

(No Model.)

S. ALAND.

BAND WHEEL, PULLEY, &c.

No. 305,651.

Patented Sept. 23, 1884.

Fig. 1.

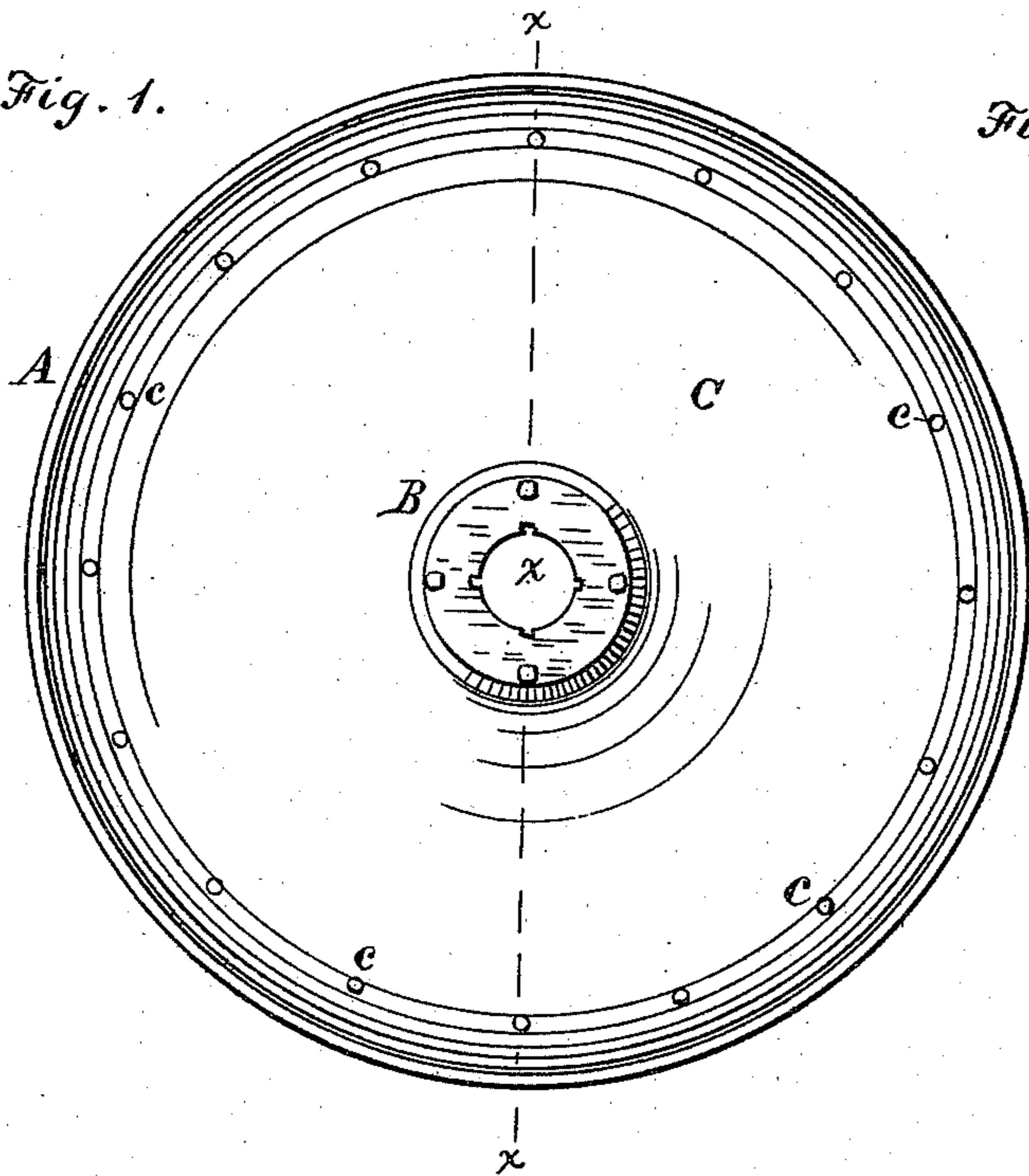


Fig. 2.

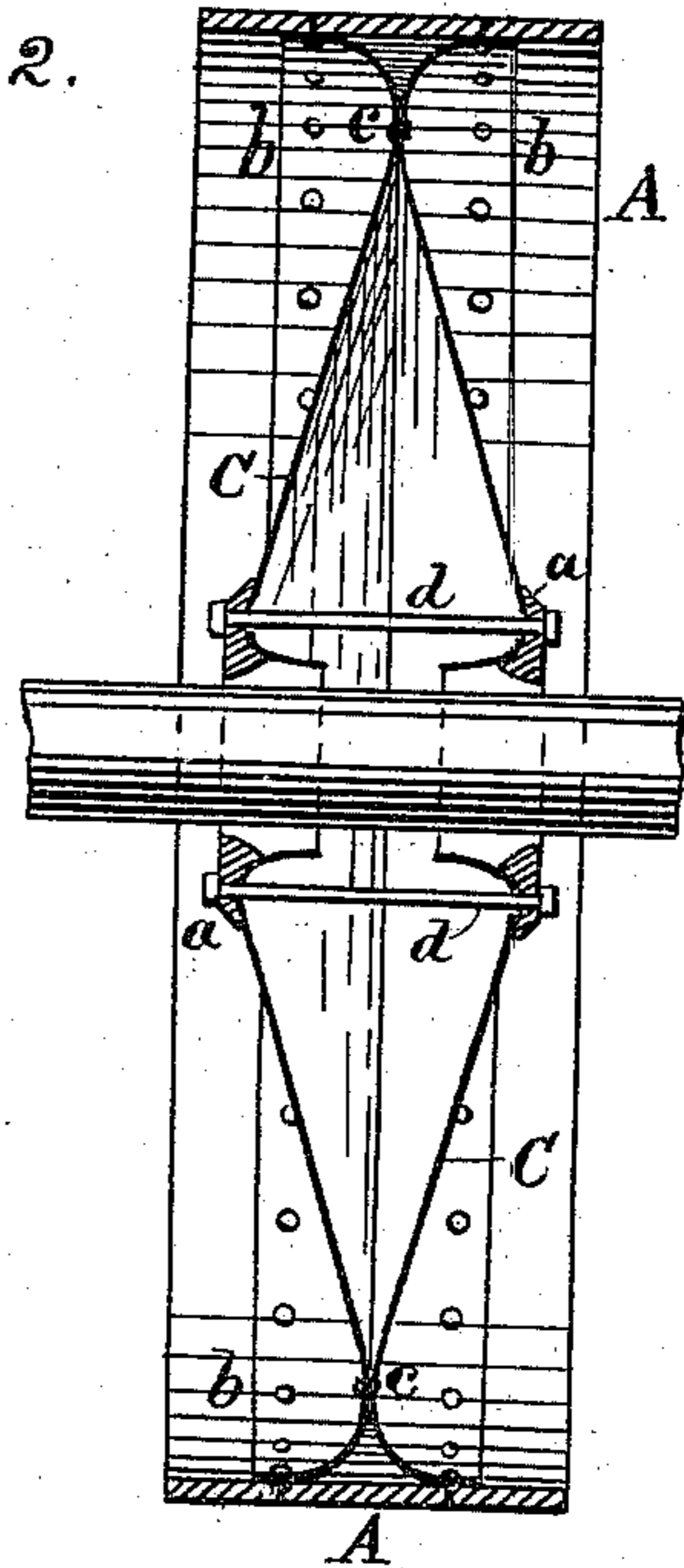


Fig. 3.

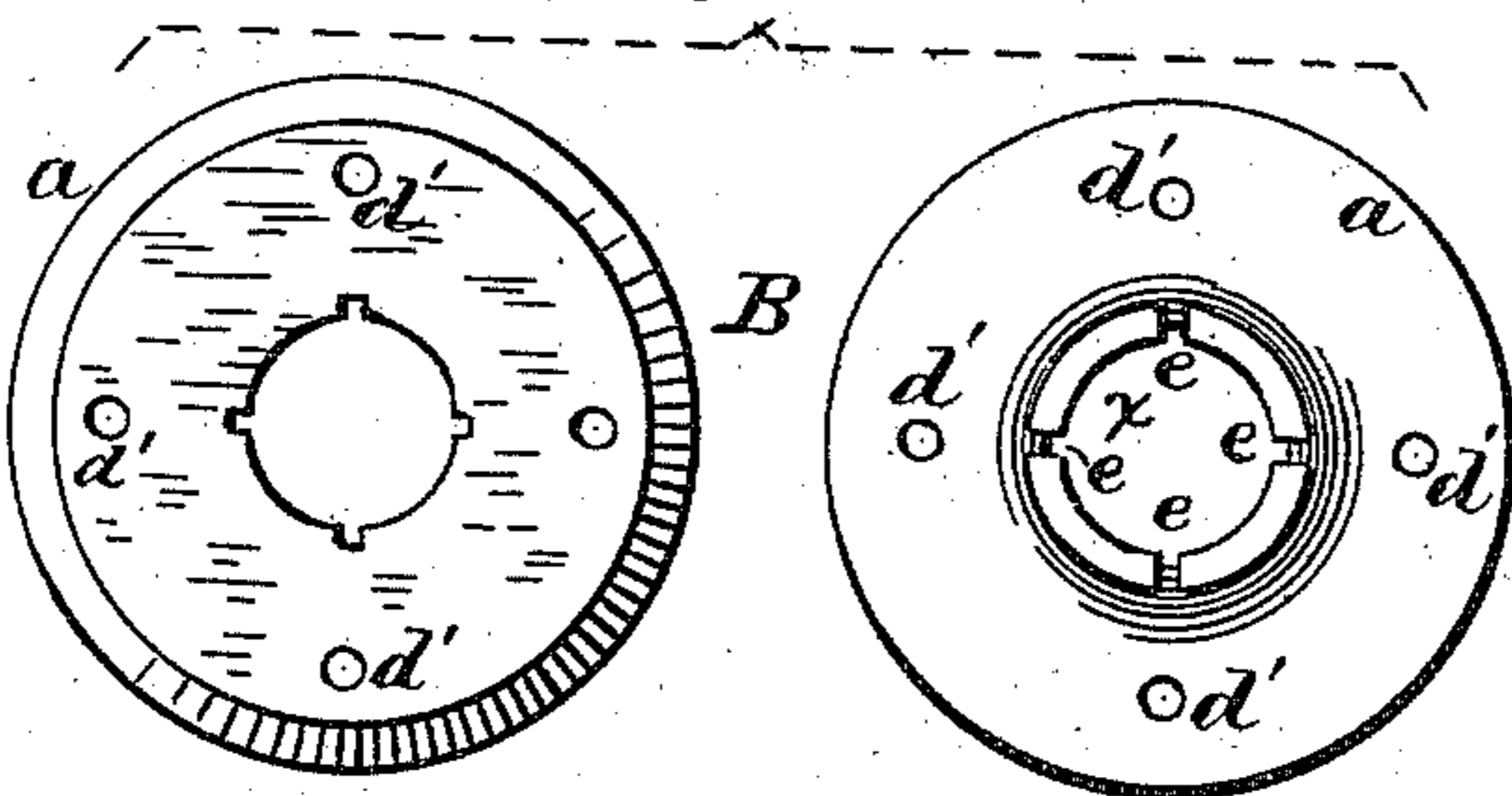
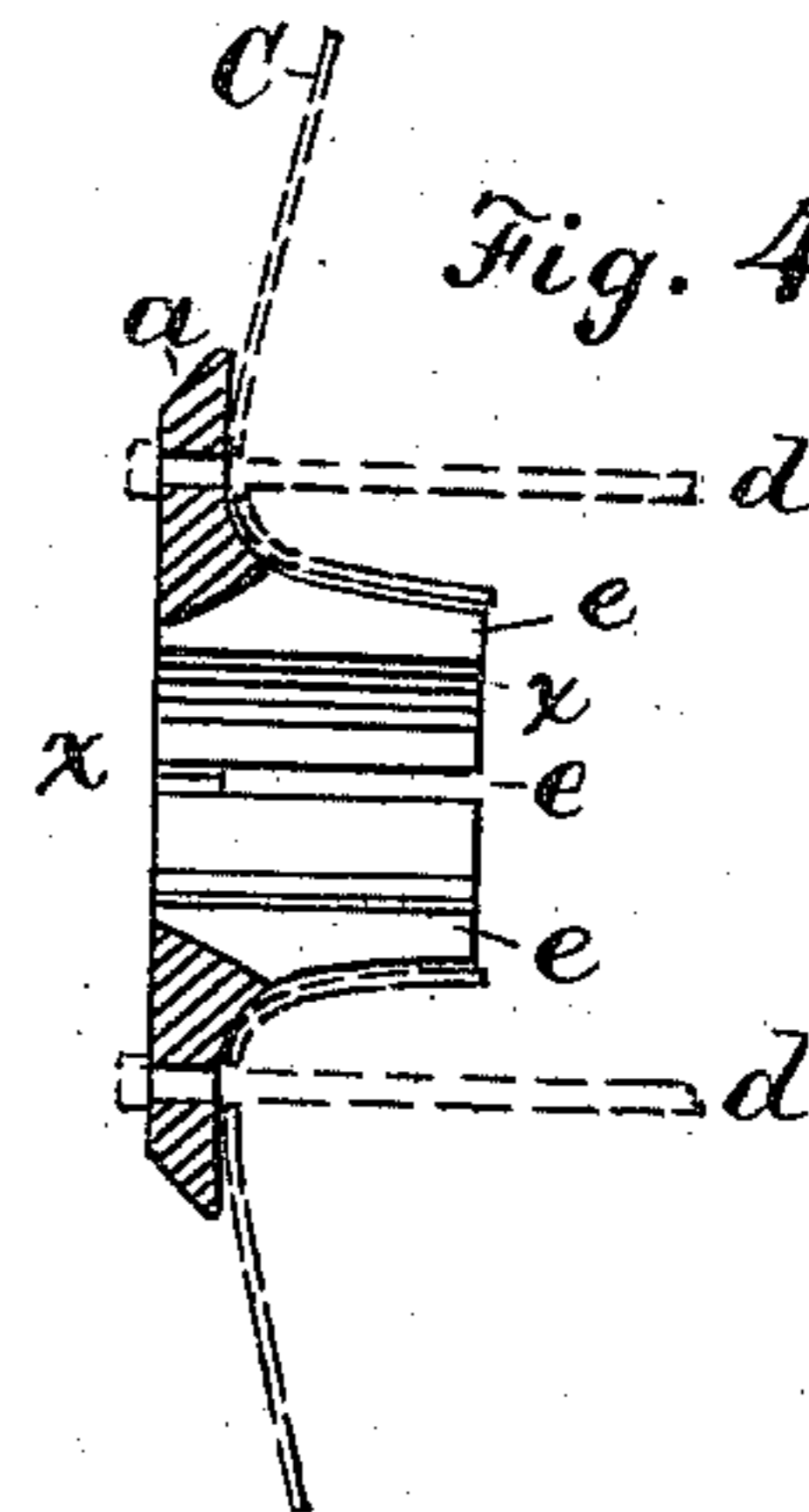


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## BAND WHEEL, PULLEY, &c.

SPECIFICATION forming part of Letters Patent No. 305,651, dated September 23, 1884.

Application filed July 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL ALAND, a citizen of the United States of America, residing at Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Band Wheels and Pulleys, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to band wheels, pulleys, and other wheels to which the improvement is adaptable; and it consists in a certain improvement in the construction of such wheels, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is side view of a band wheel or pulley having my improvement. Fig. 2 is a section of same, taken on line *x x* of Fig. 1. Fig. 3 represents the outer and inner ends of one of the sections of the hub, and Fig. 4 is a central section of same.

A designates the rim of the wheel, the same being of ordinary construction.

B indicates the hub, which is formed in two parts, each of which is provided with an annular flange, *a*, at its outer end.

C is a double sheet-metal web, usually of iron or steel, said web forming the body, or all that part of the wheel between the rim and the hub. The web C is formed of two disks or plates of sheet metal pressed or stamped in proper shape, and having their edges turned outward to form flanges *b*, which are riveted or otherwise fastened to the rim A, so that the web has a double bearing against the rim all around. Circular openings are made in said plates at the center to receive the sections of the hub, and the two web-plates are riveted together at a suitable distance from the rim A, as shown at *c*, from which fastening-points the plates diverge as they extend to the hub until they bear against the inner faces of the flanges *a*, and their edges are then turned inward, so that the central expanded part of the web is confined between the flanges *a* of the two sections of the hub B. The central cylindrical parts *x* of the hub are formed with slots *e*, (see Figs. 3 and 4,) which are parallel with the center line of the hub from end to end, and holes (indicated by *d'*) are made in the flanges *a* of the hub to receive the bolts *d*, which bind the sections of the hub together. When the bolts or rods *d* are passed through the flanges *a* and web-plates C and tightened, the sections of the hub B are drawn

toward each other, and the intervening web-plates are forced inward and toward the center in such manner as to press against the cylindrical parts of the hub B, which, being slotted, yield to such pressure, and thus reduce the diameter of the shaft-hole in the hub, and by such means the wheel is immovably secured on the shaft. As will be observed, the parts or sections of the hub are adjustable to or from each other. The expanding web is also adjustable, as the central portions of the web-plates may be pressed inward and secured by the bolts, as desired. When it is desired to place the wheel on a small shaft, a small hub being used, the small hub-sections are applied to the wheel and moved toward each other, pressing inward the central portions of the web-plates, and consequently extending the web toward the center, and thus adapting it to the hub, when the parts may be secured by the bolts *d*. A wheel having a web constructed as described may thus be adjusted to a number of shafts of different sizes.

I claim—

1. A wheel having a hub formed in two sections, and provided with an expanding web secured to the rim of the wheel, and having its central or expanded part pressed by the two sections which form the hub and are secured by bolts, substantially as and for the purposes described.

2. In a wheel, the combination of a rim and disk-shaped diaphragms with a sectional segregated hub formed with slots parallel with the central line of the hub, which admits of the contraction of the cylindrical parts of the hub when the two sections are pressed together with the disk-shaped diaphragms between them.

3. In a wheel, the rim and disk-shaped diaphragms combined with a hub which admits of the removal of the hub and substituting therefor a hub with a hole of greater or less diameter, substantially as and for the purposes described.

4. A band or pulley wheel consisting of a rim, A, adjustable hub B, and web C, the parts being constructed and secured substantially as set forth.

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

SAMUEL ALAND.

Witnesses:

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R. G. CORNISH.