

No. 822,489.

PATENTED JUNE 5, 1906.

J. O. STIVERS.

NAIL CLENCHING DEVICE FOR THE HEELS OF WOODEN LASTS.

APPLICATION FILED SEPT. 23, 1905.

Fig. 1.

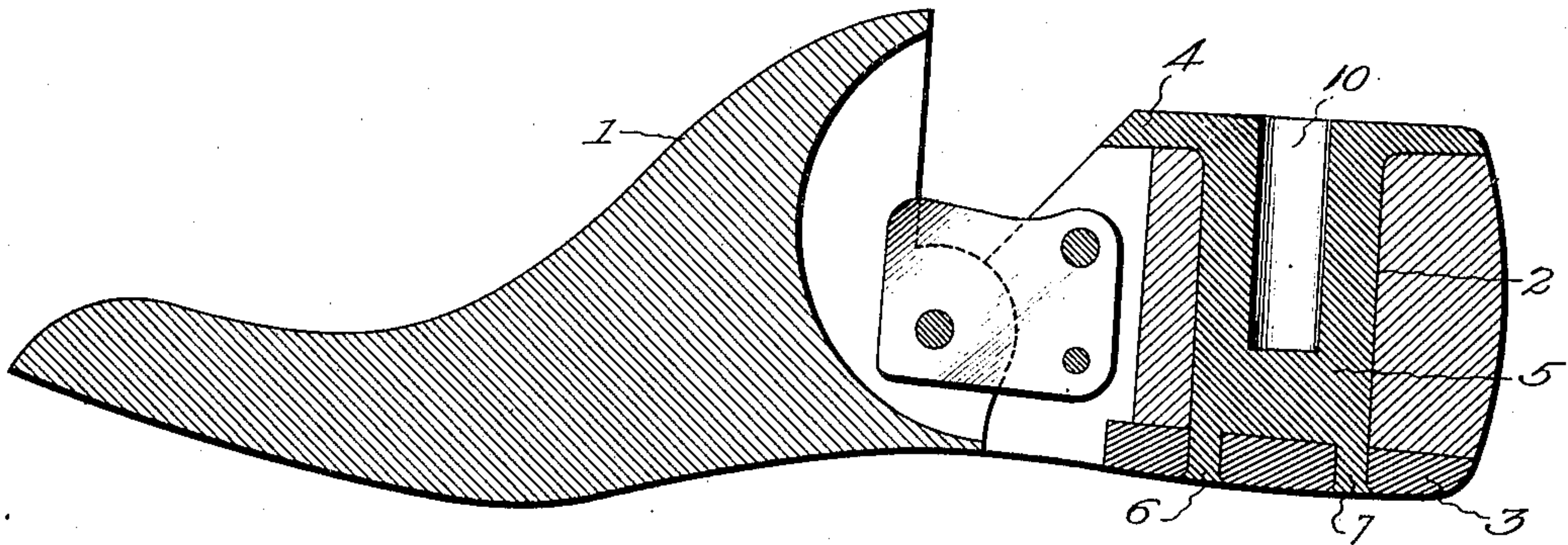


Fig. 3.

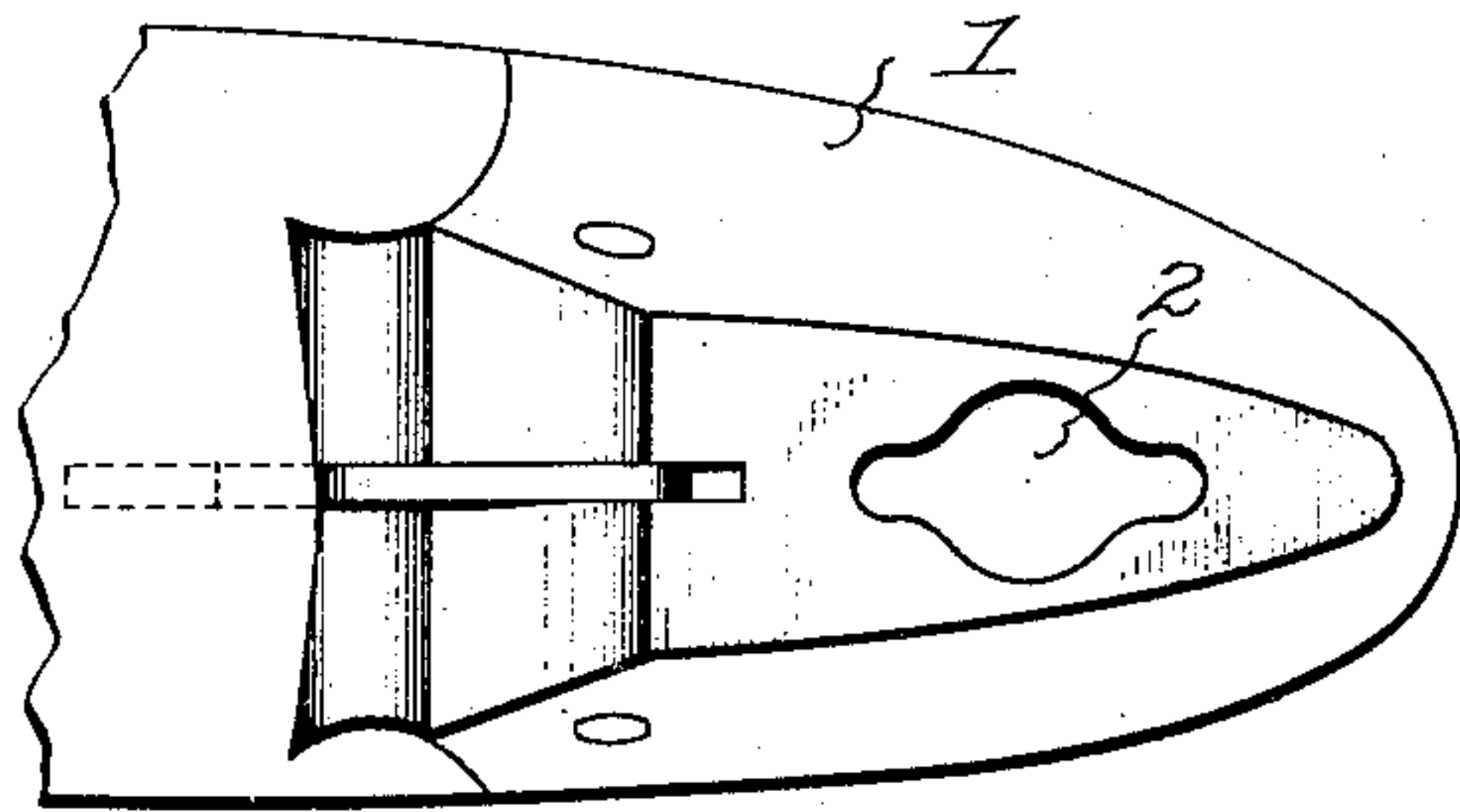


Fig. 2.

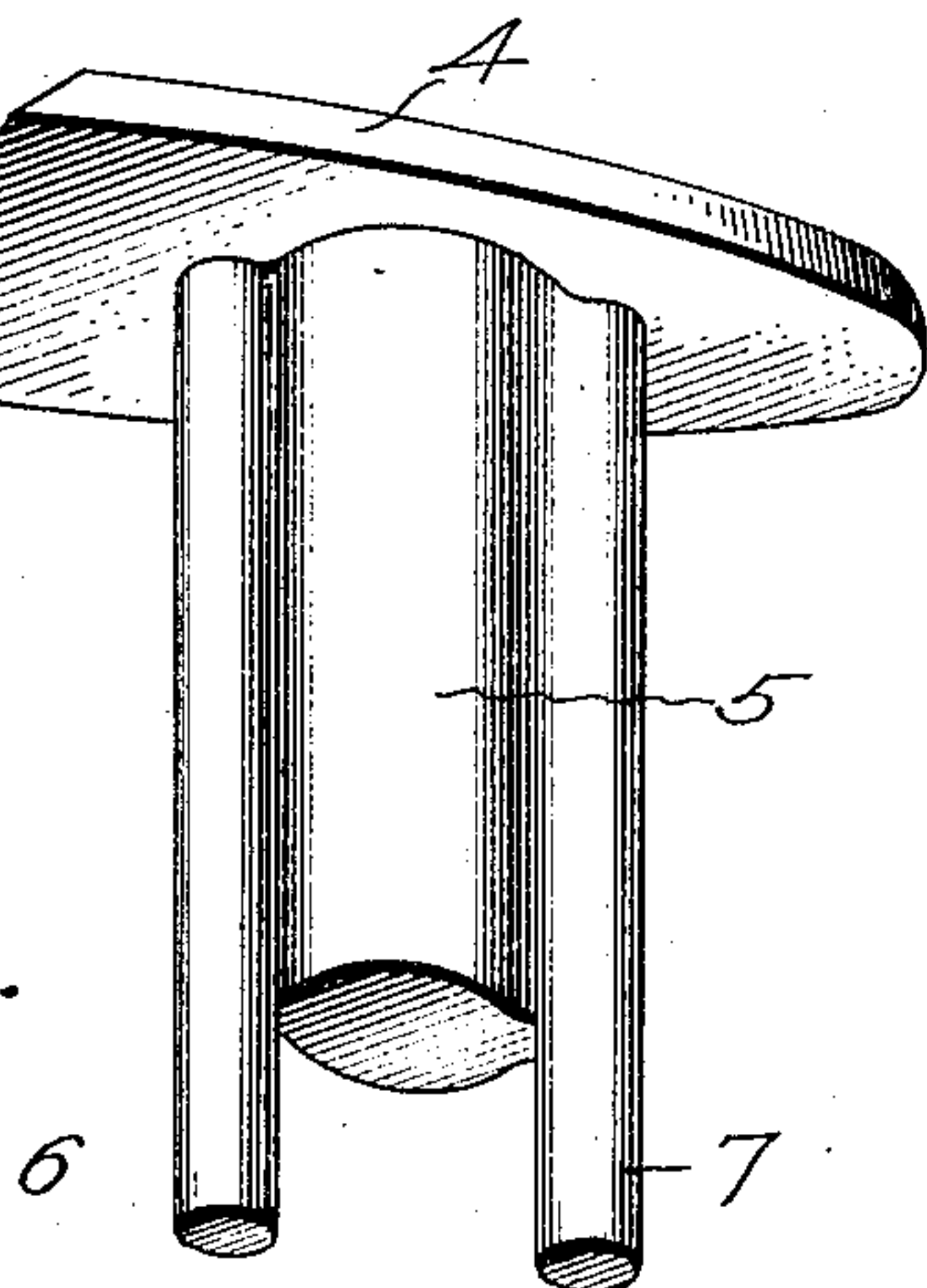
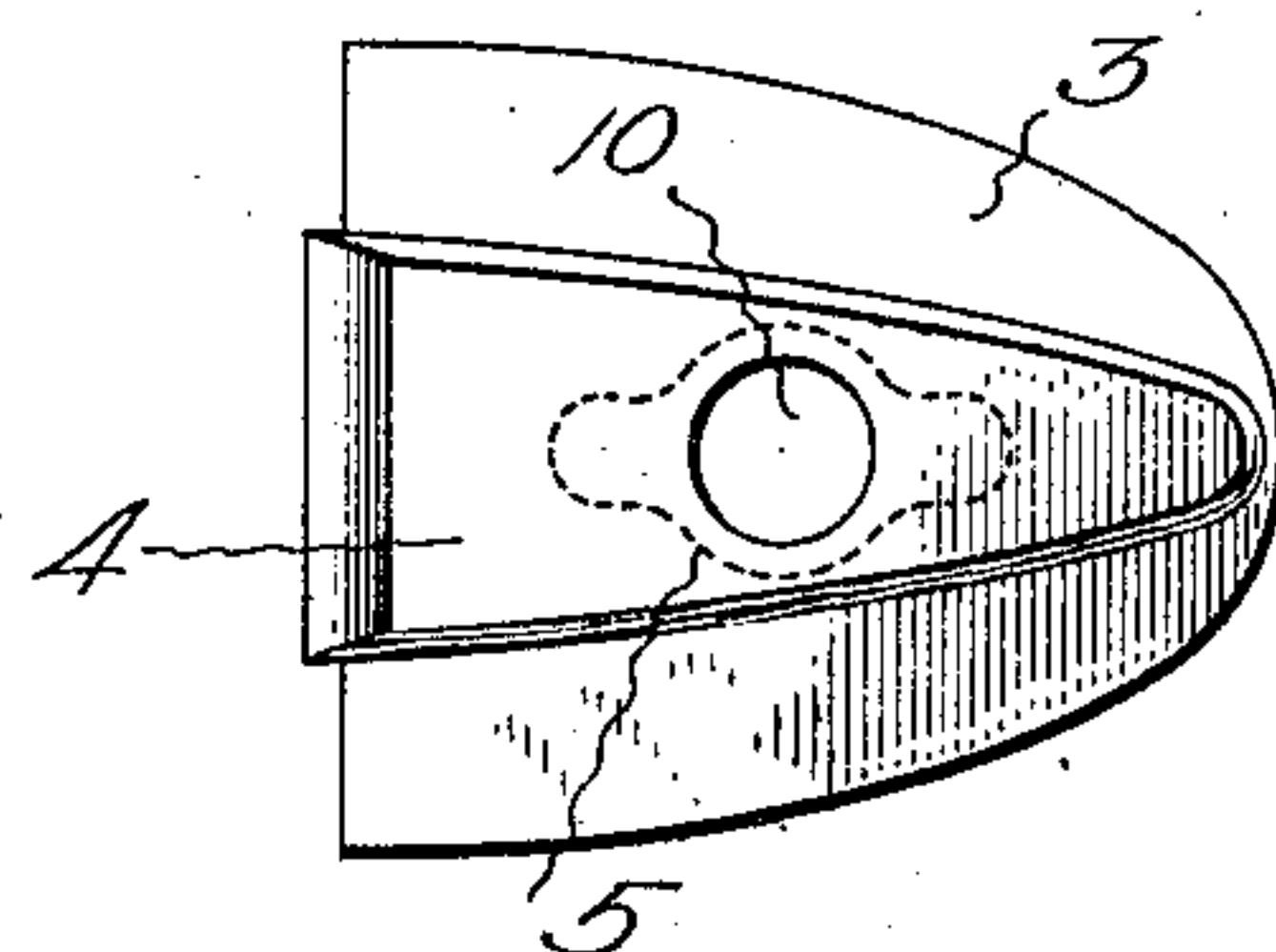


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN O. STIVERS, OF DENVER, COLORADO.

NAIL-CLENCHING DEVICE FOR THE HEELS OF WOODEN LASTS.

No. 822,489.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed September 23, 1905. Serial No. 279,788.

To all whom it may concern:

Be it known that I, JOHN O. STIVERS, a citizen of the United States of America, residing in the city and county of Denver and State of Colorado, have invented a new and useful Nail-Clenching Device for the Heels of Wooden Lasts, of which the following is a specification.

My invention relates to improvements in nail-clenching devices for the heels of boot and shoe lasts for clenching the nails of the heels of boots and shoes to the soles when they are nailed thereto by any machine in use for this purpose; and the objects of my invention are, first, to provide a metal nail-clenching device for wooden lasts that will prevent the crushing and breaking of the lasts when the heels of boots, shoes, and slippers are nailed to them in a heel-nailing machine; second, to provide a rigid nail-clenching metal plate and thimble-column, which column extends through the heel of the last and is rigidly secured to a supporting-plate that is placed over the opposite side of the heel of the last; third, to provide a reinforced nail-clenching metal heel-plate for wooden lasts that will prevent the bending of the supporting thimble or column, and thus prevent the breaking of the heels of the lasts; fourth, to provide a metal face-plate or cap attached to a metal thimble which will protect the top of a shoe-last from being broken down; fifth, to provide a metal thimble with a metal top or cap to which is rigidly secured a metal plate that provides for the riveting or clenching of the nails that hold the leather heel to the sole of a boot, shoe, or slipper. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view through a last, showing my invention applied to the heel portion thereof. Fig. 2 is a detail perspective view of the parts constituting my invention separated from each other. Fig. 3 is a plan view of the heel portion of the last with my invention removed; and Fig. 4 is a detail plan view of the invention, the parts being secured one to the other.

Similar numerals of reference refer to similar parts throughout the several views.

Referring to the drawings, the numeral 1 designates a wooden boot or shoe last. Vertically through the center of the heel of the wooden last I form a hole 2, preferably an oblong-shaped hole, the longest diameter of which is positioned lengthwise of the heel por-

tion of the last. The heel-surface of this wooden last is provided with a rabbeted step portion, which is cut out of it to form a flat bearing-surface for a nail-clenching plate 3. The depth of the rabbeted step in the heel is made the thickness of the plate, so that the heel with the nail-clenching plate will still be of only its normal thickness and form. This nail-clenching plate is preferably made to extend entirely over the tread of the heel, and its outer surface is curved or shaped to receive the heel-bearing surface of the inside of a boot or shoe. Upon the opposite side of the heel of the wooden last I also fit a plate 4, which I term a "centering" base-plate. This centering base-plate preferably extends over the opposite surface of the heel of the last, a flat place being formed on the top or ankle portion of the last to enable it to rest squarely and flatly against it. To the under side of this centering base-plate a solid metal column or thimble 5 is preferably cast or formed integrally with the plate to stand at right angles to it and which is adapted to extend into and through and fit snugly in the aperture 2 in the wooden heel. I preferably make this metal column of oblong shape to fit the oblong-shaped aperture in the heel, as this form of column is a very strong form of column that does not require a very wide aperture transversely in the heel, as a wide aperture would tend to weaken the wood of the heel. This metal column extends through the aperture even with the flat rabbeted stepped surface in the heel of the last, and its top surface is level with it, and upon it the metal nail-clenching heel-plate rests, as well as on the wood of the heel of the last, and from the opposite sides of the longest diameter of this metal column or from the center of the thimble post or column one or more integral pin-shaped portions 6 and 7 project above its top surface and extend through two apertures 8 and 9, which are formed in the nail-clenching plate to receive them, two being shown in the drawings. These apertures are countersunk on the outside of the plate, and after the two plates and thimble-column have been properly fitted and firmly seated in and to the opposite sides of the heel the pins are riveted to rigidly clamp the two plates and columns to the heel of the last. This centering base-plate is provided with an aperture 10, which extends into it and also into its column at the center of the heel and is adapted to a center or centering gage and fits over a centering-

pin in the surface-plate of heel-nailing machines. I do not illustrate this heel-nailing machine, as it does not form any part of my invention.

5 In the place of casting the metal column integrally with the centering base-plate it may be cast to the nail-clenching heel-plate and be riveted or otherwise rigidly secured to the centering base-plate, or, if desired, the
10 two opposing plates and the supporting-column may be made separate from each other and both plates may be riveted or otherwise rigidly secured and clamped to the column and heel of the last, for while I have
15 illustrated the nail-clenching plate made free from the columns my invention contemplates, broadly, the clamping of two opposing plates to the opposite sides of the heels of lasts and the securing of these plates to an
20 unyielding metal supporting-column extending through the heels of wooden lasts, one of which plates is adapted for a nail-clenching plate and the other as a centering base or foundation plate for the last, and the
25 plates and column adapted to be inserted in a hydraulic or other power-operating machine expressly designed to securely nail at one stroke of its operative movement the heels of boots and shoes to their soles in a
30 well-known manner.

My invention is simple, strong, and durable and will prevent the heels of wooden lasts from crushing or breaking.

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

1. In a nail-clenching device for the heels of wooden lasts, the combination of a last having a heel provided with a vertical aperture through it, with a base-plate fitting the
40 ankle end of said heel and containing a centering-aperture, adapted to center the heel in a heel-nailing machine, a metal column

cast integrally with said base-plate and arranged to fit snugly in and to extend through the aperture in said heel, projecting 45 pins on the opposite sides of said metal column arranged to project above the surface of said heel, a stepped rabbeted surface in the heel of said last, a nail-clenching plate fitted to said stepped rabbeted surface, and to 50 rest on said plate and containing apertures through which said pins project, and arranged and adapted and rigidly riveted to the top of said metal column by said pins, and to clamp said wooden heel between it 55 and said base-plate, as set forth.

2. In a nail-clenching device for the heels of wooden lasts, the combination of last having a heel provided with a central aperture extending through it, the metal centering 60 base-plate fitted to the top of the heel of said last, provided with a central column of metal projecting from the inside of said base-plate into and through said aperture in the heel of said last, and a centering or gaging aperture 65 extending into the plate and its column, and adapted to gage the position of said heel in a heel-nailing machine, and having pin portions projecting above the top of said column and the nail-clenching heel-plate fitted to the 70 heel portion of said last and riveted to the top of said column by the projecting pin portions of said column, whereby said nail-clenching heel-plate is rigidly supported by said column and base-plate, and said heel 75 and base plates are clamped to said wooden heel, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN O. STIVERS

Witnesses:

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BESSIE THOMPSON.