

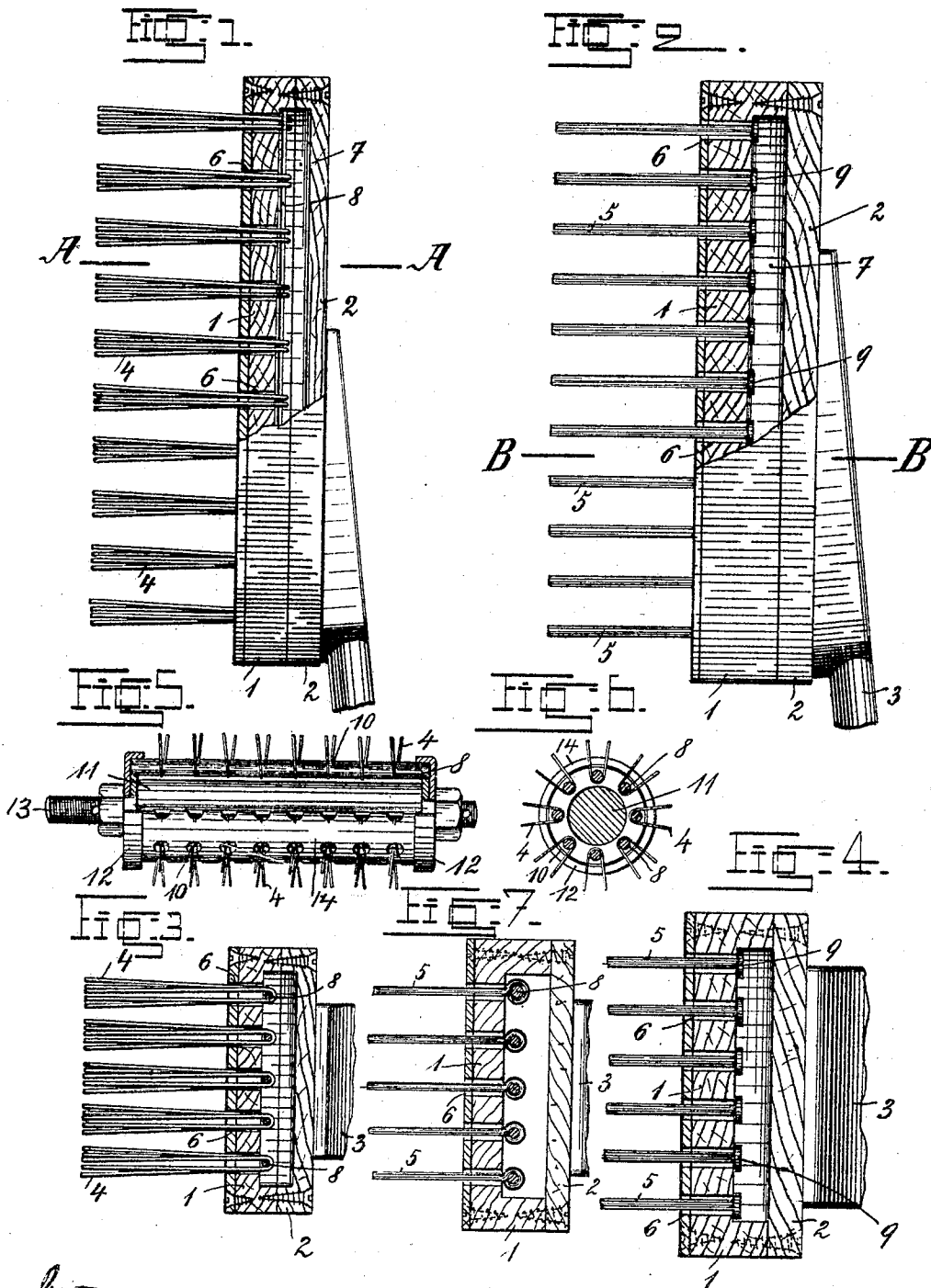
No. 795,062.

PATENTED JULY 18, 1905.

H. POLLMANN.

BRUSH WITH BRISTLES MOVABLE IN ALL DIRECTIONS.

APPLICATION FILED OCT. 13, 1903.



Witnesses
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UNITED STATES PATENT OFFICE.

HEINRICH POLLMANN, OF ST. WOLFGANG, AUSTRIA-HUNGARY.

BRUSH WITH BRISTLES MOVABLE IN ALL DIRECTIONS.

SPECIFICATION forming part of Letters Patent No. 795,062, dated July 18, 1905.

Application filed October 13, 1903. Serial No. 176,864.

To all whom it may concern:

Be it known that I, HEINRICH POLLMANN, barber, a subject of the Emperor of Austria-Hungary, residing in St. Wolfgang, Upper Austria, in the Empire of Austria-Hungary, have invented Improvements in Brushes with Bristles Movable in All Directions; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to brushes, and particularly to such as are employed for agricultural purposes and differ from those hitherto in use in that the bristles which are made out of any kind of material and arranged singly, in pairs, or in bundles are movable laterally to a certain limit in all directions, because the holes in the body of the brush through which these bristles or bundles of bristles are passed are larger in dimension than these bristles or bundles of bristles. By securing the bristles to the body in this way and by an empty space between the brush and the cover the bristles move also in a longitudinal direction, so that they exactly fit the shape of the object to be brushed. Thus even those parts lying in a lower level are subjected to the effects of the brush. Such brushes with steel bristles are well adapted for removing old barks and the like from fruit and decoration trees, as well as for cleaning pipes, boilers, and the like.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe the construction and operating manner, reference being had to the accompanying drawings, on which three forms of construction are represented.

Figure 1 shows a brush, partly in section, with bundles of bristles. Fig. 2 shows another brush, partly in section, having single bristles. Figs. 3 and 4 show transverse sections on the indicated lines A A, respectively. B B of Figs. 1 and 2. Fig. 5 shows a brush for cleaning heating-pipes and the like, partly in longitudinal section; and Fig. 6 the same in cross-

section. Fig. 7 shows a brush in cross-section where the bristles are provided with eyelets.

The brush consists of the known parts the body 1 and the cover 2, provided with a handle 3, of any suitable form. The bundles of bristles 4 or bristles 5, made out of metal of any kind, preferably out of steel, are passed through openings 6 in the body of the brush. Said openings 6 have a larger diameter than the bristles or bundles of bristles. In order that the bundles of bristles or bristles may also move in their longitudinal direction, an empty space 7, to which the ends of the bristles extend, is provided between the body 1 and the cover 2. To prevent these bristles to drop through these openings 6, the bundles of bristles are fastened on a wire or wires 8, running on the body of the brush, Fig. 1, or the bristles are fastened by means of heads 9, as shown in Figs. 2 and 4.

In brushes for cleaning pipes, Figs. 5 and 6, the body 14 consists of a sheet-metal cylinder with apertures (holes) 10 for receiving the bristles 4. Here the bristles are also kept tight by wires 8 running parallel to the axle 13 of the body, in the center of which a cylindrical bolt 11 is arranged, upon either end of which caps 12 are placed, and by nuts screwed thereon the body 14 is maintained in its position.

For cleaning pipes this brush is attachable to a stick or the like by means of a screw-thread 13. The same purpose may of course be obtained by other means, and I do not wish to be understood as restricting myself to the exact forms and constructions shown—for instance, the ends of the bristles entering in the body of the brush may be shaped to eyelet through which a wire secured to the body is passed—as many slight changes or variations might suggest themselves to the ordinary mechanic, all of which would be clearly included within the limit and scope of my invention.

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

1. A brush comprising a body with cylindrical openings and bristles passed loosely therethrough, the diameter of said openings

being larger than that of the bristles so that the latter may move in all lateral directions, substantially as set forth.

2. A brush comprising a body provided with
5 cylindrical openings and bundles of bristles passed loosely therethrough, said openings being of larger diameter than the respective bundles of bristles contained therein so that the latter may move in all lateral directions.

10 3. A brush comprising a body 1, a cover 2, bundles of bristles 4 passing loosely through perforations in the said body, said body having a recess 7 therein allowing the bundles to
15 move longitudinally and independently of each other.

4. A brush comprising a body having a recess therein, wires running through said recess, bundles of bristles fastened to said wires to move longitudinally and independently of each other, and perforations on the body of the brush of a larger diameter than the bundles of bristles.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of September, 1903.

HEINRICH POLLMANN.

Witnesses:

FRANZ REITER,

ALVESTO S. HOGUE.