

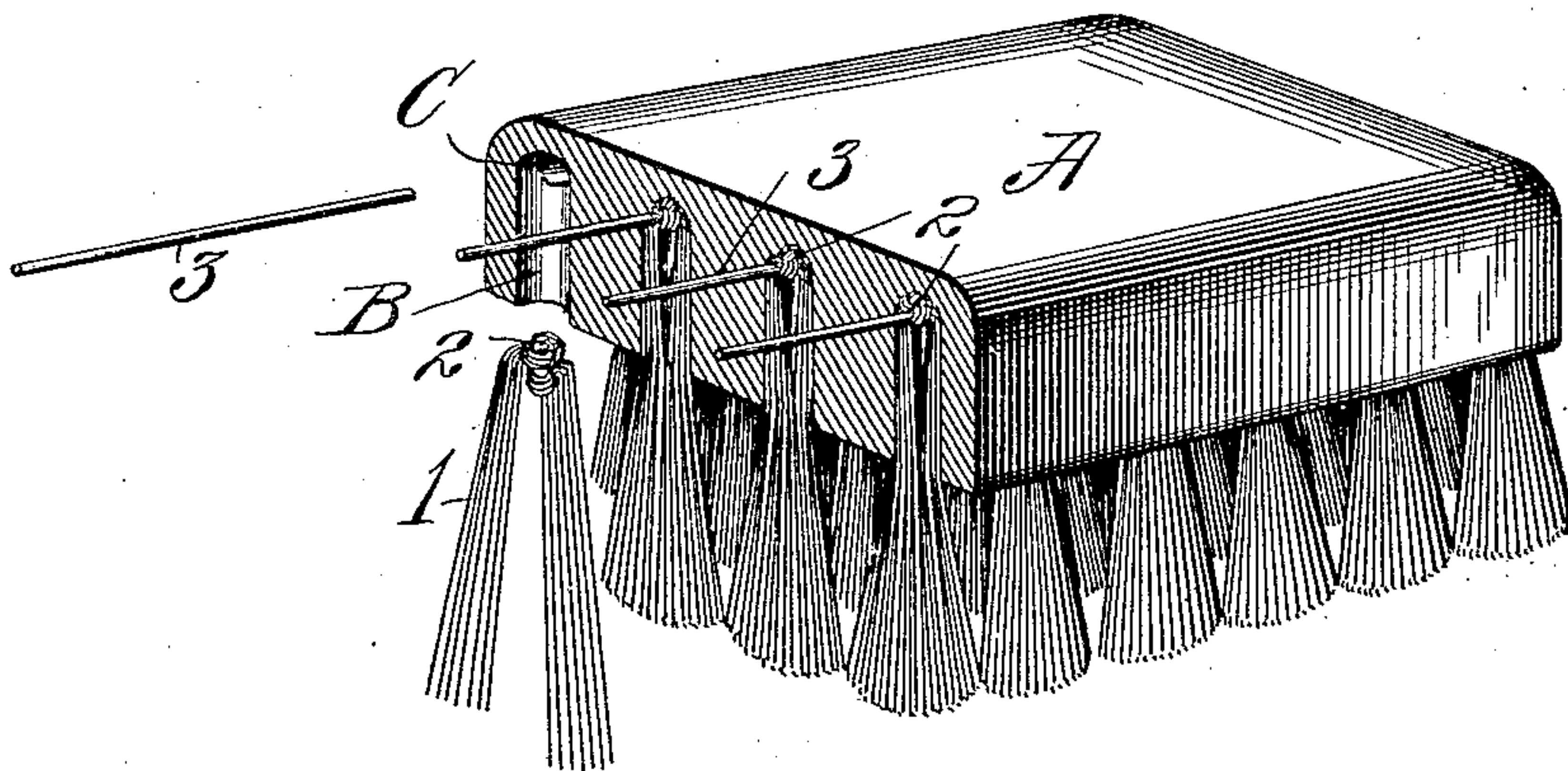
No. 875,464.

PATENTED DEC. 31, 1907.

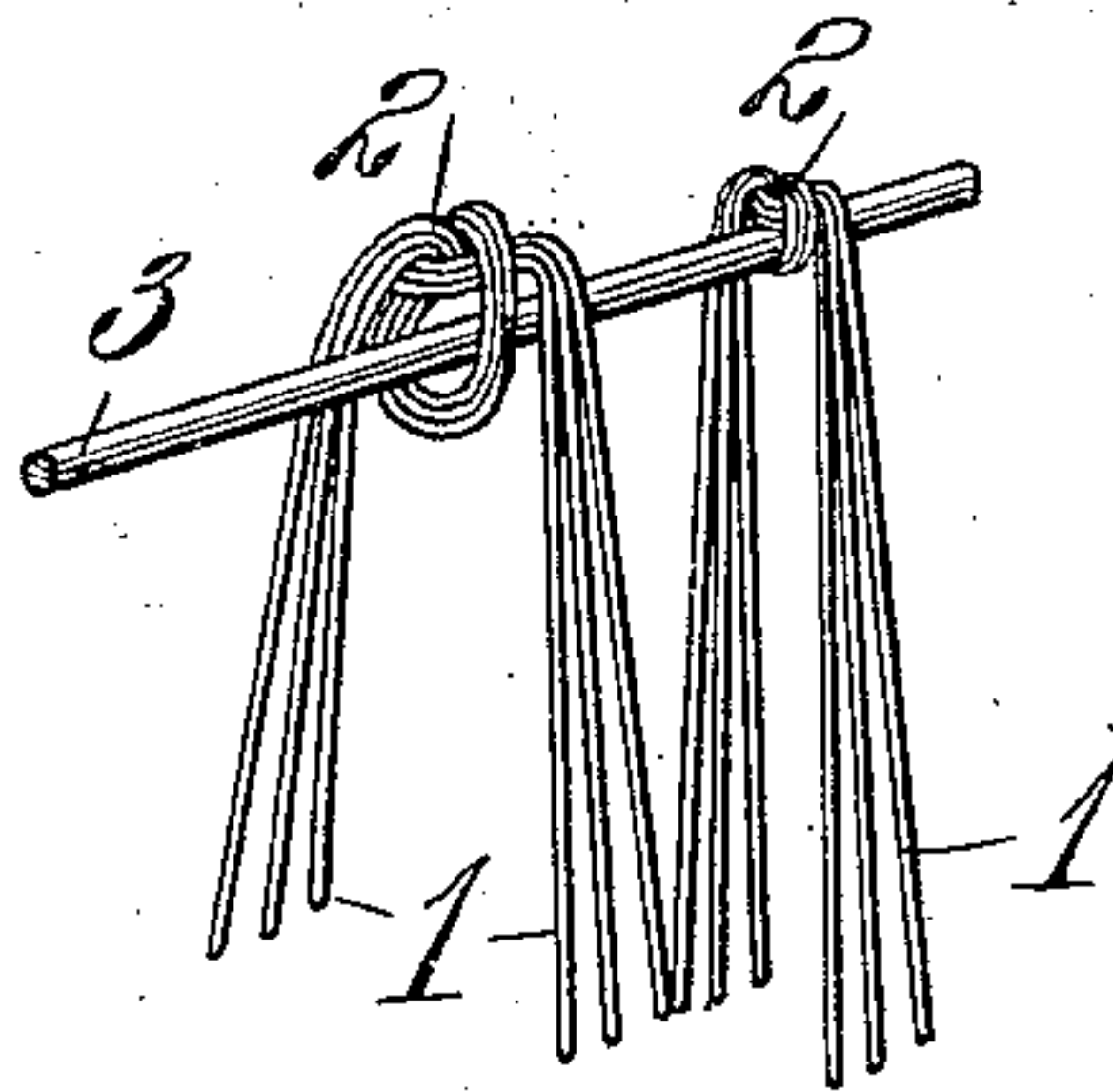
A. SCHNURMACHER.  
BRUSH.

APPLICATION FILED MAR. 3, 1906.

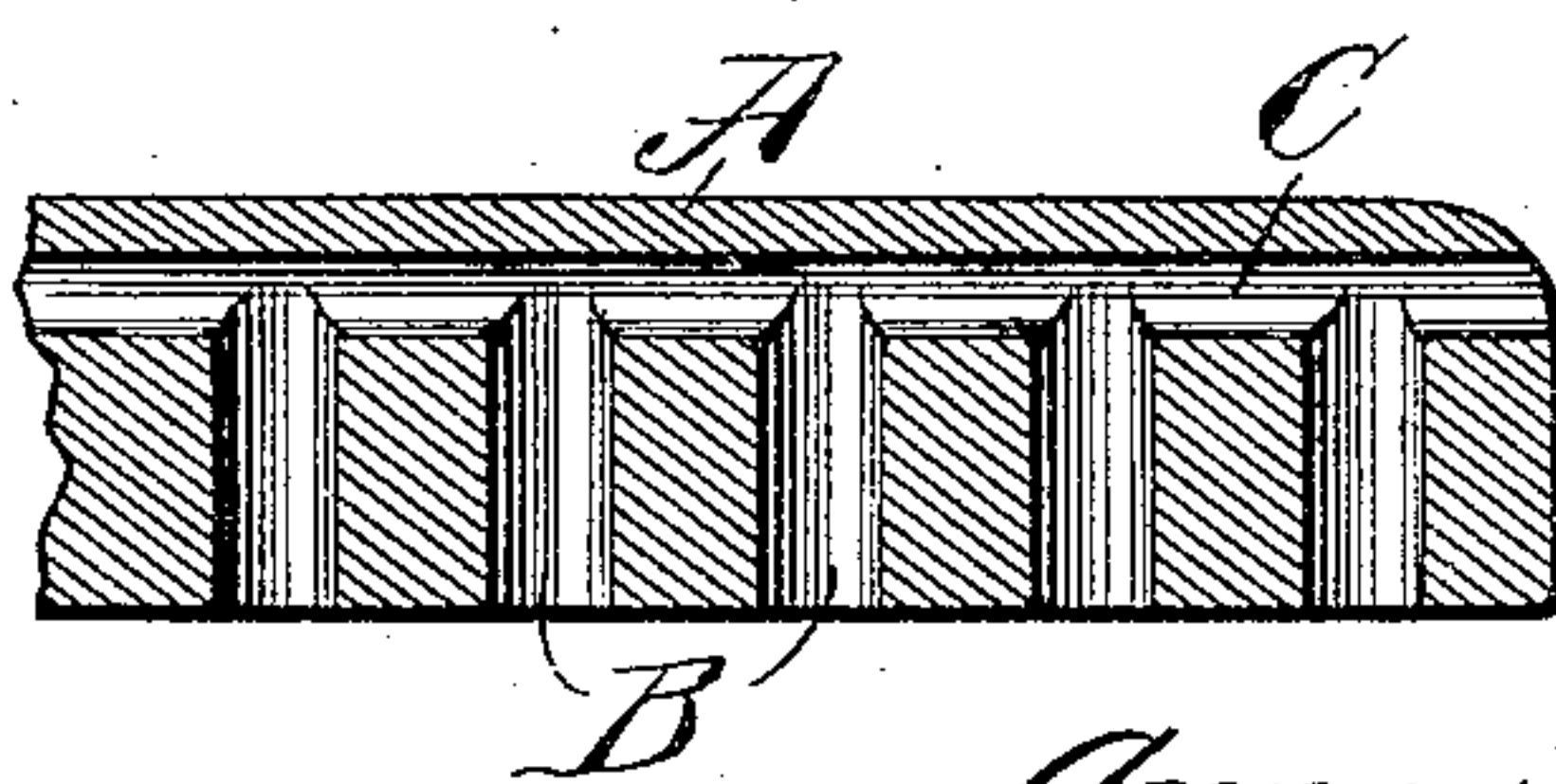
*Fig. I.*



*Fig. II.*



*Fig. III.*



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# UNITED STATES PATENT OFFICE.

ANNA SCHNURMACHER, OF ST. LOUIS, MISSOURI.

## BRUSH.

No. 875,464.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed March 3, 1906, Serial No. 303,940.

*To all whom it may concern:*

Be it known that I, ANNA SCHNURMACHER, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Brushes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to an improvement in brushes and it has for its object to provide a construction whereby the tufts of bristles may be efficiently held in the brush back without liability of single bristles becoming loosened or separated from the tufts.

Figure I is a view partly in perspective and partly in section of a brush constructed in accordance with my improvement. Fig. II is a perspective view of two of the tufts of bristles of the brush shown strung upon their receiving cord, one of the tufts being illustrated as completely tied around the cord, and the other tuft being shown as the tufts appear during the process of tying them. Fig. III is a section of the brush back.

My brush is manufactured in the following manner: First I take bunches of bristles and tie knots therein midway of the length of the bunches whereby the entire number of bristles in each bunch are held firmly assembled and with the ends of the bristles free. I then bring the ends of the bunches of bristles together by folding them at the point where they are tied with the result of forming tufts. The tufts of bristles are then embedded in their tied form in a suitable back in which the butts or tie ends of the tufts are seated while the free ends of the tufts project outwardly from the back as is usual in brushes. In embedding the tufts in the back, I may follow either of two plans of procedure. First, the tufts may be held in any suitable manner, for instance in a frame and the back of the brush may be molded around the tufts, if it is produced from any suitable plastic substance. Second, the brush back may be provided with pockets that extend inwardly from one face of the back and also with channels extending longitudinally of the back and intersecting said pockets. When the brush is to be made in this manner, the tied bunches of bristles or tufts are first introduced into their respective pockets in the brush back with the knots of the ties of the bristles occupying positions in line with the channels that

intersect the pockets. Cords are then passed through the channels and through the knots of the bristle tufts from end to end of the brush back and after they have been threaded through all of the knots, are secured at their ends in any suitable manner. The cords just mentioned may be readily threaded through the knots by the use of a suitable needle or wire to which each cord is connected before it is passed through the ducts.

A designates the back of a brush that is provided with tuft receiving pockets B and channels C that extend at angles to said pockets.

1 designates the tufts of bristles that are utilized in making the brush, and which are adapted to occupy the pockets B in the brush back. These bristles may be of any desirable length and for the purpose of preventing separation of any of the bristles in the tuft from the remaining bristles, each tuft is tied into a knot 2 intermediate of its ends, preferably midway of its length. The tied bristles are then laid in the brush back in any suitable manner, such as introducing them into the pockets B of the back A, and may be secured therein by the use of any suitable cement. I prefer, however, to secure the tufts of bristles by receiving cords or threads 3 that occupy the channels C in the brush back and which pass through the knots 2 of the tufts of bristles, as seen in Figs. I and II. These cords may be secured in the brush back by any suitable means.

It will be seen that the tufts of bristles will each remain as a unit, without liability of any one or more of the bristles becoming separated from the remainder of the bristles in the tuft, due to the tufts being tied intermediate of their ends as explained, this being true either in the event of the bristles being applied to the receiving cord 3 or being secured to the brush back without the use of such cords. It is furthermore obvious that the back of the brush may be prepared first in the form in which it is seen in the drawings and the bristles be subsequently introduced into and secured in the back or that the bristles may first be tied in tufts and the back molded in a manner to embed the tufts of bristles therein.

I wish it understood that in the use of the term bristles herein, I include not only what are known as bristles technically

speaking and which are in the form of hair, but also other forms of so-called bristles, such as those produced from fiber.

I claim:

- 5 A brush comprising a back, a plurality of tufts of bristles having knots tied therein midway of their ends, and a cord on which

said bristles are strung, substantially as set forth.

ANNA SCHNURMACHER.

In presence of:

E. S. KNIGHT,  
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