

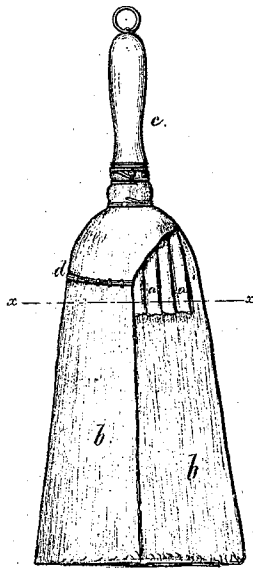
*E. P. Cooley,*

*Broom.*

*No. 104,118.*

*Patented June 14, 1870.*

*Fig. 1.*



*Fig. 2.*



*E. P. Cooley*

*Witnesses*

*Chas. H. Smith*

*Geo. A. Miller*

# United States Patent Office.

ELI P. COOLEY, OF NEW YORK, N. Y.

Letters Patent No. 104,118, dated June 14, 1870; antedated June 6, 1870.

## IMPROVEMENT IN BROOMS AND WHISKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ELI P. COOLEY, of the city and State of New York, have invented and made a new and useful Improvement in Brooms or Brushes; and I do hereby declare the following to be a correct description of the said invention.

Brooms, and small brushes or "whisks," made of broom-corn, are usually formed by binding the spears of broom-corn firmly around a handle, then cutting off the woody butts above the binding-cord or string, and placing an outside covering of the broom-corn to envelope the head attached to the handle, and all bound together by sewing, that passes through the broom below the end of the handle.

Brooms of this character are necessarily stiff and rigid at the upper part, and when the loose and elastic ends are worn away the broom is useless, or nearly so, because the fibers lie so closely together that there is not any opportunity for them to spring back to a normal position independently of each other, and any dirt or adhesive material causes the fibers to stick together, and remain bent and out of shape by the spreading of the broom in sweeping.

My invention is devised with a three-fold object in view—

First, to strengthen the broom-head;

Second, to render the broom itself more elastic by separating the fibers; and

Third, to save material by lessening the quantity of broom-corn required in the broom.

The nature of my invention consists in the introduction, into the head of the broom, of the pieces of the stalk or butts, interspersed, and extending only to a short distance from where the sewing or binding is applied, so as to stiffen the broom-head and hold the broom-corn fibers very firmly in place, and, at the same time, allow the utmost elasticity in that portion of the broom or brush that is applied to sweeping, and, the broom-corn fibers standing further apart, the end of the broom is wider, covering more surface and sweeping much cleaner.

In the drawing—

Figure 1 is a side view of a broom, partially in section, and

Figure 2 is a cross-section of the broom at the line *x x*.

The spears of broom-corn are bound around the handle, by string or wire, in the usual manner; but, instead of using nothing but the spears of broom-corn, I introduce short pieces of the stalks or butts of the broom-corn, as at *a a*. These butts are interspersed through between the pieces of broom-corn, and do not extend down below the point at which it is desired to terminate the rigid head. Thus, the portions *b* of the broom-corn, extending beyond the ends of the butts, are kept sufficiently far apart to obtain the entire elasticity of the fibers or spears. At the same time, the head of the broom is made as firm and rigid as possible.

The head of the broom is secured to the handle *c*, in any usual manner, and, at *d*, I have shown the line of stitching that unites the parts of the broom firmly at this portion of the head.

In cases where the head of the broom is made with a clamp to receive the broom-corn, the pieces of butts can be introduced, in the same manner and for the same purpose, as before stated.

I am aware that in paint and other brushes the bristles have been spread apart by the end of the handle, and also by pins or pegs attached to a wooden head, and penetrating into the brush. In the first-named case, the bristles are not separated throughout the mass, and in the latter instance the pegs, being a fixture in the head, could not be drawn together with the binding-string. Hence, the head could not be properly clamped with uniformity.

I claim as my invention—

The introduction into the head of the broom of separate pieces or sections, interspersed between the spears of broom-corn, or other material, at the portion of the said broom where the parts are held together, as and for the purposes specified.

Signed this 26th day of October, A. D. 1869.

E. P. COOLEY.

Witnesses:

CHAS. H. SMITH,  
GEO. T. PINCKNEY.