

(No Model.)

G. A. FULLERTON & F. W. COY.

ABRASIVE WHEEL.

No. 248,093.

Patented Oct. 11, 1881.

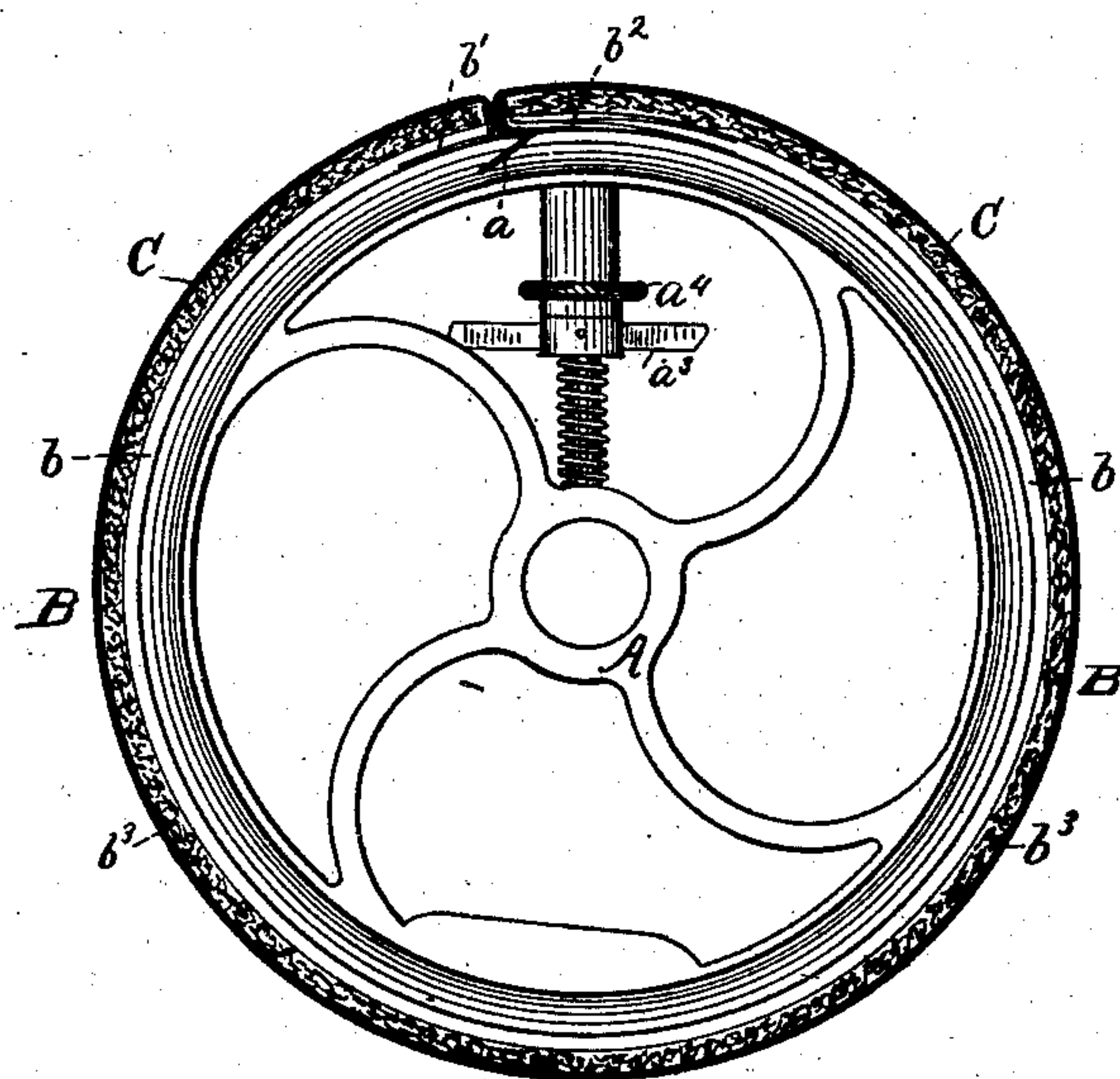


Fig. 1.

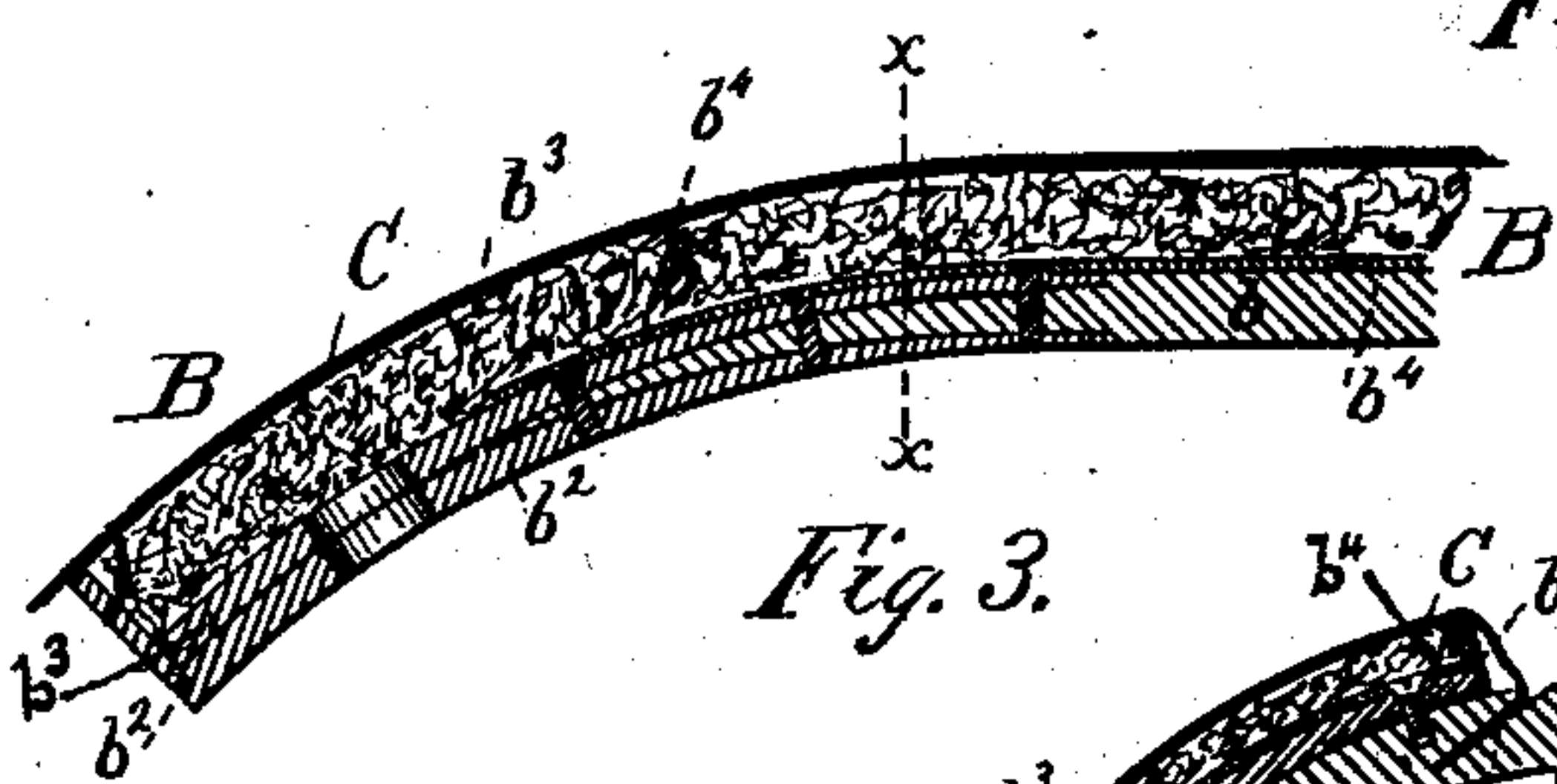


Fig. 3.

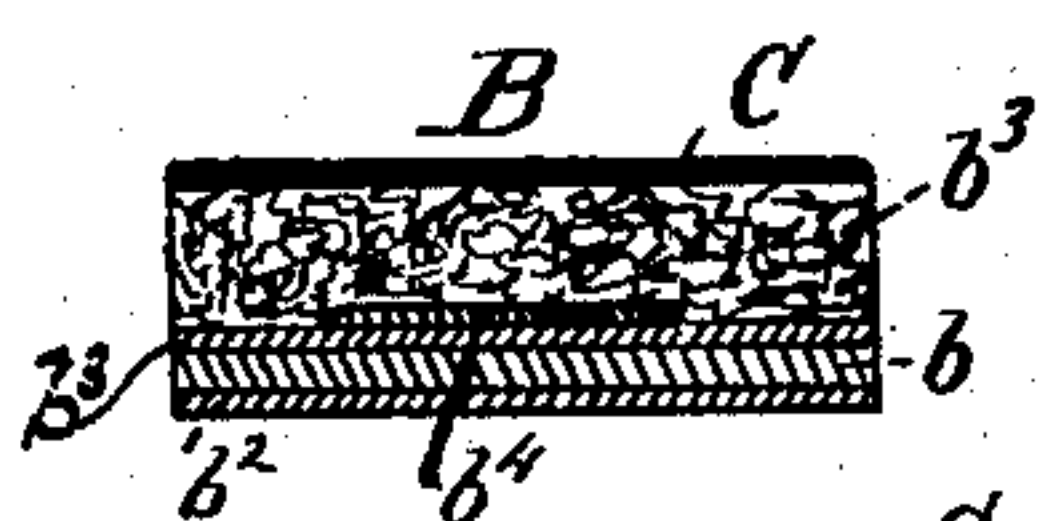


Fig. 4.

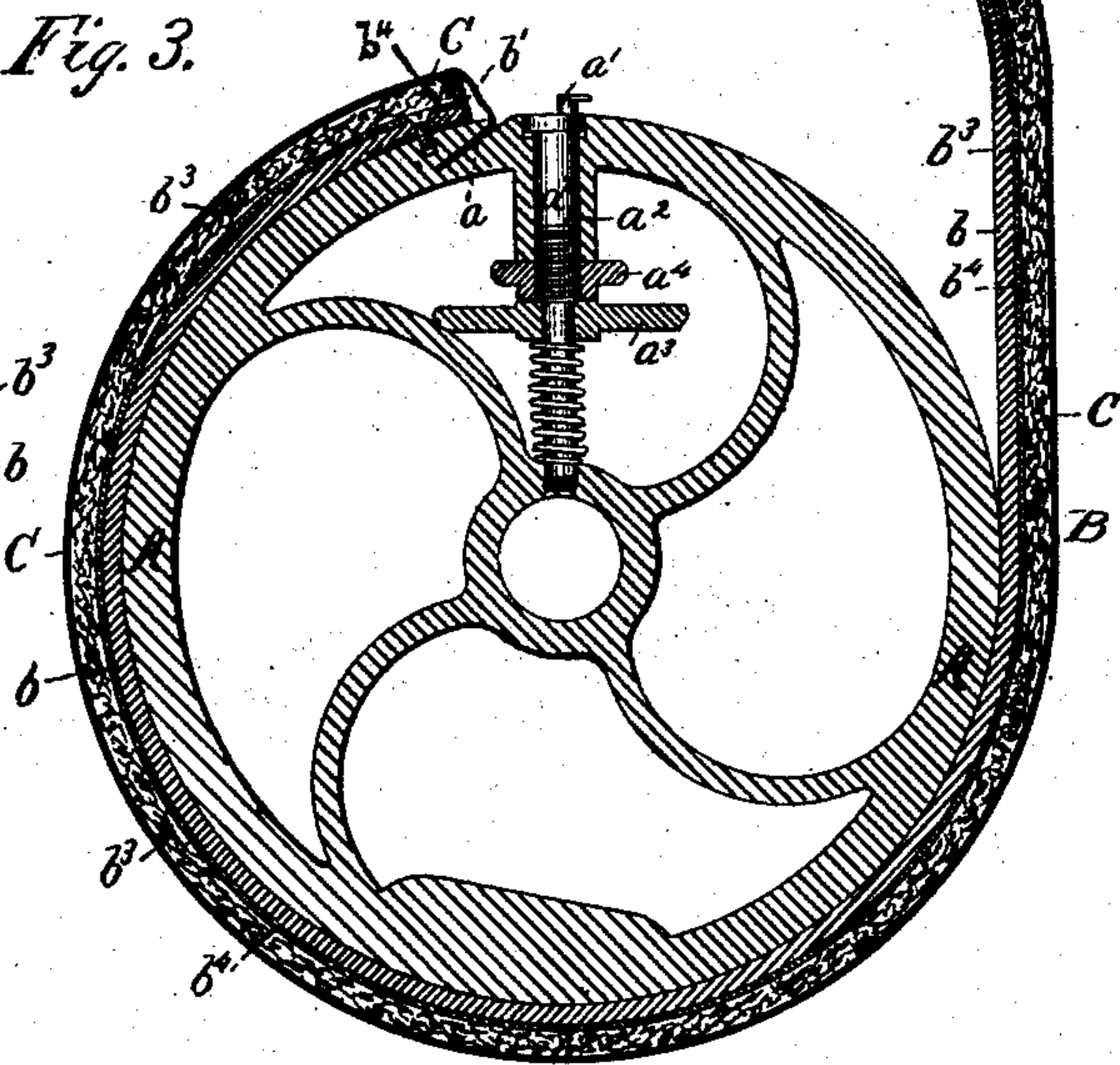


Fig. 2.

Wm. Fittell.  
John R. Snow.

George A. Fullerton.  
Frederick W. Coy



# UNITED STATES PATENT OFFICE.

GEORGE A. FULLERTON AND FREDERICK W. COY, OF BOSTON, MASSACHUSETTS, ASSIGNORS TO GEORGE H. P. FLAGG, TRUSTEE, OF SAME PLACE.

## ABRASIVE WHEEL.

SPECIFICATION forming part of Letters Patent No. 248,093, dated October 11, 1881.

Application filed July 9, 1881. (No model.)

*To all whom it may concern :*

Be it known that we, GEORGE A. FULLERTON and FREDERICK W. COY, both of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Abrasive Wheel, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, making a part hereof, in which—

Figure 1 is a side elevation. Fig. 2 is a vertical section. Fig. 3 is a section of the band bearing the abrasive material. Fig. 4 is a section on line *xx*, Fig. 3.

Our invention relates to the means of securing the sand-paper or other abrasive material to the wheel; and it consists in the combination, with the wheel or roll, of a flexible band, which is adapted to be firmly secured to the wheel or roll, and also to support the sand-paper and hold it in its place.

In the drawings, A represents a wheel such as is used for sandpapering the shanks and heel-edges of boots and shoes, and B a band for supporting the abrasive material. This band B is composed of a strip of leather, *b*, having upon its ends metallic pieces *b'* *b''*, by which it is secured to the periphery of wheel A.

The piece *b'* may be attached by screws, as shown, or in any other convenient way, as it is not necessary to remove it from the periphery of wheel A except when a new felt strip is needed.

The piece *b''* is attached to the leather strip *b*, as shown in Fig. 3. The leather is properly trimmed to make its under side flush with the metal piece *b''* and its upper side flush with a strip of metal, *b'''*, placed thereon to receive the ends of the rivets, which pass through all three and secure them together. It is also trimmed to a tapering point to fit between the inner ends of these metal pieces, which are beveled for that purpose. The outer ends of the metal pieces lie close together, and have an aperture through them for securing the band to the wheel.

The felt strip *b'''* is sewed to the leather strip *b*, the two together making one band. As these wheels are run at a very high speed, it is desirable to re-enforce the leather strip *b* by a steel strip, *b'''*, which is firmly fastened at each end to the metal pieces *b'* *b''*; or a steel band may be used in place of the leather band *b*; but the band *b* is preferably mainly of leather,

because the felt strip *b'''* is more readily connected with leather than with metal.

In applying the sand-paper one end of the strip C is inserted in the slot *a*, and the other end is folded over the metallic piece *b''*, one end of band B being disconnected from wheel A for the purpose. This is clearly shown in Fig. 2, where C represents the strip of sand-paper. After the paper has been thus applied to the band the free end of the band is secured to the wheel by placing the metal piece *b''* over the button *a'*. As this button *a'* is eccentric on its shaft *a''*, turning that shaft half round will carry the button from its position in Fig. 2 nearer to the piece *b'* of band B, and thereby strain band B over the periphery of wheel A. Button *a'* is then depressed, so as to force piece *b''* close against the sand-paper lying between it and the periphery of wheel A. The shaft *a''* is provided with the finger-piece *a'''*, by which it can be readily turned, and with the nut *a''''*, by which the button *a'* can be depressed. Other devices may be used for these purposes, as will be obvious.

One end of the paper may, of course, be clamped between piece *b'* and the periphery of wheel A; but the slot *a* answers well, and obviates the use of any mechanical device for causing the piece *b'* to act as a clamp.

Our invention is applicable to buffing or scouring rolls, as well as to shank-wheels, the band B being made wider and two or more fastening devices being used instead of the single button *a'*.

What we claim as our invention is—

1. In an abrasive wheel, the combination, substantially as described, with the wheel or roll, of a flexible supporting-band, over which the abrasive strip is stretched, and between which and the wheel one end of the abrasive strip is secured.

2. In combination with wheel A and band B, the eccentric button *a'*, its shaft *a''*, and means, substantially as described, for turning and lowering the shaft *a''*, in order to strain the band around the wheel and to force the end of the band close against the wheel.

GEORGE A. FULLERTON.  
FREDERICK W. COY.

Witnesses:

W. A. COPELAND,  
J. R. SNOW.