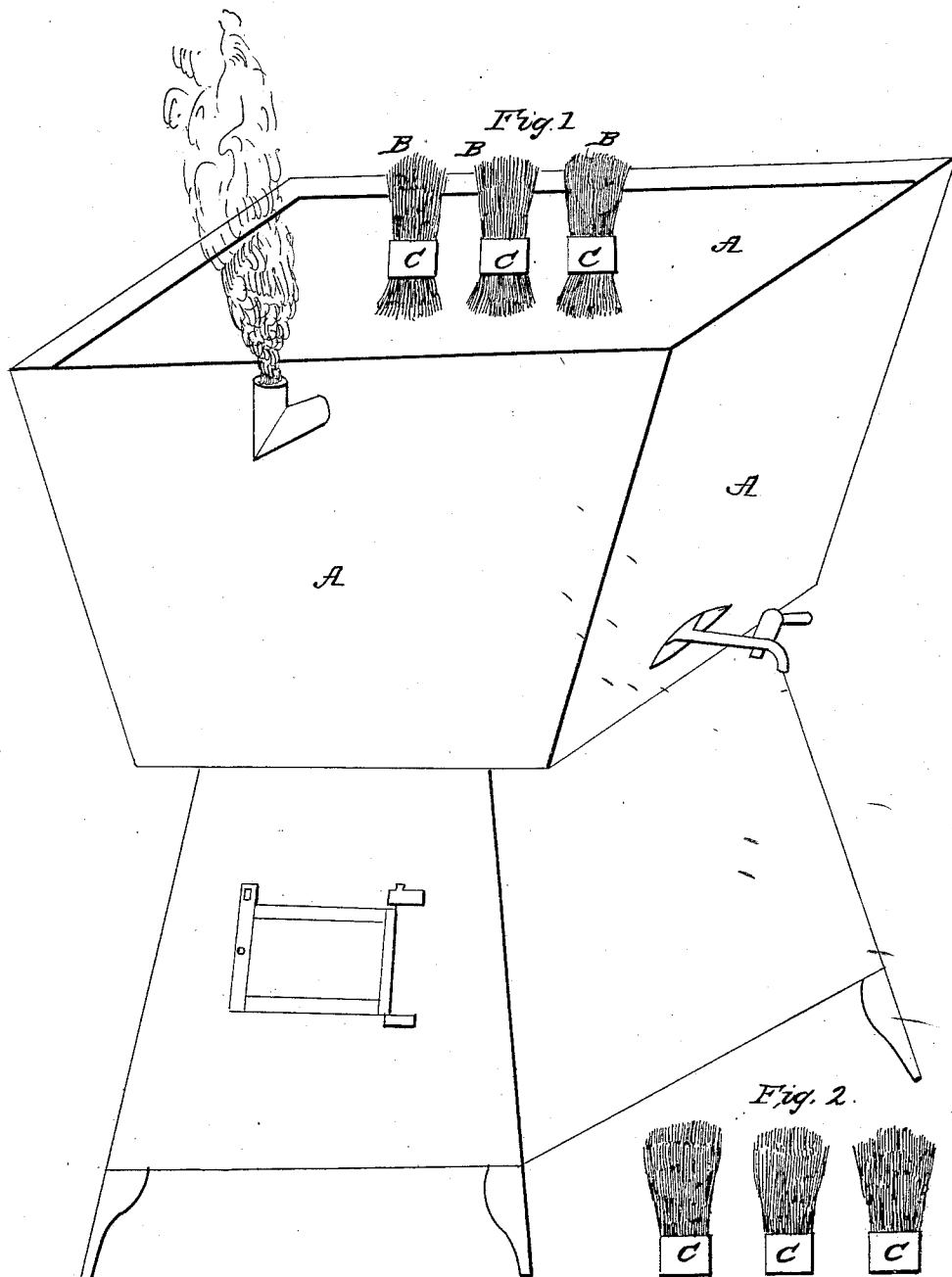


C. WILLIAMS.

Brush Machine.

No. 9,869.

Patented July 19, 1853.



UNITED STATES PATENT OFFICE.

CHAS. WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA.

PREPARATION OF BRISTLES FOR BRUSHES.

Specification of Letters Patent No. 9,869, dated July 19, 1853.

To all whom it may concern:

Be it known that I, CHARLES WILLIAMS, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and improved mode of preparing bristles for the manufacture of painting, varnishing, stenciling, and all that class of brushes known as "drove-work," (where the handle operates as a wedge to confine the bristles,) thereby enabling the operator to compress within a given space a larger bulk of bristles than can be done without the aid of my improvement while they (the bristles) still retain their essential properties; and I do hereby declare that the following is a full and exact description of the process thereof, reference being had to the accompanying drawing and letters of reference marked thereon.

The nature of my invention consists in the mode of preparing the bristles, by the application of heat (by steam or otherwise,) to the roots of the bristles.

To enable others skilled in the art to make and use my invention, I will proceed to describe the process.

The band or ferrule that confine the bristles are drawn over about two thirds or three fourths of their length, from the flag end of the bristles (that being smaller than the root), it is then submitted to the action of heat by being placed (with the root down) on the crown head of a steam boiler or drum.

As represented in the drawing, Figure 1, A, is the steam boiler constructed so as to present a clear top surface, with a safety valve attached, B, B, B, the bristles in the ferrules C, C, C, (drawn as far as can be done by hand) undergoing the process, the heat of which in a short time displaces the moisture from the roots and contracts them

in a remarkable degree so as to enable the operator to draw the bristles with ease and facility to their proper place within the band or ferrule C, C, C, as in Fig. 2, they are then ready for driving and finishing by the usual mode known to the trade.

In order to show the advantage of my improvement it will be necessary to state a few facts to enable it to be enforced.

It must be conceded that if a person can paint or varnish over as large a surface by dipping his brush only twice in the liquid, as he could if he dipped it three times, he would cover a larger surface in a given time, and upon due consideration of the fact that each particular bristle acting as a sponge to absorb the color forms when compressed within the band or ferrule a spongy substance capable of absorbing the liquid in quantities proportionable, with its bulk.

Now to produce the effect which I claim will follow the application of my improvement, "namely," to compress within a given space a larger bulk of bristles than can be done by the old method thereby showing a smaller root with a larger flag surface and enabling the workman to cover more space at one dipping than can be done with brushes made in the old style.

What I claim as my invention and desire to secure by Letters Patent, as new in the manufacture of that class of brushes known as "drove-work," is—

Preparing the bristles by the application of heat to the roots, substantially in the manner and for the purpose which I have herein fully set forth.

CHARLES WILLIAMS.

Witnesses:

JOHN A. ELKENTON,
B. I. TAYMAN.