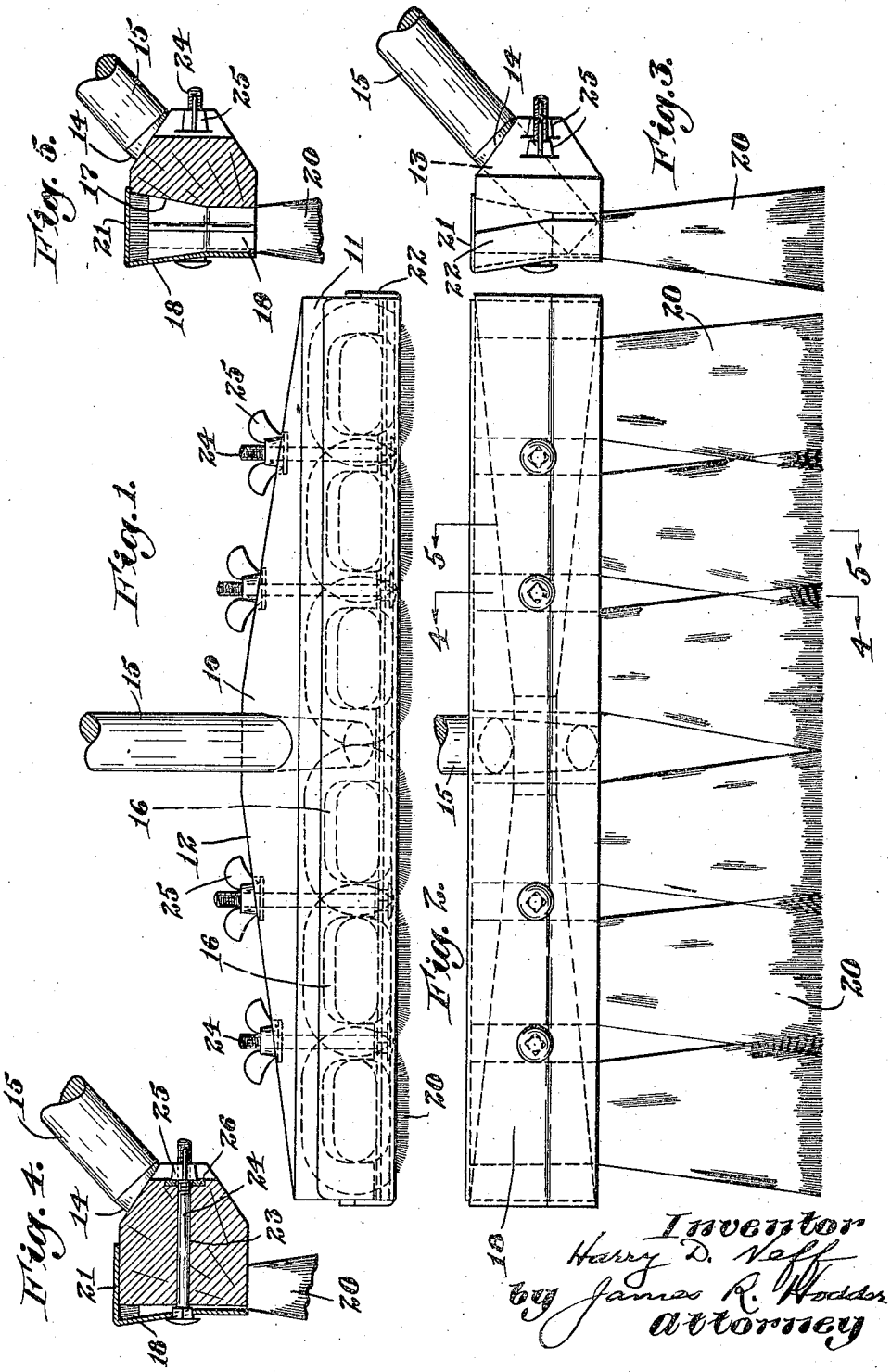
Nov. 18, 1924.

1,516,026

H. D. NEFF

PUSH BROOM

Filed July 30, 1923



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Patented Nov. 18, 1924. 1,516,026

UNITED STATES PATENT OFFICE.

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PUSH BROOM.

Application filed July 30, 1923. Serial No. 654,587.

To all whom it may concern:

Be it known that I, HARRY D. NEFF, a citizen of the United States, and a resident of Stoneham, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Push Brooms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention relates to broom and brushes, and more particularly to an improved broom or brush of the push type.

A push broom, to be adapted for the heaviest kind of work, must be massive in construction, and the brush elements must be substantially constructed in order to withstand the heavy wear to which they are subjected. In my present invention, I have devised a form of brush head or holder which is adapted to receive brush or broom units of the heaviest type, and such improved head is provided with a plurality of grooves or cut-out portions having a contour or cross section such as will enable it to receive the head of a brush unit of the type referred to and I enclose or secure such brush units in such depressions or grooves by means of the closure adjustably mounted on the head, which closure is shaped to conform with the contour of the holding portion of the brush units.

The object of my invention, therefore, is an improved push broom or brush in which the brush portion is comprised of a plurality of parallelly arranged grooves formed in the head of the broom.

Referring to the drawings, illustrating a preferred embodiment of my invention,

Fig. 1 is a plan view;

Fig. 2 is a front elevation;

Fig. 3 is an end elevation;

Fig. 4 is a vertical sectional elevation on the line 4—4 of Fig. 2, and

Fig. 5 is a vertical section on the line 5—5 of Fig. 2.

Referring to the drawings, 10 designates a head comprised preferably of any heavy close grained wood, although metal may be substituted therefor, and such head 10 is provided with a front portion 11 substantially rectangular in cross section and with a rearwardly extending tapered portion 12 that is provided with a hole 13 into and through which may extend the tapered end 14 of an operating handle 15. The rectangular portion 11 of the head 10 is provided with a plurality of parallelly arranged grooves 16 substantially oval in cross section, as viewed in Fig. 1, and with the back wall of such grooves formed with an upwardly and outwardly flaring surface 17, as clearly shown in Fig. 5. Cooperating with the head 10 is an enclosing cover 18 preferably of heavy sheet metal, the shape of the vertical face thereof, as viewed in Figs. 3, 4, and 5, corresponding in shape to the shape of the outwardly and upwardly extending surface 18 in the grooves 16, such grooves 16 and the cooperating face of the enclosing member 18 forming substantially an inverted cone-shaped upper portion merging into a parallel sided passage, as clearly shown in Fig. 5, such shape being substantially that of the holding member 19 for securing the fibres of the brush element 20 together. The metal of which the member 18 is composed is large enough in area to fold over a portion 21 thereof to substantially close the top of the grooves 16 and is also provided with end portions 22 which fold over and engage with the side or ends of the rectangular portion 10, the elements 18, 21, and 22, therefore, forming a complete enclosing and protecting member for the front, top, and two ends of the rectangular portion 11 of the head 10. The element 18 is provided with a plurality of perforations that are in alinement with a plurality of perforations 23 in the broom head 10 and through such alined perforations extends the body portion of a bolt 24 threaded on its end to receive a wing nut 25 and between the wing nut and the head 10 is placed a metallic washer 26.

The head 10 having been provided with an operating handle 15, the thumb nuts 25 are removed from the bolts 24 and the enclosing element or member 18 is removed together with the bolt 24 from such head 10. The plurality of brush elements 19, 20 are inserted, one of such elements in each of the grooves 16, the member 18 and bolts 24 replaced, and thumb nuts 25 are utilized to bring the member 18 firmly into position with respect to the rectangular portion 11 of the head 10, this action causing a firm gripping and holding of the member 19 that grips the fibres of the brush 20. The brush is used as in the ordinary push broom and by making the fibres 20 of proper material,

a substantial brush of extremely long life is produced.

While I have necessarily shown and described the preferred embodiment of my invention somewhat in detail, it is to be understood that I may vary the size, shape, and arrangement of parts comprising my invention within wide limits without departing from the spirit of the invention.

Having thus described my invention, what I claim as new is:

In an improved push broom of the type described, the combination of a substantially rectangular elongated head having a plurality of parallelly arranged grooves formed therein, each groove having its upper rearward surface extending outwardly and upwardly from a point intermediate the upper and lower ends thereof, a gripping and closing member mounted on said rectangular head, means for adjusting said gripping and closing member with respect to the head, a closure for the top of the grooves in the head formed integral with, and extending laterally outward from, the gripping and closing member, and a plurality of broom units fitting within said parallelly arranged grooves.

In testimony whereof, I have signed my name to this specification.

HARRY D. NEFF.