

No. 806,727.

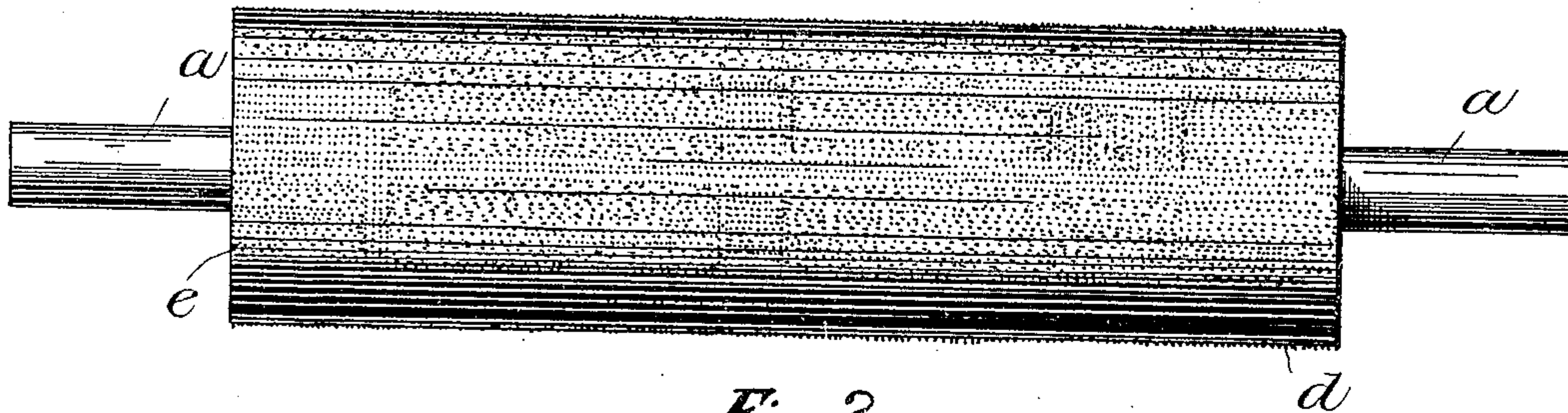
PATENTED DEC. 5, 1905.

W. YOULTEN.

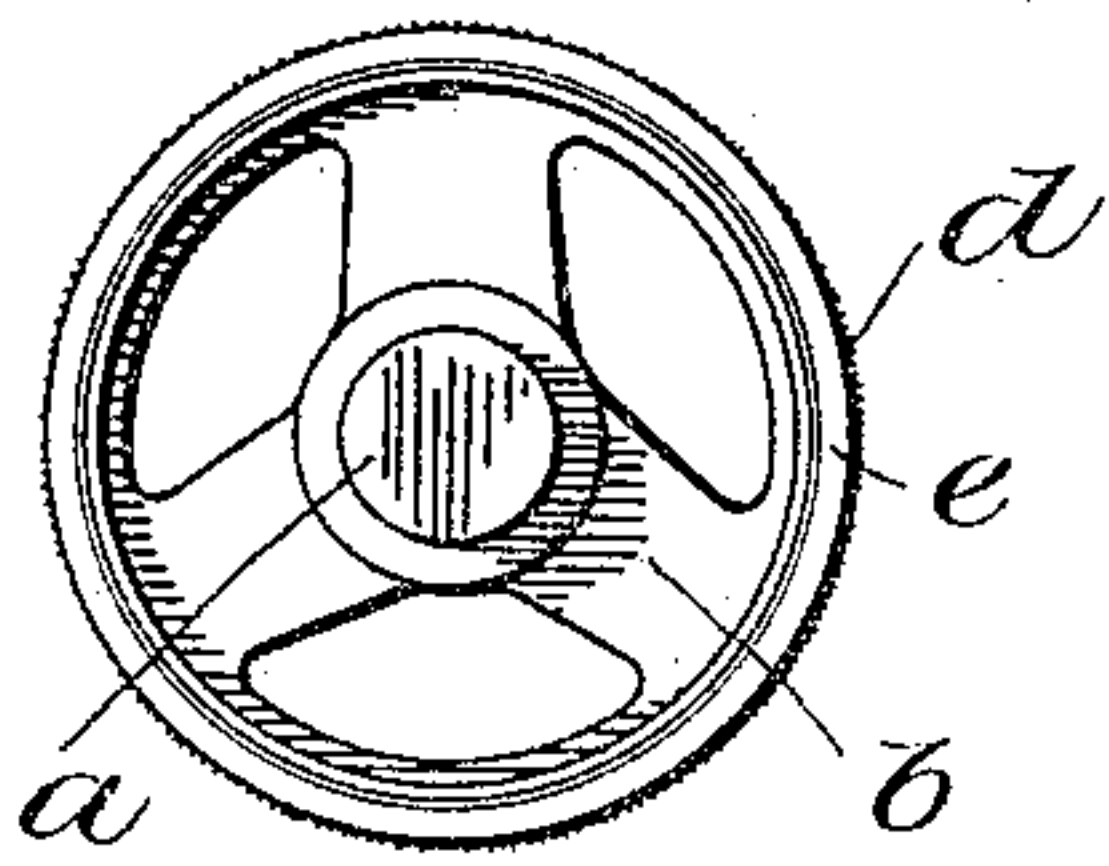
ROLLER FOR GINNING, BURRING, AND LIKE FIBER CLEANING MACHINES.

APPLICATION FILED FEB. 21, 1905.

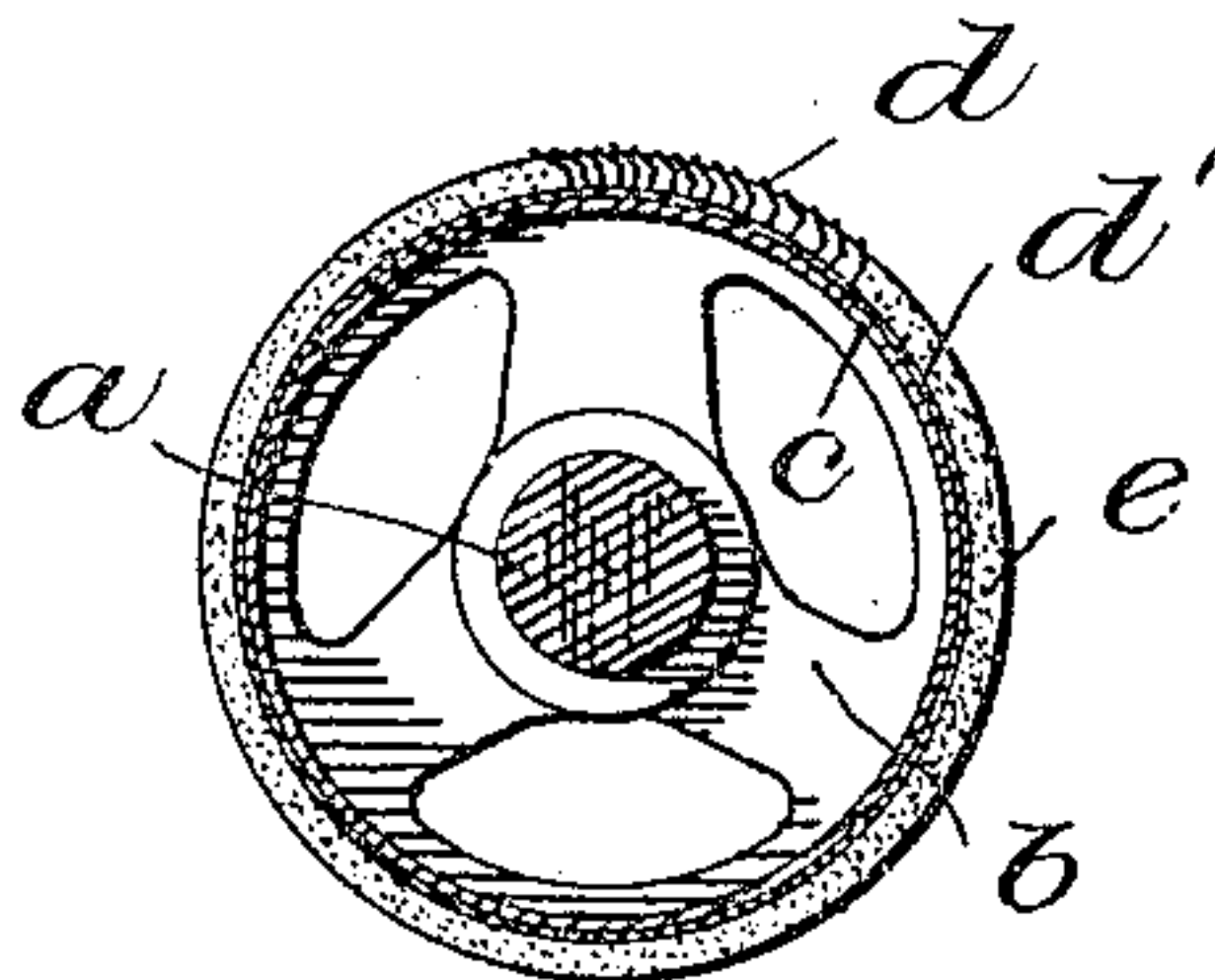
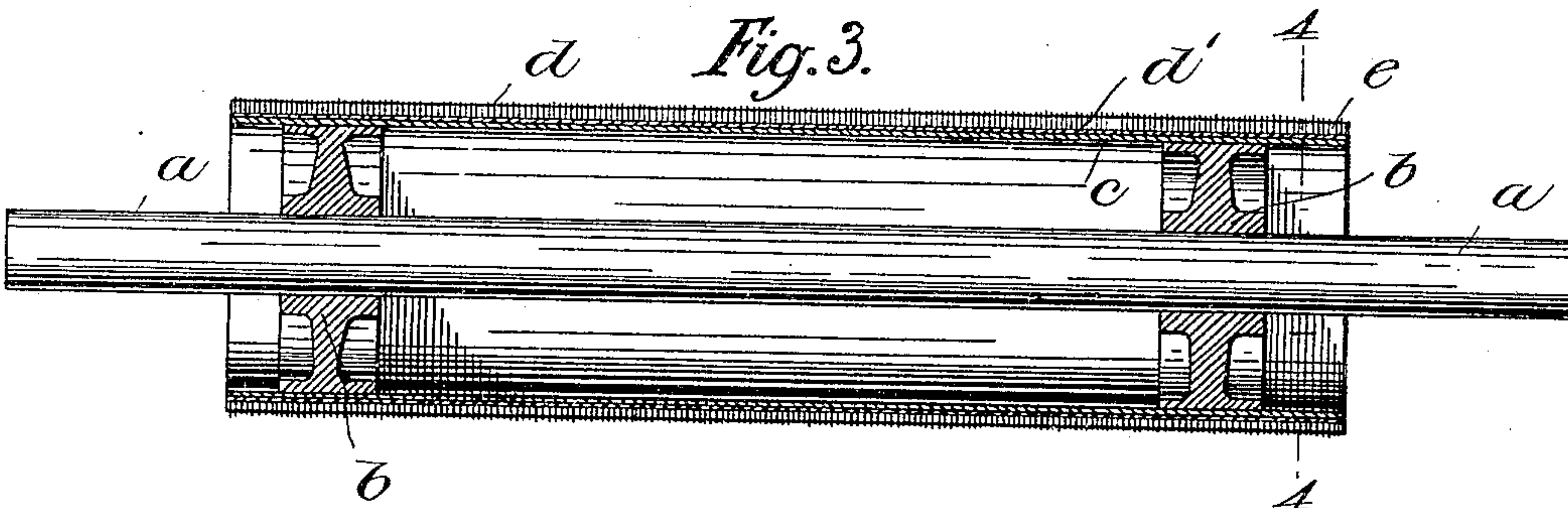
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

Witnesses.

*Stephen Kinsten*

*Geo. A. Dupre.*

Inventor.

*William Youten.*

*W. Wilkinson & Jones*  
*his Attorneys*



# UNITED STATES PATENT OFFICE.

WILLIAM YOULTEN, OF WESTMINSTER, ENGLAND.

ROLLER FOR GINNING, BURRING, AND LIKE FIBER-CLEANING MACHINES.

No. 806,727.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Original application filed August 17, 1903, Serial No. 169,826. Divided and this application filed February 21, 1905. Serial No. 246,677.

*To all whom it may concern:*

Be it known that I, WILLIAM YOULTEN, a subject of the King of Great Britain and Ireland, residing at 159 Victoria street, Westminster, in the county of London, England, have invented certain new and useful Improvements in Rollers for Ginning, Burring, and Like Fiber-Cleaning Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in rollers for ginning, burring, and like fiber-cleaning machines, and while it may be used with existing types of machines of this class it is especially designed for use with ginning-machines of the type illustrated in my application filed August 17, 1903, Serial No. 169,826, of which the present application is a division.

Many attempts have been made to discover a material for the surface of ginning-rollers which would grip and draw out the cotton, wool, or the like during treatment by the combs, knives, or other devices used for removing the seeds or other impurities from such fibers during the operation of ginning or burring and yet enable the cleaned fibers to be rapidly removed by means of a doffing-brush or other doffing device; but the rollers with roughened surfaces and other similar devices hitherto employed have met with but a small degree of success.

According to my present invention the surface of the ginning-roller is covered with fine-gage wire card or bristles embedded in a composition forming a hard elastic matrix from which the points of the wire card or bristles protrude very slightly, so as to grip the fibers under treatment. In constructing such a roller I may mount upon a suitable shaft a tube on which is wound or placed tempered steel card or alternatively bristles or other equivalent. The steel wires or bristles may be bent at an angle with the radial pointing toward the direction of motion of the roller, so that they may more readily seize the fibers. The roller is then immersed in a suitable composition capable of forming a hard matrix from the periphery of which the embedded wires or bristles protrude sufficiently for the purpose for which they are required.

The accompanying drawings show one method of constructing a roller according to my invention.

Figure 1 is a side elevation showing the surface of the roller. Fig. 2 is an end elevation of same. Fig. 3 is a longitudinal section through the roller, the shaft being shown in elevation; and Fig. 4 is a transverse section on the line 4 4 of Fig. 3.

In the drawings, *a* is a shaft with pulleys *b*, carrying a tube or cylindrical roller *c*, on which is wound or placed steel card of suitable gage and temper, or bristles *d*, *d'* designating the base of the card. The steel wires or bristles may be bent or placed at an angle with the radial pointing toward the direction of motion of the roller, as shown in Fig. 4. The roller after the wire card or bristles are placed thereon has applied to it any suitable composition *e* capable of forming a hard matrix, the wires or bristles being allowed to protrude slightly from the surface. A satisfactory composition for forming the matrix may consist of glue and whiting with or without an admixture of saccharine matter and with or without the addition of linseed-oil. The proportions I have found to answer well in practice are eight ounces dissolved glue, eight ounces whiting, three ounces linseed-oil, with or without an admixture of saccharine matter. Another formula which I have found satisfactory is equal weights of glue and whiting with enough treacle—say ten to twelve per cent.—to give the composition sufficient elasticity to prevent cracking while cooling. The glue may be melted in the usual way and the treacle and whiting added to it and the composition poured into a mold containing the roller.

Although I have described this roller with a surface of the kind specified for use as a ginning-roller, rollers of this kind may also be used for doffing-rollers and for other purposes in connection with machines for ginning and burring fibers.

What I claim, and desire to secure by Letters Patent of the United States of America, is—

1. A roller for ginning, burring and like fiber-cleaning machines, provided with a surface of fine-gage-wire card embedded in a composition furnishing a hard matrix from which the points of such wires or bristles protrude sufficiently to seize and grip the fibers under treatment, said composition comprising a mixture of glue, whiting, and a thinning agent.

2. A roller for ginning, burring and like

fiber-cleaning machines, provided with a surface of fine-gage-wire card embedded in a composition furnishing a hard matrix from which the points of such wires or bristles  
5 protrude sufficiently to seize and grip the fibers under treatment, said composition comprising a mixture of dissolved glue, whiting and saccharine matter.

10 3. A roller for ginning, burring and like fiber-cleaning machines, provided with a surface of fine-gage-wire card embedded in a composition furnishing a hard matrix from

which the points of such wires or bristles protrude sufficiently to seize and grip the fibers under treatment, said composition comprising a mixture of dissolved glue, whiting and treacle. 15

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

WILLIAM YOULTEN.

Witnesses:

A. E. VIDAL,  
R. WESTACOTT.