

G. RASMESSEN, JR.

BRUSH.

APPLICATION FILED MAY 20, 1914.

1,178,179.

Patented Apr. 4, 1916.

Fig. 1.

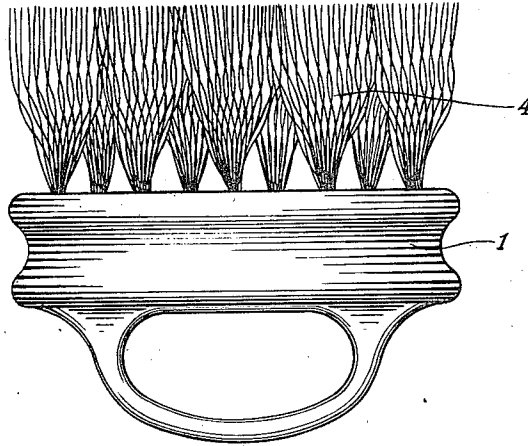


Fig. 3.

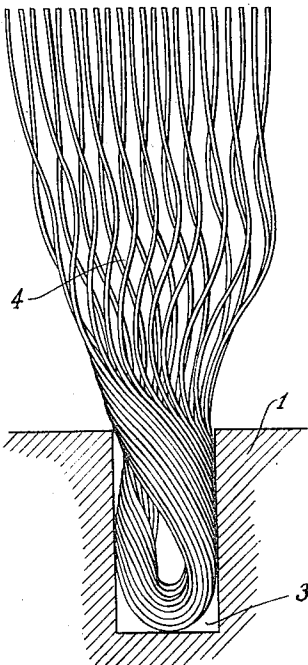


Fig. 4.

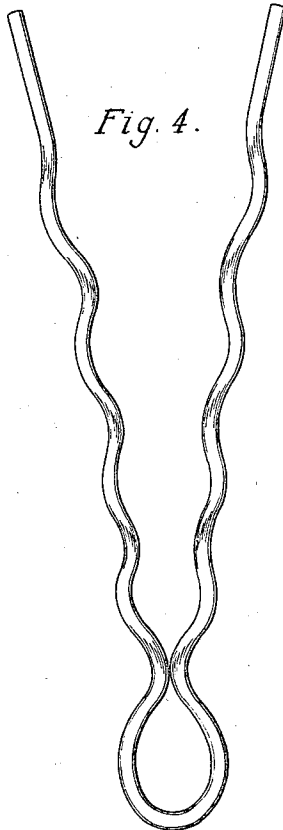
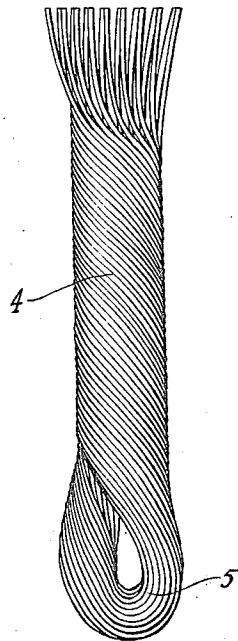


Fig. 2.



Witnesses:

M. H. Klant.
Walter F. Stone

Inventor:

George Rasmussen, Jr.,
By Hummel & Hummel,
Attys.

UNITED STATES PATENT OFFICE.

GEORGE RASMESSEN, JR., OF WINNETKA, ILLINOIS.

BRUSH.

1,178,179.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE RASMESSEN, JR., a citizen of the United States of America, and a resident of Winnetka, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Brushes, of which the following is a specification.

The main objects of this invention are to provide an improved method of fastening wire tufts in the stocks of brushes; and to provide an improved wire brush for scrubbing and cleaning.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Figure 1 shows a side view of a brush constructed according to this invention. Fig. 2 is an enlarged detail of a wire tuft as twisted before it is inserted into its socket in the stock of the brush. Fig. 3 is an enlarged detail of the tuft in place in the stock of the brush in its final form after being permitted to expand, but many of the bristles are omitted from the upper central part of the tuft for the sake of clearness. Fig. 4 is a detail of one of the bristles.

The present invention provides a wire brush having tufts of twisted spring wire bristles which are self-fastening when permitted to partially untwist and expand within their seats in the stock of the brush. The brush preferably comprises a cast body portion or stock 1, and a handle 2. The stock has holes 3 cast or drilled therein to form seats for the tufts of wire 4. Each tuft is formed of a plurality of short lengths of wire doubled or bent back upon themselves, and then twisted to the form shown in Fig. 2. A convenient way of forming the tufts is to bend the groups of straight wire around a rod and then twist the tufts. The latter may then be secured in their twisted form and the rod withdrawn. The bent or bulbous ends 5 of the tufts are approximately the diameter of holes 3, in which they are inserted or driven in forming the brush. The tufts being made of spring wire it is necessary to retain them, in the form shown in Fig. 2, by mechanical means during the operation of inserting them in their seats. After being so inserted the tufts are released and permitted to expand to the form shown in Fig. 3. The bristles become substantially uniformly spaced from each other throughout the area of the abrading end of

the tuft, and expand against the walls of seats 3, in this manner becoming securely fastened in the stock of the brush. Such bristles as are in contact with the walls of seats 3, aside from their own tendency to expand, are further urged into contact with the walls by the bristles nearer the longitudinal axis of the tuft. The twisting of the tufts gives each bristle a helical form similar to that of an extended coiled spring. Therefore, in the operation of the brush each bristle will have a tendency to bend more or less uniformly along its length regardless of the direction of movement of the brush over the surface operated upon. The wires with which the tufts are formed are preferably made of steel coated with some rust-proof material, such as copper, in order to give the brush a long life and good appearance.

It may be seen that this invention provides a brush extremely simple to manufacture and of few parts. It is also highly efficient as the strain on the bristles when in operation is not concentrated at some fixed point or points, thereby tending in time to weaken the bristles at such points and cause breakage, but in operation the action of each bristle is such as would occur in bowing an extended coiled steel spring.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A wire brush comprising a stock having holes therein and tufts of twisted wires seated in said holes and retained therein by their resilient expansion against the sides of the holes.

2. A wire brush comprising a stock having holes therein and tufts of bent wires seated in said holes and retained therein by their resilient expansion against the sides of the holes.

Signed at Chicago this 12th day of May, 1914.

GEORGE RASMESSEN, JR.

Witnesses:

R. E. ALLEN,
MATTIE LAMB.