

(No Model.)

F. G. FARNHAM.
ROTARY BRUSH.

No. 571,559.

Patented Nov. 17, 1896.

Fig. 1.

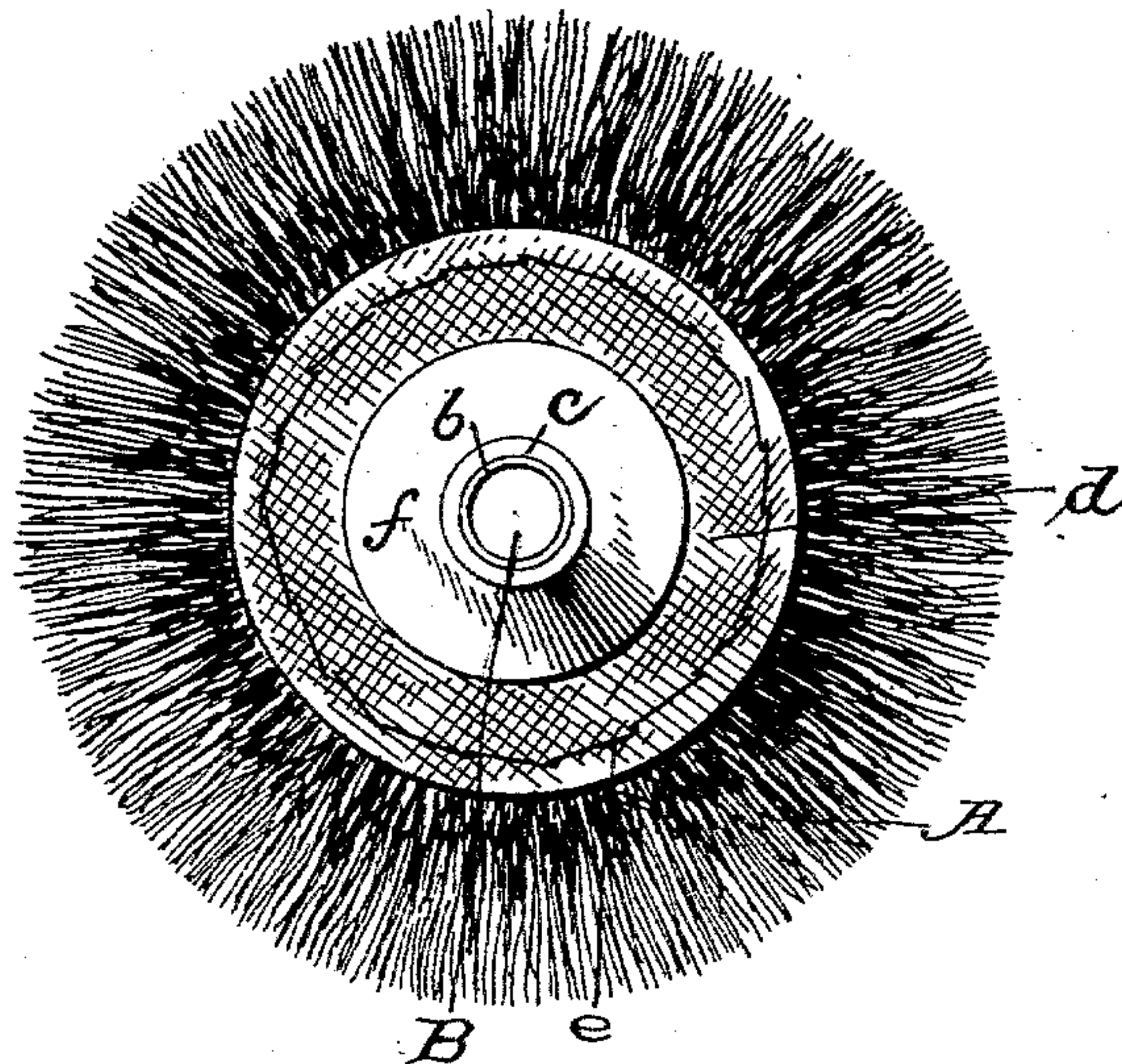


Fig. 2.

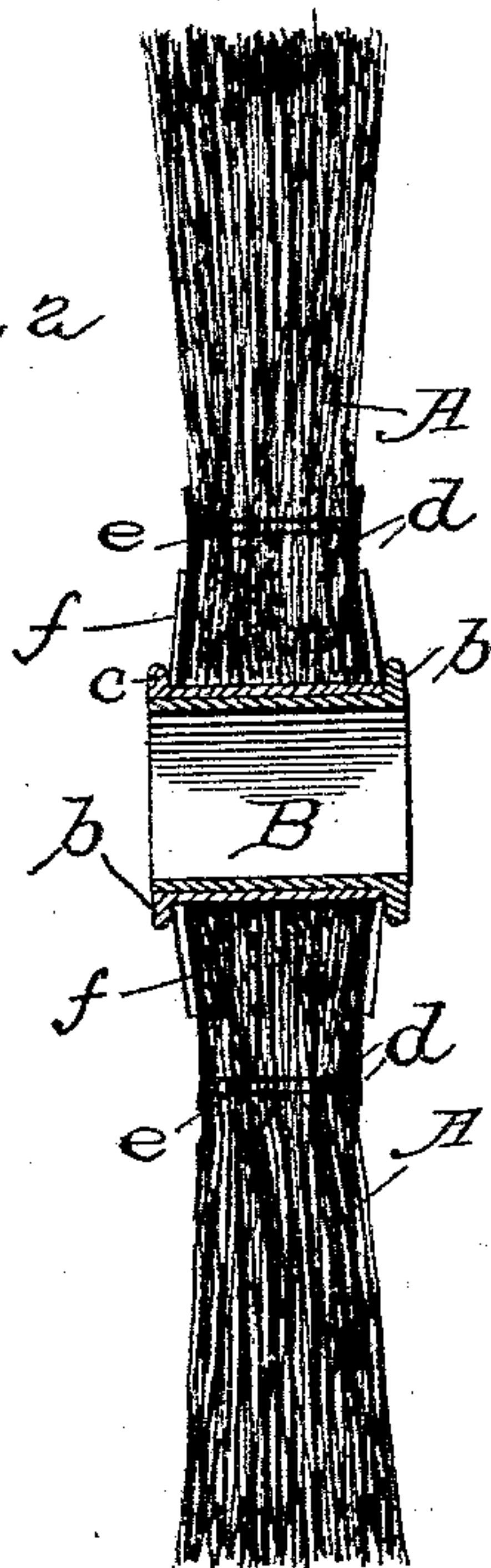
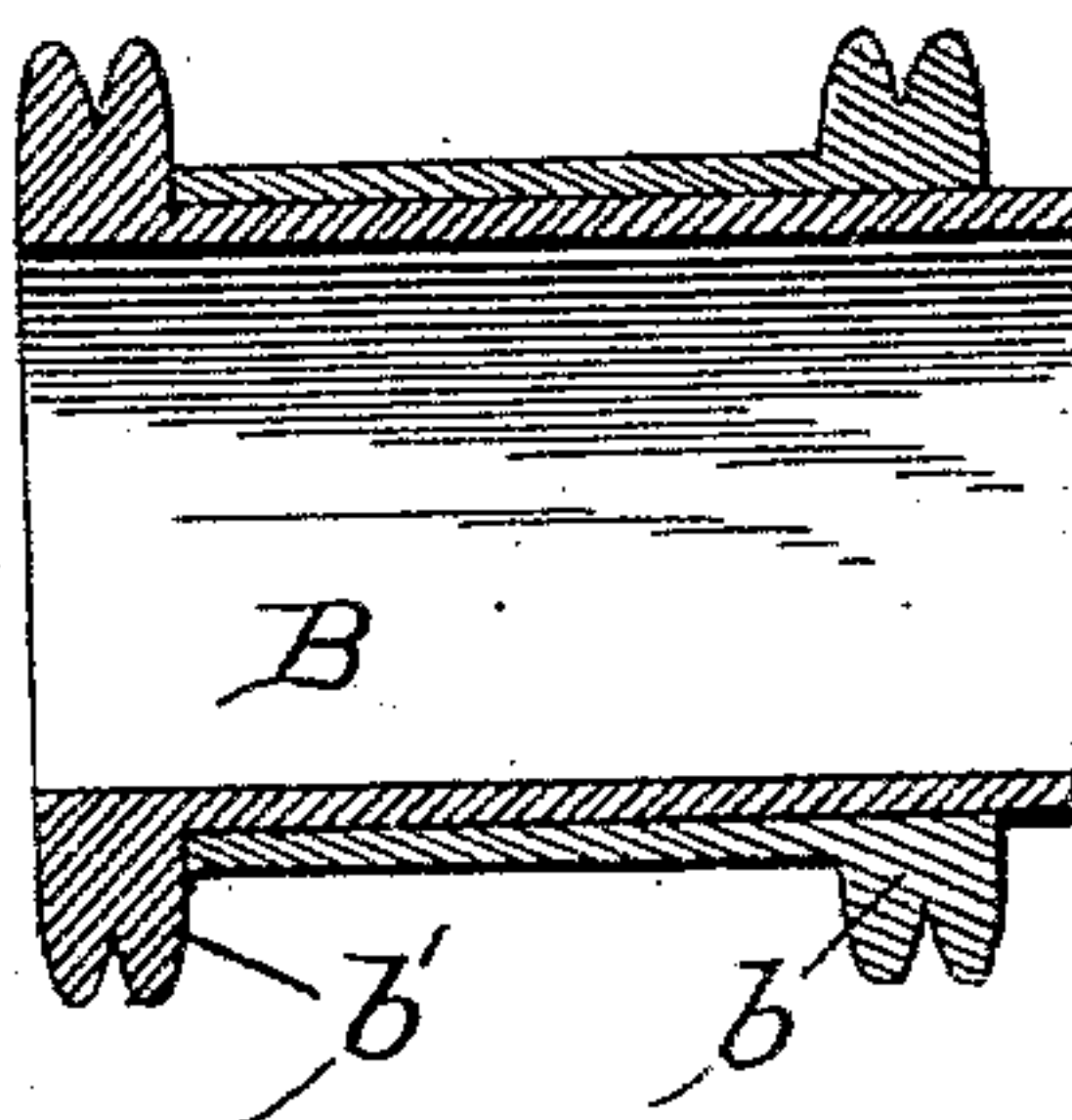


Fig. 3.



Attest
Walter Donaldson
J. L. Middleton

Inventor
Frank G. Farnham
by Mrs. L. L. Allen
Atty.

UNITED STATES PATENT OFFICE.

FRANK G. FARNHAM, OF HONESDALE, PENNSYLVANIA.

ROTARY BRUSH.

SPECIFICATION forming part of Letters Patent No. 571,559, dated November 17, 1896.

Application filed February 10, 1896. Serial No. 578,749. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. FARNHAM, a citizen of the United States, residing at Honesdale, in the county of Wayne and State of Pennsylvania, have invented certain new and useful Improvements in Rotary Brushes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to rotary brushes of that class in which the brush is composed of radially-arranged fibers held in the form of disks by means of a hollow hub and flanges fixed around the hub.

It consists of a special construction, all as hereinafter explained.

My said invention is illustrated in the accompanying drawings, in which—

Figure 1 shows the brush in side elevation, and Fig. 2 shows a central transverse section. Fig. 3 is a sectional view, enlarged, of a hub before it is reduced.

In the drawings, A represents the body of the brush, which is composed of any suitable material arranged radially, the mass of the fibers being held at the inner ends and about the hub. The basis or main portion of the hub consists of a hollow hub B.

As shown in the drawings, the hub B is composed of two parts *b b'*. These two parts are exactly alike, excepting that one is made smaller, so as to fit snugly one within the other. Both are formed with outer flanges *c*, which are turned integral with the tubular part, and when the parts are put together they are held, if made of wood, by means of glue. While I prefer to make the parts of wood, I do not confine myself to this material.

The fibers forming the body of the brush are arranged, as aforesaid, radially about this central tubular part. Next to the body or fibers is placed on each side a disk of cloth, (marked *d*.) These disks have a central hole made to fit snugly about the tubular part of the hub and the outer margins extend out over the body of fibers, to which they are held by stitching *e*, made to pass through the body of the fibers and through both disks, thus binding the flexible cloth disks upon the body of the fiber and holding the fiber firmly, yet flexibly. The inner ends of the fibers are held firmly in place by being saturated with glue, which holds them in place, and this glue also penetrates and holds the inner edge of

the disk of cloth. In order to cover this saturated portion of the cloth disk, and at the same time to make a more rigid and solid finish about the center of the brush and a finish through which the glue will not penetrate, I place over the disks of cloth other disks *f*, of stiff material, preferably Manila paper, these disks having holes fitted to the tubular part of the hub. These disks also furnish a solid bearing for the flanges of the tubular part, and being put in place while the glue is still fresh they are glued to the cloth. They do not permit the glue to soak through and deface the outer surface and at the same time they afford a suitable surface for printing whatever it may be desired to print upon the article.

It will be apparent that the fibers may be arranged about the outer tubular part *b*, with the disks on one side in place, the disks on the other side then being added after the glue has been applied, and finally the inner tubular part *b*, properly covered with glue, is put in place. This construction gives a solid tubular hub adapted to be put upon a spindle with rigid holding-disks next to the tubular hub and with marginal flexible holding-disks connected thereto and flexibly holding the fibers.

I have found that the flange in the tubular hub cannot be turned as thin as required without breaking. In order to overcome this, I turn the flanges of double thickness, as shown in Fig. 3, and with a small groove in the periphery thereof, so that after the brush parts are secured together and all firmly attached the end flanges may be sawed at their grooved portions, leaving the flanges of one-half thickness.

I claim—

A brush consisting of radially-arranged fibers, a central tubular hub comprising two parts each having one end flanged and with the flanged ends reversed, flexible disks on each side of the fibers and with stiff disks covering the flexible disks, the whole being secured together, substantially as described.

In testimony whereof I affix my signature in presence of two witness.

FRANK G. FARNHAM.

Witnesses:

ROB. A. SMITH,
CARROLL S. MIDDLETON.