

(No Model.)

J. LACROIX.
PNEUMATIC SOLE AND HEEL.

No. 547,645.

Patented Oct. 8, 1895.

Fig. 1.

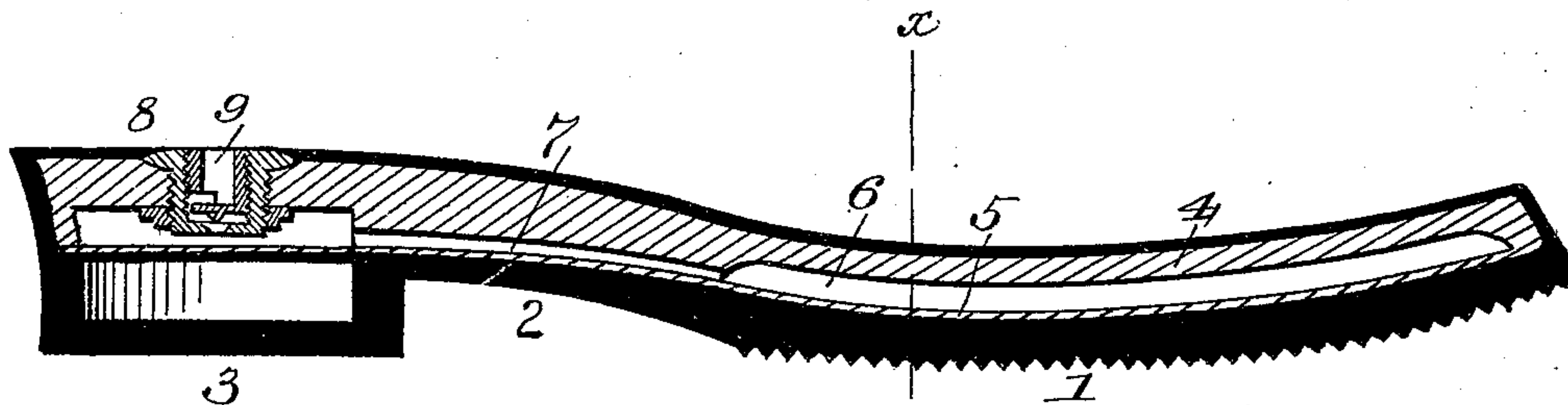


Fig. 2.

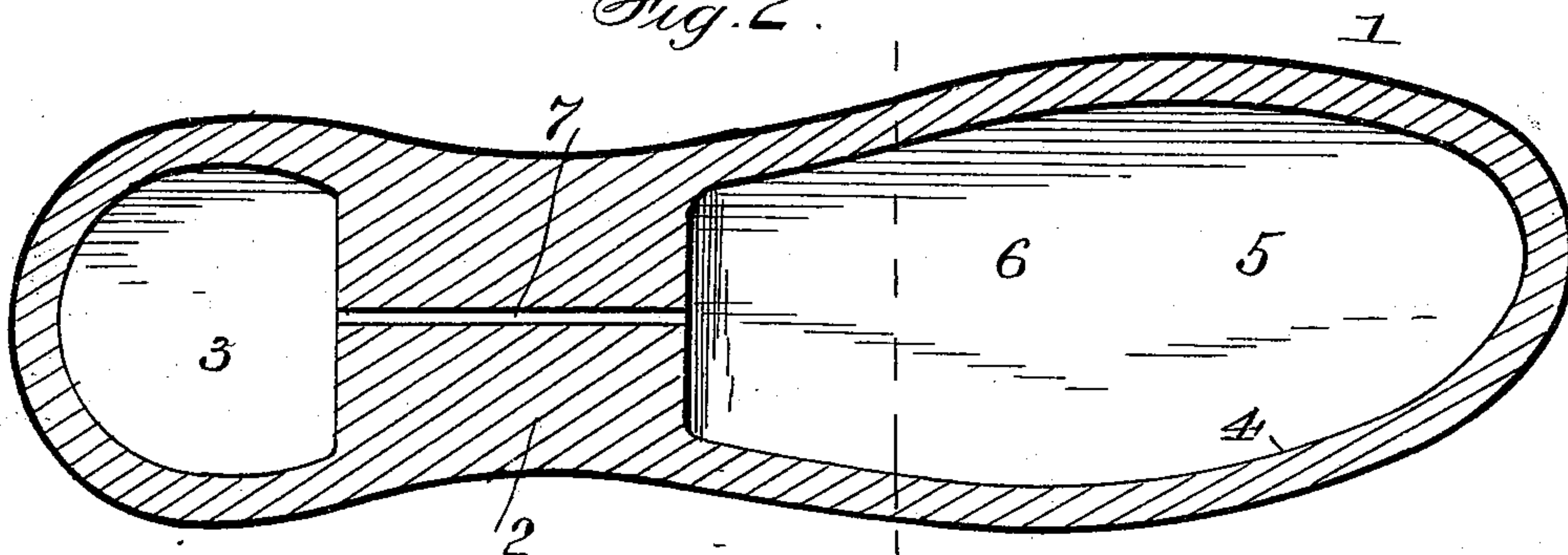
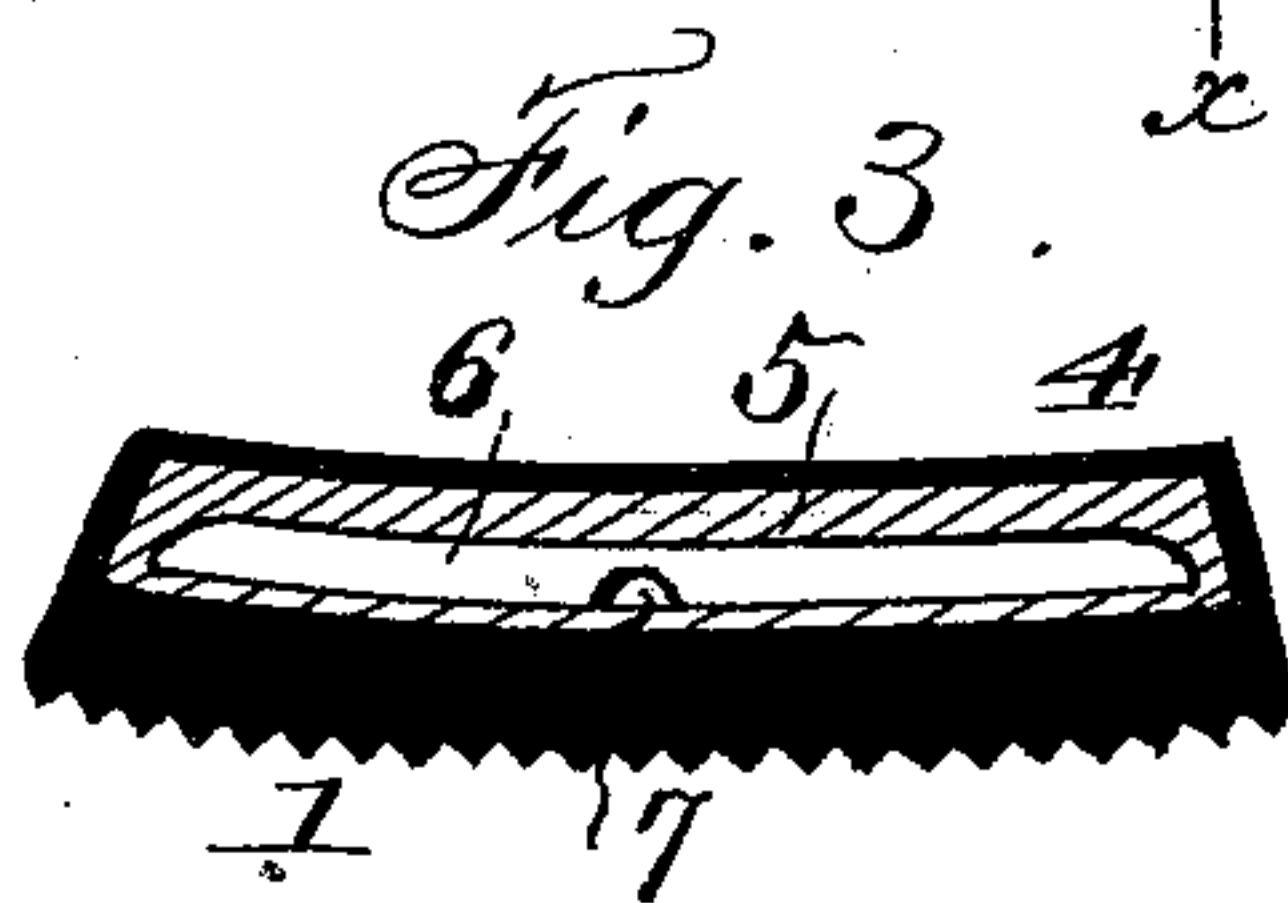


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH LACROIX, OF FALL RIVER, MASSACHUSETTS.

PNEUMATIC SOLE AND HEEL.

SPECIFICATION forming part of Letters Patent No. 547,645, dated October 8, 1895.

Application filed July 18, 1895. Serial No. 556,486. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LACROIX, a citizen of the United States, and a resident of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Pneumatic Soles and Heels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in rubber and leather soles and heels for boots and shoes, and its object is to provide such a sole and heel which shall possess superior advantages with respect to efficiency and comfort in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal section of a sole and heel constructed in accordance with my invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a cross-section on the line *xx*, Fig. 1.

In the said drawings the reference-numeral 1 designates the outer part of the sole, 2 the shank portion, and 3 the heel, all made of vulcanized rubber in one piece.

The numeral 4 designates the inner part of the sole, made of leather, covered on its upper face with rubber and recessed on its under side from near the point to the shank and provided with a covering 5, of thin leather, forming an air-chamber 6. The rubber sole is connected to this leather sole and to the covering 5, and the combined sole thus formed is secured to the upper of a boot or shoe in any ordinary or convenient manner.

Located in the shank of sole 4 is a passage

7, which communicates with the air-chamber, and which communicates at its rear end with a pipe 8, provided with an automatic valve 9.

In practice the air-chamber has air forced therein by means of a pneumatic pump connected with the pipe 8. After sufficient pressure has been obtained the pump is disconnected, when the valve will be closed by the back-pressure, thereby preventing leakage. It will thus be seen that an air-cushion will be formed between the outer and inner portions of the sole, whereby walking will be rendered more comfortable. The invention will be found to be especially valuable to persons who are compelled to be on their feet much, as it is more springy than the ordinary soles, as it will rest the feet when standing still, and in walking or running will be less tiresome. It will also be of great use to persons with sore or sensitive feet, and also to invalids or sick people. It can be applied to any kind of foot-wear.

Having thus fully described my invention, what I claim is—

As an improved article, a combined rubber and leather inflatable sole and heel, consisting of the leather portion recessed at the front and heel and formed with a horizontal connecting passage, the covering secured to the under side of said leather portion, the rubber sole and heel secured thereto, the rubber insole, and the inflation valve communicating with the recess in the heel, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOSEPH LACROIX.

Witnesses:

JOHN COUGHLIN,
JOSEPH RENAULT.