

(No Model.)

E. BOULANGER.

DRUM.

No. 371,415.

Patented Oct. 11, 1887.

Fig. I.

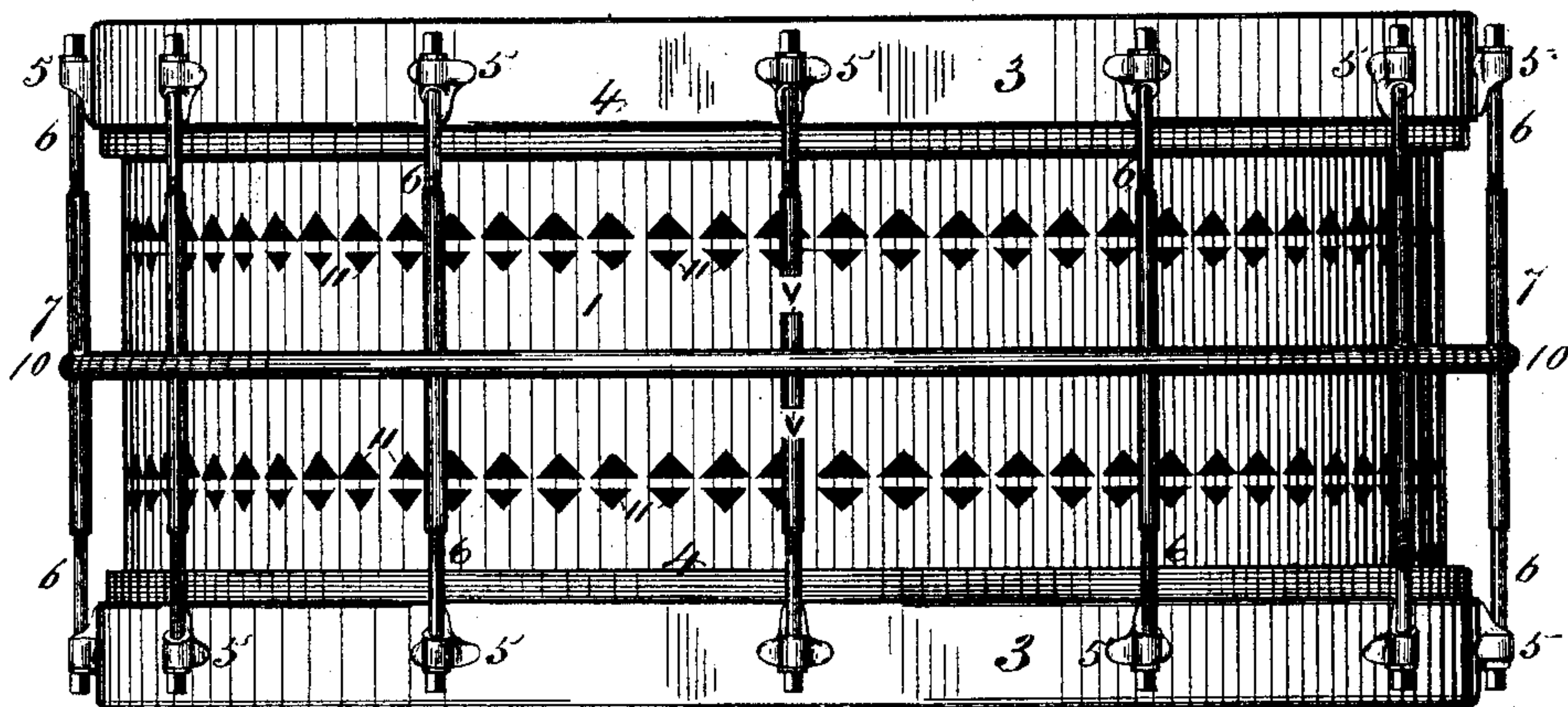


Fig. II.

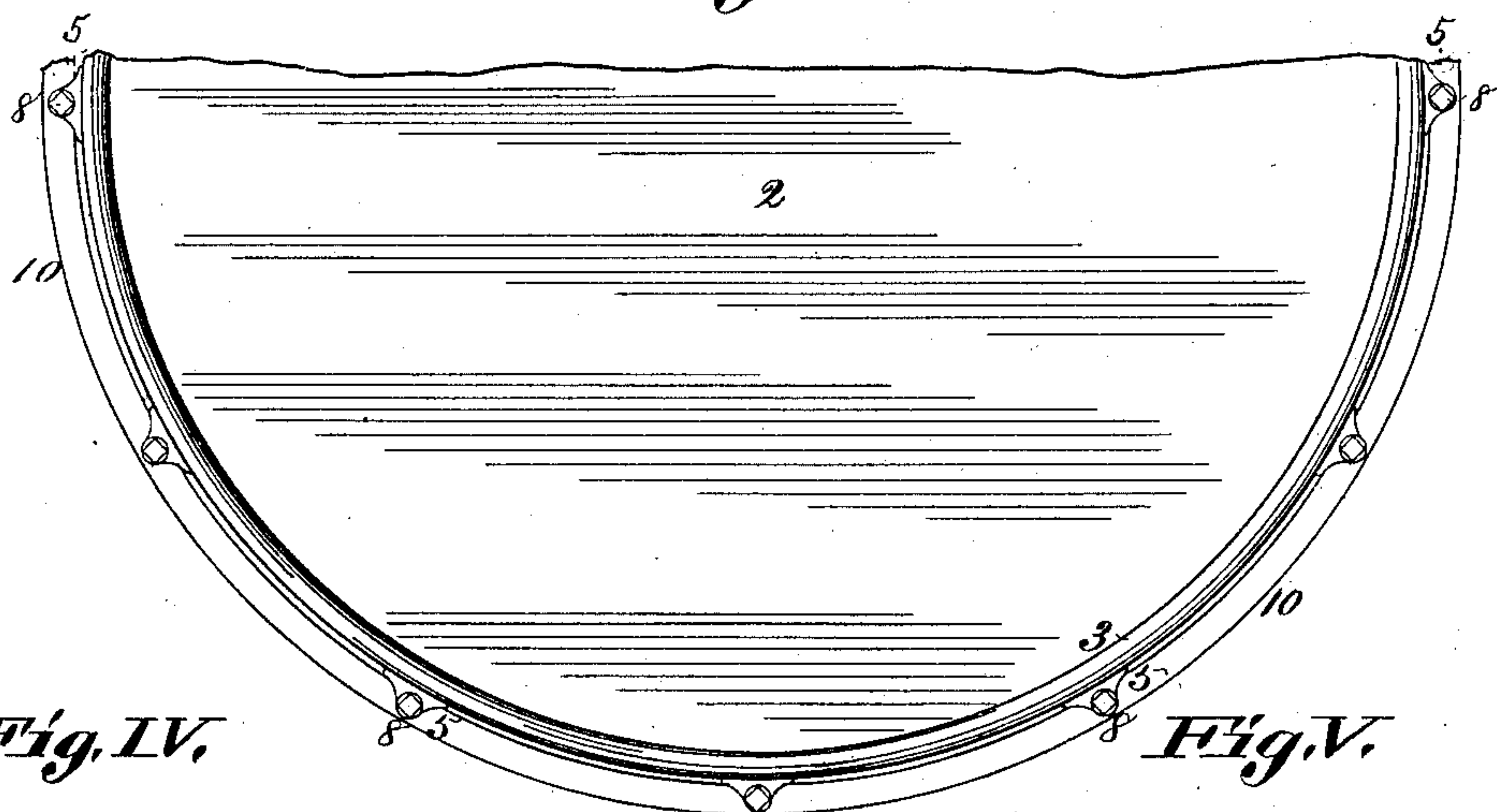


Fig. IV.

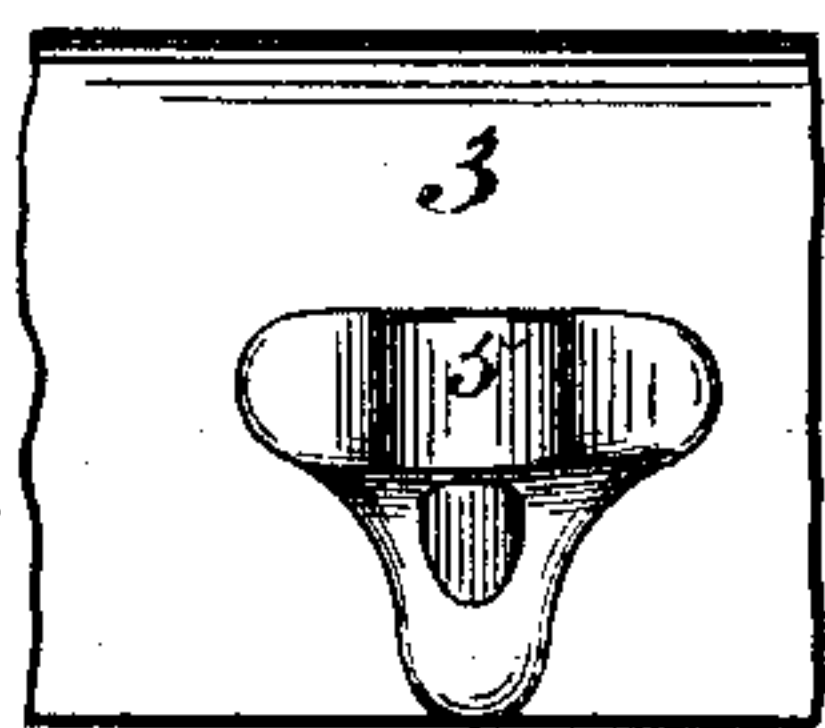


Fig. III.

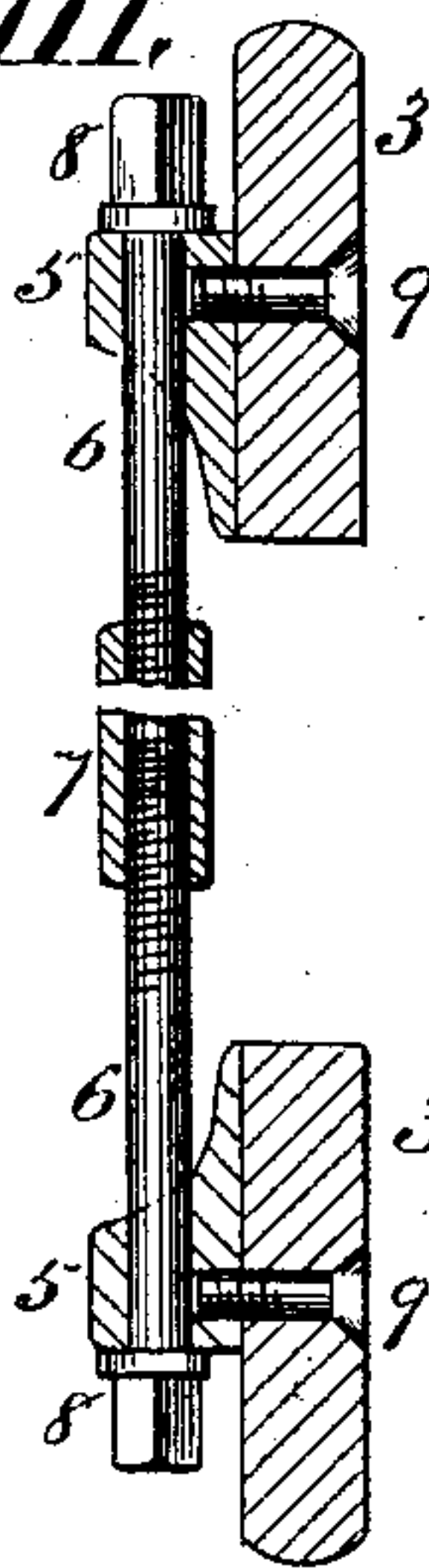


Fig. V.

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UNITED STATES PATENT OFFICE.

EMILE BOULANGER, OF ST. LOUIS, MISSOURI.

DRUM.

SPECIFICATION forming part of Letters Patent No. 371,415, dated October 11, 1887.

Application filed January 19, 1887. Serial No. 234,7-8. (No model.)

To all whom it may concern:

Be it known that I, EMILE BOULANGER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Drums, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a side view of the drum. Fig. II is a part end view of the drum. Fig. III is an enlarged section of the hoops and connecting-screws. Fig. IV is an enlarged view of one of the ears. Fig. V is an enlarged detail section at V V, Fig. I.

1 is the shell, shown of cylindrical form, as usual.

2 is a drum-head.

3 3 are the outer rims or hoops.

4 4 are the flesh hoops, to which the margin of the head is made fast.

5 are ears or lugs, which are secured to the outside of the hoops 3 3 in any suitable manner. I have shown, as means of attachment, screws 9, passing through the hoop from the inside and screwing into the ears 5.

6 are screw-threaded tension-rods passing through the ears, with their draw-heads 8 bearing on the ears. The heads 8 of the tension-rods I prefer to make, as shown, with a circular part bearing on the ear, the head being fitted to receive a key or socket-wrench. The tension-rods engage in the screw-threaded ends of the sleeves 7, so that by screwing the rods into the sleeves the hoops 3 are drawn to-

ward each other. The sleeves pass through a tubular brace-hoop, 10, which surrounds the drum about midway of its height.

The shell I prefer to make of metal, and in it are a series of perforations, 11, which may be of any form, size, or character. As shown, there are two series of perforations in close proximity between the upper rim and the brace-hoop, and two series of perforations in close proximity between the lower rim and the brace-hoop. The communication which the perforations 11 establish between the interior and exterior of the drum insures an equal pressure of air upon both sides of the heads, and consequently a uniformity in the sound. The perforations also assist the escape of the sound-vibrations from the interior.

I claim as my invention—

1. The combination, in a drum, of the hoops 3, provided with lugs or ears 5, attached thereto, the tension-rods 6, passing through the ears, and the brace-hoop 10, substantially as set forth.

2. The combination, in a drum, of the hoops 3, provided with lugs or ears 5, attached thereto, the tension-rods 6, passing through the ears, screw-threaded sleeves 7, in which the tension-rods work, and the brace-hoop 10, substantially as set forth.

EMILE BOULANGER.

In presence of—

SAML. KNIGHT,
JOSEPH WAHLE.