

(No Model.)

J. G. DICKSON.
SOLE PROTECTOR FOR BOOTS OR SHOES.

No. 409,938.

Patented Aug. 27, 1889.

Fig. 1.

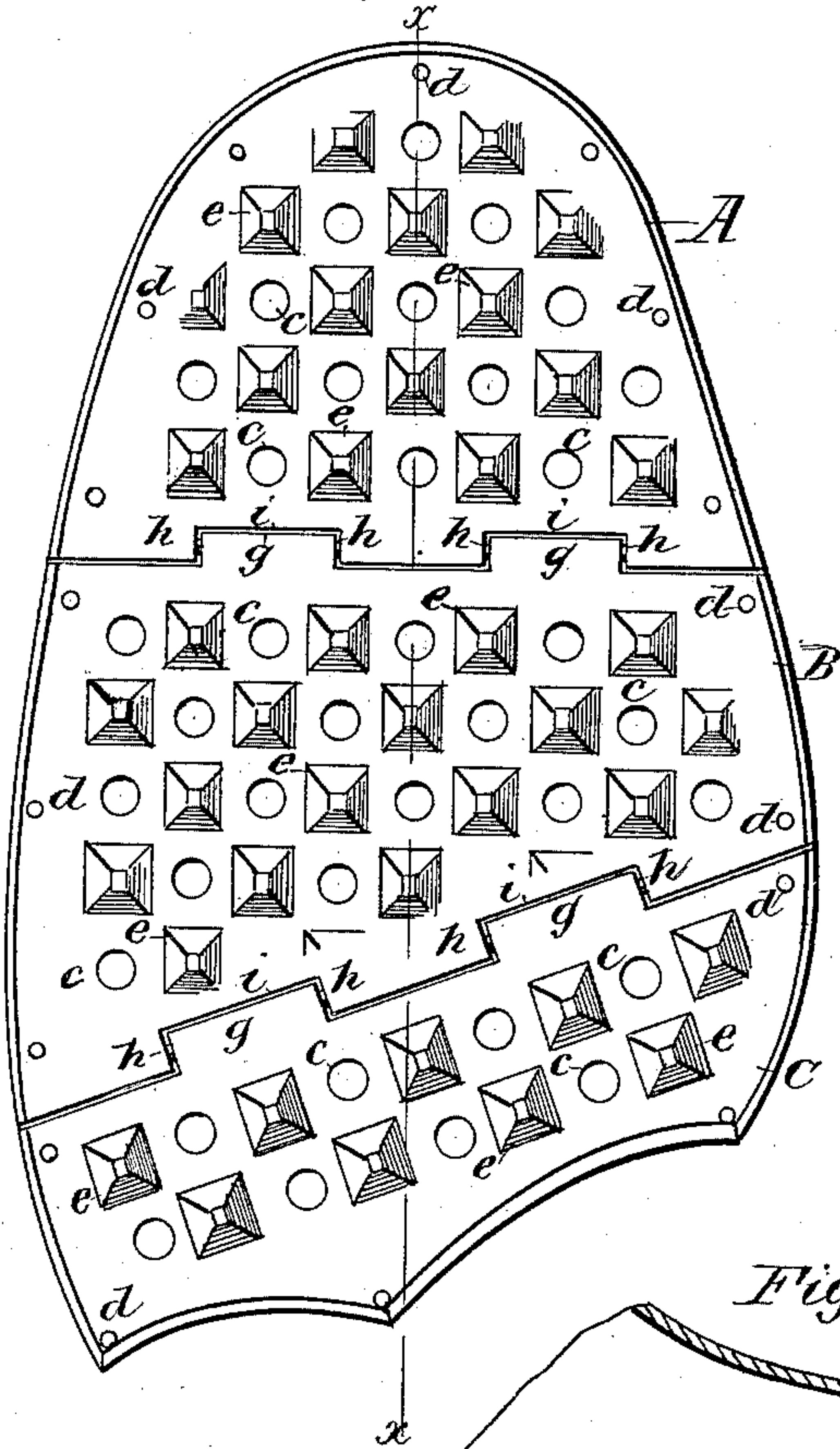


Fig. 2.

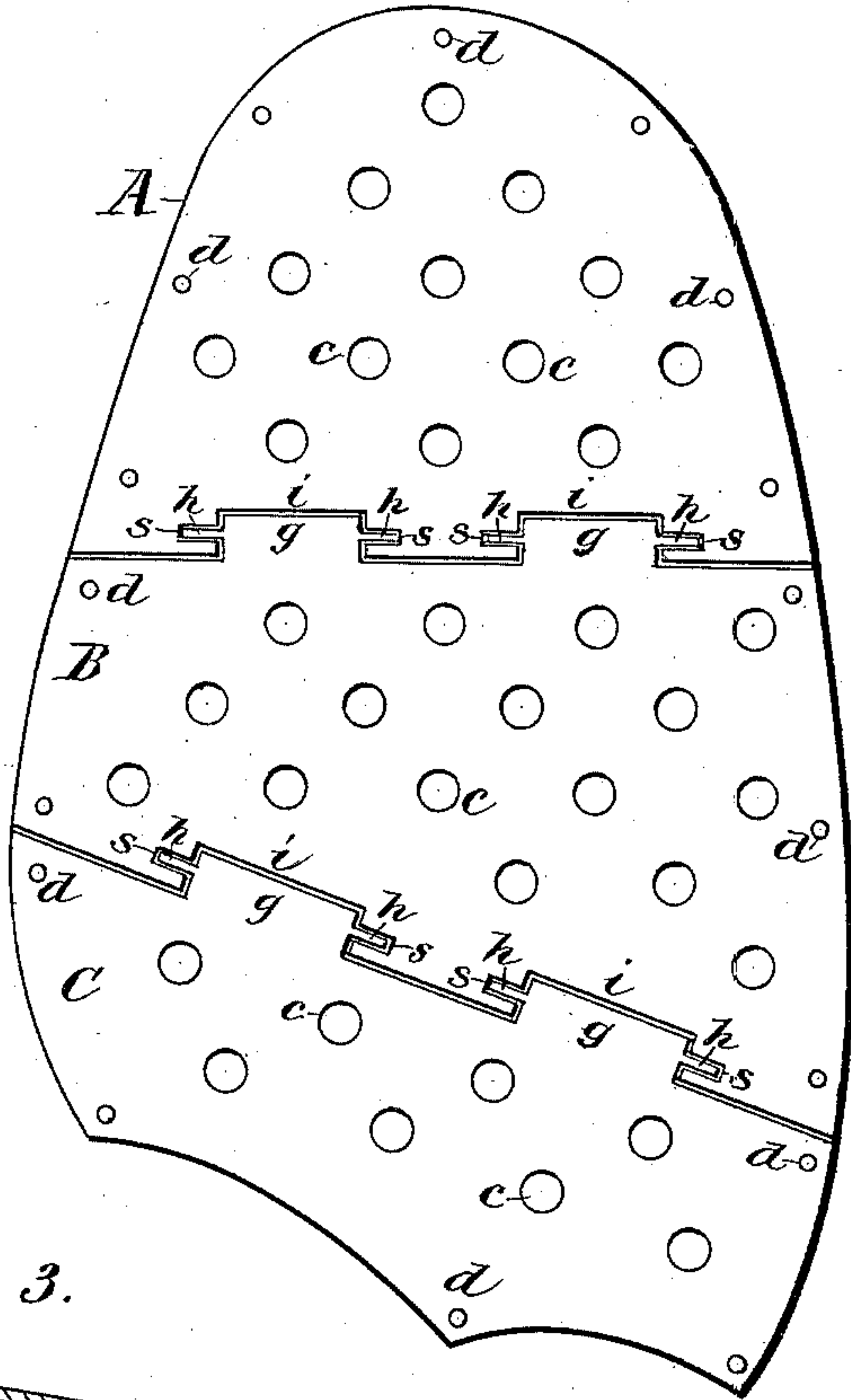


Fig. 3.

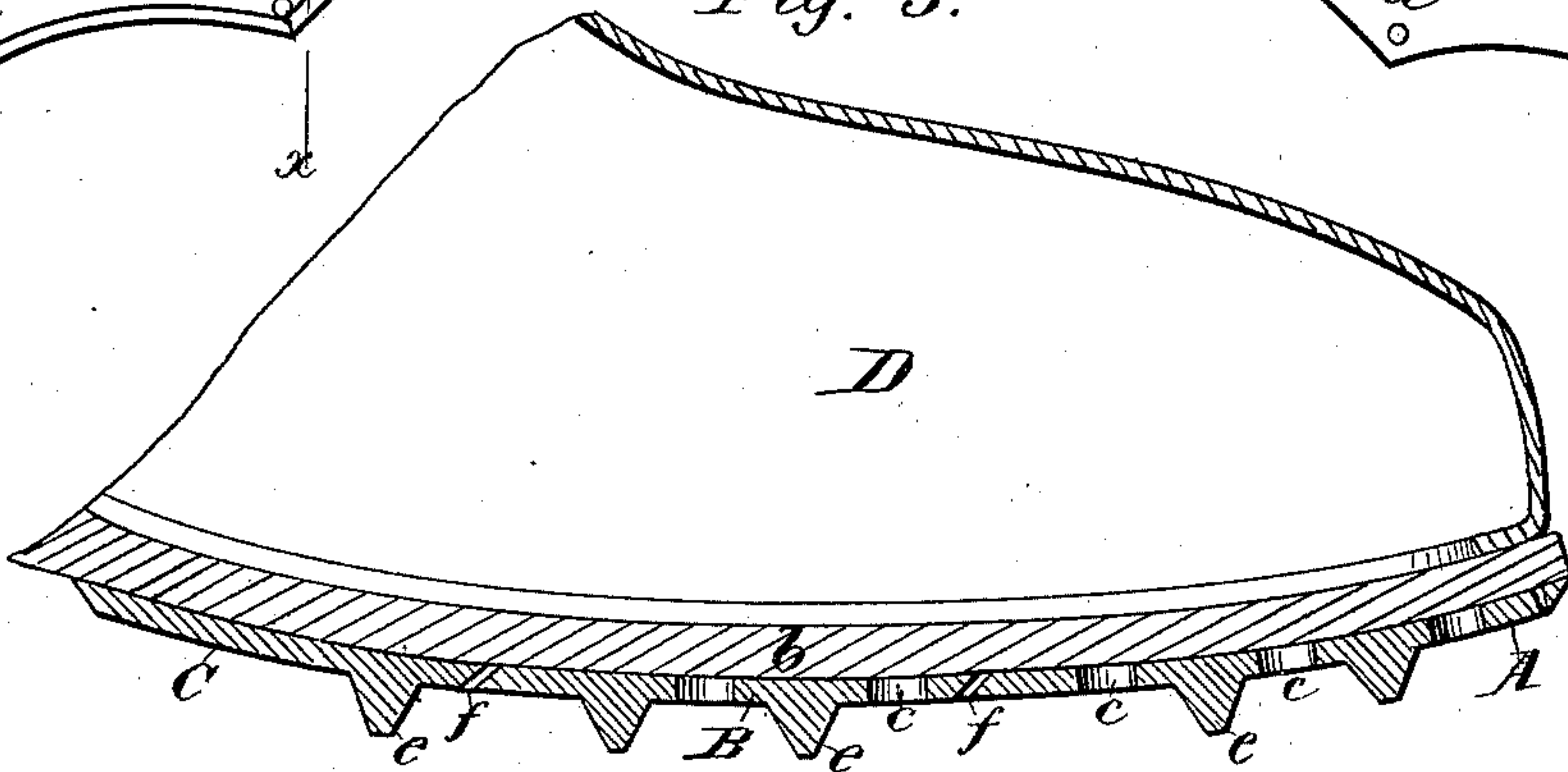
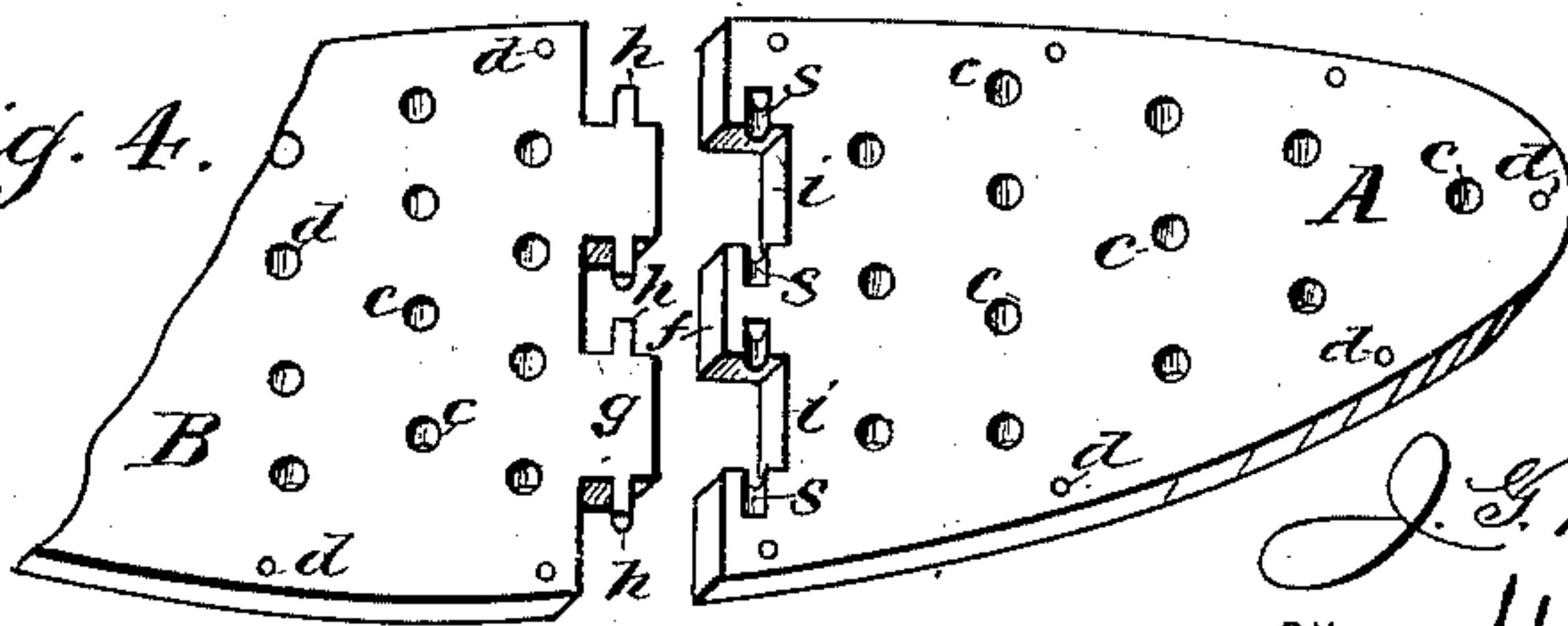


Fig. 4.



WITNESSES:

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JOHN GORGE DICKSON, OF BEAVER FALLS, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO JOHN W. McDONALD AND ALLEN E. McDONALD, OF SAME PLACE.

SOLE-PROTECTOR FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 409,938, dated August 27, 1889.

Application filed March 13, 1889. Serial No. 303,097. (No model.)

To all whom it may concern:

Be it known that I, JOHN GORGE DICKSON, of Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Sole-Protectors for Boots or Shoes, of which the following is a full, clear, and exact description.

This invention relates to metal sole-covering plates for boots or shoes generally—such, for instance, as are used by workmen engaged in rolling-mills and other places where the feet are exposed to highly-heated or other surfaces, which destroy the leather of the sole of the boot or shoe if coming directly in contact therewith. When these protecting-plates are made all in one piece, their rigidity restricts the foot from bending, and they subject the wearer of boots or shoes so protected to great inconvenience and sore feet. To obviate this said plates have been made flexible—that is, of an articulated construction, with the sections grouped edge to edge and joined together by springs or flexible connections—thereby contributing ease to the foot of the wearer, which is mainly the object of my invention; but this I attain in a different manner; and my invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an under face view of my improved boot or shoe protecting plate as adapted for the right foot, with the sections of which it is composed hinged together; Fig. 2, an upper or inside view of said plate; Fig. 3, a longitudinal section, upon the line *x x* in Fig. 1, of the plate as applied to a boot or shoe, shown only in part; and Fig. 4 is an inside face view of certain of the plate-sections, one of which is only shown in part, as the same appear when they are detached or before they are hinged together and secured upon the sole of the shoe.

While my improved metal sole-protecting plate may be made in any number of independent sections hinged together transversely

of the entire plate, three of such plate-sections A B C will ordinarily suffice. These sections are made to conform in shape to the portions of the sole *b* of the shoe D they are designed to cover, and have a series of apertures *c* to give increased lightness to them; also a series of other apertures *d* for the nails, screws, or other fastenings which unite them with the sole. Said plate-sections are likewise studded on their outer face with a series of projections *e*, in imitation of hob-nail heads, to give the whole plate better grip or hold on the ground.

To give an articulated construction to the entire plate, which will permit of the bending of the foot in walking, said plates are hinged together at their approximately meeting edges, which are beveled away in a backward and downward direction, as shown at *f*, to provide for the free working of the plate-sections where hinged together, due to the bending of the foot. Thus the plate-sections B and C are each made with hinge-lugs *g* on their advance edges, provided with end pintles or pins *h*, preferably made integral with the lugs. These lugs *g* fit within recesses *i*, made in the rear edges of the plates A and B, and the pintles *h* drop into or sit within cavities *s* at the ends of the recesses *i* on the inside or upper surface of the plate-sections A B. In this way the plate-sections may be readily hinged together without any special fitting, and when secured by the nails or screws which unite them with the sole the hinged connections will be prevented from coming apart, while the most perfect freedom of motion will be secured for the articulated plate to conform to the motion or bending of the foot.

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

1. A metal sole-protector shaped to cover the entire sole and formed in sections having their adjacent edges provided with interlocking recesses and projections *i g*, the projections having pintles *h h*, and the opposing section having pintle-recesses *s s* on its upper face at opposite sides of the recesses *i*, substantially as set forth.

2. A metal sole-protector shaped to cover the entire sole and formed in three sections A B C, provided with projections *e* on their lower faces, the adjacent edges of the three
5 plates or sections being provided with recesses *i* and projections *g*, beveled as at *f*, the pintles *h h* on said projections, and the pin-

tle-recesses *s s* in the upper sides of the sections A B, at opposite sides of the recesses *i i*, substantially as set forth.

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Witnesses:

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