

(No Model.)

A. COLBURN.
POLISHING WHEEL.

No. 410,749.

Patented Sept. 10, 1889.

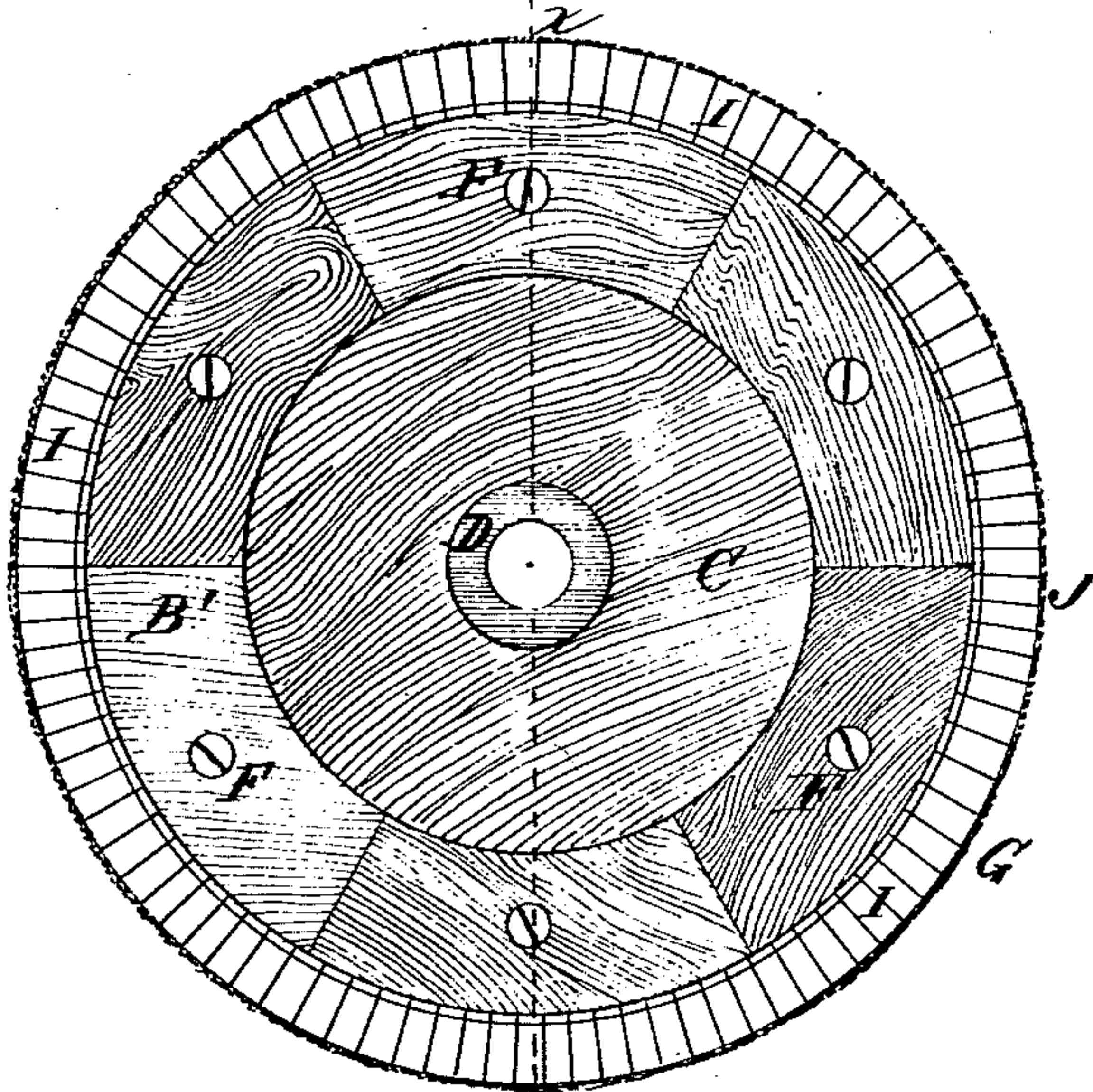


Fig. 1.

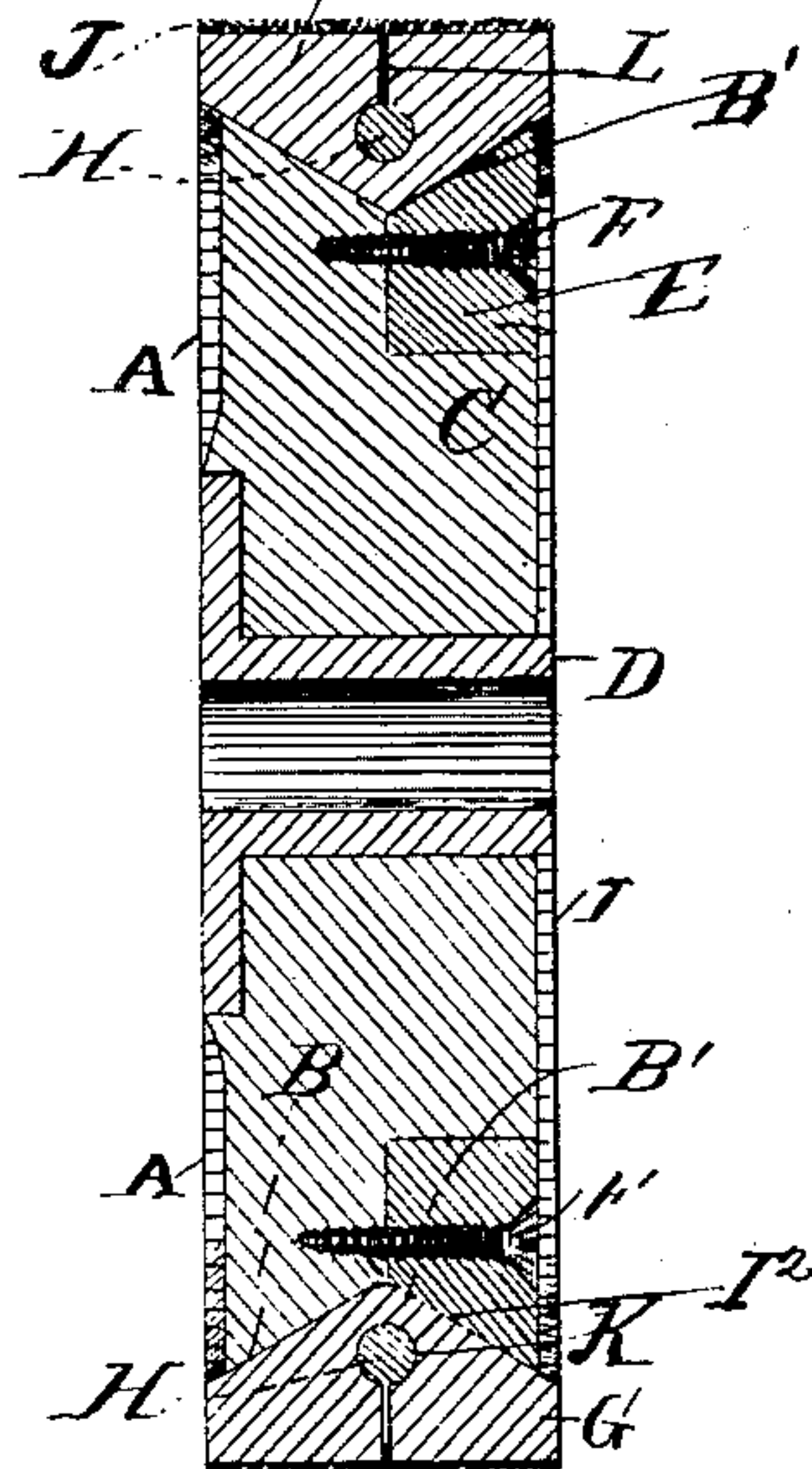


Fig. 2.

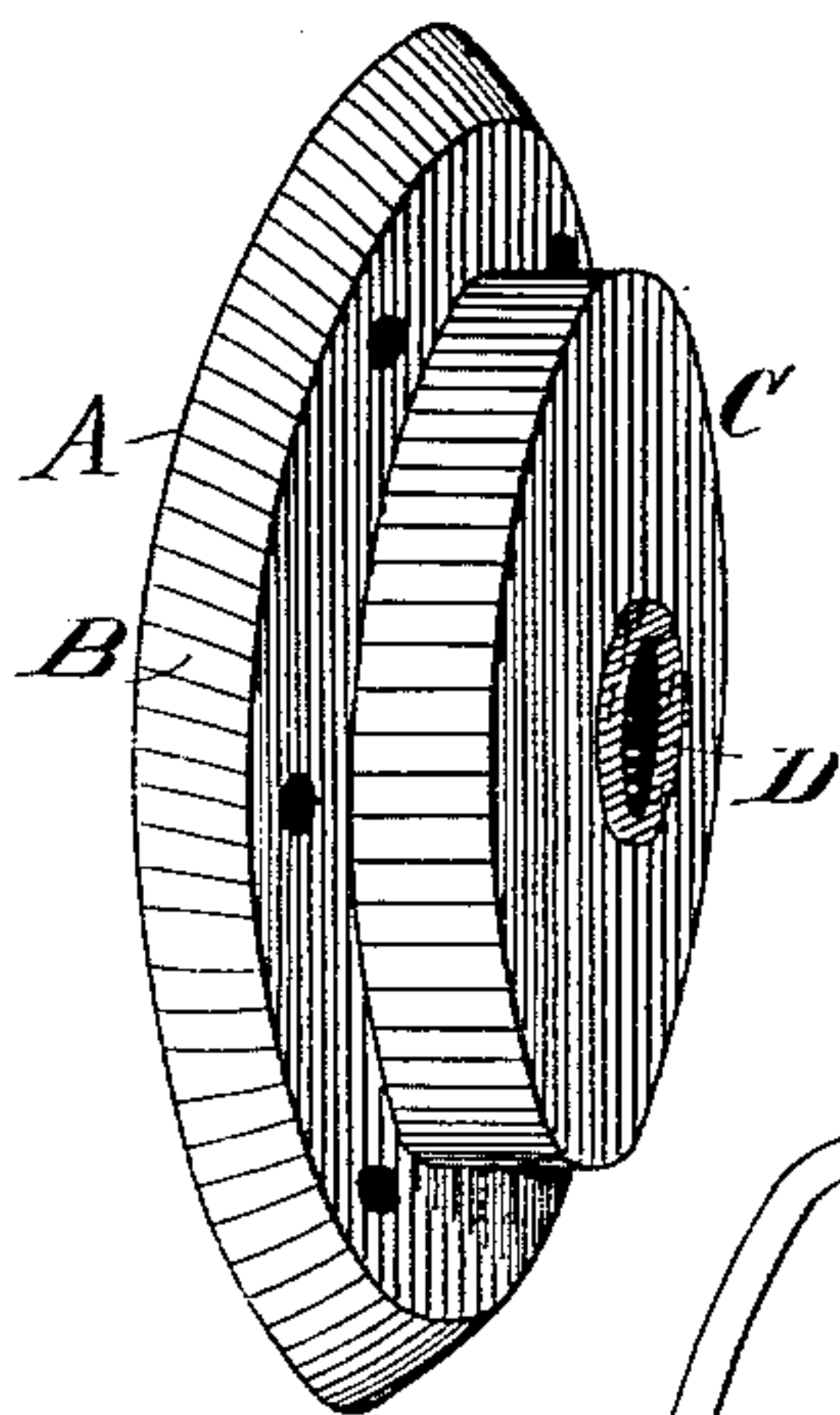


Fig. 3.

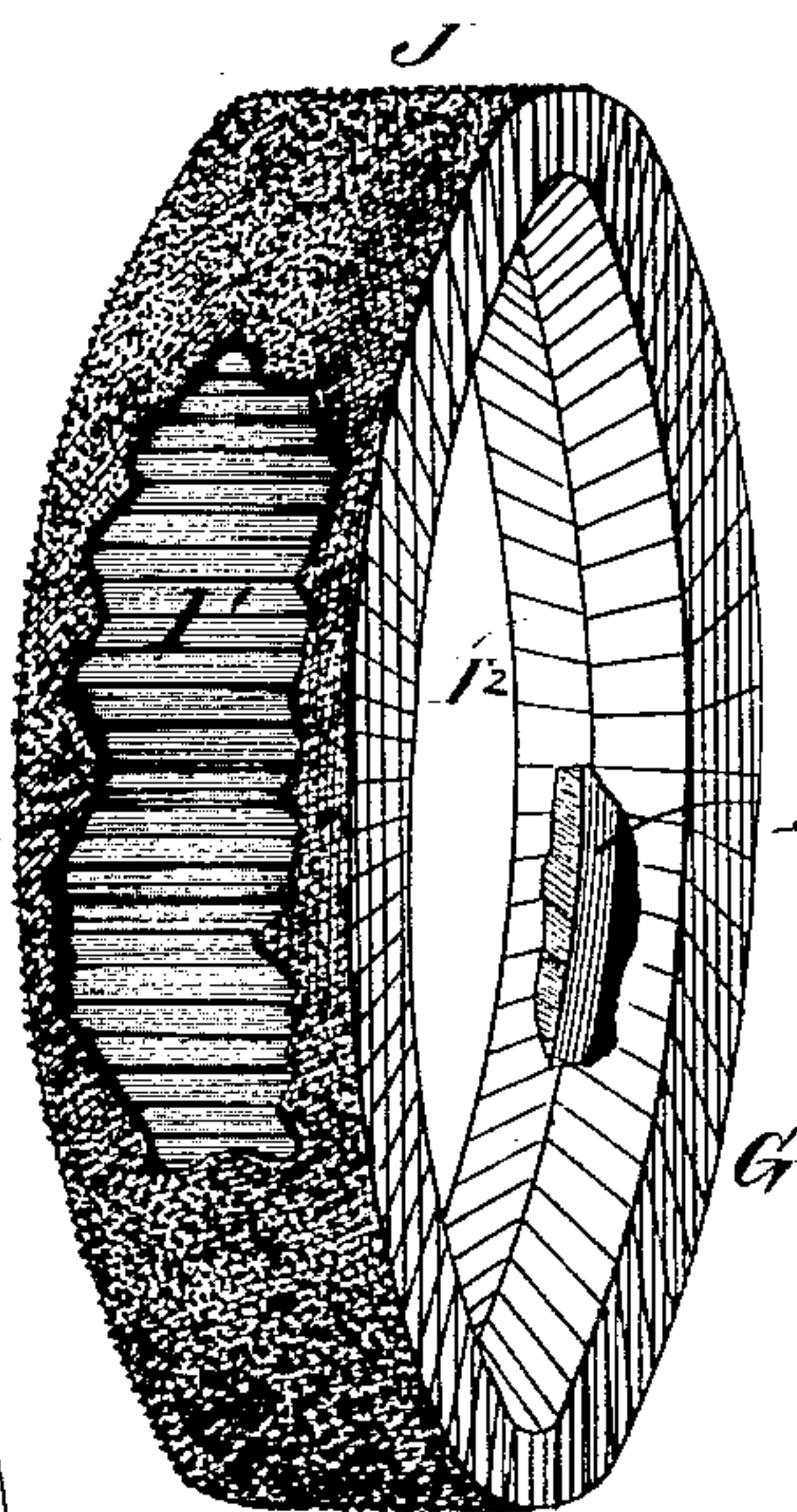


Fig. 4.

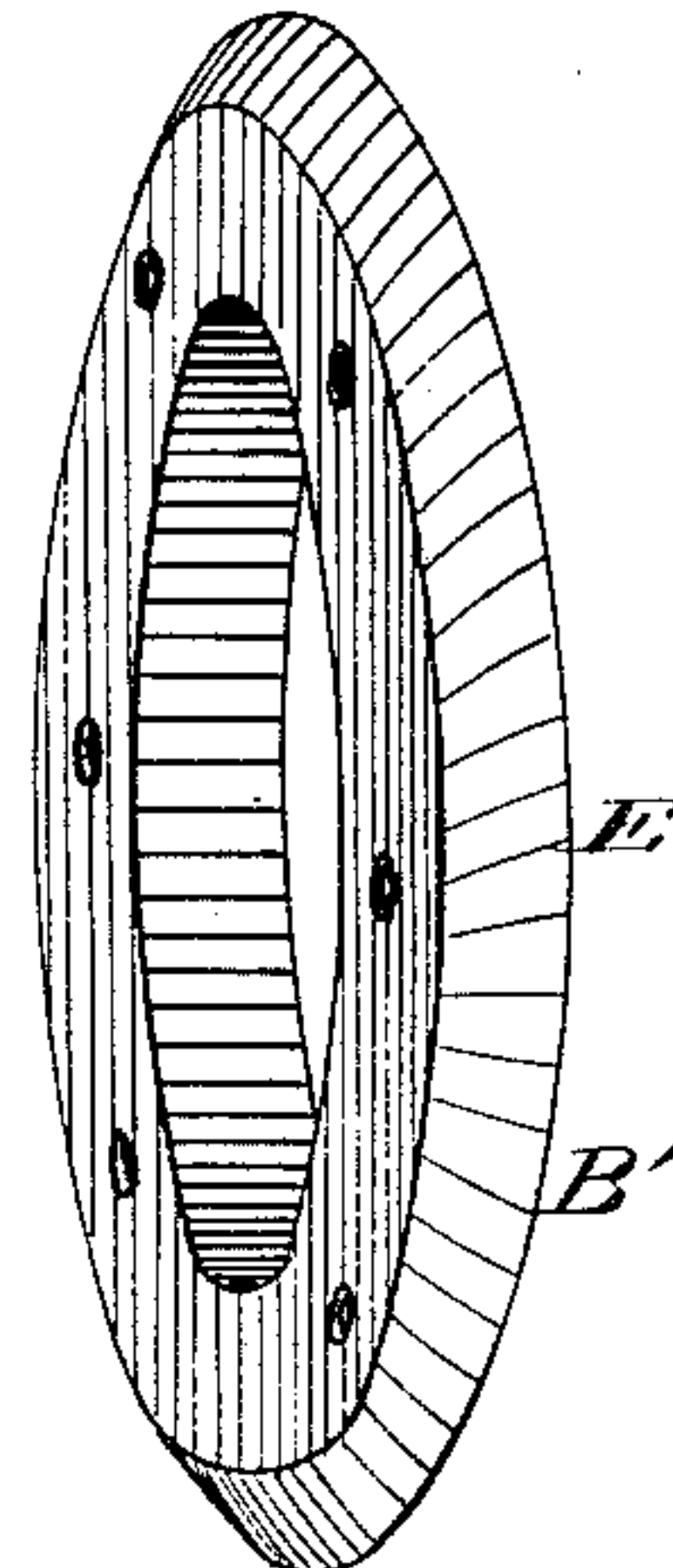


Fig. 5.

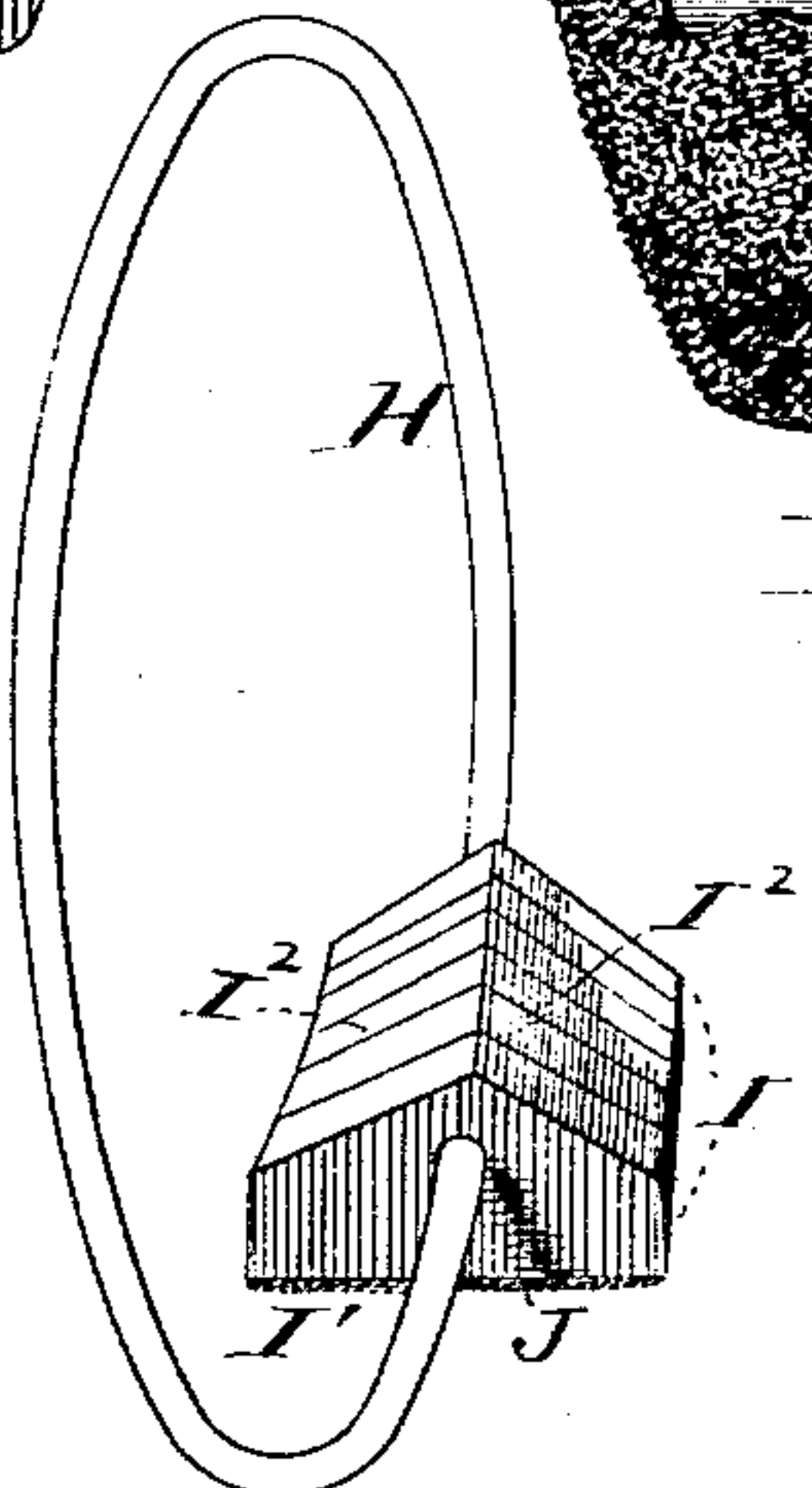


Fig. 6.

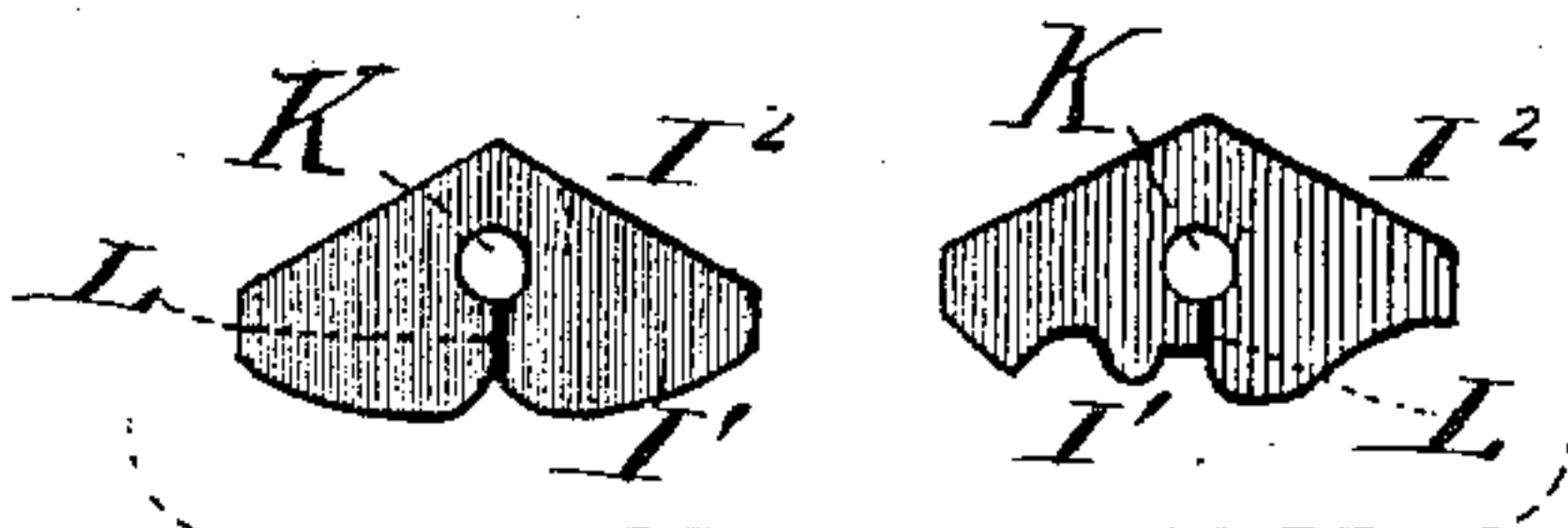


Fig. 7.

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his atty

UNITED STATES PATENT OFFICE.

ALVIN COLBURN, OF LYNN, MASSACHUSETTS.

POLISHING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 410,749, dated September 10, 1889.

Application filed May 13, 1889. Serial No. 310,519. (No model.)

To all whom it may concern:

Be it known that I, ALVIN COLBURN, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Polishing-Wheels, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claim.

In the accompanying drawings, Figure 1 is a side view of a polishing-wheel embodying my inventions. Fig. 2 is a section of the same on line *x*, Fig. 1. Figs. 3, 4, and 5 are perspective views of the principal component parts of the wheel separated, so as to more clearly disclose their construction and arrangement. Fig. 6 is a perspective view of the metallic ring upon which sections of leather, felt, or other suitable material are compactly strung, thus forming the body of the polishing or abrading portion of the wheel. Fig. 7 shows modifications in the outline of such sections of leather or felt on the edges which compose the peripheral face of the wheel, which may be of any desired configuration in the line of its cross-section.

The wheel illustrated in the drawings as embodying my invention consists of a divided interior portion, one part A having a beveled edge B and a concentric hub C, Fig. 3, and being provided with a central metallic bushing or flanged sleeve D, which extends through the wooden hub C, as shown in Fig. 2, and part E, Fig. 5, corresponding in diameter with part A, having a beveled edge B' and a central opening adapted to fit upon hub C, and when the two parts A and E are thus brought together and secured by bolts or by screws F they form a peripheral groove around the united parts between their beveled edges B and B', as shown in Fig. 2. In this groove is mounted the polishing rim or ring G, composed of the endless wire H, covered with the sections or layers I, of leather or felt, strung thereon, as before stated, the outer edges I of which, when the wheel is to be used for grinding, are covered with an adhesive coating J, of abrasive material—such as glue and emery—or any other suitable covering. The pieces I, strung upon ring H and, when used for grind-

ing, coated as stated, have holes K punched in them to receive ring H, and slits L leading to holes K, through which the body of the iron ring is passed into the holes, and the inner angular edges I² of the pieces I are formed to correspond with the beveled edges B and B' of the parts A and E, and thus to fill the annular groove formed by said retiring edges when the inner faces of the parts A and E are bolted or screwed together, as before described and as shown in Fig. 2. By this construction and arrangement of the several parts the pieces I are firmly clamped between the bevels B and B', the slits L are closed thereby, and the pieces kept from turning on the wire H, while the wire holds them securely in place against the centrifugal force when the wheel is revolved at the required high velocity.

The configuration of the polishing face or periphery G of the wheel in the line of its cross-section may be plain, as in Figs. 2, 4, and 6, or the pieces composing the same may be cut or formed on their outer edges with a curved or angular polishing edge of any desired contour, as illustrated in Fig. 7.

A wheel for grinding or polishing having a periphery thus composed of layers or sections of leather, felt, or analogous materials strung upon an endless wire, with the slits through which the wire is passed into the holes arranged radially, or nearly so, whereby they are pressed together and closed when supported upon a divided inner wheel or hub, and clamped between the sides thereof, substantially as described, constitutes the chief feature of my invention. Such a wheel is cheaply constructed, durable, and safe to operate, and the polishing or abrasive surface thereof, so composed of detachable sections of felt or leather, can be readily and cheaply renewed upon the same wire when the periphery of the wheel has become so reduced by wear as to need repairing.

I claim—

In a polishing-wheel composed of two circular pieces with beveled edges clamped together and a rim comprising a metallic ring covered with fibrous pieces coated with an abrasive substance and mounted upon and

clamped between the beveled edges of the circular pieces, substantially as described, the fibrous pieces I, formed with an angular V-shaped edge I², and having holes K and slits 5 I cut therein to receive the metallic ring, said slits being cut at right angles to the polishing-face of the rim and radial to the wheel, so that when clamped between the beveled edges B and B' the slits will be kept closed thereby, substantially as specified.

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Witnesses:

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