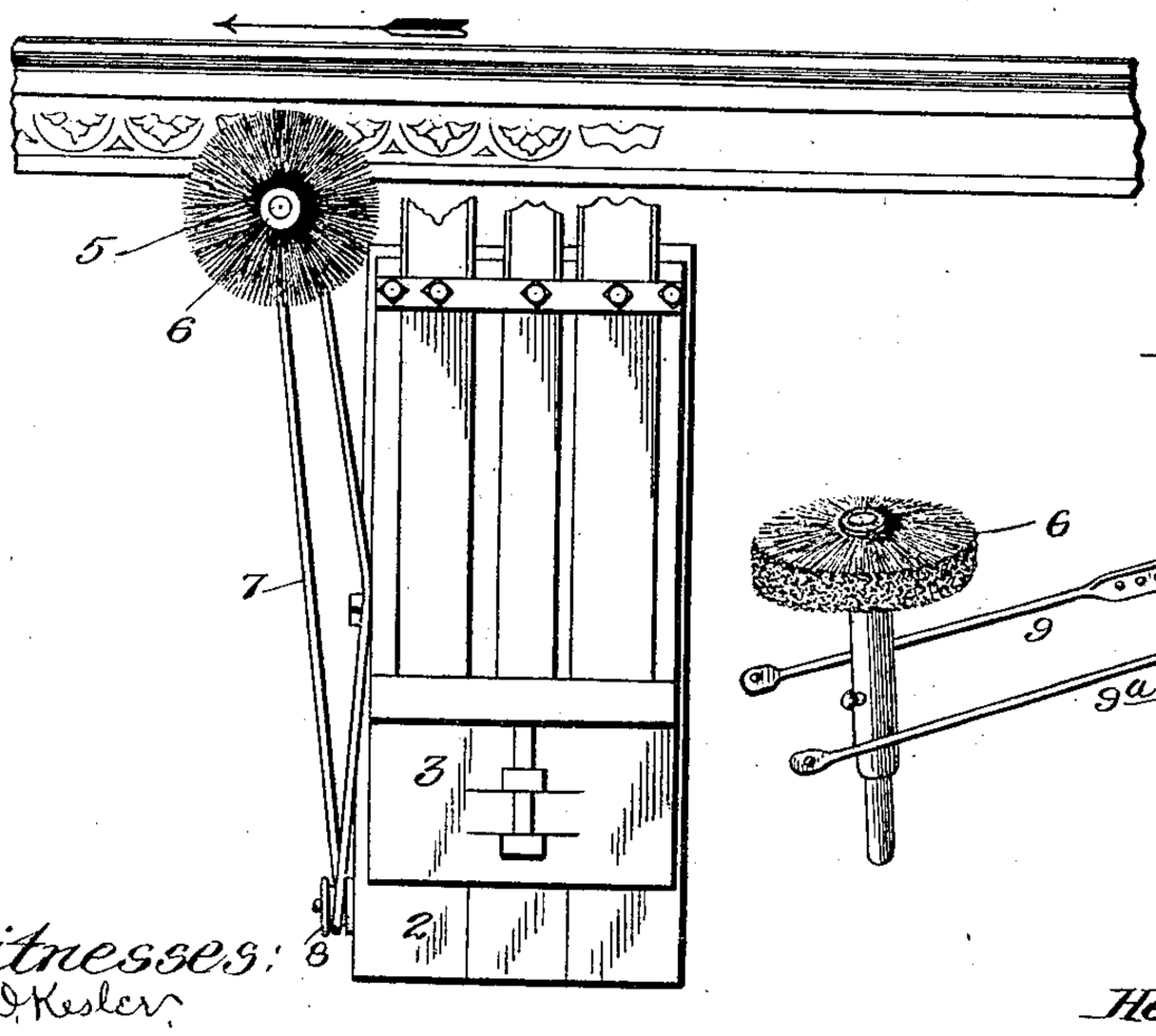

Fig. 3.

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UNITED STATES PATENT OFFICE.

HENRY MARLES, OF LONDON, ENGLAND, ASSIGNOR TO THE MARLES CARVED MOULDING COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

BRUSH ATTACHMENT FOR WOODWORKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 658,270, dated September 18, 1900.

Application filed March 1, 1900. Serial No. 6,983. (No model.)

To all whom it may concern:

Be it known that I, HENRY MARLES, a subject of the Queen of Great Britain, residing at London, England, have invented certain new and useful Improvements in Brush Attachments for Woodworking-Machines, of which the following is a specification.

My invention relates to brush attachments for woodworking-machines for cleaning or brushing out the chips or waste resulting from the action of cutting-tools, and is particularly, although not exclusively, adapted for use in connection with the carving-machine disclosed in Letters Patent No. 616,002, granted to me the 13th day of December, 1898.

My invention has for its object the novel mounting of the brush and its connection with a reciprocating slide, whereby the reciprocation of the latter effects the rotation of the former.

My invention also has for its object the novel mounting of the cleaning-brush so that it is adjustable with the cutting-tool and a novel connection thereof with the reciprocating tool-carrying slide so that it is rotated by the reciprocation of said slide.

To these ends my invention consists in the novel arrangement and combination of parts hereinafter described, and pointed out in the appended clauses of claim, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation showing the manner of mounting and means of rotating the brush and its position with relation to the work operated on, illustrating in general outline so much of the carving-machine of the before-mentioned patent as will enable others to understand the manner of its use. Fig. 2 is a top plan view of the brush in operation upon a specimen piece of work. Fig. 3 is a view similar to Fig. 1 of a slightly-different arrangement.

In describing my invention I will do so with particular reference to its use in connection with the carving-machine disclosed in my aforesaid Letters Patent; but I wish it understood that this is merely illustrative, and I do not confine my invention to its use in connection with such a machine.

In the said drawings, the reference-numeral 1 indicates a standard adjustably supporting a table 2, in which reciprocates a tool-slide 3, carrying a series of cutting-tools, and the numeral 3ª indicates a second tool-slide, also carrying a series of cutting-tools. These tools are shown disposed so that they reciprocate in planes at substantially-right angles, as in said before-mentioned patent; but, as contemplated in said patent, they may be adjusted to work at any intermediate angle. The table 2, in which the slide 3 reciprocates, is provided with a journal 4, in which is rotatably mounted a brush-shaft 5. The portion 6 of the brush, which performs the funtion of sweeping out the chips or waste resulting from the action of the tools, is preferably composed of bristles of animal or vegetable material, but may be of any other suitable material. As illustrated most clearly in Fig. 1 of the drawings, an endless belt 7 is trained about the brush shaft or spindle 5 and a pulley 8, fixed to the table 2, and at one point in its length, preferably at the point where the two ends meet and are joined, it is secured to the reciprocating tool-slide 3. In another and equivalent form, as shown in Fig. 3 of the drawings, the connection for driving consists of two straps 9 and 9ª, one of which is at one end secured directly to the brush shaft or spindle and at its other end to the reciprocating tool-slide. The other strap 9ª is at one end secured to the brush shaft or spindle and first passes about the pulley 8 and then is connected to the reciprocating tool-slide. In both of these forms it will be seen that the reciprocation of the tool-slide operates to rotate the brush and also that the rotating of the brush during the outward reciprocation of the tool-slide is in one direction and on the inward reciprocation thereof it is rotated in the opposite direction. This rotation of the brush in opposite directions is of peculiar value in connection with machines of the class disclosed in my aforesaid Letters Patent, where designs of more or less complexity and consisting of symmetrical parts are cut into or upon molding-strips. In such machines the completed designs are passed from the cutting-tools to the cleaning-brush one by one in succession, and where the brush in its cleaning action is

rotated in opposite directions chips or waste material resulting from the action of the tools is swept out with the utmost satisfaction, all the chips or waste material being carried out of the design, leaving the latter perfectly clean or free of any such waste or chips.

The desirability of the rotation of the brush in reverse directions will be appreciated upon consideration of Fig. 2 of the accompanying drawings, wherein is shown a design cut into a molding and in which the cutting is deeper at the center than at the edges of the design and sharp shoulders occur. In cleaning out such work particularly it will be seen that if the brush rotated constantly in one direction—say toward the left—it would be difficult to clean out the chips at the right-hand side of the design, and the work as it passes from the machine would not be cleaned satisfactorily; but by the reverse rotation of the brush the cleaning is effected with the greatest satisfaction, the rotation of the brush toward the left cleanly sweeping out the chips of the left-hand part of the design and the rotation of said brush to the right cleanly sweeping out the chips of the right-hand part thereof.

Having thus described my invention, what I claim is—

1. In an attachment for cleaning out chips in woodworking-machines, the combination with a reciprocating part, of a brush connected to and rotated by the reciprocation of the former, substantially as described.

2. In an attachment for cleaning out chips in woodworking-machines, the combination with a reciprocating part, of a brush, and an endless band connected to the brush shaft or spindle and to said reciprocating part whereby the former is rotated by the reciprocation of the latter, substantially as described.

3. In an attachment for cleaning out chips in woodworking-machines, the combination with a reciprocating tool-slide, of a brush connected to and rotated by the reciprocation of the former, substantially as described.

4. In an attachment for cleaning out chips in woodworking-machines, the combination with a reciprocating tool-slide of a brush, and an endless band connected to the brush shaft or spindle and to said reciprocating tool-slide, whereby the former is rotated by the reciprocation of the latter, substantially as described.

5. In a cleaning attachment for woodworking-machines, the combination with a table, of a tool-slide reciprocating thereon, a brush rotatably carried by said table, and a connection between said brush and said slide whereby the former is rotated by the reciprocation of the latter, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HENRY MARLES.

Witnesses:
MAURICE EILAND,
CHARLES HALE.