

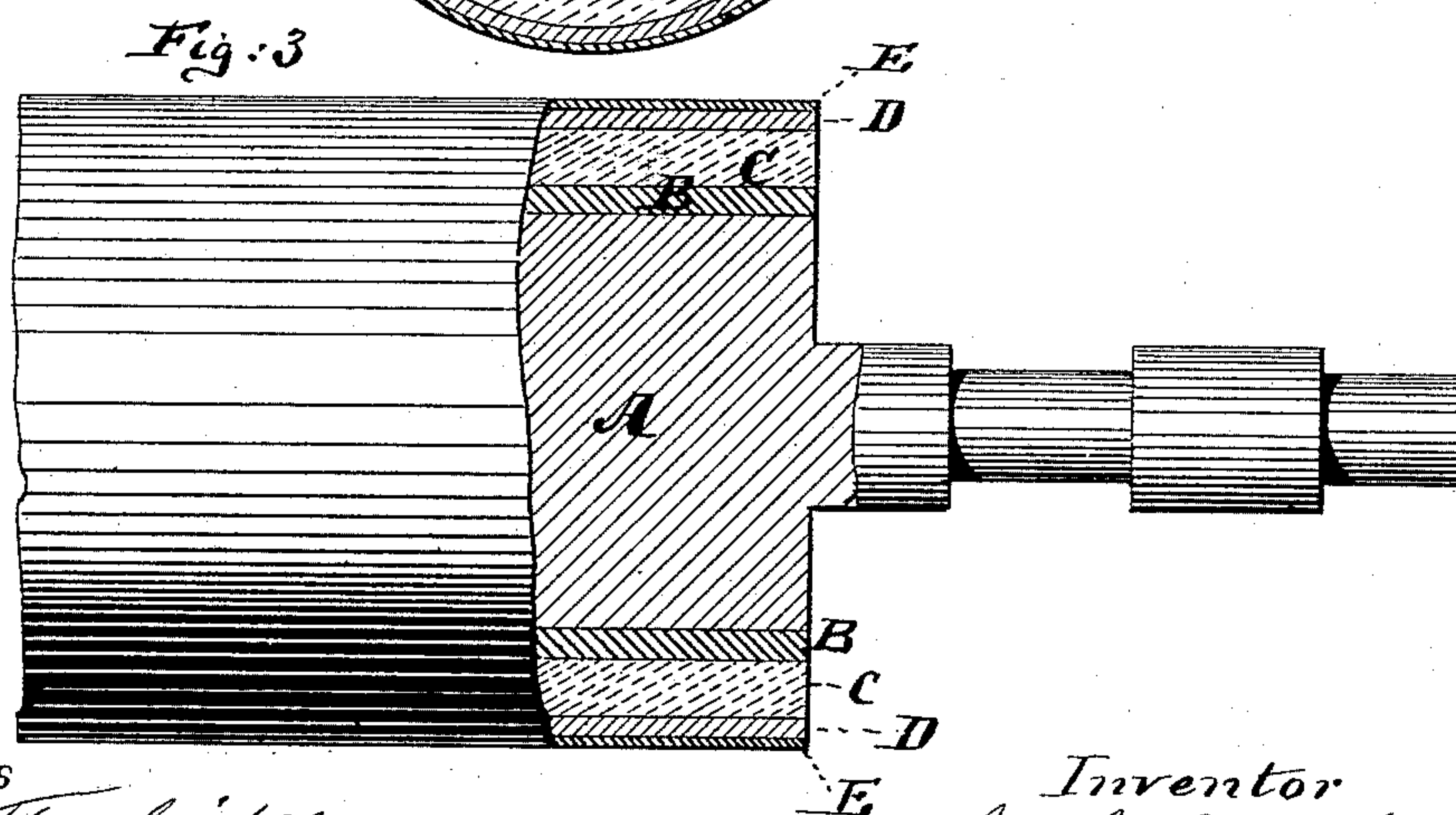
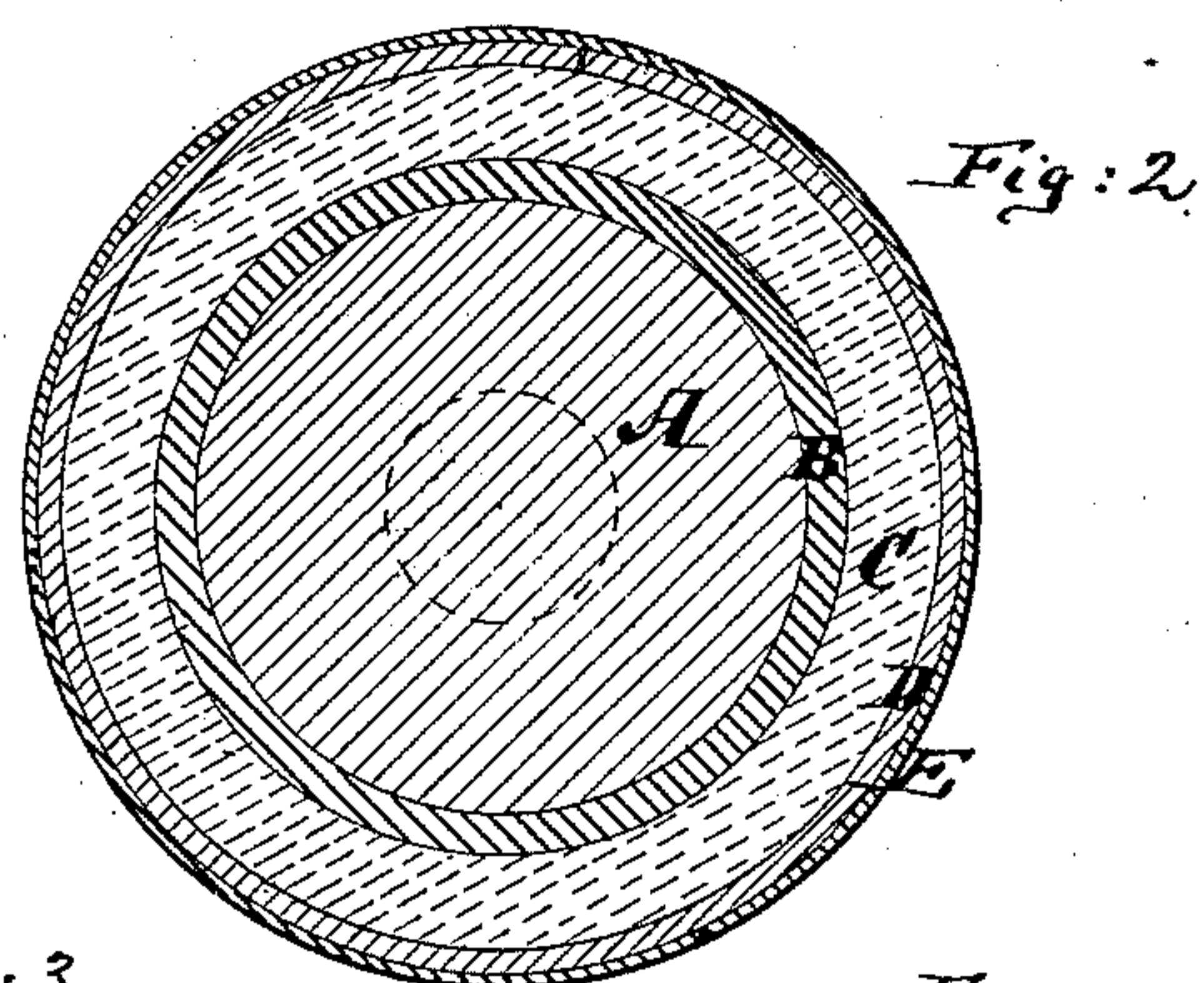
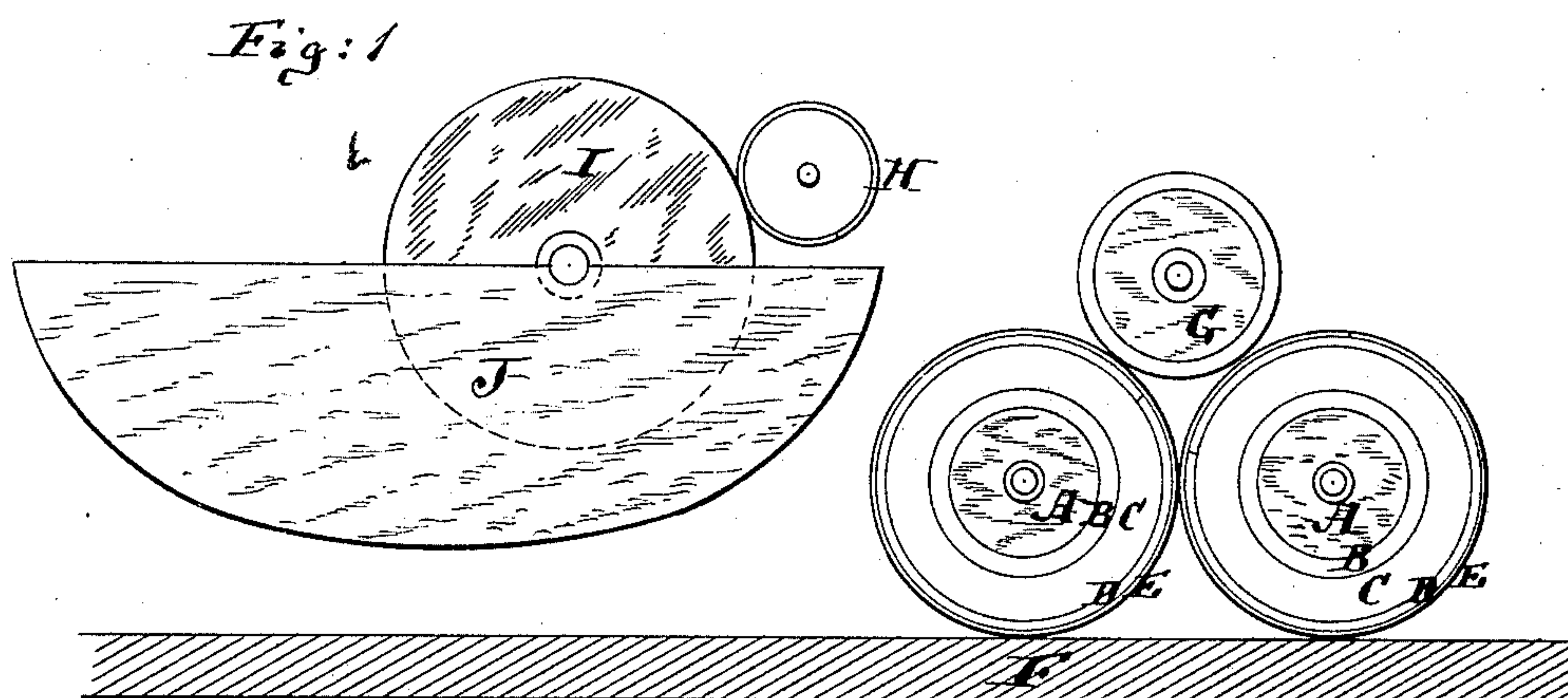
(No Model.)

J. BRENGEL.

DAMPING ROLLER FOR LITHOGRAPHIC PRESSES.

No. 327,995.

Patented Oct. 13, 1885.



Witnesses
John C. Tunbridge
August Schlarbaum.

Inventor
Jacob Brengel
by his Attorneys
Brisson & Steele

UNITED STATES PATENT OFFICE.

JACOB BRENGEL, OF JERSEY CITY, NEW JERSEY.

DAMPING-ROLLER FOR LITHOGRAPHIC PRESSES.

SPECIFICATION forming part of Letters Patent No. 327,995, dated October 13, 1885.

Application filed January 15, 1885. Serial No. 152,958. (No model.)

To all whom it may concern:

Be it known that I, JACOB BRENGEL, a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improved Damping-Roller for Lithographic Presses, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, in which—

10 Figure 1 is a side view of that part of a lithographic press which contains the damping-rollers. Fig. 2 is a cross-section of my improved damping-roller. Fig. 3 is a side view, partly in section, of one end of the same.

15 Damping-rollers are used in lithographic presses for the purpose of keeping the stone wet while it reciprocates in the press. Heretofore such damping-rollers have been made with metallic center, around which were
20 wrapped several thicknesses of flannel or other fabric, and about the flannel was finally wrapped a layer of fabric known as "mull." The difficulty with such rollers was that their coverings would become indented or grooved,
25 so to say, by the stone against which they press, so that when a roller had been working over a small stone for a certain length of time it would no longer be adapted to properly wet a larger stone. Another difficulty was that
30 when the outer covering was once injured so that it had to be replaced it required great skill to cut to proper size and apply the varying thicknesses of flannel that would make up a new covering, for each thickness required
35 a sheet different in size from that pertaining to the adjoining thicknesses.

The object of my invention is to make these damping-rollers durable and self-adjusting to stones of different sizes.

40 Another objection to the damping-rollers now in use is that the moisture which pervades the flannel will gradually get to the iron center of the roller, corroding the same. To obviate this the iron rollers are frequently
45 covered with brass thimbles, around which the flannel is placed; but even this protection does not fully answer the purpose, because the least flaw in the brass admits water to the iron and causes the same to be rapidly corroded.

50 My invention consists in interposing between the flannel or fabric covering of the

roller and its metallic center an india-rubber tube, which renders the roller elastic, protects the metal from corrosion, and enables me to dispense with many thicknesses of flannel or
55 outer-fabric covering.

In the drawings, A represents the metallic center of the roller. The same is usually made of iron, but may be made of any other suitable metal or rigid material, and, if desired, a tube
60 of brass, B, may be placed around the iron center; but this brass tube is not an essential feature of a roller containing my invention. Around this metallic center is placed the ring
65 C of india-rubber. It should be a seamless ring of rubber, vulcanized on the roller, so that it will embrace and hug the same throughout with equal pressure and disclose any flaws
70 upon mere inspection, if any there be, for if there should be a flaw in the rubber it would be useless. The tubing C must be a perfect covering throughout. Around this rubber
75 tubing C is placed the layer D of flannel, and around that a layer, E, of mull. These layers are usually applied to damping-rollers.

With reference to Fig. 1 of the drawings, the damping-rollers A B C D E are represented as resting on the reciprocating stone F, and as
80 in contact with the upper brass roller, G, which brass roller is moistened by the drop-roller H, that comes in contact with the wooden roller I, that revolves in the water-trough J. The drop-roller H is moved from the roller I to
85 the roller G and back in the customary manner.

Some of the advantages which flow from the use of the rubber covering C in a damping-roller are the following: A great saving of material used in the covering is made, because
90 instead of four or five plies of flannel I use but one; hence for a new covering, the flannel may be already cut out ready for application, and need not be specially measured for each
95 ply. In places where a number of presses are used, the cut flannels of proper shape may be kept on hand. Such is not possible with the present arrangement of rollers.

Another advantage is that the roller will always be of uniform size, which is not the case when its size depends upon numerous thick-
100 nesses of flannel. They will always make it vary more or less; and the improved roller will

keep its form even after it has been used on a small stone for a suitable length of time, as the rubber will throw it back, when relieved from pressure, to the proper cylindrical shape. Nor
5 will my improved roller get hard, which is one of the principal difficulties with the rollers that have the flannel directly on the metal. Experiments have satisfied me, furthermore, that my improved roller is much more durable
10 and much more uniform in action than the rollers which do not have the interposed ring of rubber.

The invention is applicable to all kinds of damping-rollers used in lithographic presses,

and to all rollers that serve to convey water 15 from the trough to the damping-rollers that finally deliver the moisture to the stone.

I claim—

The damping-roller constructed of the metal central body, rubber tube C, in contact with 20 said metal, tube D, of flannel, in contact with said rubber, and outer tube, E, of mull, as specified.

JACOB BRENGEL.

Witnesses:

CHARLES G. M. THOMAS,
HARRY M. TURK.