

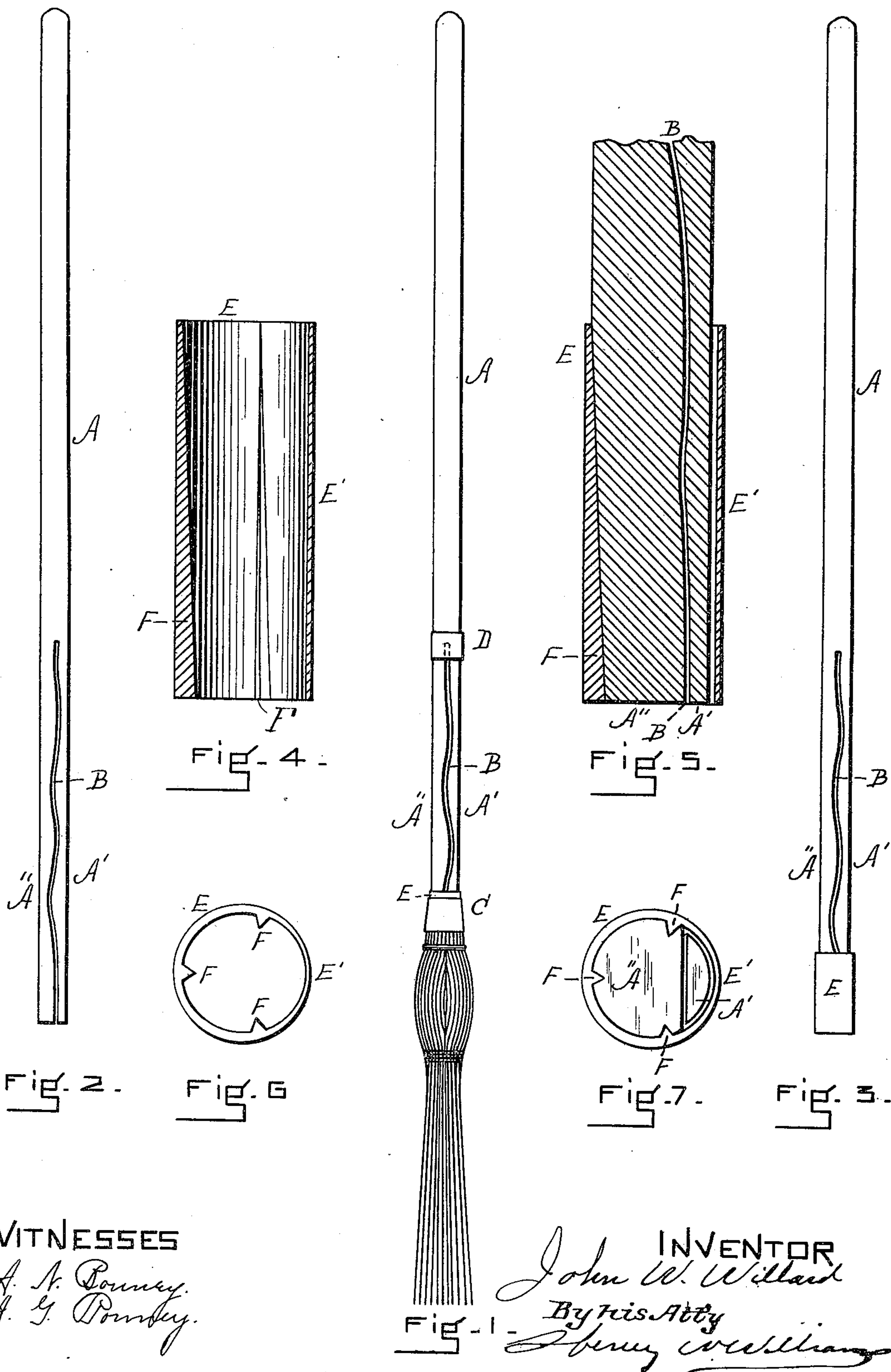
No. 645,988.

Patented Mar. 27, 1900.

J. W. WILLARD.  
BROOM HANDLE.

(Application filed Mar. 7, 1898.)

(No Model.)



WITNESSES

*A. N. Bonney.*  
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FIG-1-

INVENTOR  
*John W. Willard*  
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# UNITED STATES PATENT OFFICE.

JOHN W. WILLARD, OF PITTSFORD, VERMONT, ASSIGNOR TO THE NU  
BROOM COMPANY, OF BOSTON, MASSACHUSETTS.

## BROOM-HANDLE.

SPECIFICATION forming part of Letters Patent No. 645,988, dated March 27, 1900.

Application filed March 7, 1898. Serial No. 672,844. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. WILLARD, a citizen of the United States, residing at Pittsford, in the county of Rutland and State of Vermont, have invented new and useful Improvements in Handles for Brooms, of which the following is a specification.

This invention relates to improvements in the handles of brooms and analogous articles, and particularly to that class of handles in which a saw-kerf or slit is provided, extending substantially lengthwise therewith, whereby spring and life are imparted to the handle and the different movements thereof necessary to the act of sweeping rendered more easy by reason of the yielding effect and absence of deadness, particularly at the commencement of each movement of the handle.

My invention consists of certain novel constructions and arrangements of parts whereby a greater degree of life and efficiency are imparted to the handle and its usefulness enhanced.

The nature of the invention is fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is an edge elevation of a broom whose handle is constructed in accordance with my invention. Fig. 2 is a similar view of a handle in process of construction and provided with the saw-kerf or slit. Fig. 3 is a similar view showing the handle with the kerf and with its lower end provided with a ferrule. Fig. 4 is an enlarged central vertical section of the ferrule detached. Fig. 5 is a similar section of the lower end of the broom-handle and the ferrule in place thereon. Fig. 6 is a view of the under side or end of the ferrule detached. Fig. 7 is a view of the under side or end of the broom-handle with the ferrule in position thereon.

Similar letters of reference indicate corresponding parts.

A represents the handle of a broom or similar article, provided with the saw-kerf or division-cut B. This kerf is preferably somewhat waving or corrugated in shape and extends from a suitable point between the ends of the handle to and through the extreme lower end thereof. In other words, the kerf commences at the lower end of the handle and

divides it into two distinct parts A' and A'' of equal length. Although these two parts are equal in length they are at their lower ends very unequal in thickness, the part A' being much thinner than the part A'' at its lower end. In fact, the average thickness of the part A' is preferably less than that of the part A''.

C is the broom-head.

A band D is applied to the handle approximately at the upper end of the kerf, as shown in Fig. 1.

E represents a ferrule or tube substantially circular in shape and with a small arc E' of its circumference thinned internally throughout its entire length. This thinned portion corresponds in width to the width of the part A' of the handle at its lower end, and the thicker portion E corresponds with the larger part A'' of the handle at its lower end. The thicker portion E of this ferrule is formed on its inner surface with three (more or less) longitudinal ribs F, preferably V-shaped in cross-section, as shown in Figs. 6 and 7. These ribs are thicker at their lower ends and grow gradually thinner toward the upper end of the ferrule. The ferrule is driven onto the lower end of the handle A, with its ribs F coming in contact with and being forced into the portion A'' only until the lower end of the ferrule is substantially flush with the lower end of the handle.

By reason of the internally-recessed or thinned portion E' of the ferrule there is considerable space between the portion A' of the handle and said portion E' of the ferrule, and this space continues, preferably, for the entire length of the ferrule. Thus there is opportunity for considerable play of the free portion A' within the ferrule, while the portion A'' is rigid and immovable therein by reason of the ribs F, which extend into said portion A'' only and do not come in contact with the portion A'.

The head of the broom is applied and secured directly to the ferrule E and not directly to the handle, thereby leaving the slitted portion free to operate.

By locating the slit at the extreme lower end of the handle the effect produced is just where it is of greatest efficiency—viz., next



the broom—and the slit is too low to catch or pinch the hand of the operator.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a handle for a broom or similar article, the handle proper, provided with a saw-kerf or slit dividing the lower end of said handle longitudinally into two parts A' and A'', the part A'' being thicker at and near said lower end than the part A' by reason of the kerf at said end being located at one side of the center thereof; and a ferrule or band applied to and around the handle at said lower end, said ferrule or band being provided on its inner surface with one or more inwardly-projecting ribs F extending into said thicker portion A'' only, substantially as set forth.
2. In a handle for a broom or similar article, the handle proper provided with a saw-kerf or slit dividing the lower end of said handle longitudinally into two parts A' and A'', the part A'' being thicker at and near said lower end than the part A' by reason of the kerf at said end being located at one side of the center thereof; and a ferrule or band applied to and around the handle at said

lower end, said ferrule or band being provided on its inner surface with one or more inwardly-projecting ribs F extending into said thicker portion A'' only, said ribs being arranged longitudinally of the ferrule and being thicker, that is, extending farther into said portion A'', at the lower end of the ferrule and growing gradually thinner at the upper end thereof, substantially as described.

3. In a handle for a broom or similar article, the handle proper provided with a saw-kerf or slit extending from the lower end thereof to a suitable point intermediate of said ends, whereby said handle is divided substantially longitudinally at and near its lower end into two parts; and a ferrule or band applied to and around that portion of the handle provided with the kerf, said ferrule being rigidly secured to one of said portions and being provided internally with a recess next the other of said portions, whereby the last-named portion is free to move toward and from the portion first named within said recess, substantially as set forth.

JOHN W. WILLARD.

Witnesses:

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