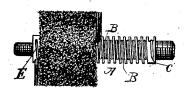
(No Model.)

G. S. GLADDING.
GUN BRUSH.

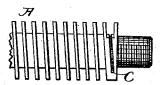
No. 264,826.

Patented Sept. 19, 1882.

TI 9.1\_



TI 2\_



Witnesses; Charchill Herman fustow

Inventor; large & Gladding By his attorney ,

## United States Patent Office.

GEORGE S. GLADDING, OF CHESTER, ASSIGNOR TO CALVIN B. ROGERS, OF DEEP RIVER, CONNECTICUT.

## GUN-BRUSH.

SPECIFICATION forming part of Letters Patent No. 264,826, dated September 19, 1882.

Application filed March 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. GLADDING, of Chester, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Gun-Brushes, of which the following is a specification, reference being had to the accompanying drawings.

The invention has relation to improvements in gun-brushes, and especially to that class which are formed by fastening the bristles upon a worm or screw by means of a wire, the wire being applied to hold the bristles between the threads of the screw.

In the manufacture of this class of gun-15 brushes it has been heretofore customary to pierce the ends of the worm or screw, whereby a means of securing the ends of the wire has been provided. This has given rise to much inconvenience and loss of time, to obviate which 20 is the principal object of the invention.

The distinctive novelty of my invention consists in providing a channel or channels at the ends of the worm or screw, within which the ends of the wire are placed and secured by clinching or soldering, as hereinafter more fully described. I am thus enabled to save time and labor, besides providing a brush of a superior character.

In the accompanying drawings, Figure 1 is a so side view of a gun brush or cleauer, part of the bristles being omitted, so as to more clearly illustrate the invention; and Fig. 2 is an enlarged view of the screw.

A denotes the worm or screw, to which the bristles are attached by means of the wire B, by preference, as illustrated in Fig. 1, the ends of the screw terminating in the reduced groove or channel C, which is of a size and form to

receive the end of the wire B. In practice the end of the wire is introduced into the channel 40 C, and secured therein by forcing the walls of the channel toward each other, and clinching them, whereby the end of the wire is introduced in the channel C, and soldered therein in any convenient way. After the bristles 45 have been secured in place the other end of the wire is fastened in a similar way, to effectuate which a like channel, E, is provided at the other end of the screw. It is apparent that the channels will not necessarily be placed at 50 the ends of the screws, although in practice it will probably be most convenient to employ them as indicated in the drawings, and as hereinbefore particularly described.

It is customary to employ a brass screw in 55 the manufacture of the class of brushes to which the invention relates; and I recommend in practicing my invention that the said metal be made use of, as heretofore.

What I claim as new, and desire to secure 60 by Letters Patent, is—

A gun-brush formed by fastening the bristles between the threads of a screw by means of a wire, the screw being provided at its ends with the channels C E, wherein the ends of 65 the wire are secured by clinching the walls of the channels, substantially as set forth.

In testimony that I claim the foregoing improvement in gun-brushes, as above described, I have hereunto set my hand this 21st day of 70 February, 1882.

GEORGE S. GLADDING.

Witnesses:

Winslow Shailer, J. Tillotson Clarke.