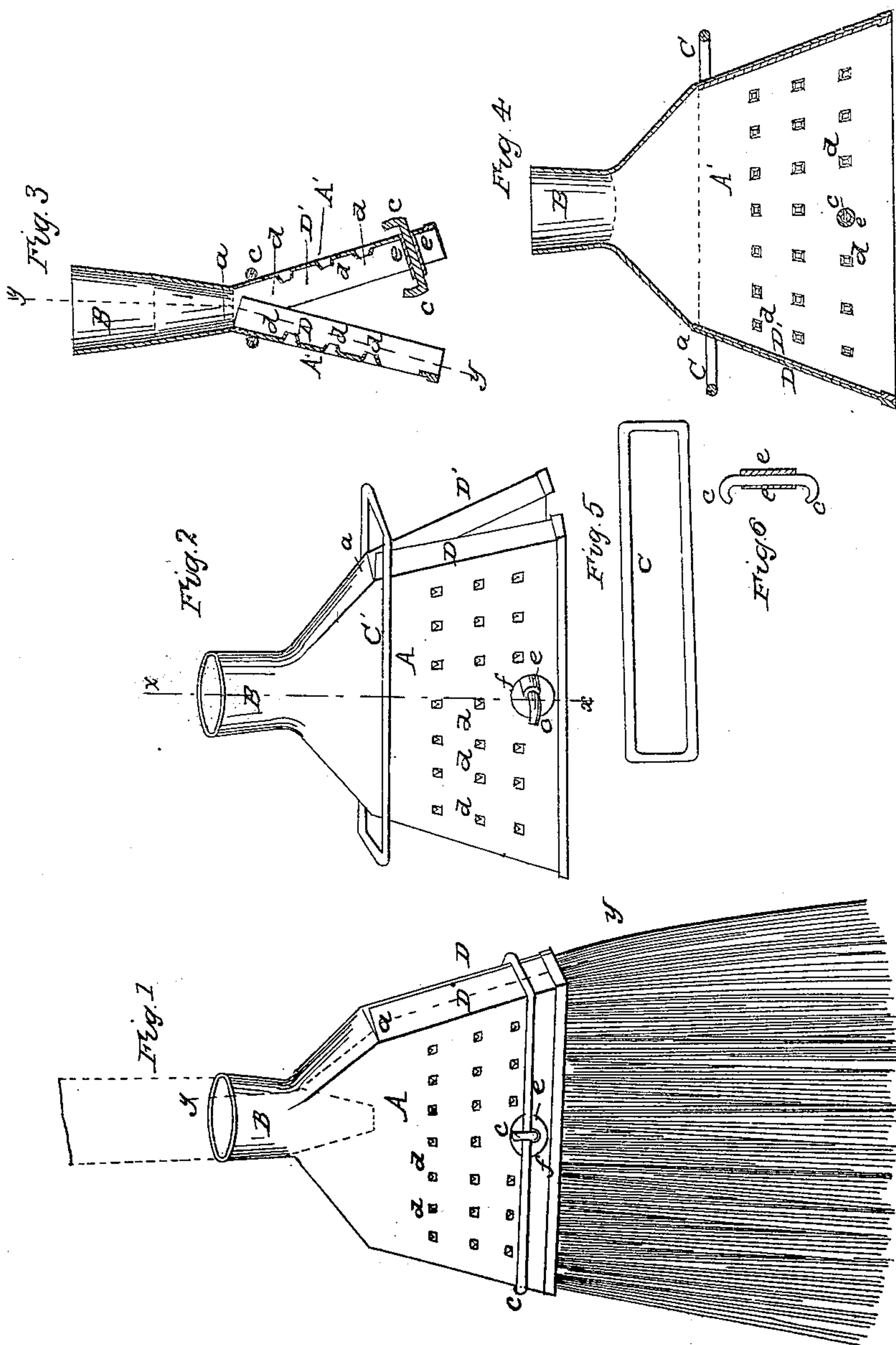


J. S. ELKINS.

Broom Head.

No. 53,962.

Patented April 17, 1866.



Witnesses  
L. H. Davis  
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Inventor.  
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# UNITED STATES PATENT OFFICE.

JOSEPH S. ELKINS, OF MARQUETTE, WISCONSIN.

## IMPROVED BROOM-HEAD.

Specification forming part of Letters Patent No. 53,962, dated April 17, 1866.

*To all whom it may concern:*

Be it known that I, JOSEPH S. ELKINS, of Marquette, in the county of Green Lake and State of Wisconsin, have invented a new and Improved Broom-Head; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view of a complete broom constructed according to my invention. Fig. 2 is a perspective view of my broom-head detached, in an open condition, ready to receive the broom-corn. Fig. 3 is a vertical section of the same on the line *xx* of Fig. 2. Fig. 4 is a vertical section on the line *yy* of Figs. 1 and 3, and Figs. 5 and 6 are detached views of the clamp in detail.

The nature of my invention consists in an improvement in ordinary broom-heads of the kind now before the public by providing clamps or jaws, with center fastenings, to hold the brush in such a manner as to enable me to dispense with much weight of material by employing a thinner and lighter amount of material for my broom-head, and yet at the same time produce a perfectly stiff and serviceable broom. The great defect in this style of broom-head heretofore has been the necessity of making the head very heavy and thick, in order to obtain sufficient strength in the sides or jaws of the broom-head to permit the necessary clamping force to be exerted upon the broom-corn to hold it firmly without breaking or bending the frame or jaws.

An ordinary corn broom weighs about one and a half pound. My broom-head weighs about a half-pound additional. When it is considered that all metallic broom-heads of ordinary size heretofore contrived weigh at least three times this much—viz., one and one-half pound—or about as much again as the broom itself, and that in sweeping a brisk sweeper makes from seventy-five to one hundred strokes per minute, the great importance of reducing every possible ounce of weight in broom-heads becomes apparent; and a special device by which I am enabled to effect this great reduction in the weight of these metallic broom-heads is the subject of the present invention.

To enable others skilled in the art to make

and use my invention, I will proceed to describe its construction.

I construct my broom-head of sheet tin, copper, brass, or any like material, in the form shown in Figs. 1, 2, 3, and 4 of the drawings.

A A' represent the jaws of the broom-head, which are made so as to spring apart at the points *a a* when the clamp-collar C is released from the clamp-hooks *c c* and pushed up to the position seen in Fig. 2. The jaws when so opened or separated are in the proper position to receive the broom-corn or other material of which the broom or brush is to be constructed.

The broom-head is provided with a proper socket, B, to receive the handle of the broom, in the ordinary manner, and the jaws A A are provided, on the inner sides, with barbs or projections presenting pointed or roughened surfaces, to more securely retain the brush within the head. Such a surface is more preferably and cheaply produced by punching angular holes with a sharp-edged punch from the exterior in a manner somewhat similar to a very coarse grater. I have illustrated the latter method in this application, such projections being indicated by the letters *d d d*, &c., in the drawings, (more clearly shown in the section Fig. 3.)

The edges D and D' lap past each other when the head is clamped up, as shown in Fig. 1.

C in the drawings is a clamp-collar, constructed of stout wire passing around the jaws of the broom-head, to confine them to their proper places when in use. This clamp holds the jaws of the broom-head tightly against the brush of the broom, and is itself held against the jaws and retained in that position by the clamp-hooks *c c*, which hooks are constructed by bending over each end of a stout piece of wire, in the form shown in Figs. 3 and 6. The clamp-hooks so formed pass loosely through a tube, *e*, which tube is firmly attached at one end to the jaw A' of the broom-head, the jaw A being provided with a circular or other opening, *f*, through which the hook at the loose end of said tube passes to allow the jaws of the broom-head to be spread apart when required.

The form of the wire clamp-collar is plainly seen in Fig. 5, and the clamp-hooks and tube detached in Fig. 6. There may be one, two, or more of these swivel clamp-hooks placed



along the width of the broom-head, all of which will of course clamp upon the same collar.

The operation of my invention is as follows: The empty broom-head, either before or after having a proper handle attached to it, is opened by slipping up the collar, as seen in Figs. 2 and 3, and in this condition the broom-corn, properly cut and prepared, or any other material intended to form the brush, is inserted, in sufficient quantity, between the jaws A A', and the said jaws closed firmly down upon it, while at the same time the collar C is slipped down as far as the shank of the hooks c c will permit, and the hooks themselves, by a rotary or swivel motion, are turned upward so as to project over and across the collar, and thus prevent it from spreading apart when the

force by which the jaws were closed upon the broom-corn is removed. The broom will now be found ready for use, and will combine greater strength with less weight than has ever heretofore been rendered practical.

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

The combination of the clamp-collar C and the clamp swivel hook or hooks c c with the jaws of a broom-head, substantially as shown and set forth.

J. S. ELKINS.

Witnesses:

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