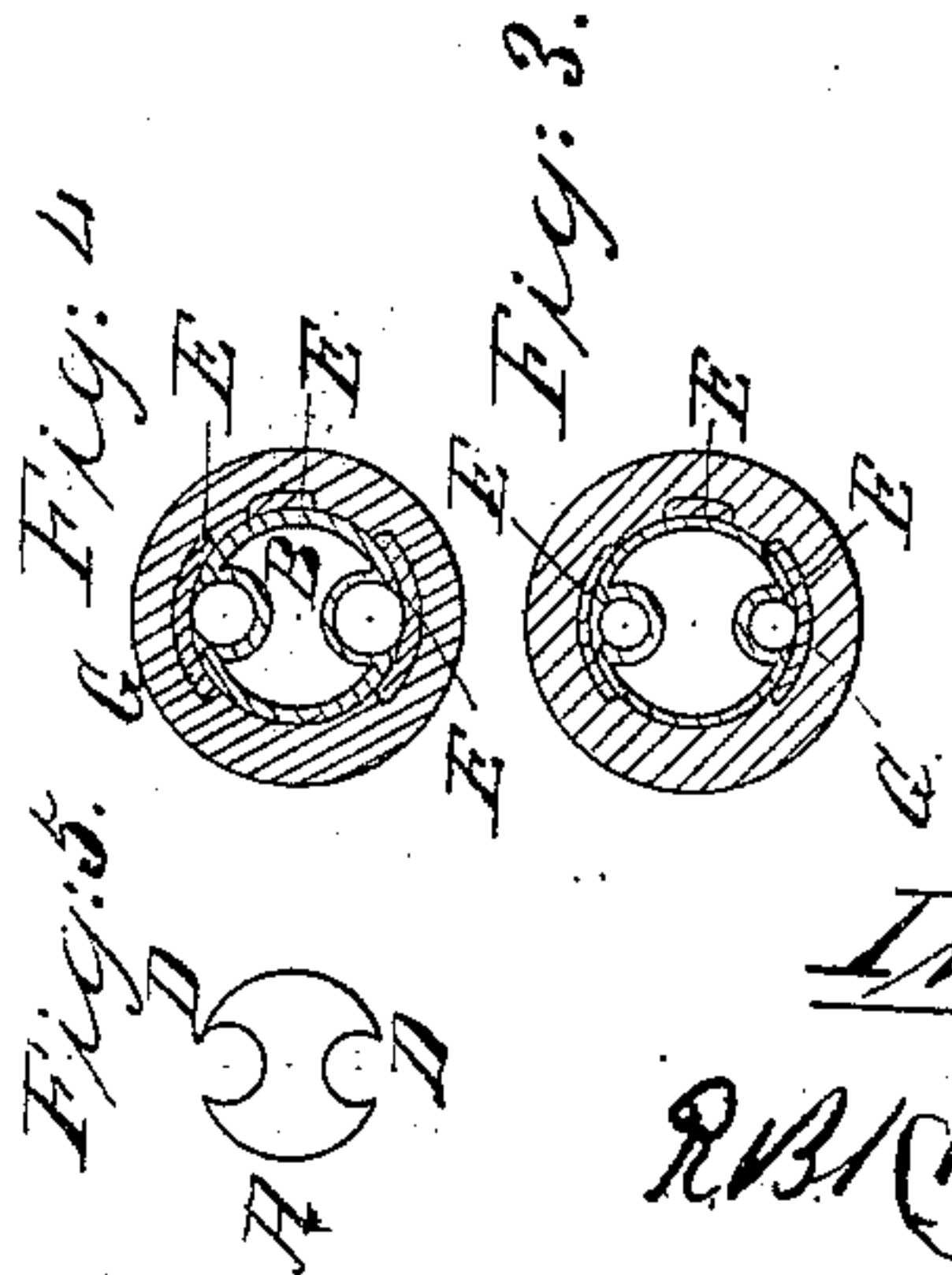
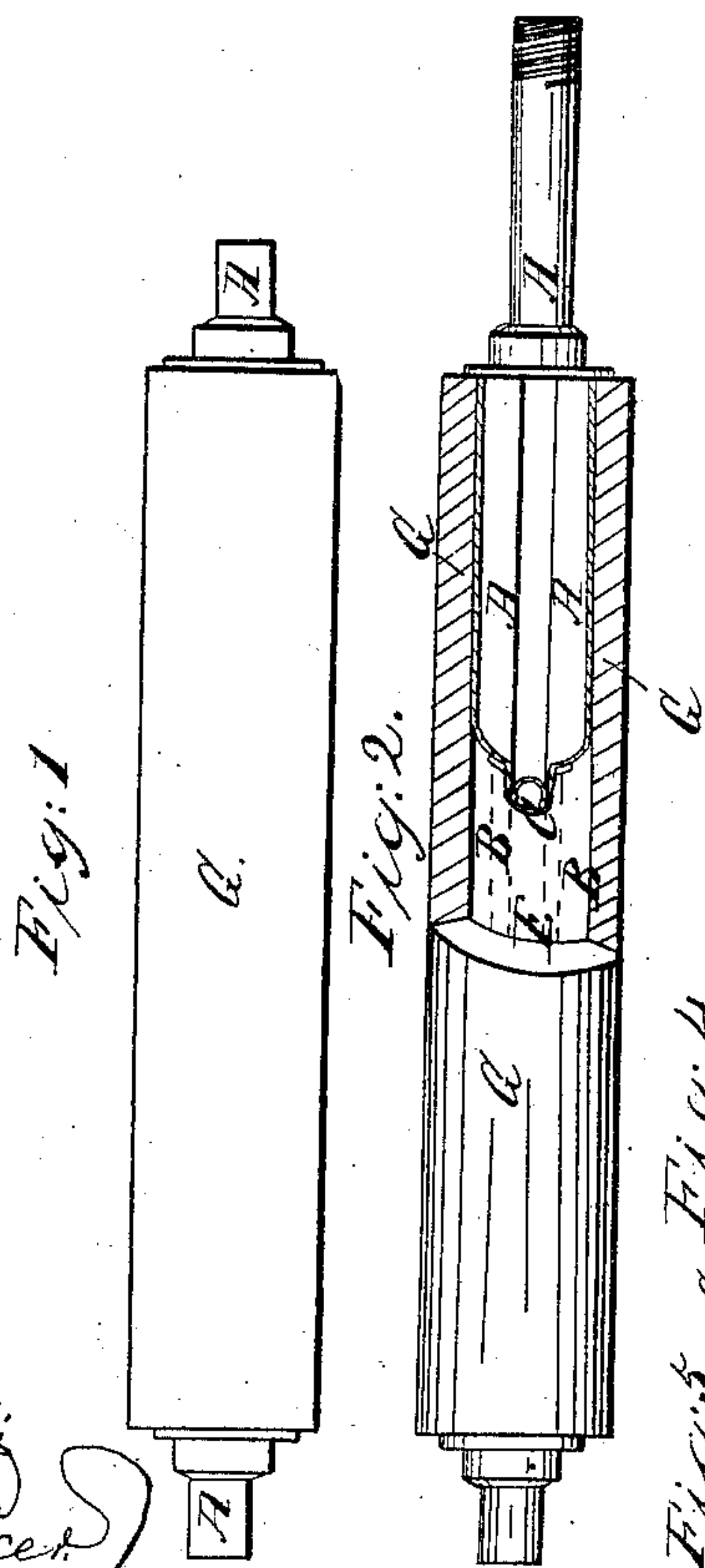
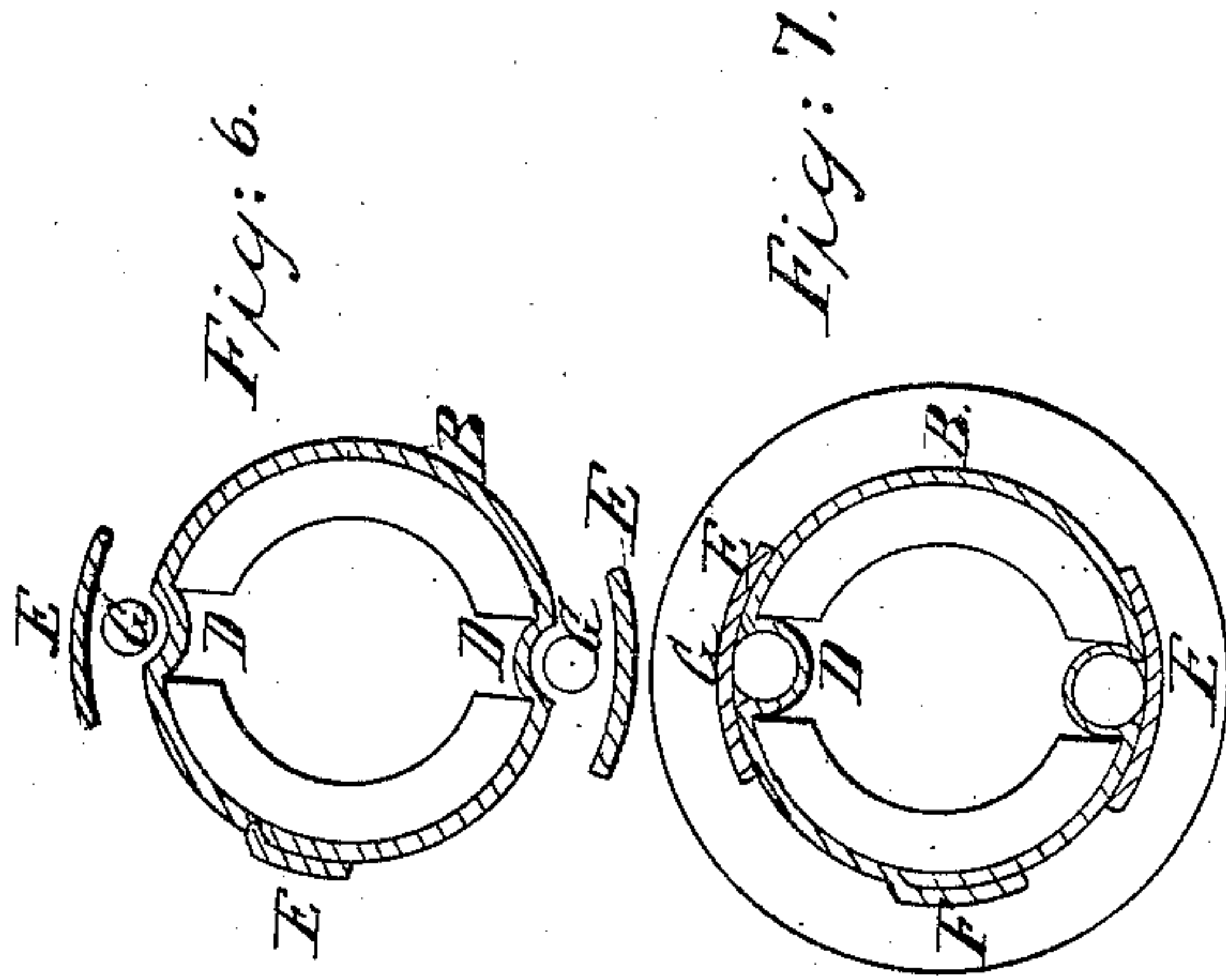


R. B. Huguenin,

Wringer Roll.

N^o 56,418.

Patented July 17, 1866.



Witnesses:
A. H. Keeney
Geo. H. Landon

Inventor.
R. B. Huguenin

UNITED STATES PATENT OFFICE.

ROBERT B. HUGUNIN, OF NEW YORK, N. Y.

IMPROVED ROLLERS FOR CLOTHES WRINGERS, WASHERS, &c.

Specification forming part of Letters Patent No. 56,418, dated July 17, 1866.

To all whom it may concern:

Be it known that I, ROBERT B. HUGUNIN, of the city of New York, State of New York, have invented a new and useful improvement in the manufacture of elastic-covered rollers used for clothes wringers, washers, and starchers, and for wine-expresser machines, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification,

This invention consists in vulcanizing rubber or equivalent gum onto cloth or wire-cloth (or both combined) covered metal shafts, the said shafts being made with grooves, with metal rods or suitable wire wrapped within the cloth covering and then pressed down into the said grooves, &c., for the purpose of preventing the covering from turning.

Figure 1 illustrates one of these rollers complete. Fig. 2 is a roller with the elastic covering mostly removed and the cloth covering partially so, showing the manner of securing the cloth by means of the metal rods and groove or their equivalent, as well as the manner of tying the cloth on each side of and over the rod or other fastening and holding it securely in its place; Fig. 3, cross-section of a shaft, showing two grooves, the wire, rod, or its equivalent in the grooves wrapped with cloth, &c., the whole then covered with rubber. Fig. 4 represents a covering for a shaft made on a mandrel, ready to be applied to its shaft, the rods or their equivalent within the cloth-support adjusted to fill the grooves in the shaft when applied. Fig. 5 shows a section of a shaft with grooves cast, rolled, or wrought to receive the rods or equivalent device to prevent the covering from turning. Fig. 6 shows a sectional view of a hollow shaft during the process of covering with prepared cloth or wire-cloth; Fig. 7, sectional view of a hollow shaft and covering complete.

Similar letters of reference indicate corresponding parts in all the figures.

To enable those skilled in the art to fully understand my invention, I will proceed to describe its construction and operation.

In the drawings, A is a metal shaft, made with one or more grooves of suitable depth, width, and length to accommodate the metal

rod or its equivalent and the cloth surrounding it. This shaft may be hollow or not. The grooves may be rolled into the iron at the mill, or separately wrought in each shaft, or the shafts may be cast in the form desired.

B is cloth or wire-cloth, or both combined, of one or more plies, prepared with raw-rubber gum cut to the proper size and shape and wrapped around the shaft A.

C are metal rods, cords, or their equivalent, laid on the cloth covering around the shaft directly over the grooves, into which they are forced with the cloth underneath them. This may be done by a vise or other suitable clamp, or driven down before applying the elastic covering, which completes the roll.

D are grooves in the shaft. E are small strips of the gum-prepared cloth pressed over the whole length of the wire C and gummed down to the covering on each side of the said wire; or instead of these strips an additional wrapping of the prepared cloth or wire-cloth may be put over all. Either of these processes unites the main first covering over the outside or top of the rods, forming pockets underneath, in which rest the rods. Thus no amount of strain in working would tend to draw the rods upward.

F are sides of the main wrapping-cloth drawn tightly around after the rods are in place, and then united by being pressed together, the raw gum being adhesive. G is elastic covering.

The operation of giving the shaft the final or elastic covering may be briefly described as follows: After the shaft has been covered with the prepared cloth, as described, a suitable thickness of raw rubber is then wrapped over and around the shaft and cloth. The whole is then placed in a suitable mold and vulcanized.

This process cures the rubber to the cloth, firmly uniting the same when wrapped over and lapped, making the cloth and rubber to all intents and purposes one, and the roll in itself complete.

The same process is followed when the covering is made on a mandrel and afterward applied.

In operation these rollers are worked in the same manner as other rollers for the same purpose.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The elastic rollers herein described, made by vulcanizing rubber or equivalent gum upon raw rubber, prepared cloth, or wire-cloth, or both combined, the cloth being first wrapped around the central core, and the rods or their

equivalents secured within the said cloth and grooves of the core, substantially in the manner and for the purposes specified.

R. B. HUGUNIN.

Witnesses:

A. H. SPENCER,
T. H. LONDON.