L. W. BUXTON.
Heel-Plates for Boots and Shoes.

No. 200,505. **Patented Feb. 19, 1878.**

Fig. 1,

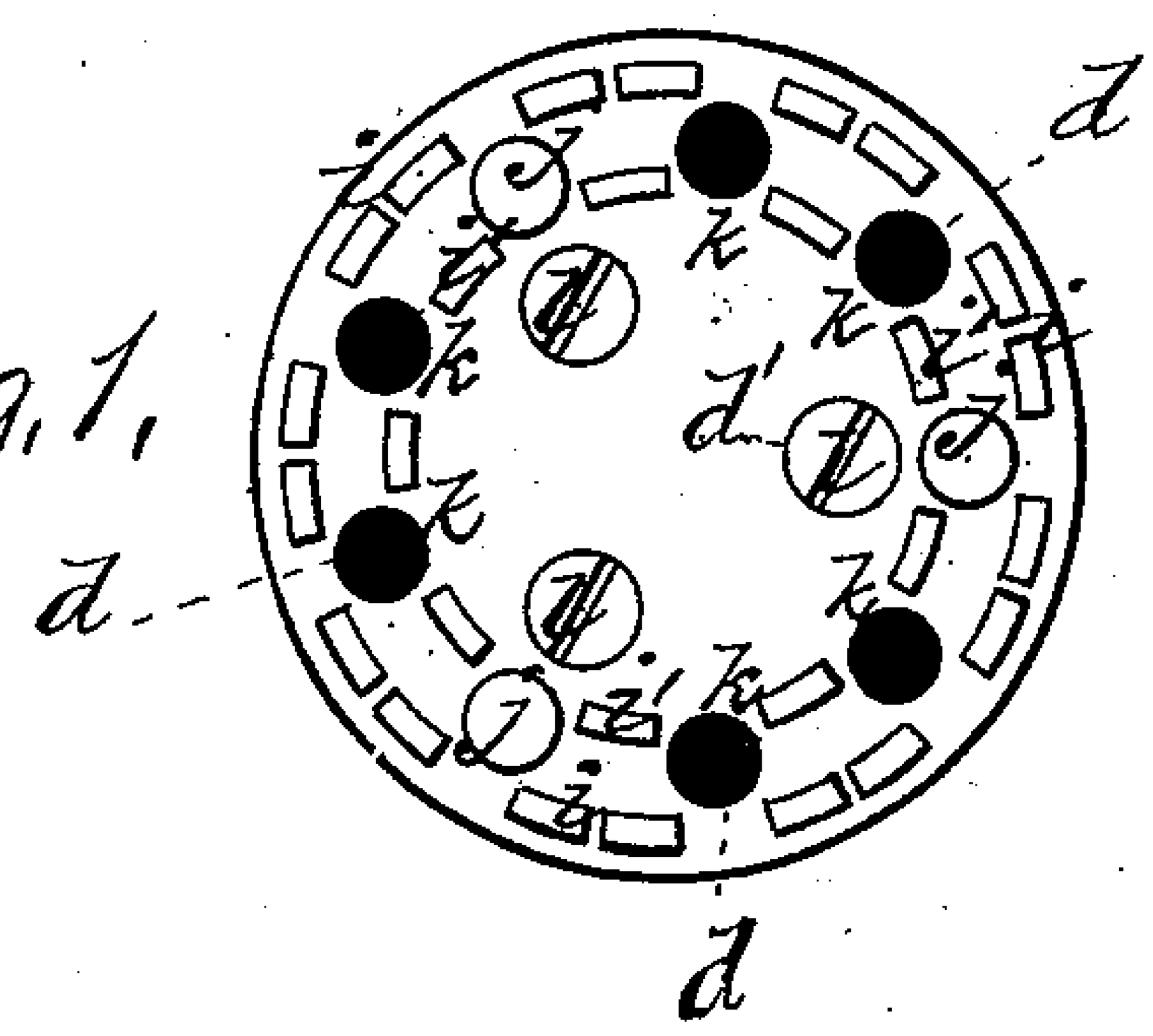


Fig. 2.

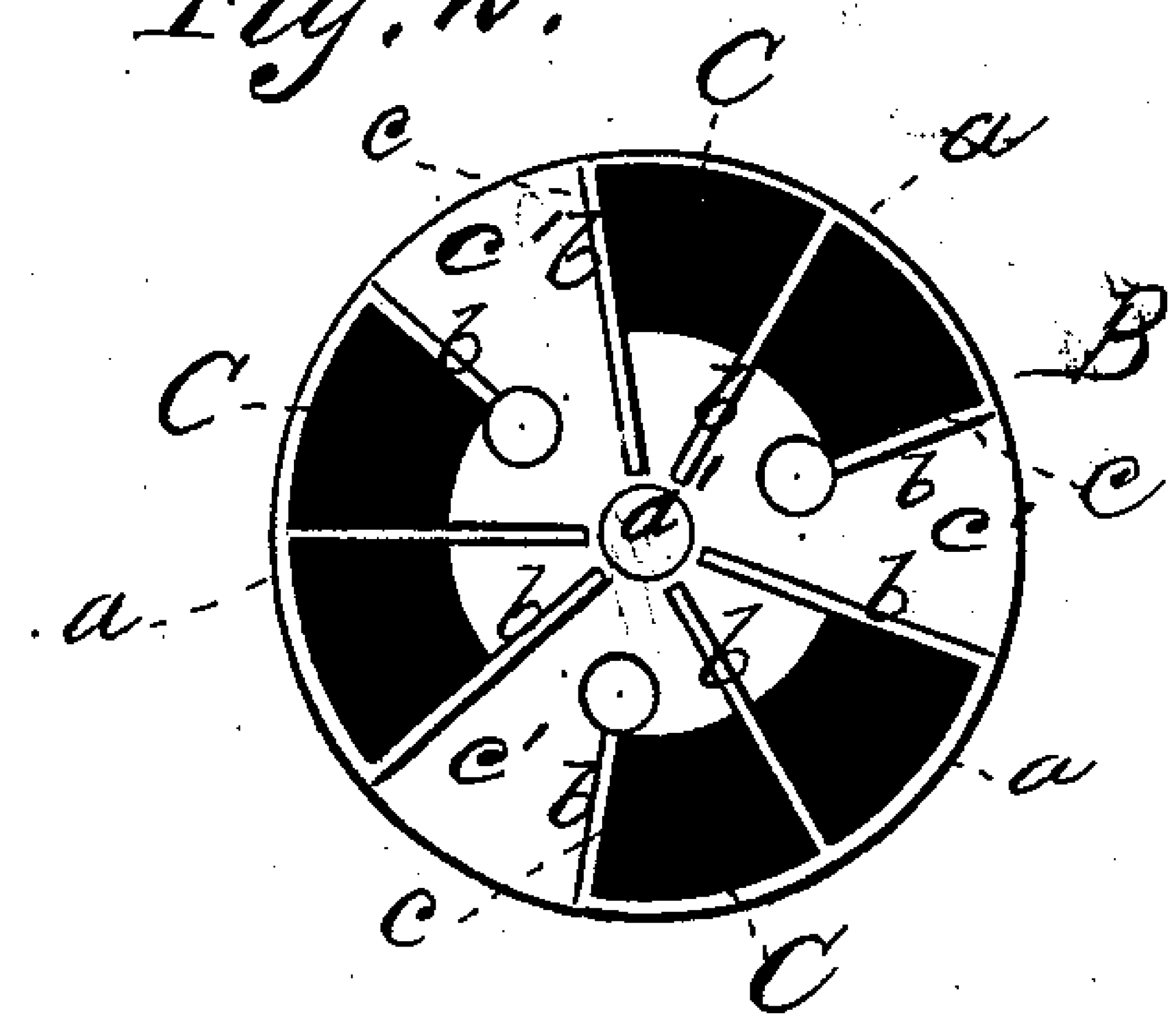


Fig. 3,

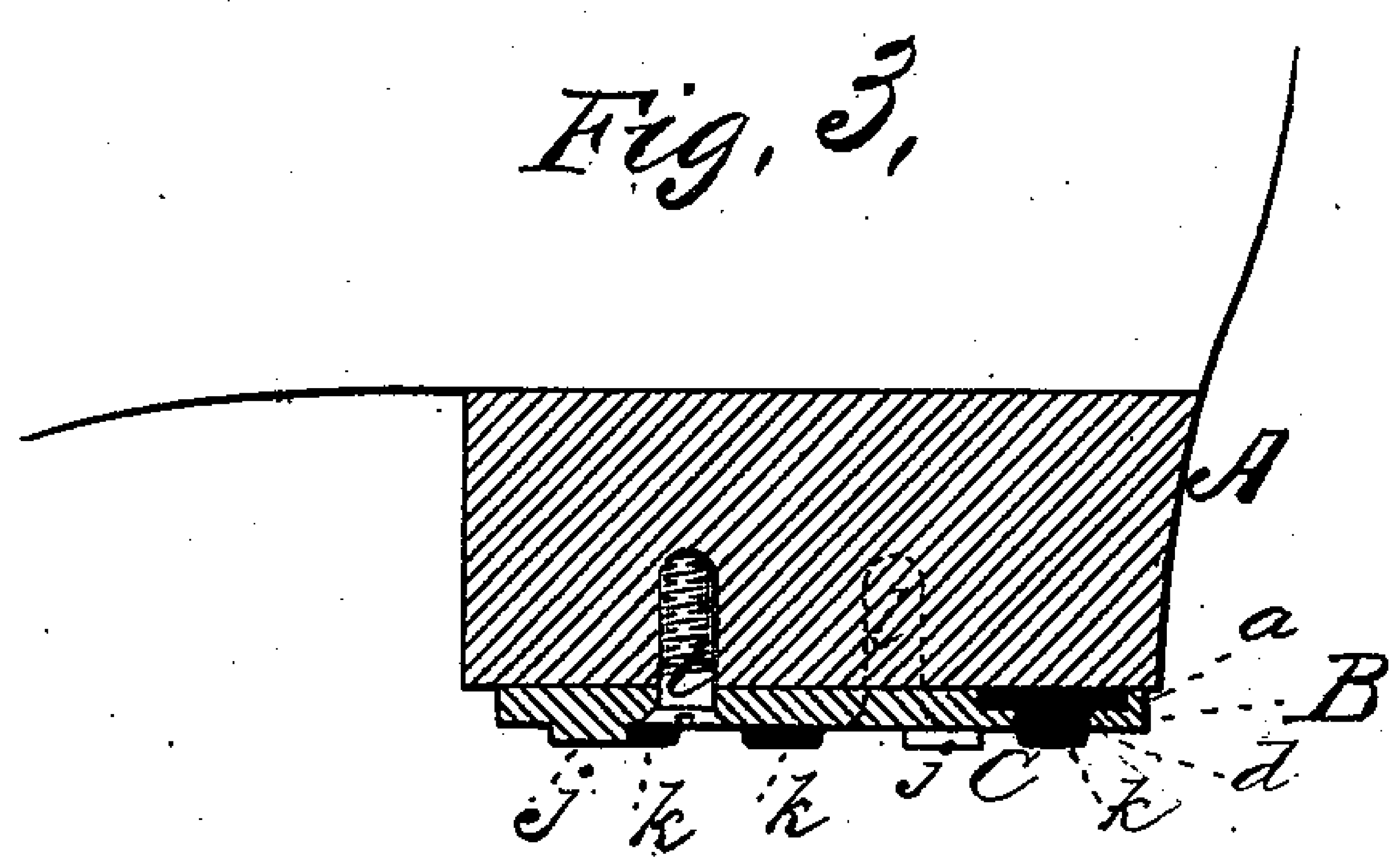
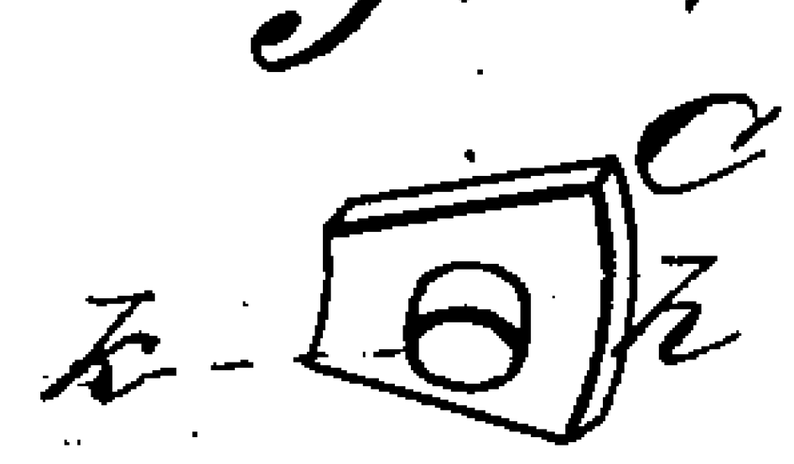


Fig. 4,



WITNESSES
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LEVI W. BUXTON, OF NASHUA, NEW HAMPSHIRE.

IMPROVEMENT IN HEEL-PLATES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **200,505,** dated February 19, 1878; application filed December 22, 1877.

To all whom it may concern:

Be it known that I, LEVI W. BUXTON, of Nashua, in the county of Hillsborough and State of New Hampshire, have invented a new and valuable Improvement in Heel-Plates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of the under side of my improved heel-plate. Fig. 2 is a view of the upper side thereof. Fig. 3 is a vertical section of the plate applied, and Fig. 4 is a perspective view of the cushion.

This invention has relation to improvements in heel-plates for boots and shoes.

The nature of the invention consists in certain novel parts of the plate, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates a detached heel, and B a preferably circular metallic heel-plate, of a diameter equal to or slightly less than the said heel. Upon the upper surface of this plate, at its edge, a narrow flange, *a*, is formed, from which extend inward, nearly to a central boss, *a'*, a number of radial ribs, *b*, of similar height, which divide the plate into a number of sector-shaped compartments, *c*, each of which is provided with a central aperture, *d*. The compartments are arranged in pairs, side by side, each pair being separated from the others by a sector-shaped space, *c'*.

C represents the rubber cushion used with this plate. It consists of a flat sector-shaped body, *h*, and a rounded stud or projection, *k*, extending centrally therefrom.

When the cushions are applied to the plate the bodies thereof fit snugly between the flange *a* and ribs *b* in the recesses *c*, and the studs *k* project through the apertures *d* a suitable distance. The body *h* of the cushion is somewhat thicker than the depth of the recess *c*, and consequently, when in position, the upper side of the cushion projects above the ribs *b* and marginal flange *a*. When the plate B is secured to a heel the sector-shaped bodies are violently compressed, and their density is communicated to the spurs or studs *k*, so that in walking the sound of the heel striking against the ground resembles that of a leather heel.

Plate B, upon its bottom, is provided with two concentric rows of calks, *i i'*, the first of which is between the studs *k* and the edge of the plate, and the latter just inside of the periphery of the said studs. The outside row of calks takes hold upon the ground, thereby preventing slipping, and correcting all tendency to tilting, which the inside row would otherwise cause. This inside row not only protects the rubber spurs *k*, but also materially aids in preventing slipping.

Between each pair of studs *k* is a metallic stud, *j*, situated in the same position relative to the calk rows as the studs *k* aforesaid. The studs *j* serve to protect the heads of the screws *l*, which pass through countersunk holes in the plate inside of the studs *j*, and which are arranged at the angles of an isosceles triangle, at an equal distance from each other and from the center of plate.

Plate B is cast with the boss *a'*, the radial ribs *b*, the edge flange *a*, the calks *i i'*, the spurs, and the apertures *d d'*, respectively, for the screws and studs, though the apertures may be bored afterward.

When the plate B is secured to the heel by means of its screws the boss *a'* comes in contact with the heel and holds up the central portion of the said plate, while the portions thereof outside of the screws are drawn in against the heel, thereby bringing the cushions and the radial ribs forcibly in contact with the tread of the heel. By this means, in walking upon sidewalks, the natural sound of an ordinary heel is very closely simulated.

When the plate is worn down at one side it may be turned around one-third and reapplied to the heel, and at each turn one of the metal studs *j* will be in position for bearing the brunt of the wear.

What I claim as new, and desire to secure by Letters Patent, is—

1. A heel-plate for boots and shoes having a central boss, *a'*, and edge flange *a*, the radial ribs *b*, sector-shaped compartments *c*, intervening sector-shaped spaces *c'*, and equidistant screw-holes, substantially as specified.

2. The heel-plate B, having sector-shaped

recesses upon its upper side, the apertures *d*, extending through said plate, the cushions C, fitting said recesses and having studs *k* projecting through said apertures, the annular spaced calks *i i'*, and the spaced spurs *j* upon its under side, and the equidistant screw-holes *d'*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEVI W. BUXTON.

Witnesses:

BERNARD B. WHITTEMORE,

CHARLES WILLARD.