

E. HEATON.  
SHANK SPRING.

No. 75,266.

Patented Mar. 10, 1868.

Fig 1

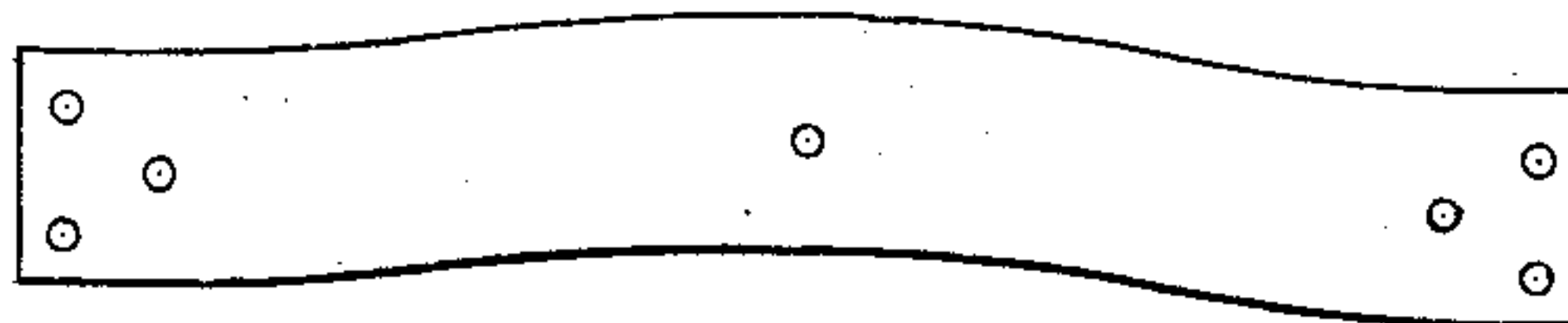


Fig 2

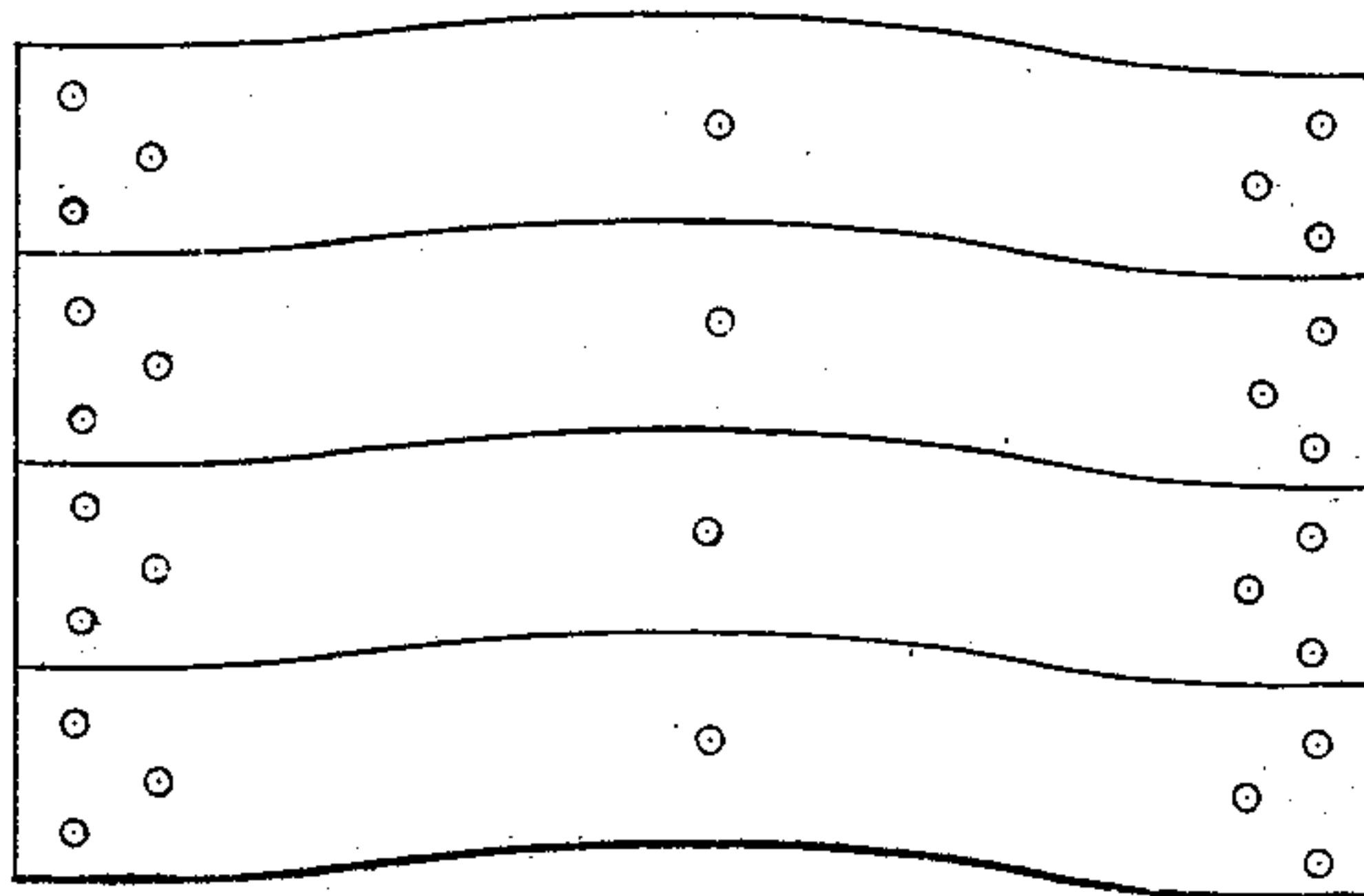
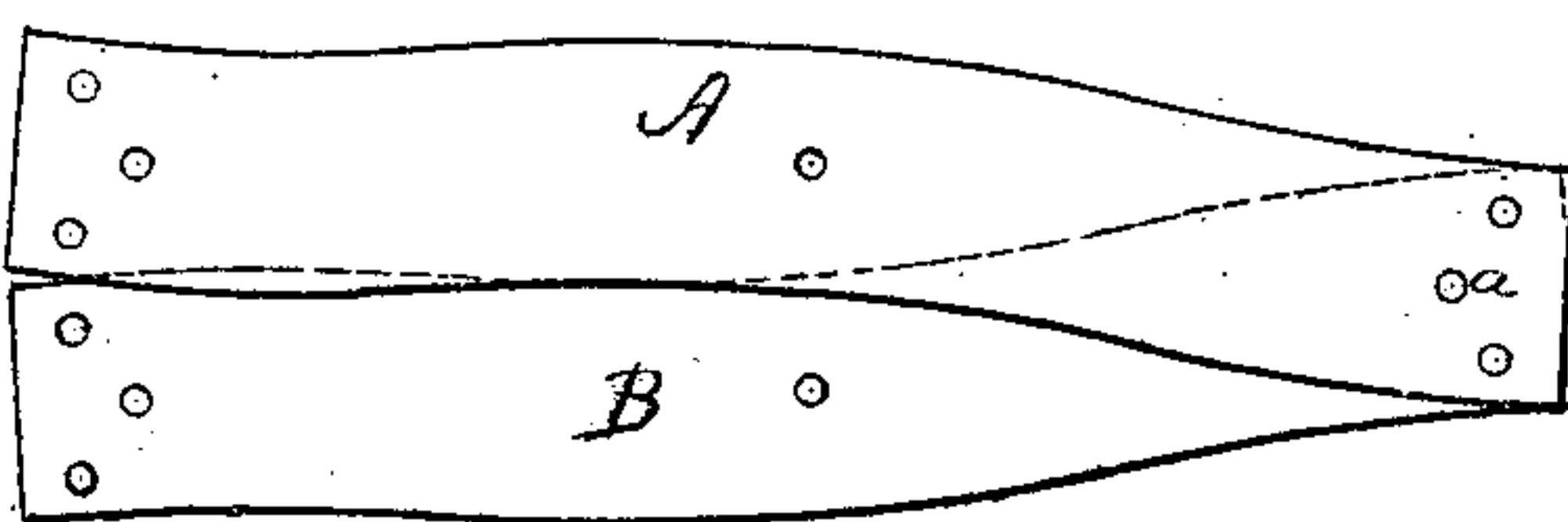


Fig 3



Witnesses

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By his Attorney.

*Wm E Earle*

# United States Patent Office.

EDWARD HEATON, OF NEW HAVEN, CONNECTICUT.

*Letters Patent No. 75,266, dated March 10, 1868.*

## IMPROVEMENT IN SHANK-SPRINGS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDWARD HEATON, of New Haven, in the county of New Haven, and State of Connecticut, have invented a new Improvement in Shank-Springs for boots and shoes; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a single shank,

Figure 2 the manner of cutting, and in

Figure 3 a diagram, illustrating the position of the spring in the shank of the boot or shoe.

This invention relates to an improvement in steel springs, such as are inserted in boots and shoes, and the invention consists in the manner of cutting the shanks from sheet metal, so that no portion of the metal is wasted.

To enable others to construct my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

It is necessary to give to the springs a curve, corresponding to the shape of the foot, and consequently the reverse for right or left boots or shoes, as seen in fig. 3, the spring A being for a right boot, and B for a left, the point *a* being the same in both right and left. Heretofore this curve has been given by cutting the spring of different widths at different points in the spring, which necessitates no inconsiderable waste of metal. To avoid this waste, and yet obtain the curve required, I form the spring as seen in fig. 1, the one edge being of reverse form precisely as the other, so that one edge of one spring corresponds exactly to the opposite edge of another spring; that is to say, from a sheet of metal the springs are cut, as seen in fig. 2, and this may be done by a shear, having its edge to correspond to the edge of the springs, and the metal fed into the shears. The springs are successively cut from the sheet without any waste of metal, which saves a large expense in the cost of the dies, as each different-sized spring, as heretofore formed, required a die of precisely that size and form.

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

The construction of shank-springs, when cut or stamped out of the sheet without scrap or waste, substantially as specified.

EDWARD HEATON.

Witnesses:

A. J. TIBBITS,

J. H. SHUMWAY.