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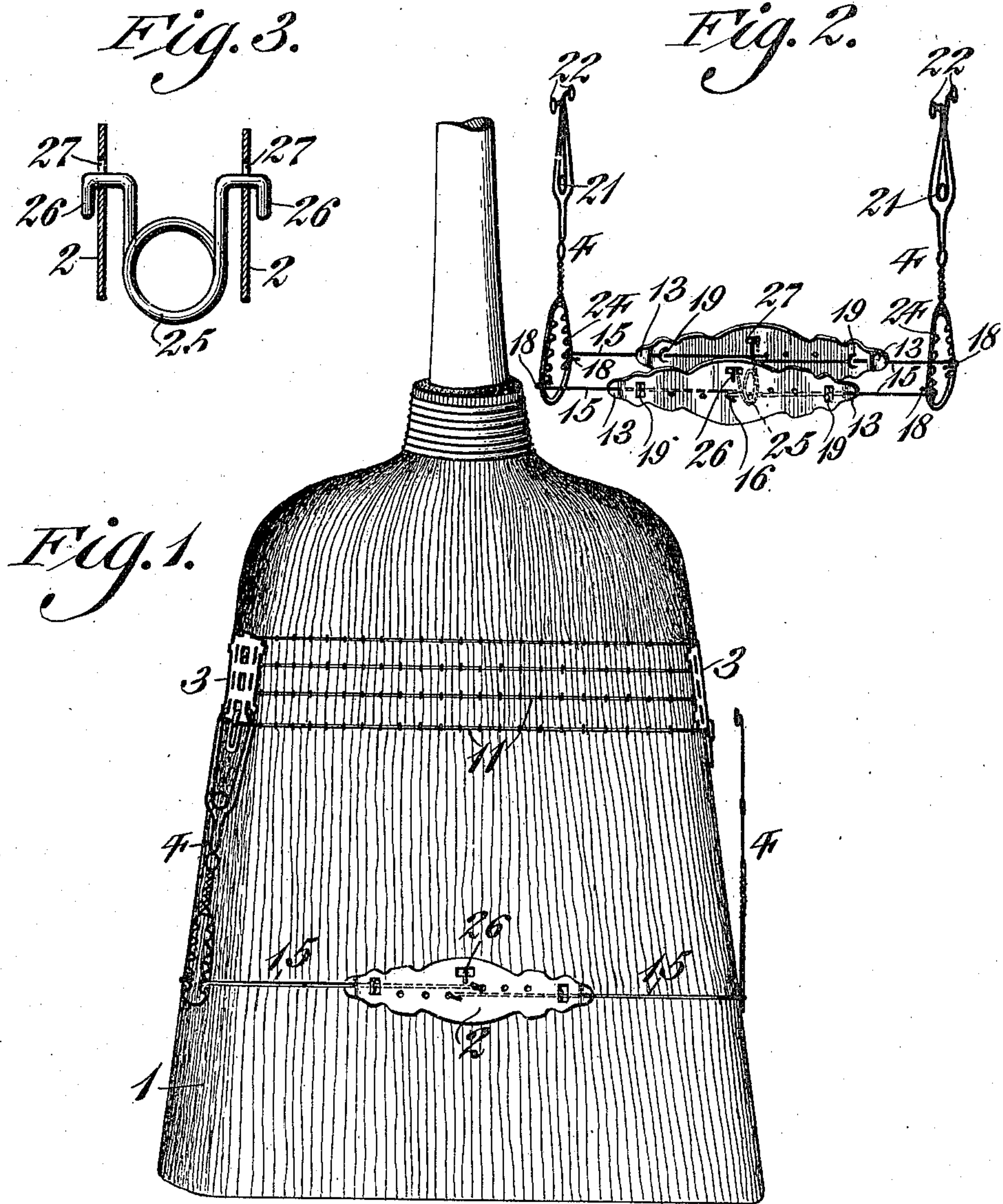
BROOM BRACE.

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975,916.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.



Witnesses

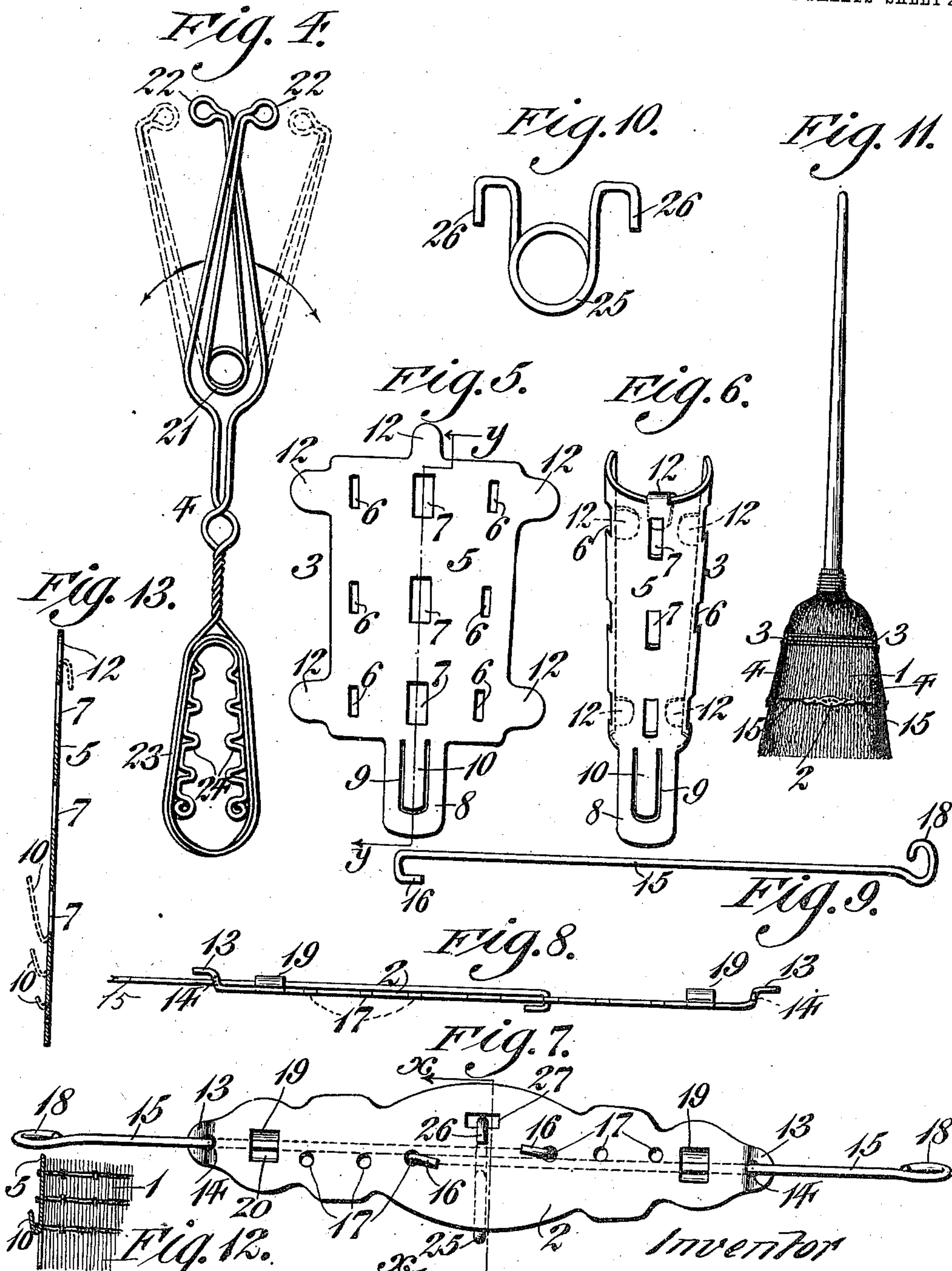
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# UNITED STATES PATENT OFFICE.

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## BROOM-BRACE.

975,916.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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*To all whom it may concern:*

Be it known that I, STEPHEN G. WILSON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Broom-Brace, of which the following is a specification.

This invention relates to brooms and more particularly to an attachment for broom heads, the object of which is to produce substantially even wear of the straws, a flexible and spring action during a sweeping operation and to give long life to a broom.

It further consists of a device which may be readily attached to a broom head and when in position thereon may be adjusted and shifted to vary the distance from the sweeping end of the broom head and also to regulate the spring action of the same.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a side elevation of a broom with my novel device attached thereto. Fig. 2 represents a perspective of a portion of the device. Fig. 3 represents a section on line  $x-x$ , Fig. 7. Fig. 4 represents one of the side spring members. Fig. 5 represents a blank cut to form an attaching clip forming a portion of the device. Fig. 6 represents the same ready for attachment to a broom. Fig. 7 represents a side elevation of one of the bracing members. Fig. 8 represents a plan of the same. Fig. 9 represents one of the securing rods detached. Fig. 10 represents a reinforcing fastening member. Fig. 11 represents a broom showing my device in attached position. Fig. 12 represents a detail of the attaching device. Fig. 13 represents a section on line  $y-y$ , Fig. 5.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—1 designates a broom head, having secured thereto my novel bracing means, consisting, in the present instance, of the plates 2, side clips 3 and spring members 4.

Referring to Fig. 6, one of the attaching clips 3 is shown in detail and consists of a suitably shaped blank 5 provided with apertures 6 and slots 7, for a purpose to be presently explained. This blank 5 is also provided with an end tongue 8 having a slot 9 cut therein, whereby a finger 10 is formed adapted to cooperate with the stitching 11 of the broom head 1.

12 designates a plurality of lugs, here shown as formed integral with the blank 5 and adapted to be bent inwardly and form a gripping means to engage the straws of the broom head. The blank 5 is shown in Fig. 6 formed into the suitable shape for attaching the device to cooperate with the sides or edges of the broom head and as so formed is shown curved on substantially the arc of a circle, as will be readily apparent. One of these attaching means or clips 3 is secured to each side or edge of the broom head by passing the tongue 8 beneath one or more of the rows of stitching, the finger 10 then being bent out and upward around the stitching of the broom and into close engagement with the face of the clip to hold the latter securely in place. It will be noted, as shown in dotted lines Fig. 13, that the tongue 10 is of sufficient length to permit the same to be turned about any particular row of stitching, as desired, since it is well known that the number of rows of stitching and the location of the same varies more or less in different makes of brooms. One of the lugs 12 is then bent inward and down over another row of stitching while the remaining lugs are forced inwardly between the straws and bent to grip the same fast. The plates 2 are preferably flat and suitably shaped for the purpose intended, being provided in the present instance with inwardly turned ends 13, adjacent each of which is an opening 14 adapted to receive a fastening rod 15, which latter passes along the side of the plate and terminates in a hook 16, which may cooperate with any one of a number of openings 17 formed for purposes of adjustment. It will of course be understood that there are two of these fastening rods 15 for each plate 2, each having



its respective adjusting openings. These rods 15 terminate in eyelets or hooks 18 for coöperation with an adjacent spring member. In connection with the rods 15 it will be noted that suitable stay lugs 19 are struck up from the plate 2, forming suitable openings 20, through which the said rod 15 passes. The spring members 21 forming an adjustable connection between the rods 15 and the clips 3 are here shown as formed of a single piece of wire suitably twisted and terminating in fingers 22 normally under tension to bring the same to overlapping position. These fingers 22 are adapted to be passed within a set of the openings 6, the set selected determining the position of the plates 2 and the length of the sweeping surface of the broom.

23 designates a loop portion formed in the spring member 21, the same being preferably tapered at one end and formed substantially throughout its length with a plurality of corrugations 24, with which latter the hook 18 of each rod 15 is adapted to engage.

25 designates a reinforcing clamp preferably formed of wire and terminating in hook ends 26 which are formed for coöperation with an opening 27 of each plate 2.

In operation, the clips 3 having been fixedly secured to the broom head by means of the tongue 10 and lugs 12 engaging the stitching and straws, as already described, the spring members 21 are placed in position by springing the fingers 22 apart and inserting them in the proper opening 6, whereupon the rods 15 carrying the plates 2 may be secured in place by snapping the hook 18 in one of the corrugations 24. The effect of so placing the plates is to reduce the thickness of the broom and cause a spreading action, giving a much wider sweeping surface and in order that the plates 2 may not be separated and be more securely held during a sweeping operation, the reinforcing clamp 25 is inserted by engaging one of the hooks 26 with an opening 27 of one of the plates 2 and turning the clamp 25 so that the opposite hook 26 may be slipped into the corresponding opening 27 in the other plate, the clamp then assuming a substantially vertical position, as will be clear from Fig. 7.

It will now be apparent that I have devised a complete, unitary structure well adapted for the purpose intended and by means of which the thickness of a broom head is decreased and the sweeping surface proportionately increased while the spring

members at each side afford a resilient means for aiding in the sweeping action.

As wear takes place or for other reasons it is desired to bring the plates 2 nearer to the broom handle the same may readily be shifted by removing the hooks 18 from one set of corrugations 24 to another, the tapering contour of which permits of adjustment while further adjustment may be made by shifting the rods 15 from one aperture 17 of the plate 2 to another.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a device of the character stated, a plurality of clips, means on each clip for engagement with the stitching of a broom head, a spring member for each clip and adapted to be adjustably connected therewith, a plurality of plates, and means for adjustably connecting each of said plates with said spring members.

2. In a device of the character described, a plurality of clips, a tongue on each clip for engagement with the stitching of a broom head, a spring member for each clip, and a plurality of plates and means for connecting said spring members with said plates.

3. In a device of the character described, a plurality of clips adapted to be secured to a broom head, each having openings therein at varying heights, a spring member for each clip, fingers on said spring members for coöperation with said openings, a plurality of plates and means for connecting said spring members with said plates.

4. In a device of the character described, a plurality of clips adapted to be secured to a broom head, a spring member for each clip having a tapered portion, corrugations on said tapered portion, a plurality of plates, and a plurality of hooks secured to each plate and adapted for engagement with said corrugations.

5. In a device of the character described, a plurality of clips adapted to be secured to a broom head, a spring member for each clip having a tapered portion, corrugations on said tapered portion, a plurality of plates, a plurality of hooks secured to each plate and adapted for engagement with said corrugations, and a bracing member connecting said plates.

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Witnesses:

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