(No Model.)

J. LACROIX.

RUBBER BOOT.

No. 556,059. Patented Mar. 10, 1896.

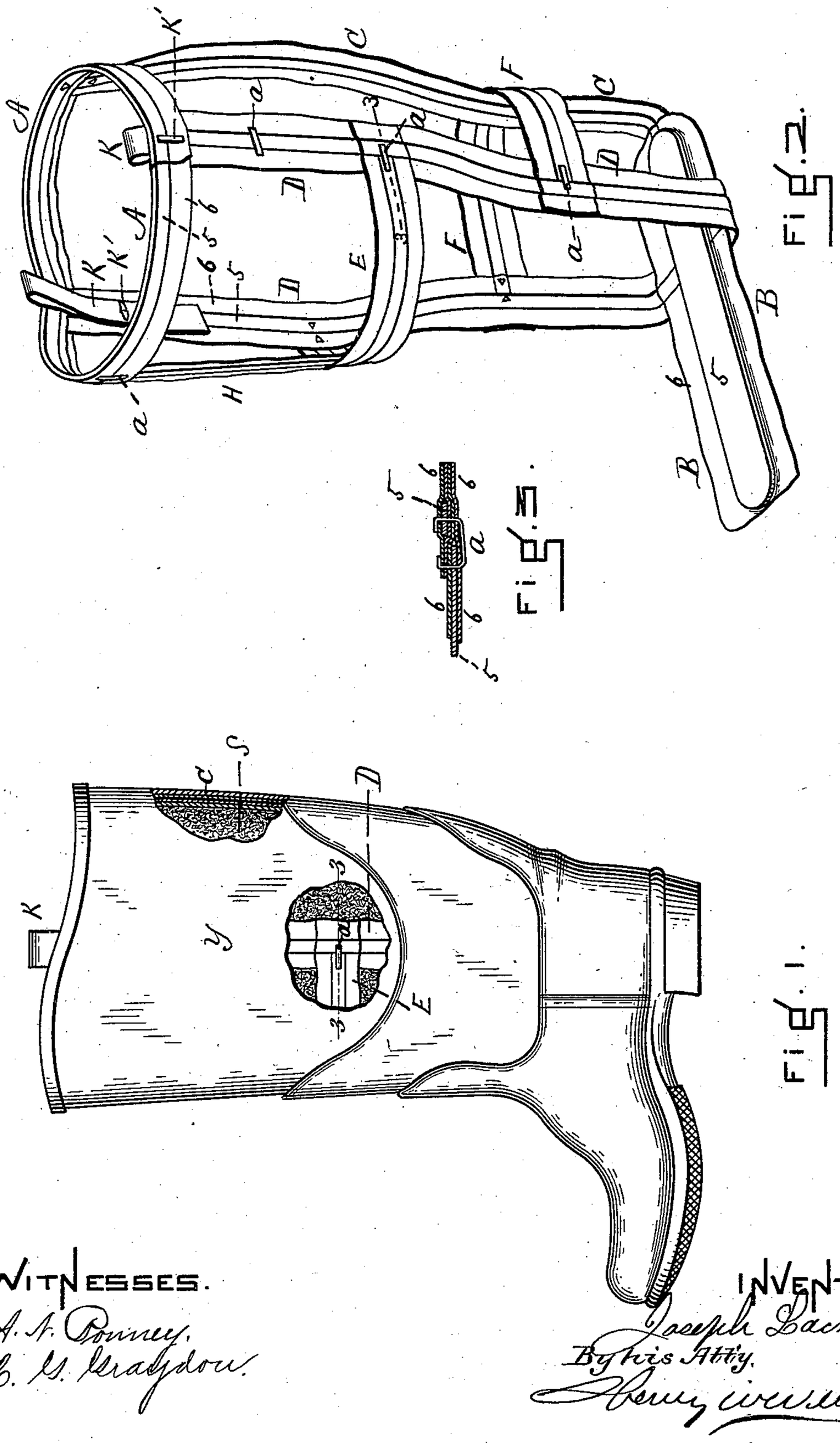

Fig. 2.

Fig. 3.

Fig. 1.

WITNESSES.

A. F. Bonney.

C. G. Bradford.

INVENTOR

Joseph Lacroix.

By his Attys.

Bonney & Williams

UNITED STATES PATENT OFFICE.

JOSEPH LACROIX, OF FALL RIVER, MASSACHUSETTS.

RUBBER BOOT.

SPECIFICATION forming part of Letters Patent No. 556,059, dated March 10, 1896.

Application filed November 30, 1895. Serial No. 570,615. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LACROIX, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Rubber Boots, of which the following is a specification.

This invention relates to rubber boots, and it has for its object to prolong the wear of the boot by preventing tearing, breaking, and "squashing" down, the latter referring particularly to the leg and ankle portion, the tearing being most likely to occur at the top and the breaking occurring most frequently at the ankles and the portions above and in front of the heel; and the improvement comprises a skeleton frame adapted to be placed adhesively between the rubber and the lining of the boot, more especially of the leg portion thereof and the sole.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a rubber boot embodying my invention, portions of the rubber being broken out for purposes of better illustration. Fig. 2 is a view in perspective of the skeleton frame removed. Fig. 3 is a horizontal section taken on line 3, Fig. 1.

Similar letters of reference indicate corresponding parts.

The skeleton frame consists essentially of the ring portion A, which lies between the lining S and the rubber Y at or near the upper edge of the leg portion; a horizontal and substantially straight portion B, which lies between the sole and the lining; the substantially upright rear portion C, which extends between the rubber and the lining at the rear from the portion A to the rear end of the portion B; the side portions D, which extend vertically from the portion A to the portion B; the band E, which extends horizontally from one to the other of the portions D between the upper and the lining forming the front of the leg; the ankle-band E, which extends from one to the other of the portions D rearward at substantially the point of the ankle, and the upright portion H, which extends in front from the portion A to the portion B. All these portions which constitute the frame are between the rubber and the lining, and each consists essentially of a strip of whalebone 5 or analogous material suitably covered and flanked by strips of fabric 6. The whalebone is for supporting the boot and holding it in shape, thus preventing it from breaking or squashing down, while the fabric 6 is for the purpose of adhesively securing the frame between the lining and the rubber and to provide pockets for the whalebones.

The different portions of the frame are secured together by suitable clamps *a* in order to prevent any relative play of the parts, and consequently to prevent the ends of any of the parts from forcing and projecting through the rubber. In attaching the horizontal to the vertical portions it is advisable that the ends of the whalebones in the horizontal portions should reach and abut (as nearly as possible) against the edges of the whalebones in the vertical portions, as illustrated in Fig. 3, the clamps extending through the whalebones as well as through the fabric. Care is taken to provide these stiffening portions where they are most needed. Hence the portion F is located at the ankle, the portions D and C at the sides and back, &c. I do not confine myself, however, to these exact locations, nor to the precise number of parts constituting the skeleton frame. The width of the parts is also subject to some variation, that of the sole portion B being naturally wider than the other portions.

The straps K are clamped at K′ to the upright portions D, and hence the strain of the pull is communicated directly to the bottom of the boot, and tearing at the top is effectually prevented.

The danger of breakage and tearing is so much lessened by the use of the skeleton frame that a cheaper and less amount of rubber can be used in the manufacture and a stronger and better boot produced.

It is evident that the improvement can be applied to a boot having a leg portion of any lined material.

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

In combination with the main or outer portion of a boot and the lining thereof, a skeleton frame comprising the ring or band A set horizontally near the upper edge of the bootleg, the part B set next the sole, and vertical connecting stiffening-strips as D C connecting said parts A B, and loops K secured to said uprights, all said parts of the frame being between the lining and outer portion of the boot, substantially as set forth.

JOSEPH LACROIX.

Witnesses:
DONTAGUE DESNOYERS,
ARTHUR DESTREMPS.