

No. 731,635.

PATENTED JUNE 23, 1903.

J. E. & R. P. VANDEGRIFT & R. L. MORRIS.

SHAFT COUPLING.

APPLICATION FILED FEB. 9, 1903.

NO MODEL.

Fig. 1.

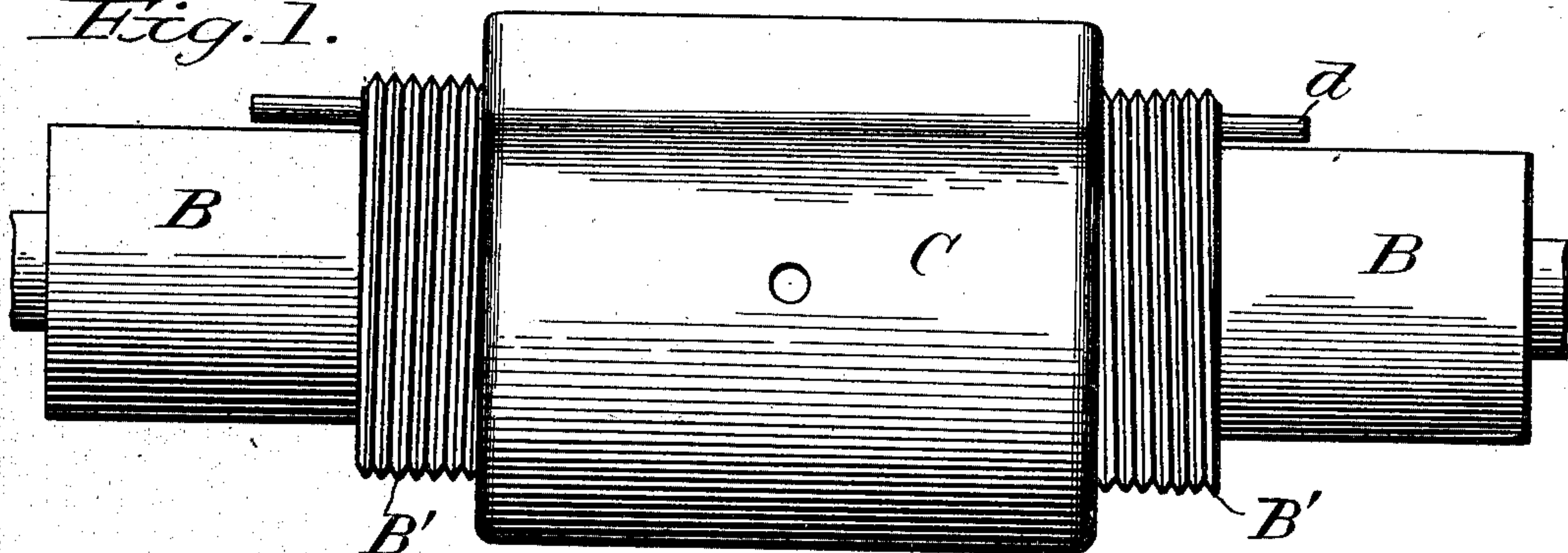


Fig. 2.

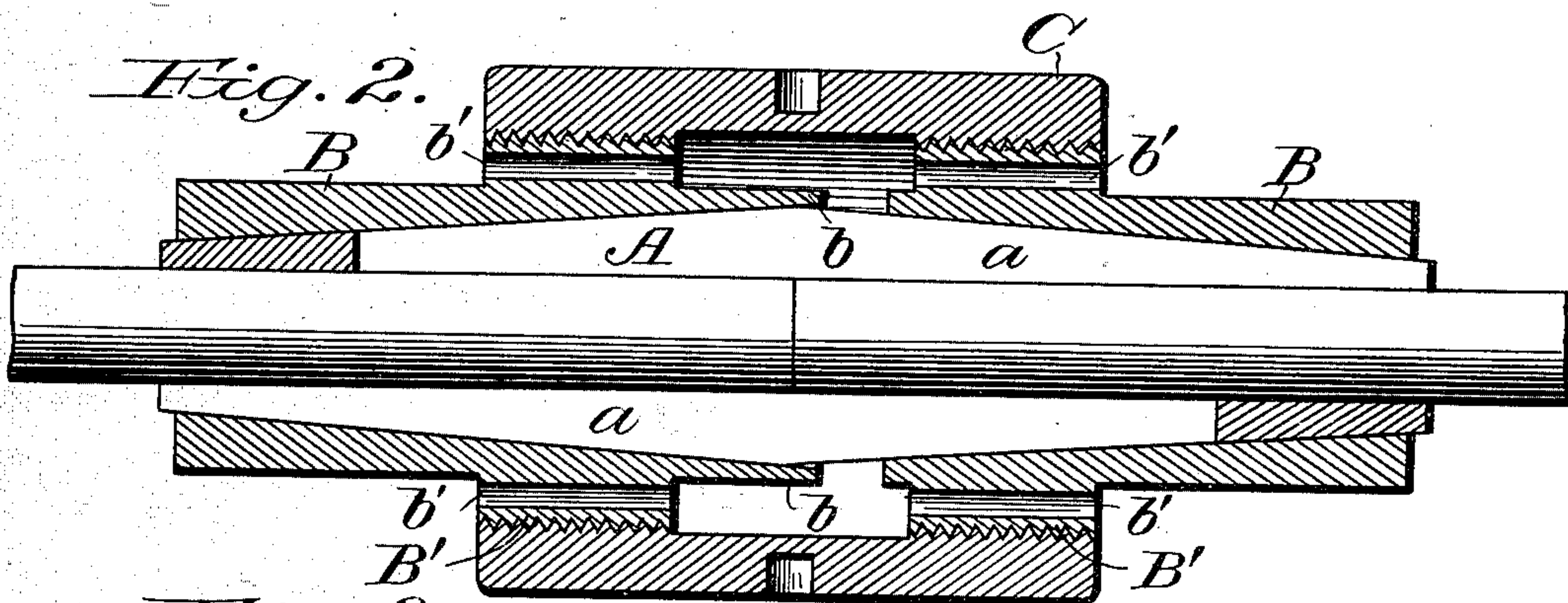


Fig. 3.

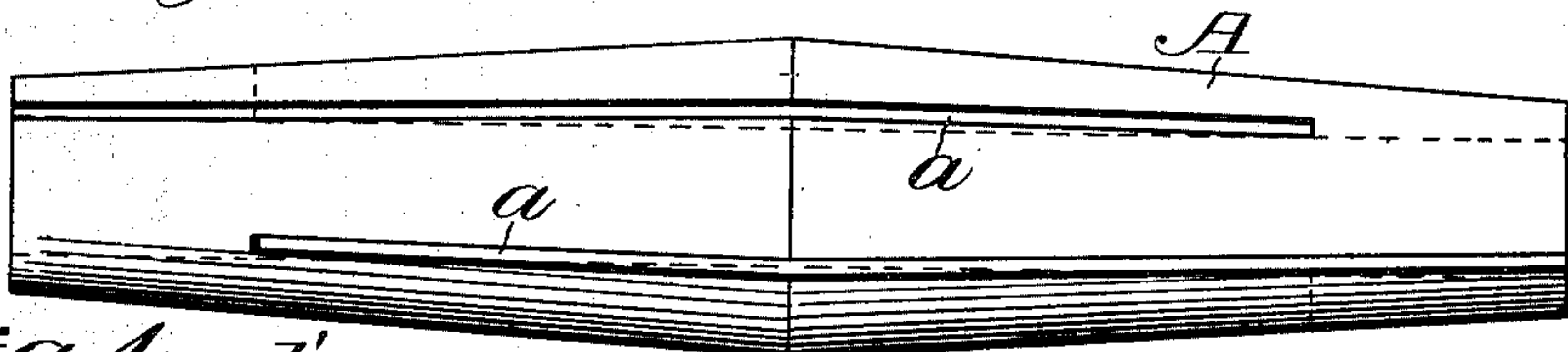


Fig. 4.

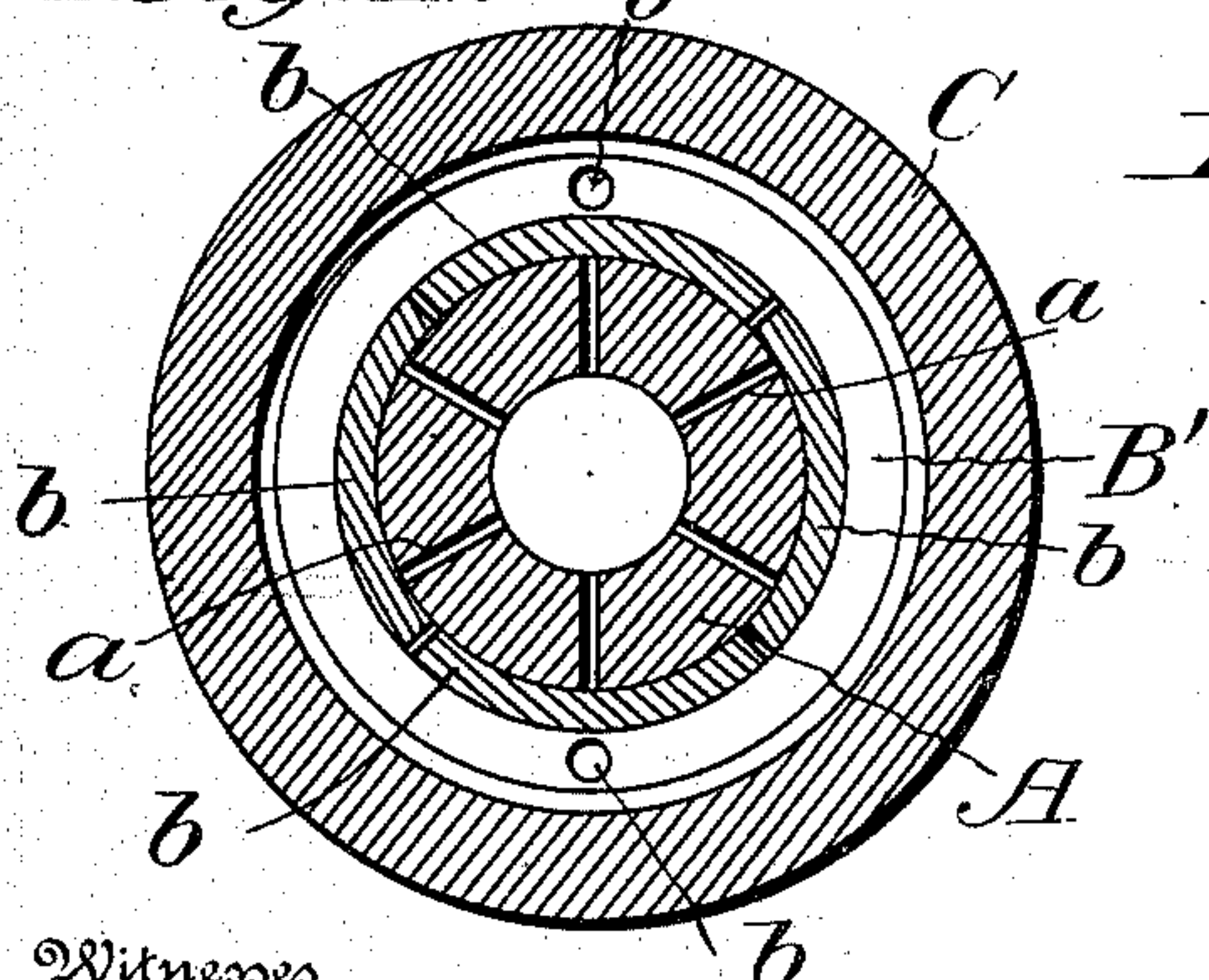
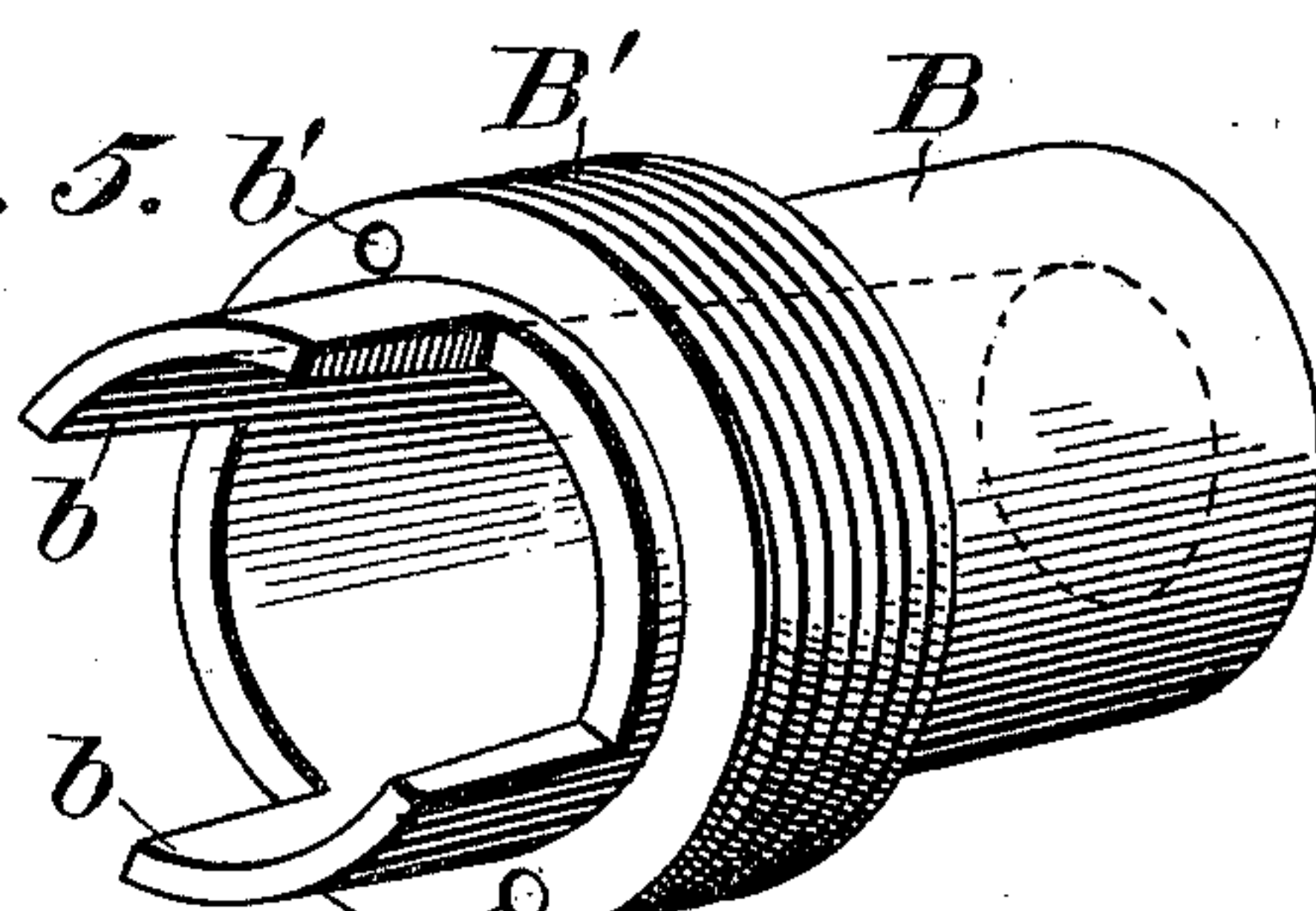


Fig. 5.



Inventors

J. E. Vandegrift.
R. P. Vandegrift.
R. L. Morris.

Attorney

By

Eugene H. Johnson

Witnesses

C. H. Walker.
J. M. Moore.

UNITED STATES PATENT OFFICE.

JAMES E. VANDEGRIFT, ROLLA P. VANDEGRIFT, AND ROBERT L. MORRIS,
OF SHELBYVILLE, INDIANA.

SHAFT-COUPLING.

SPECIFICATION forming part of Letters Patent No. 731,635, dated June 23, 1903.

Application filed February 9, 1903. Serial No. 142,496. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. VANDEGRIFT, ROLLA P. VANDEGRIFT, and ROBERT L. MORRIS, each being a citizen of the United States of America, and residing at Shelbyville, in the county of Shelby and State of Indiana, have invented certain new and useful Improvements in Shaft-Couplings; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in shaft-couplings; and it consists in the construction and combination of the parts, as will be hereinafter set forth.

In the accompanying drawings, which illustrate our invention, Figure 1 is a side elevation showing the compression-shells of the coupling in position to be drawn toward each other by a nut which engages the threaded parts of the shells. Fig. 2 is a longitudinal sectional view. Fig. 3 is a side elevation of the sleeve. Fig. 4 is a vertical section taken through a point near the center of Fig. 2, and Fig. 5 is a perspective view of one of the compression-shells.

A shaft-coupling made in accordance with the invention comprises an expansible sleeve which exteriorly tapers toward each end, a pair of compression-shells having interlocking ends, a tapered interior, and exterior threads for engagement with a collar which when turned will draw the shells toward each other and compress the sleeve upon the shaft, means also being provided for holding the shells so that tongues thereon will enter recesses to interlock the shells.

The coupling embodies in its construction an expansible and compressible sleeve A, preferably made in a single piece, the exterior tapering from its center toward each end, such sleeve having kerfs or slits *a a*, which alternate and extend from one end to a point near the opposite end, such sleeve being adapted to be placed over and embrace the end portions of a shaft.

Shells B B interiorly taper to correspond with the inclination of the exterior of the sleeve A, the shells being so constructed that when the ends are brought together the projecting tongues *b b* will enter recesses between the same. The tongues or recesses may be formed by cutting away or milling out a part of the end of each one of the shells. Each shell has at a slight distance from the end of the recess a part B', of greater diameter than the greatest diameter of the body portion, and such part has external threads—one shell having the threads cut right and the other left—the pitch of the threads being the same on both sections. The shells B B are each provided through the projecting portions B' with apertures *b' b'*, positioned so that when such apertures are in alinement the tongues will be opposite the recesses, and such apertures are intended to receive a pin or bar which will hold the shells in proper alinement, so that the tongues will enter the recesses when the nut or collar C is turned to draw the shells together.

The nut or collar C has internal right and left threads, and when the collar is turned the shells will slide upon the pin until the tongues enter the recesses, after which the pin may be removed.

In case it is desired to dispense with the tongues and recesses a pin or pins *d* may be used, as such pin or pins will prevent the sleeves turning independent one of the other.

In practice the parts of the coupling comprising the compressible sleeve A, shells B B, and the nut or collar C are placed upon a shaft, the shells being on opposite ends of the nut, and in order to position and hold the shells in alinement a pin is passed through the apertures *b'*, such pin preventing the turning of one shell independent of the other and also admit of the shells sliding one toward the other, so that the tongue on one shell will enter the recess in the other shell. After such engagement takes place the pin has served its function and may be removed.

The oppositely-threaded nut or collar when turned in the proper direction will draw the shells together to compress the sleeves on the shaft. It is obvious that the pin-receiving apertures *b' b'* through the shells are desirable,

for without the same and a pin it would be a difficult matter to hold the shells in alinement prior to the interlocking of the tongues, and without some means for holding the shells
5 against turning one independent of the other the threads of the nut or collar would engage the threads on one shell prior to engagement with the other.

If desired, the ends of the sleeve may be
10 formed with flat surfaces, and the nut or collar may be similarly shaped, so that the parts can be turned by a wrench.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—
15

1. A shaft-coupling comprising a compressible sleeve, a pair of shells having on their adjacent ends tongues and recesses, there being
20 pin-receiving apertures extending longitudinally through the shells and to one side of the tongues and recesses for the reception of a pin to hold the tongues of one shell in line with the recesses in the other shell, and a nut which engages the shells and draws them

toward each other when turned, substantially
25 as shown.

2. A shaft-coupling comprising a compressible sleeve, shells which overlie the sleeve and are provided with interlocking ends and externally with circumferential flanges having
30 threads, the threads on one flange being pitched opposite the threads on the other flange, there being pin-receiving apertures through the flange of each shell adapted for the reception of a pin to hold the shells against
35 independent rotation, and a nut having right and left hand threads for engagement with the threads on the flanges of the shells, substantially as shown and for the purpose set
40 forth.

In testimony whereof we have hereunto set our hands in the presence of two witnesses.

JAMES E. VANDEGRIFT.

ROLLA P. VANDEGRIFT.

ROBERT L. MORRIS.

Witnesses:

H. K. MORRIS,

W. I. PATTERSON.