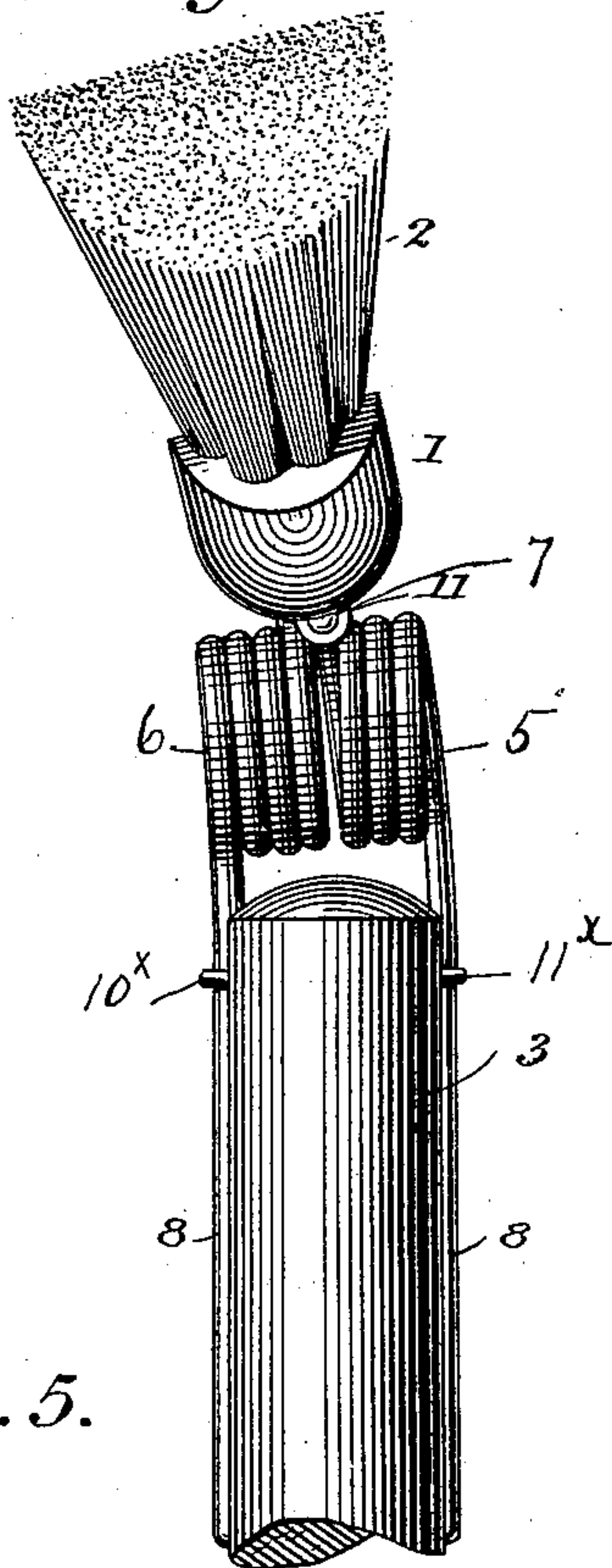
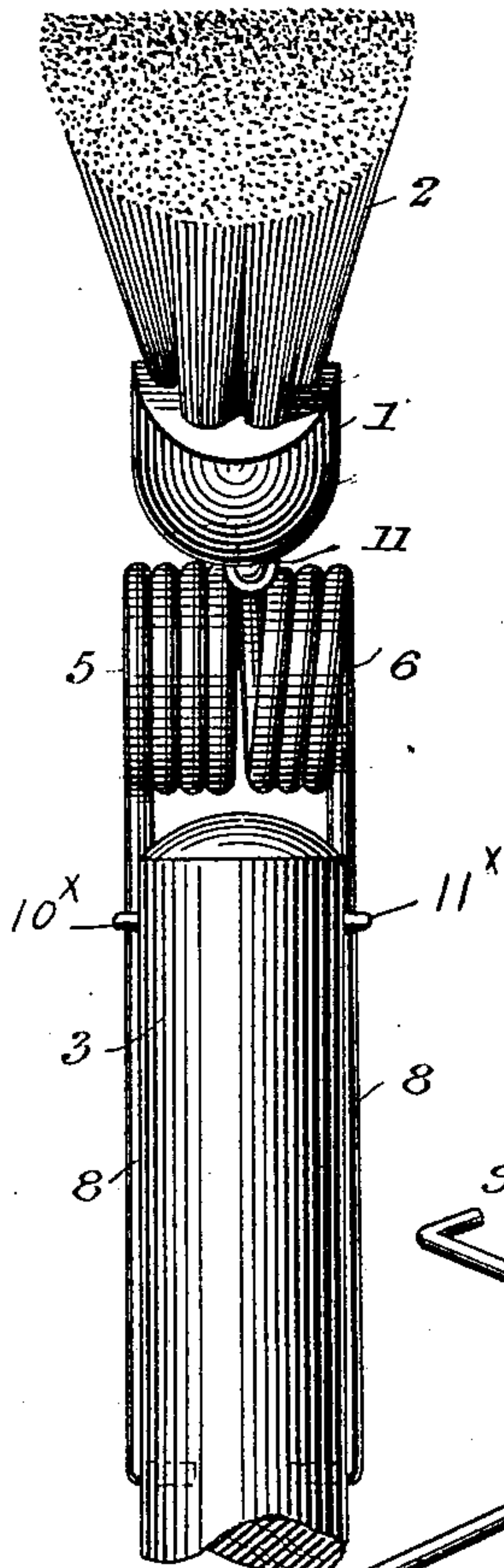
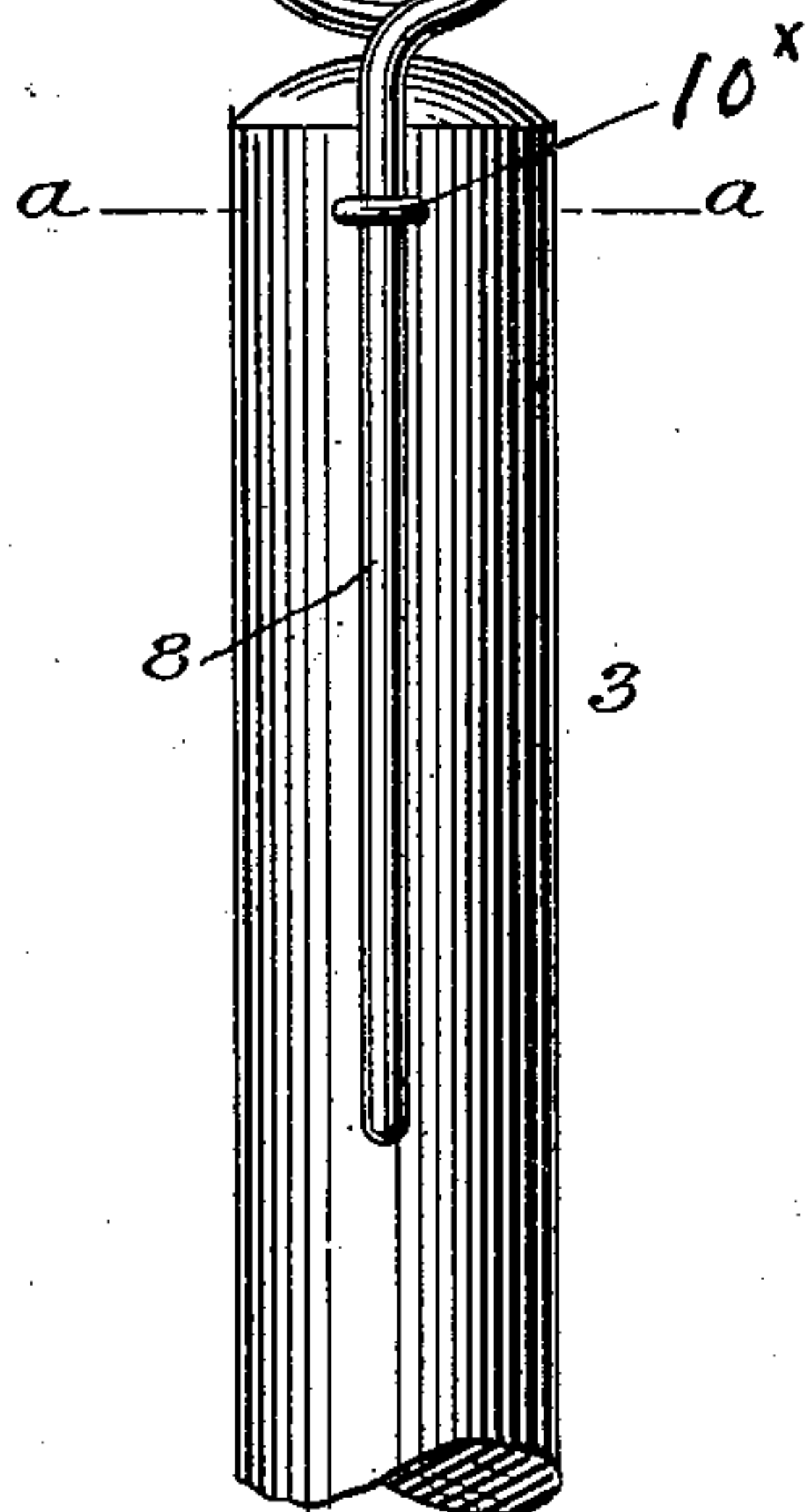
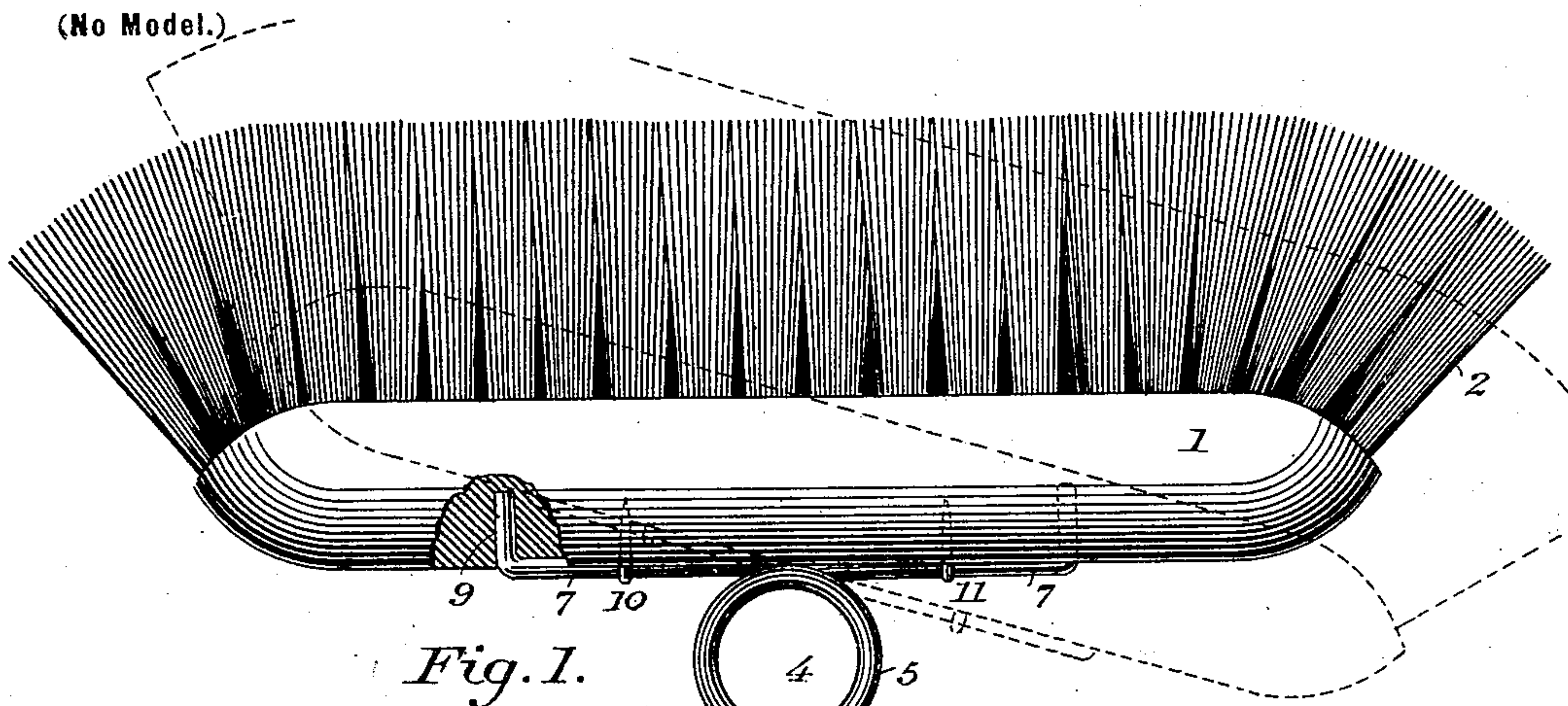


**McCLINTOCK YOUNG.**  
**BROOM, &c.**

(Application filed Apr. 1, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

McCLINTOCK YOUNG, OF FREDERICK, MARYLAND, ASSIGNOR TO THE  
PALMETTO FIBRE COMPANY, A CORPORATION OF ILLINOIS.

## BROOM, &c.

SPECIFICATION forming part of Letters Patent No. 706,144, dated August 5, 1902.

Application filed April 1, 1902. Serial No. 100,947. (No model.)

*To all whom it may concern:*

Be it known that I, McCLINTOCK YOUNG, of Frederick, county of Frederick, and State of Maryland, have invented a new and useful  
5 Improvement in Brooms and Analogous Implements, of which the following is a specification.

This invention relates to brooms and analogous implements, and more particularly to  
10 the handle, the object being to provide a flexible yielding connection with the broom-head, so as to relieve the operator of the usual strain incident to a rigid handle or stiff broom and to avoid wear of the carpet and  
15 broom.

With these ends in view my invention consists in a yielding or flexible connection of improved form between the handle and the  
20 head of the broom, whereby the latter may yield in all directions.

The invention consists also in so constructing the flexible connection that it will serve as a means for suspending or hanging the broom on a nail or similar support.

25 The invention consists also in the details of construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved broom. Fig.  
30 2 is an end elevation of the same. Fig. 3 is a similar view showing how the broom-head may be inclined transversely. Fig. 4 is a transverse section on the line *a a* of Fig. 1. Fig. 5 is a perspective view of the parts of  
35 yielding connection detached and separated.

Referring to the drawings, 1 represents a broom-head having the usual straws or bristles 2, and 3 represents a handle, which is connected with the back of the head by a  
40 flexible or yielding connection 4 in the form of two independent spring-coils 5 and 6, arranged end to end and extending transversely of the handle and having their opposite ends connected, respectively, with the head and  
45 handle. Each of the springs is formed from a single piece of wire, and the end coils are continued in the form of extensions 7 and 8, disposed substantially at right angles to each other, the extension 7 being adapted to be se-  
50 cured to the back of the broom-head, while the other extension is adapted to be fastened

on the side of the handle. The two springs are identical in form; but when assembled to form the flexible connection between the handle and head of the broom the coils are re-  
55 versely disposed end to end, so as to exert an equal strain and so that the extensions 7 will be adjacent to each other and will extend in line in opposite directions longitudinally of the head 1. The extensions 8 on the outer  
60 ends of the coils will by this arrangement be separated from each other and will extend along the opposite sides of the handle, to which they are firmly and rigidly secured.

A firm connection of the springs with both  
65 the handle and the head may be effected in a variety of ways; but I prefer to groove or recess the head longitudinally from its center in opposite directions, which groove is adapted to receive the extensions 7 of the springs, and  
70 I form at the ends of the groove holes, into which are tightly seated tangs 9 on the ends of the extensions, the latter being held tightly in the groove by means of staples 10 and 11. On opposite sides of the handle grooves are  
75 formed to receive the extensions 8, and at the ends of the grooves holes are provided, into which tangs 9<sup>x</sup> on the ends of the extensions are tightly seated and the extensions firmly held in the grooves by means of staples 10<sup>x</sup>  
80 and 11<sup>x</sup>.

From the foregoing description it will be seen that the peculiar flexible connection described yieldingly maintains the head 1 at  
85 right angles to the handle, but will readily permit the former to assume a longitudinal inclination, as shown by dotted lines in Fig. 1, or a transverse inclination, as shown in Fig. 3, or intermediate inclinations, so that the head is, in effect, elastic in all directions. The move-  
90 ment of the head of the broom in one direction, as indicated by dotted lines in Fig. 1, subjects the springs to a torsional strain, while the lateral movement of the head, as indicated in Fig. 3, subjects the springs to a  
95 strain of a different character, closing the coils at one side and opening them at the other side, the spring action in this instance being gained by a compression and expansion of the coils. I believe myself to be the  
100 first, therefore, to so dispose a coiled spring with reference to the handle and head of the



broom that it will serve as the sole connecting means between them and in the movements of the head in two directions will be subjected, respectively, to a torsional strain  
5 and a compressing and expanding strain.

The coils arranged as described form a ring or eye, which may be passed over a nail or similar support, and thus serves as a convenient means of hanging the broom up.

10 Having thus described my invention, what I claim is—

1. In combination with a broom-head, a handle therefor, and an intermediate coiled spring disposed transversely of the axis of  
15 the handle and rigidly connected at its opposite ends respectively with the head and handle, and serving as the sole means for connecting the head with the handle; whereby the movement of the head in one direction  
20 transversely will subject the spring to a torsional strain and the movement in another direction transversely will compress and separate the coils respectively at opposite sides.

2. In combination with a broom-head, a handle therefor, an intermediate coiled spring arranged transversely of the axis of the handle, said spring having its ends extended at right angles to each other and firmly secured  
25 respectively to the handle and head.

3. In combination with a broom-head, a handle therefor, two intermediate coiled springs arranged end to end and disposed transversely of the axis of the handle, and each connected at its ends respectively with  
30 the head and handle, and serving as the sole means for connecting the head with the handle.

4. In combination with a broom-head, a handle, and two reversely-disposed coiled  
40 springs each having their opposite ends se-

cured respectively to the head and handle, and jointly serving as the sole means for connecting the head with the handle.

5. In combination with a head, a handle therefor, and two reversely-disposed coiled  
45 springs arranged end to end with adjacent ends extended in opposite directions and secured to the head, and the opposite ends extended in the same direction and secured to the handle. 50

6. In combination with a grooved head, a handle provided with grooves in its side, and intermediate coiled springs having their ends extended and seated and secured in grooves in the head and handle. 55

7. In combination with a longitudinally-grooved head a handle formed in its sides with grooves, said grooves being formed at the ends with holes, intermediate coiled springs provided with extensions extending  
60 respectively in the grooves in the head and handle, and said extensions having on their ends tangs seated in the holes at the ends of the grooves, and staples straddling the extensions adjacent to the coils and extending  
65 in the head and handle.

8. In combination with a broom-head, a handle therefor, and an intermediate flexible connection formed of open spring-coils arranged at the back of the broom, the said coils  
70 presenting an unobstructed opening which may be passed over a nail or similar support.

In testimony whereof I have hereunto set my hand, this 24th day of March, 1902, in the presence of two attesting witnesses.

McCLINTOCK YOUNG.

Witnesses:

MARSHALL FOUT,  
J. MARSHALL MILLER.