

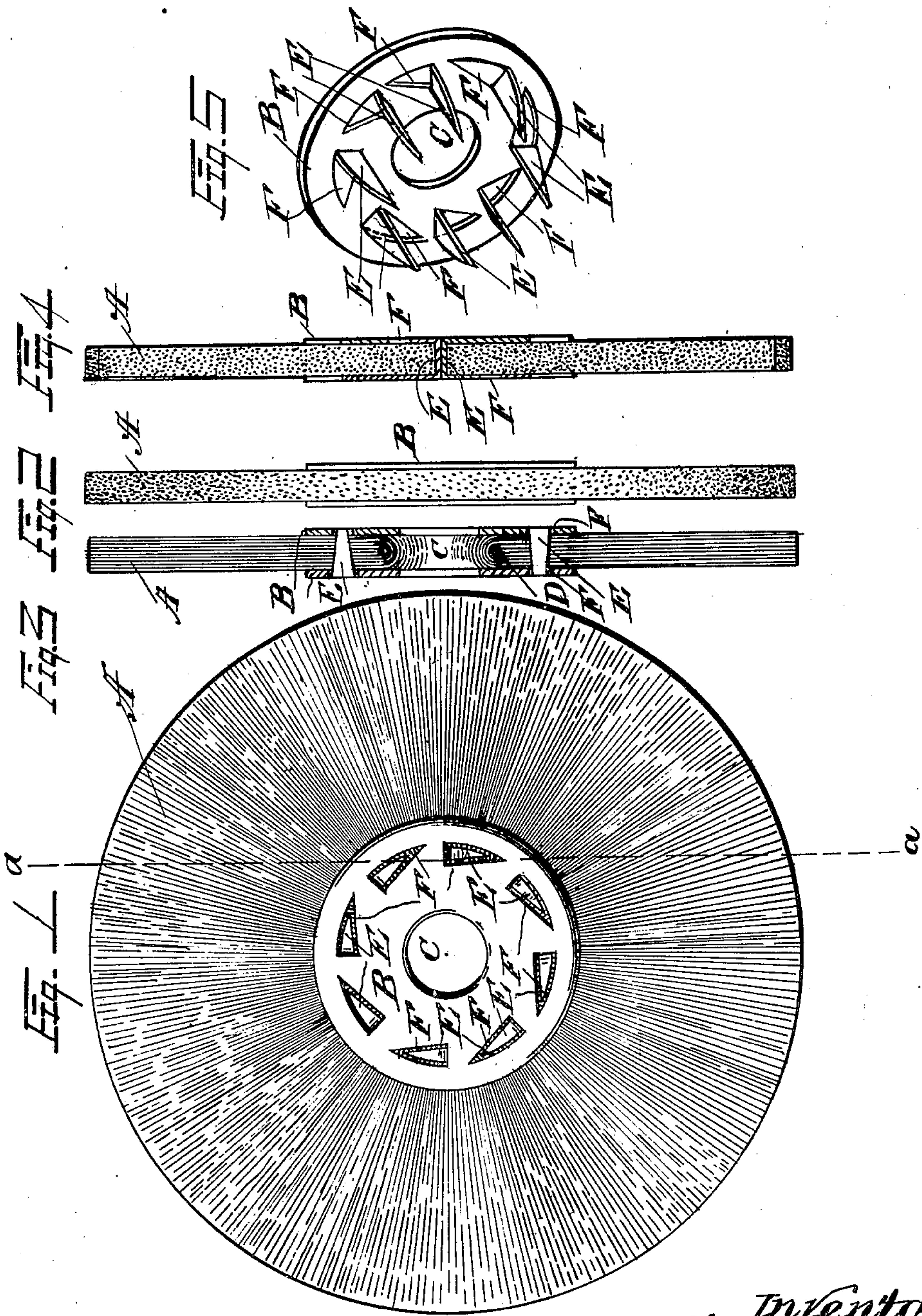
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C. E. FROST

BRUSH

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# UNITED STATES PATENT OFFICE.

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## BRUSH.

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The objects of the invention are to provide an improved disc shaped brush having radially directed bristles or brush members, secured between rigid metal discs forming a central support or hub therefor. The brush belongs to the type in which a multiple number of similar discs are mounted upon a common mandrel and secured thereon by suitable clamping means to form a unitary structure.

The present improvements relate to the means for securing the metallic discs to the bristles in such a manner that the plates and bristles are so strongly interlocked that when assembled upon a mandrel or if used singly for any purpose they can not be separated except by the use of a tool and unusual effort to pry them apart.

The locking device is simple in the construction, and can be manufactured quickly in large production by means of dies and is efficient for general use.

The invention is hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the claim.

In the accompanying drawings Fig. 1 is a side elevation of the device; Fig. 2 is an edge view thereof; Fig. 3 is a central vertical section; Fig. 4 is a vertical section on line  $a-a$ , Fig. 1. Fig. 5 is a perspective of one of the metal clamping discs showing the locking lugs thereon.

In these views, A, A, are the radially directed bristles, mounted between the central plates B, B, having the central openings C, C, through which a mandrel is passed.

In larger brushes the bristles may be doubled upon themselves and a wire D may be passed through the loop or the loop and wire may be dispensed with as may be desired.

The plates are provided with regularly spaced, pointed lugs E, E, which project inwardly therefrom, and the lugs are formed

by stamping them from the sheet metal plates, thus leaving spaced triangular openings F, F, therein.

The plates are applied to the bristles with the pointed lugs extending inwardly with the lugs upon one plate being adjacent to the lugs upon the other plate, and the points of the lugs are clinched in opposite directions against opposite sides of the brush and should enter the openings F, F, in the opposite plate, thus substantially filling these openings and providing a smooth outer surface, as shown for the plates.

It is not necessary, however, that the lugs on one plate should enter the openings in opposite plates because they may be clinched over the outer side of said bristle body, and when the lug is clinched upon the bristles the plates and bristles are securely held in place.

The extremities of the lugs are pointed to make it possible to drive them through the bristle body.

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

As an article of manufacture, a brush section, comprising a disc shaped bristle body having a central opening and a pair of sheet metal clamping plates between which said bristle body is secured, and locking means for said body and plates comprising pointed lugs extending inwardly from the inner opposite sides of said plates, the pointed ends of said lugs being turned over the outer sides of said bristle body, said lugs being integrally formed from said plates, leaving corresponding openings therein, the extremities of the lugs in one plate lying against the opposite outer face of said body and enclosed in one of said openings.

In testimony whereof I hereunto affix my signature.

CLINTON E. FROST.