H. J. STRUVE.

BROOM.

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1,115,255.

Patented Oct. 27, 1914.

Fig. 1.

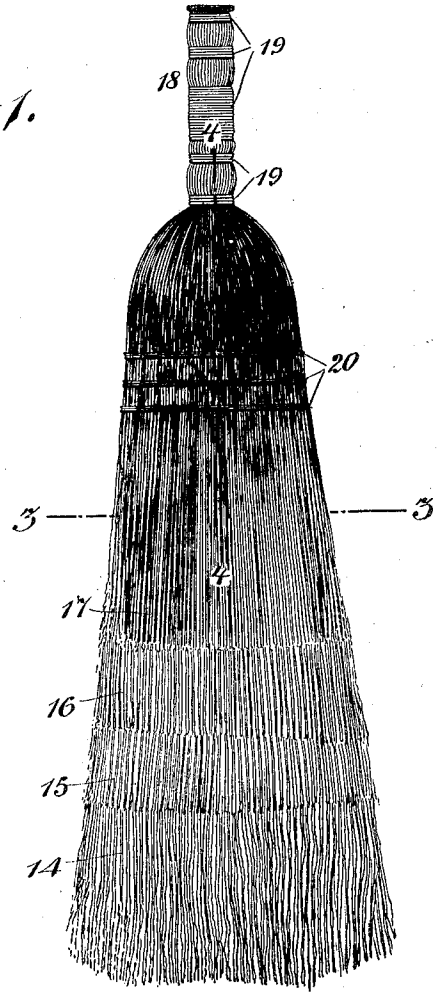


Fig. 2.

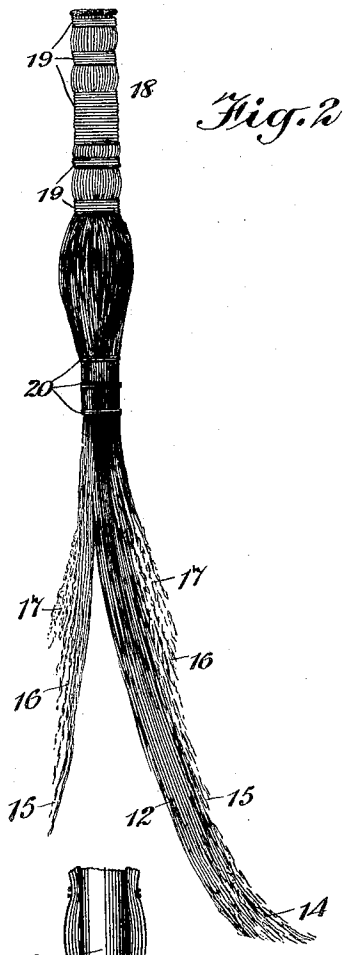
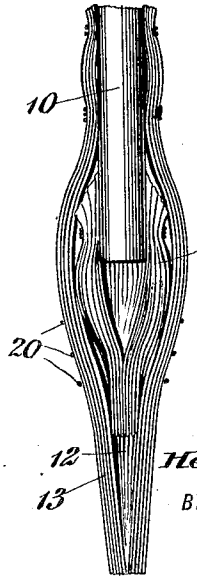


Fig. 3.



Fig. 4.



WITNESSES

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BROOM.

1,115,255. Specification of Letters Patent. Patented Oct. 27, 1914.

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To all whom it may concern:

Be it known that I, HERMAN J. STRUVE, a citizen of the United States, and a resident of Deshler, in the county of Thayer and State of Nebraska, have invented a new and Improved Broom, of which the following is a full, clear, and exact description.

My invention relates more particularly to the comparatively long whisk brooms employed in barbers' shops and like places. Brooms of the character referred to present very long brushing fibers usually of broom corn, and owing to the great length of the fibers they do not properly reinforce one another, and the additional strain exerted on the fibers, due to their length, results in the fibers breaking off at the rear end. Besides, the fibers do not offer the proper resistance for effective brushing.

In order to overcome the stated defects, I form the broom with bunched brushing fibers at the center, extending the full length of the broom, and outside the central fibers I arrange separate layers of brushing fibers, the several layers being successively of decreasing length from the front rearwardly. The fibers of a particular layer terminate on approximately a definite line, presenting distinct zones of decreasing thickness from the front rearwardly. The several layers of successively shorter fibers have a springy action, somewhat analogous to that of laminated springs of leaves of varying length, and thus reinforce the central fibers so that the latter will not break off at the bridle or tie cords. As the longer fibers wear down, the different layers become available as brushing fibers, in addition to the central fibers.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a whisk broom formed in accordance with my invention; Fig. 2 is an edge view thereof, indicating the disposition of the fibers when the broom is being used for brushing; Fig. 3 is a cross section on the line 3—3 of Fig. 1; and Fig. 4 is a detail longitudinal section on the line 4—4 of Fig. 1.

In forming a practical embodiment of the invention, a core 10 is employed at the upper end, and to the lower end of the said core are secured filler fibers 11, which are short and stiff, and terminate with substantially a blunt end at a point below the core. Over the filler fibers 11 brushing fibers are secured, and are designated generally by the numeral 13. The relation of the brushing fibers to the filler 11 is such that a tapering space 12 is defined by the filler and brushing fibers in front of said filler, as clearly shown in Fig. 4, which contributes to allowing a springy movement to the fibers when the brush is in use. The brushing fibers comprise a central or inner bunch of fibers designated by the numeral 14, and extending toward the lower end of the broom are successive layers 15, 16, 17, of shorter fibers, there being any desired number of such layers within practical bounds. As shown best in Fig. 1, the fibers of a particular layer terminate on approximately the same line extending around the broom, so that distinct zones are formed by the inner and outer brushing fibers, the zones being obviously of increasing thickness from the front end of the broom rearwardly. The broom is otherwise finished in any approved manner, there being shown conventionally a handle 18 around which are several series of wires 19 for binding the ends of the fibers onto the projecting end of the core. Below the handle the broom is provided with bridle members or tie cords 20, three of which are indicated in the present instance. The tie cords serve to secure the inner longer fibers 14, as well as the fibers forming the successive layers, so that the final point of flexure of all the fibers will be the same.

In use, the springy layers of fibers reinforce the longer fibers 14 and reinforce each other, so that the inner bunch of fibers will be prevented from breaking off at the tie cords, and successive layers of fibers will have a similar effect on each other.

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

A broom, having a core, a filler of short fibers secured at their upper ends to the core at the interior of the broom and terminating a short distance beyond the lower end of said core, and brushing fibers covering said filler and meeting below the filler, the fibers and the filler defining an interior space of decreasing width below the core, the brushing fibers furthermore comprising inner bunched fibers extending to the lower end

of the broom, and separate springy layers, the springy layers being of decreasing length from the innermost to the outermost layer, and the fibers of any given layer terminating in approximately the same line, the several layers defining distinct zones of increasing thickness from the bottom upwardly.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERMAN J. STRUVE.

Witnesses:
CARL TAMME,
ROBERT GEISLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."