

No. 665,832.

Patented Jan. 8, 1901.

H. W. LARSSON.
BRUSH.

(Application filed Oct. 6, 1900.)

(No Model.)

Fig. 1.

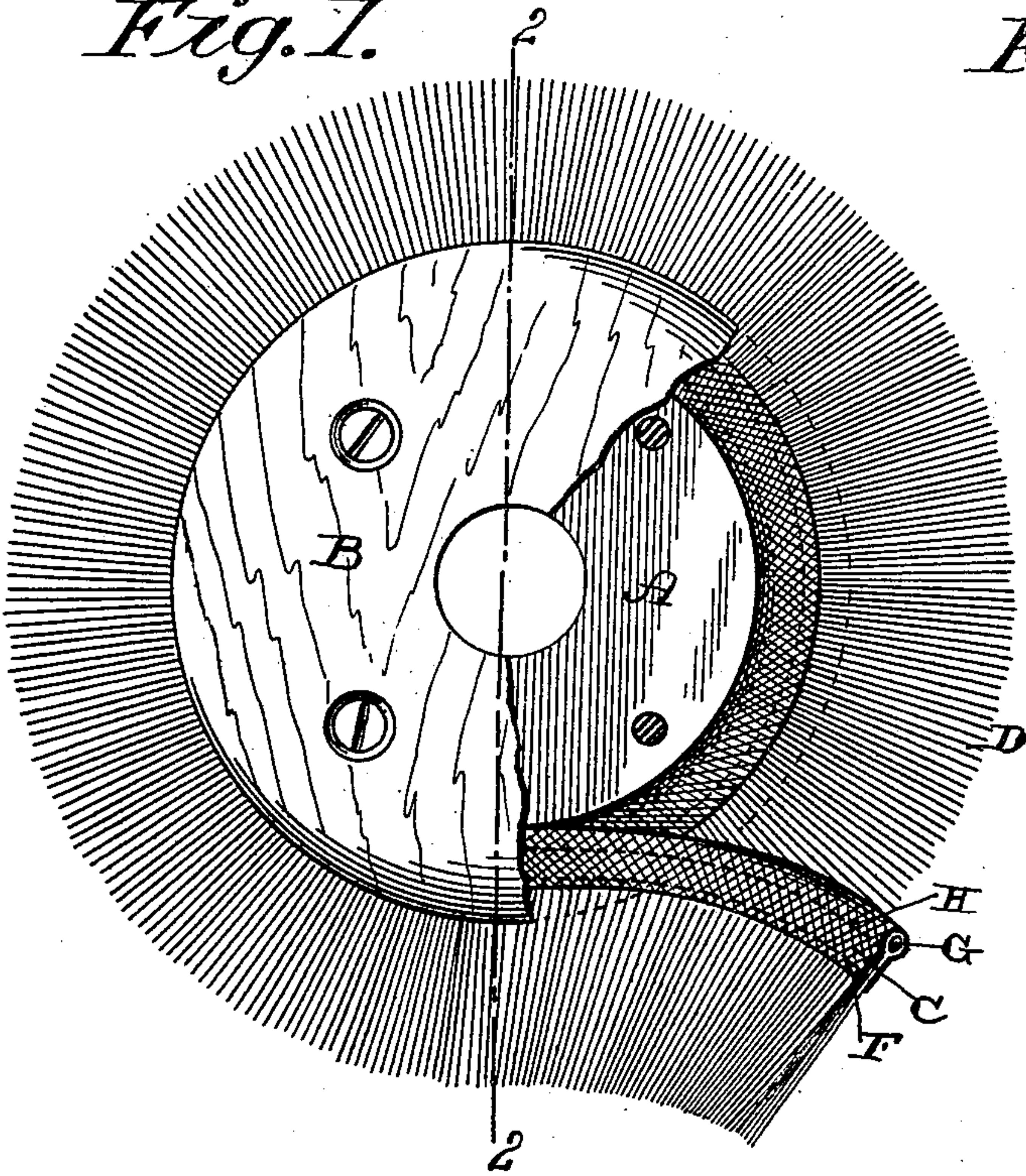


Fig. 2.

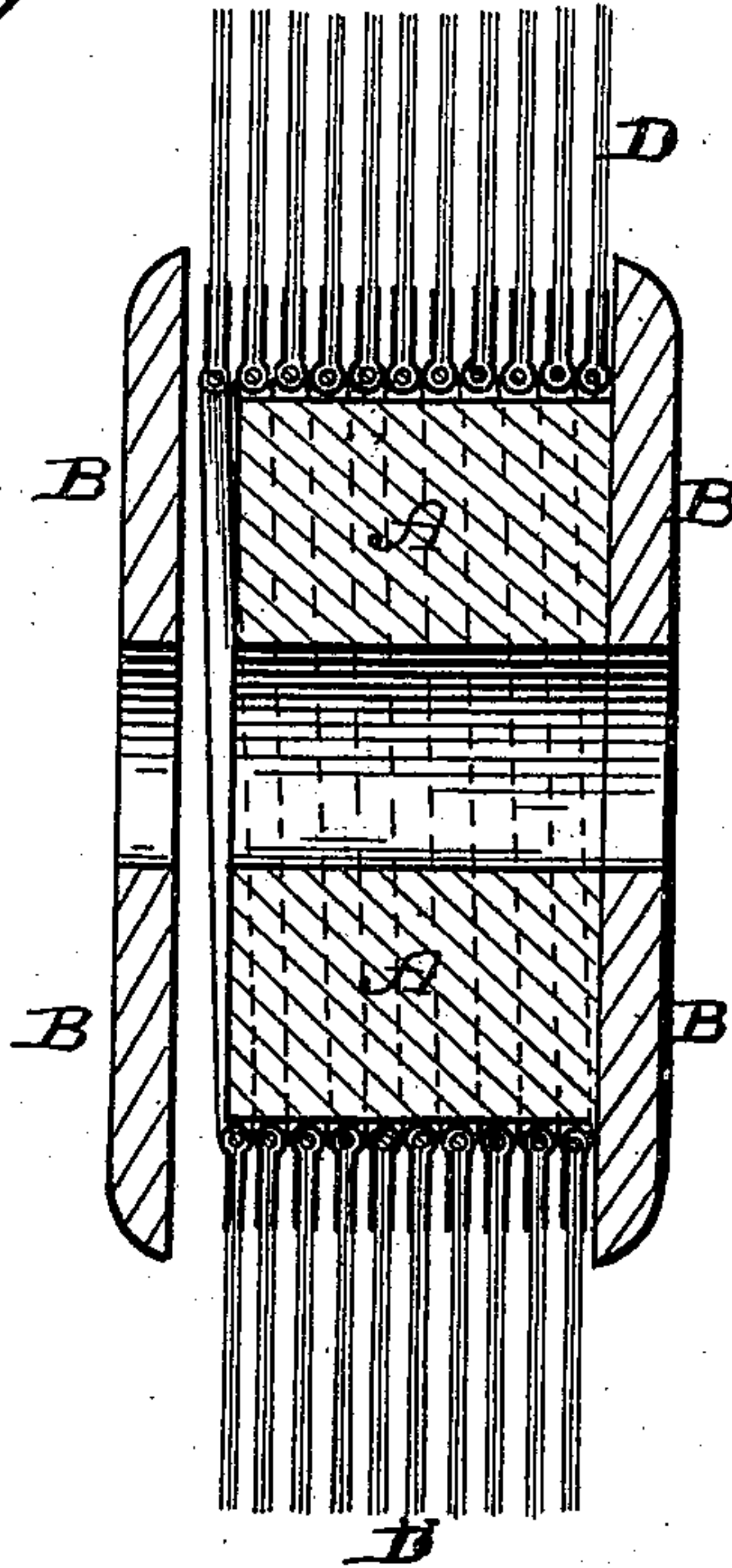


Fig. 3.

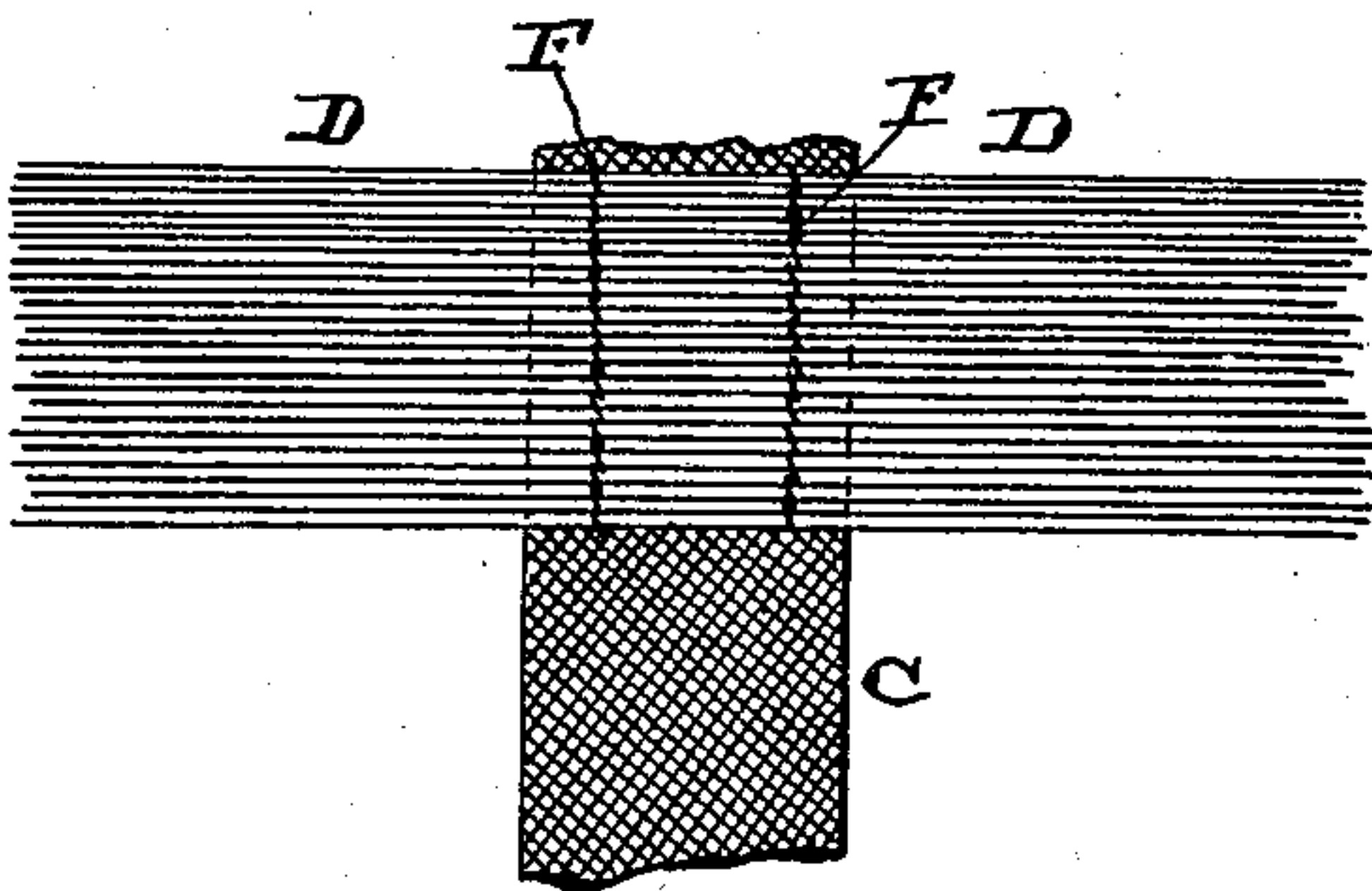
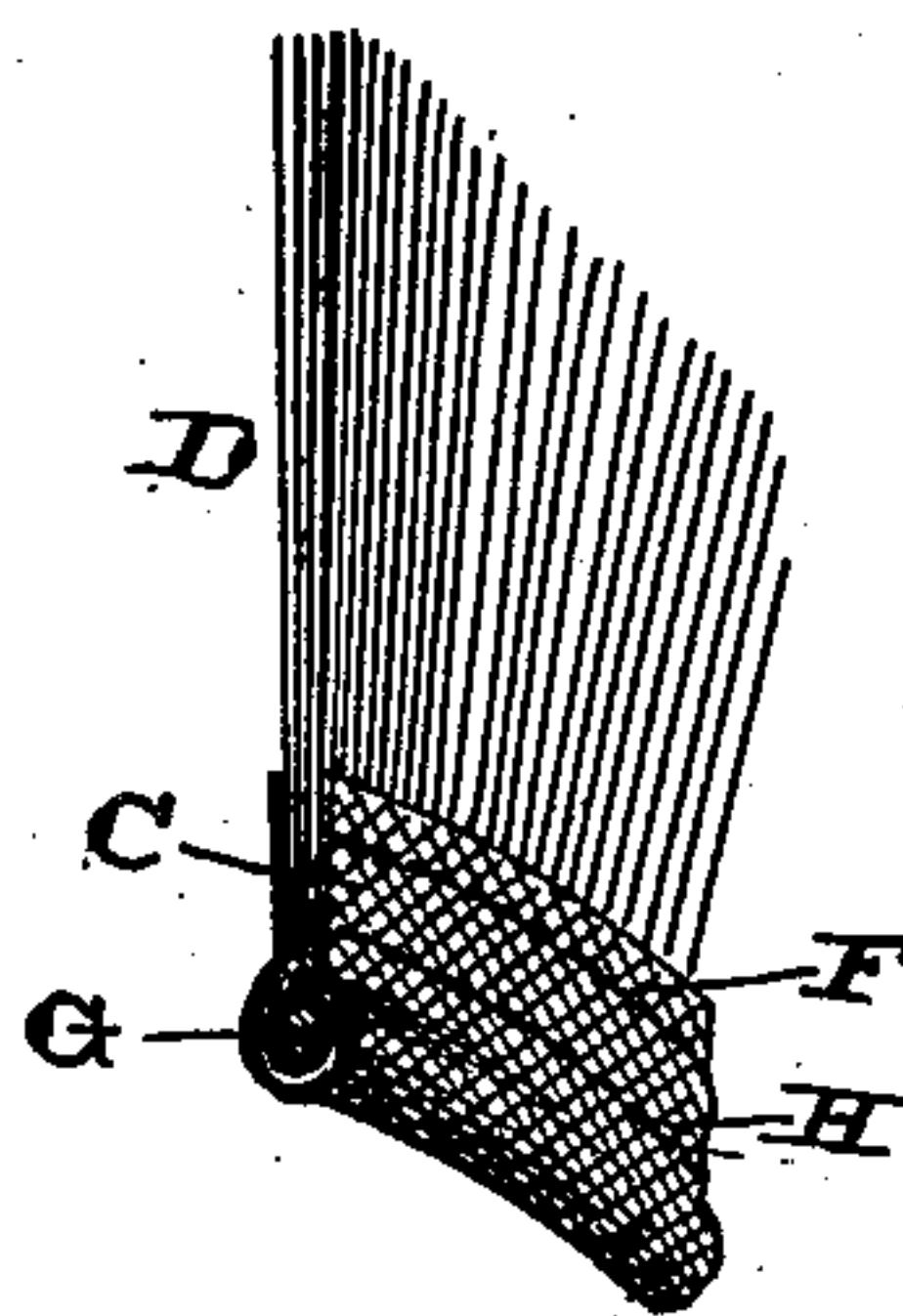


Fig. 4.



Witnesses:

*J. A. Garfield
Rosanna Smith.*

*Inventor
Henry W. Larsson,
by W. S. Bellows,
Attorney*

UNITED STATES PATENT OFFICE.

HENRY W. LARSSON, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO SIDNEY H. BELLOWS, OF SAME PLACE.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 665,832, dated January 8, 1901.

Application filed October 6, 1900. Serial No. 32,244. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. LARSSON, a citizen of the United States of America, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Brushes, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the manufacture of brushes, and has for its objects to use only a single tape, to which the hairs are stitched, instead of two, used heretofore, to dispense with the use of glue, and to produce a brush from which the hair will not pull or fly out when the brush is speeded.

My invention consists in a single tape, to which the hairs are stitched, combined with a tarred or pitched cord or tape which is placed over the center of the hairs and tape and around which cord the hairs and tape are then doubled and stitched.

It also consists in a tape cut upon the bias, whereby the web is adapted to be wound edgewise upon and conform to the periphery of the hub, as will be more fully described hereinafter.

Heretofore brushes have been made in which two tapes are used and between which the hair is stitched, so as to form a web, and then the tapes and hair between them have been soaked with glue. The web is then wound upon the hub; but owing to the great amount of compression that is required to solidify the parts a much longer web is required than is desirable, and after the web has been wrapped around the hub, subjected to great pressure, and the cap applied the brush is required to be thoroughly dried before it can be taken out of the press-forms and finished and trimmed. This method of making brushes is slow and laborious, requiring too much time and producing a heavier, more solid, and expensive brush than is required.

My method of making the brush consists in dispensing with one of the tapes and using instead thereof a tarred or pitched cord, thus dispensing with the use of glue, the necessity of great pressure, the time heretofore required for drying the material, and in using a much shorter web.

In the accompanying drawings, which represent my invention, Figure 1 is an end view of a brush, part of the end cap being removed and the end of the web being turned outwardly. Fig. 2 is a vertical section taken upon the line 2 2 of Fig. 1, the end cap being shown ready to be secured in position. Fig. 3 is a detail view showing the hair stitched to a single web. Fig. 4 is a perspective of a short section of the web after it is completed and ready to be applied to the hub.

A represents an ordinary perforated hub, and B B the two cap-pieces applied to the ends thereof. In making the web which is to be applied to this hub I take a single tape C, cut upon the bias, place the hairs, bristles, or other material D that may be used upon this tape, and then secure them in position by the two lines of stitching F, as shown. Along the center of the hair or other brush-stock used and in a line with the tape C, I lay a tarred or pitched cord G and which cord is saturated about like ship-marline. The tape and hair are then doubled over the cord G, as shown in Fig. 4, and a line of stitching H is applied to the web thus formed, so as to secure and hold the hairs in this doubled position. The pitch with which the cord is saturated causes the adhesion and anchorage of the hair, so that it will not pull or fly out when the brush is speeded. The tape is cut upon the bias, so that it can be readily wound edgewise and made to conform to the periphery of the hub. If the tape is cut perfectly straight, it buckles and is very hard to wind upon the hub. By cutting it upon the bias buckling, time, trouble, and the necessity for skill are all done away with. After the web has been formed it is wrapped diagonally around the hub A, as shown by dotted lines in Fig. 2, and as little or no pressure is required to secure the web in position there is no necessity for making the convolutions of the web extend a considerable distance beyond the end of the hub, as has heretofore been found necessary. As shown, the last convolution of the web comes but very little beyond the end of the hub, and when the cap is applied the web is securely fastened in position by the use of screws. As I do not saturate the tape with glue, cement, or other

similar material, it is not necessary to keep the brush in the press-forms nearly so long as would be required for glue or cement to harden and set. The web being simply wound
5 around the hub and subjected to but a moderate pressure, the brush is not made heavier or thicker than is necessary and the process of manufacture requires less time, is not laborious, and unskilled labor can be used in
10 assembling the parts of the brush.

Having thus described my invention, I claim—

1. A cylindrical hub provided with caps, combined with a web formed from a single
15 tape, the brush-stock secured to the tape, and a tarred or pitched cord applied along the center of the brush-stock and in a line with the tape, the tape and brush-stock then being doubled over the cord and stitched, sub-
20 stantially as shown.

2. In a brush, a web composed of a single tape cut upon the bias, the brush-stock secured to the tape, and a tarred or pitched cord applied along the center of the brush-

stock, the tape and brush-stock then being 25 doubled over the cord and stitched in position, substantially as set forth.

3. In a brush, a cylindrical body or hub having end flanges, combined with a web formed from a single tape made on the bias that is 30 with its warp and weft oblique to its length, the brush-stock laid with its middle portion crossing the tape and its opposite end portions extended beyond the edges of the tape, a tarred or pitched cord applied along the 35 center of the brush-stock and in line with the center of the tape, the tape and brush-stock being doubled on the line of and to inclose the cord and secured, and then being wound, compressed, and confined on the hub, sub- 40 stantially as described.

Signed by me at Springfield, Massachusetts, this 1st day of October, 1900.

HENRY W. LARSSON.

Witnesses:

REINHOLD CARLSSON,
WM. S. BELLÖWS.