

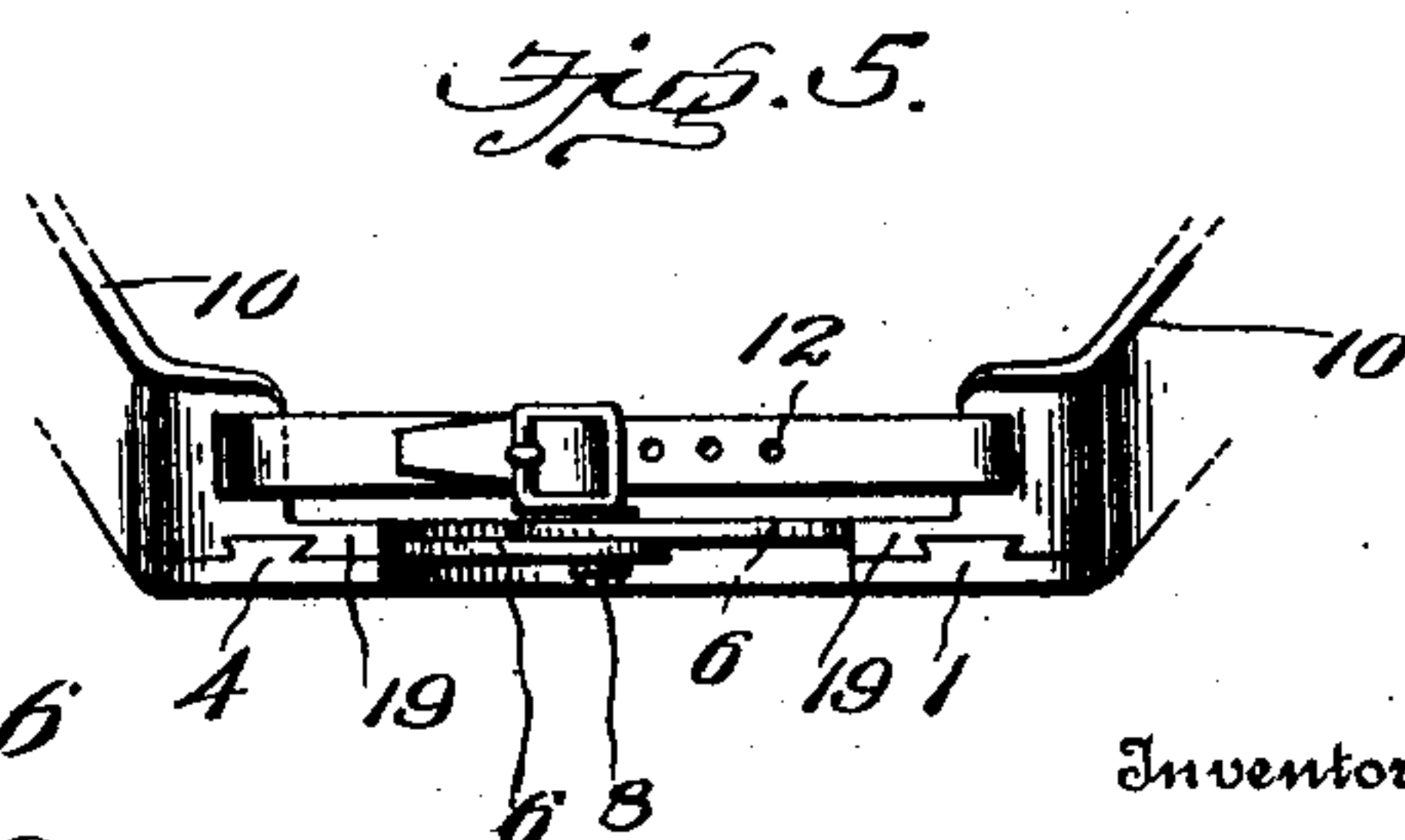
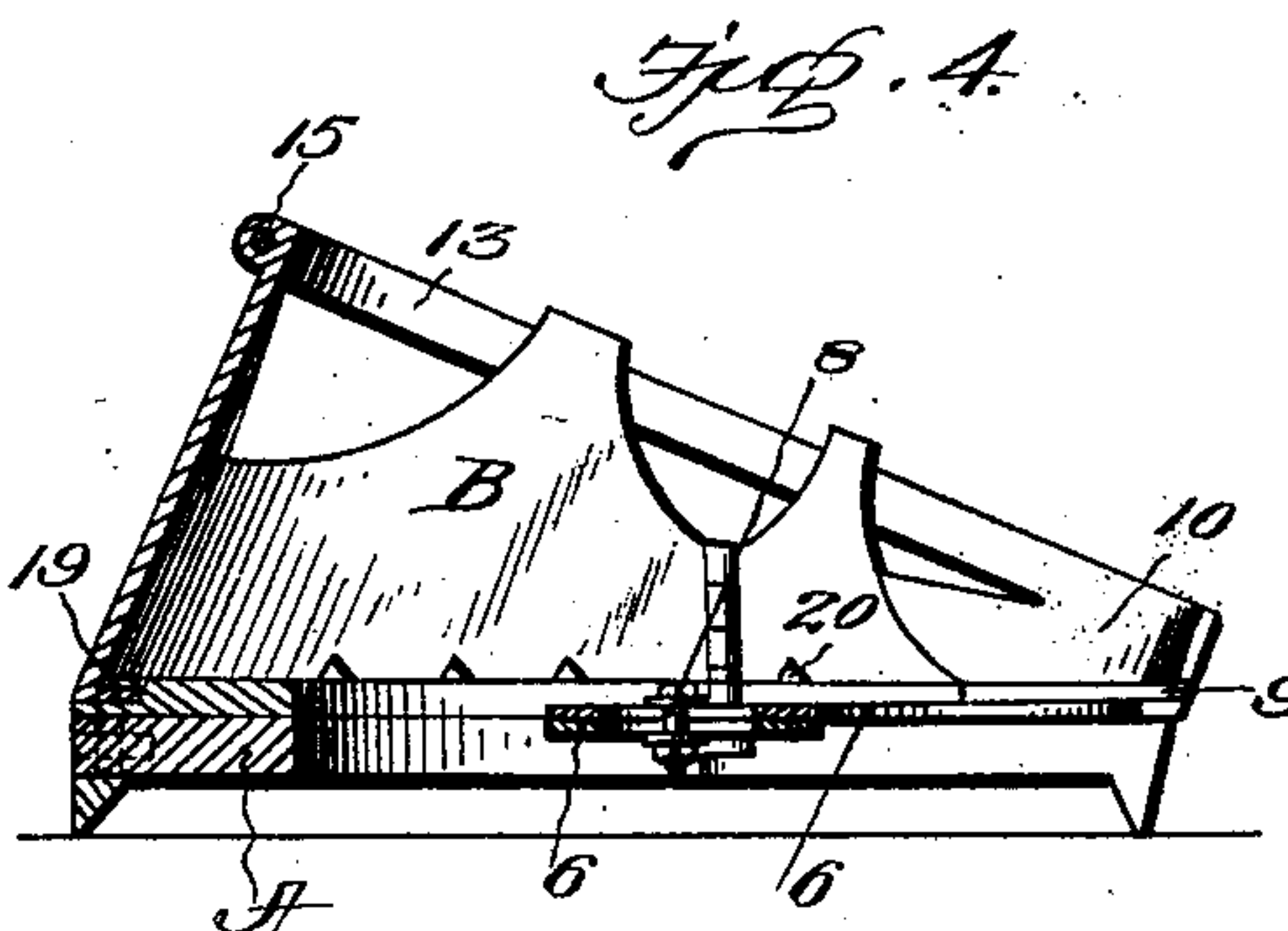
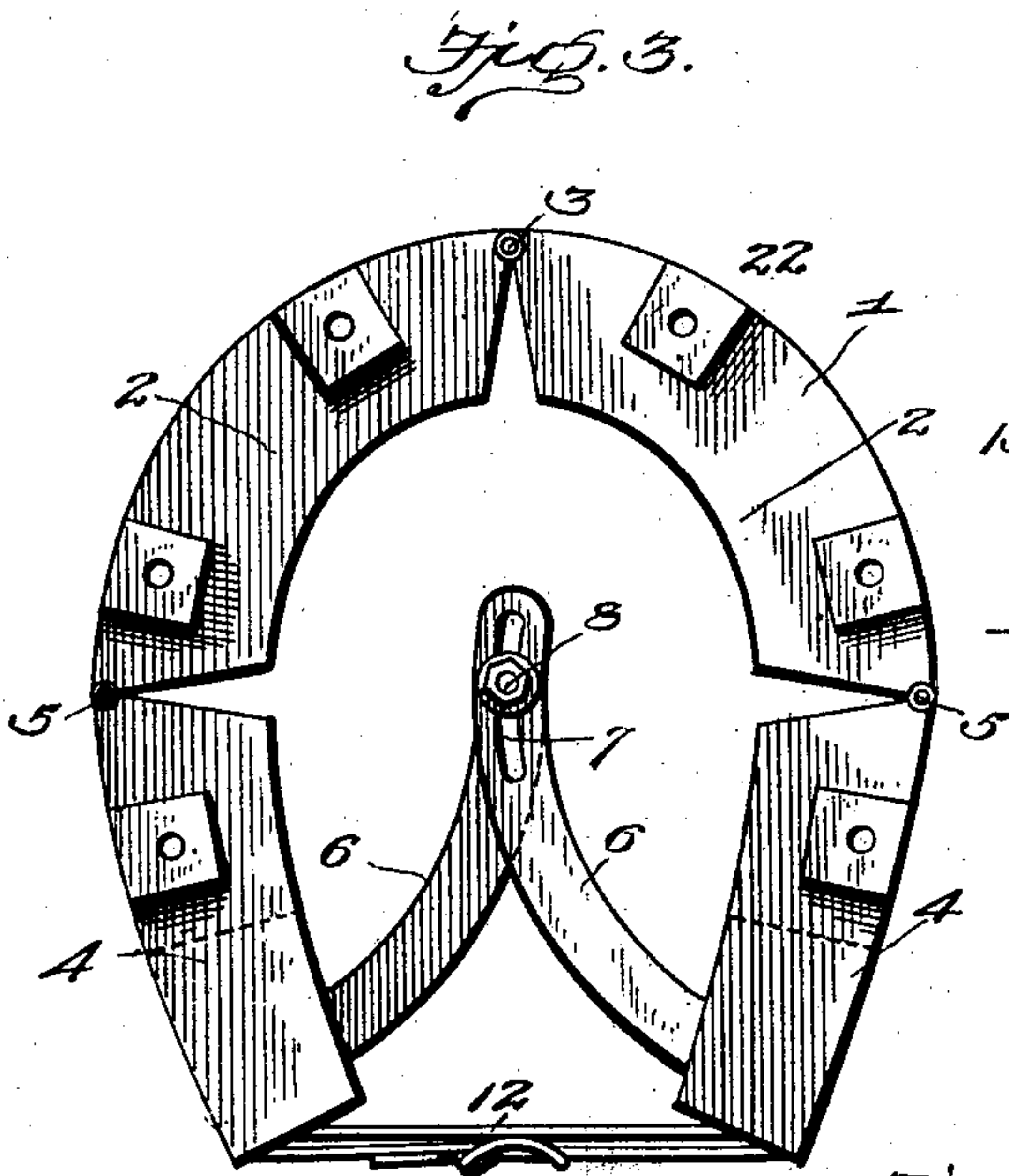
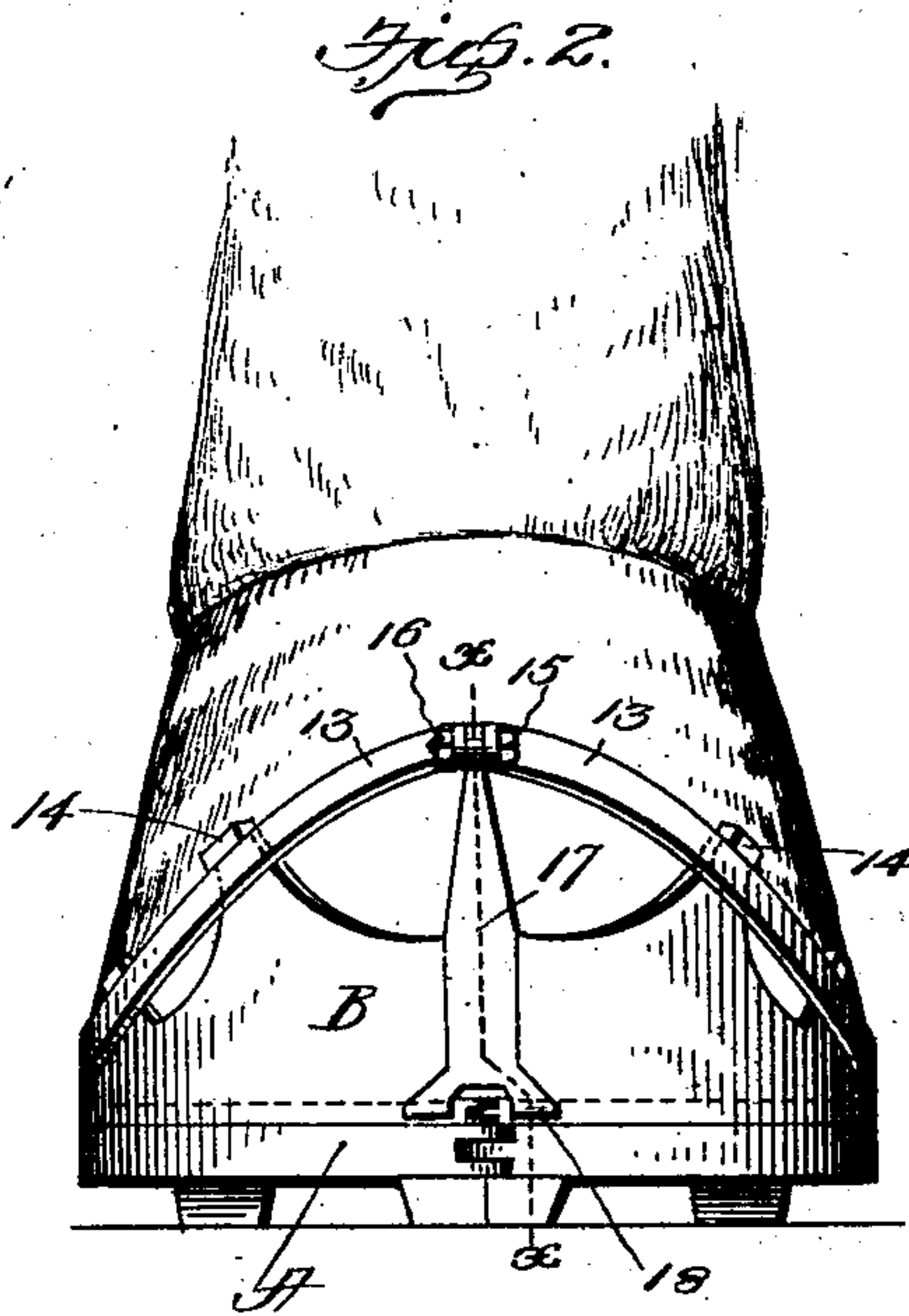
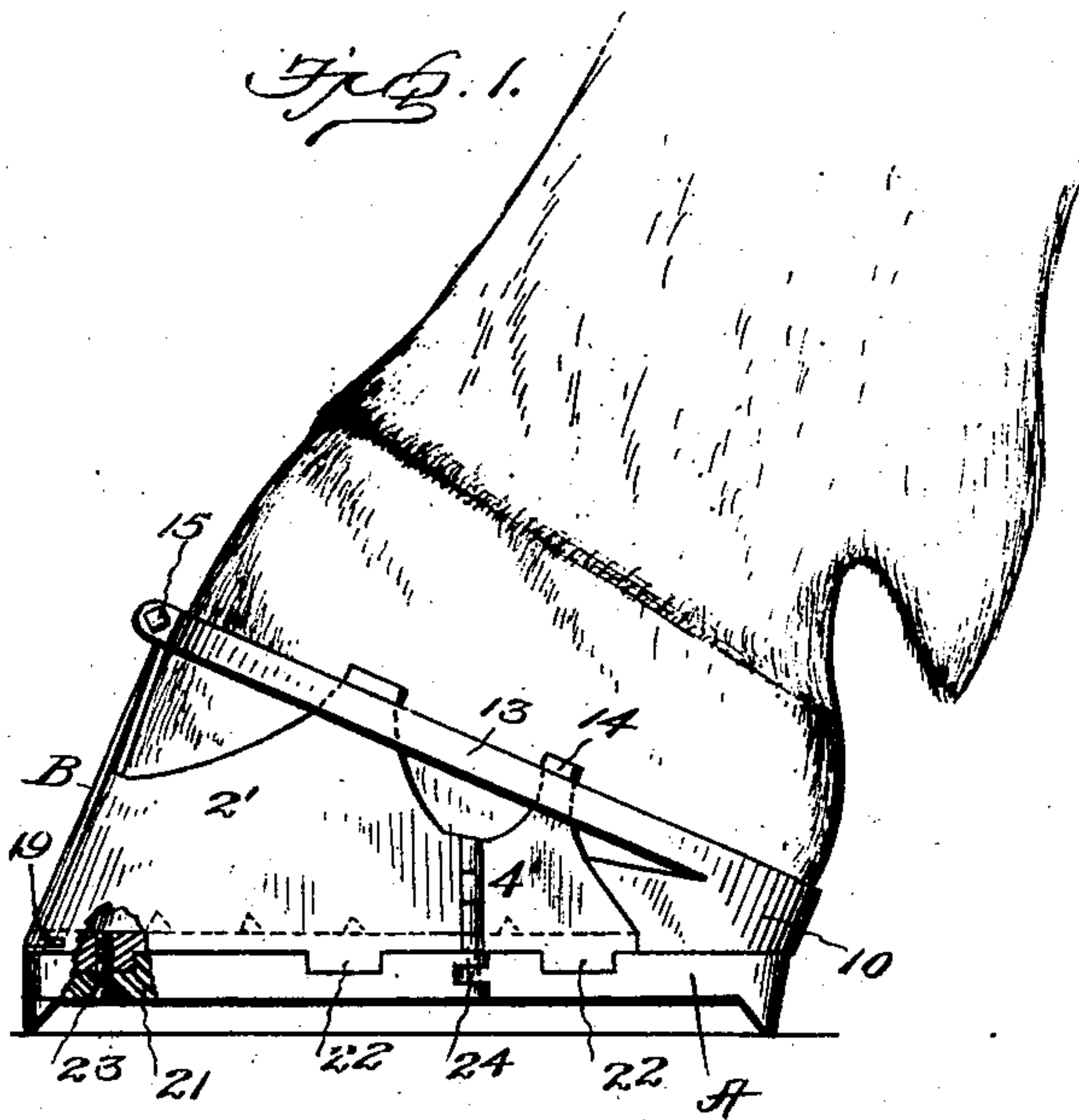
**No. 696,060.**

**Patented Mar. 25, 1902.**

**B. F. LOCRAFT.**  
**HORSESHOE.**

(Application filed Dec. 31, 1901.)

(No Model.)



Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

BERNARD F. LOCRAFT, OF WASHINGTON, DISTRICT OF COLUMBIA.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 696,060, dated March 25, 1902.

Application filed December 31, 1901. Serial No. 87,901. (No model.)

*To all whom it may concern:*

Be it known that I, BERNARD F. LOCRAFT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Horseshoes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in horseshoes.

The object of the invention is to provide a horseshoe which may be quickly applied to and removed from the hoof, which admits of the ready substitution of a calked shoe for a smooth shoe, and vice versa, to suit the conditions of the roads or streets, which is adjustable to fit hoofs of different sizes, and which permits of the parts being readily and conveniently assembled for use.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of a horseshoe embodying my invention, showing its application to the hoof. Fig. 2 is a front elevation of the same. Fig. 3 is a bottom plan view of the shell-plate removed. Fig. 4 is a vertical longitudinal section on line  $x-x$  of Fig. 2. Fig. 5 is a fragmentary rear view, and Fig. 6 is a cross-section through one of the adjustable heel members of the shell-plate.

The shoe comprises in its construction the shoe proper, A, and a shell or socket B, carrying the shoe, and which is adapted to receive the hoof and hold the shoe in position thereon. The shell or socket consists of a wall adapted to surround the hoof, and a plate 1, which is adapted to rest directly against the sole of the hoof and to serve as a direct support for the shoe A. As shown, the plate 1 consists of a series of sections, the fore sections 2 hinged at their forward ends, as indicated at 3, and the rear or heel sections 4 hinged at their forward ends, as indicated at 5, to the rear ends of the forward sections, thus adapting the plate to be expanded and contracted

to fit hoofs of different sizes. The parts of the shell-plate are adapted to be held in adjusted position by segmental bars 6, connected to the heel-sections and formed at their free ends with slots 7 for the passage of a bolt 8 or other suitable form of fastening, by means of which, after the sections have been adjusted to adapt the plate to the size of the hoof, the bars 6 may be locked to hold the plate firmly in its adjusted position. The rear or heel sections 4 are provided with adjustable heel sections or members 9, which have a dovetail connection with the rear sections of the plate, so that they may be adjusted to adapt the shoe for application to hoofs of different lengths. The shell B tapers in conformity with the wall of the hoof, being of greater height at the front than at the rear, as shown, and extending on a gradual inclination from its front toward its rear end. The said shell may be constructed of metal, leather, rubber, or any other suitable material and may be formed integral with or independently of the shell-plate 1, and in case of its being formed independently thereof may be secured thereto in any preferred manner. In the present instance the shell is shown as composed of flanges 2' and 4', rising from the sections of the heel-plate 1 and hinged or jointed together, so as to be capable of adjustment with said sections to fit the size or contour of the hoof to which the shoe is to be applied. The rear portion of the shell is closed by the flanges 10, which normally abut against the flanges 4', but are adapted to be drawn rearwardly with the adjustable sections 9 of the heel-pieces of the plate 1. These two sections 10 are slotted at the rear for the reception of a strap 12, having at one end a buckle and at the other end a series of apertures for engagement with said buckle, by means of which any forward movement of the shell upon the hoof is prevented.

From the flanges 10 extend straps 13, which project forwardly and bear against lugs 14, formed upon the flanges 2' and 4', and are apertured at their forward ends for the reception of a bolt or screw 15, to which is applied a nut 16 for holding the free ends of said straps connected. These straps conform to the outline of the hoof and serve normally to press the flanges against the same and to pre-



vent any slipping of the shell down upon the hoof. The flanges 2' are separated at their forward ends by a space, in which fits a key or supporting-strip 17, which is formed at its upper end with an eye which fits between the ends of the straps 13 and is secured thereto by the bolt 15. This key or strip serves to hold the straps in proper position, bearing against the lugs 14, and to prevent said straps from slipping downward. At its lower end the key or supporting-strip is bifurcated, as shown at 18, to straddle the upwardly-extending portion of the hinge 3 and is then bent backwardly at right angles to form tongues 19, which extend into recesses formed in the fore sections 2 of the plate 1 on opposite sides of the hinged connection 3, and thus lock said parts against independent play when they are adjusted upon the hoof. By detaching the bolt or fastening 15 the straps 13 may be loosened and the key or locking-strip detached, and when this has been done and the strap 12 loosened the shell or socket may be readily removed from the hoof. In applying the shell or socket again to the hoof, with the parts loosened up, as stated, the shell is inserted until the hoof rests upon the upper surface of the plate 1, the strap 12 tightened, the key or supporting-strip 17 inserted, and the bolt 15 then placed in position to hold the connecting ends of the key and straps 13 and to thereby fasten the shell or socket to the hoof.

It will of course be understood that any other suitable form of fastening may be substituted for the bolt 15 and its nut 16 and that the straps 13 may be made of any material suitable for the purpose.

To further assist in making a firm connection between the shell or socket and the hoof, the plate 1 may be formed or provided upon its upper surface with spurs 20 to enter the hoof and prevent any tendency of a loose connection between said plate and hoof.

The shoe A, which may be of any approved form and construction and formed with or without calks, is provided in the construction shown with recesses 21 to receive lugs 22, projecting from the under side of the shell-plate 1, which lugs are formed with threaded apertures or recesses for the reception of screws 23, projecting upwardly through the shoe and adapted to detachably connect the same to the said plate 1. By this construction the lugs and recesses form interlocking connections to relieve the screws of strain, and the formation of the lugs permits of the use of a shell-plate of reduced thickness, so as to decrease the weight of the socket. It will, of course, be understood, however, that I may, if desired, dispense with the lugs 22 and make the plate 1 thick enough for the formation of the screw-threaded apertures and the reception of the screws.

The shoe or tread plate A is shown in the present instance as being formed of a series of sections jointed together after the manner

of the construction of the plate 1, the joints or hinge connections between said sections being indicated by the numeral 24. This construction permits of the shoe or tread-plate A being adjusted with the plate 1 to suit the size of the hoof; but in some cases it may not be found desirable to employ this construction, but to use in place thereof a series of solid shoes of different sizes to conform to the different adjustments of the shell and shell-plate for different lengths and widths of hoofs. Hence I do not limit the invention to the construction of the shoe A in either of these ways.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without an extended explanation, and it will be seen that the invention provides a construction of shoe and fastening therefor which obviates the necessity of nailing the shoe to the hoof and permits of the ready application and removal of the shoe, as well as the shell, to and from the hoof whenever desired. Whenever it may be found necessary to substitute a calked for a smooth shoe or a new shoe for a worn one, this may be readily accomplished by simply removing the screws 23, whereupon the shoe may be readily released from the plate 1 and a new shoe fastened thereto. By this means the substitution of a new shoe for an old one or a rough shoe for a smooth one may be readily and conveniently accomplished. It will of course be understood that after the socket or shell has been adjusted to conform to the size of the hoof and applied thereto it need not be removed therefrom until worn out or until it is desired to detach it for some specific purpose.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

1. A horseshoe comprising a shell or socket and a tread-plate, the said shell and plate being formed of sections adjustable to suit different sizes and shapes of hoofs and also different lengths of hoofs, fastenings adjustably uniting the sections, and fasteners detachably connecting the plate and shell.

2. In a horseshoe, the combination of a socket or shell adapted to receive and surround the hoof, said socket or shell comprising a plate and a wall formed of corresponding hinged sections permitting of the adjustment of the socket to hoofs of different sizes, a strap for fastening the shell to the hoof, a shoe or tread-plate detachably connected with the plate of the shell, and a key or supporting-strip detachably connected with the strap and bifurcated at its lower end to straddle the front hinge of the plate of the shell and detachably connected with said plate of the shell.



3. A horseshoe comprising a shell or socket to receive the hoof and a tread-plate, said shell and plate being provided with interfitting lugs and recesses, the lugs being formed with threaded perforations, and screws connecting the plate and shell and entering said perforations.

4. In a horseshoe, the combination of a socket or shell adapted to receive and surround the hoof, said socket or shell comprising a plate and a wall formed of corresponding hinged sections permitting of the adjustment of the socket to hoofs of different sizes, a strap for fastening the shell to the hoof, a key or supporting-strip holding the strap in position upon the shell and having a detachable connection with the plate and wall of the shell, and a shoe or tread-plate detachably connected with the plate of the shell, substantially as described.

5. In a horseshoe, the combination of a shell or socket adapted to receive and surround the hoof, said shell or socket comprising in its construction a bottom plate and a surrounding wall composed of hinged or jointed sections adjustable to hoofs of different sizes, the heel-sections of the plate having also longitudinally-adjustable members to adjust the length of the socket, and flanges rising therefrom, straps connected to said flanges and extending forwardly and bearing against the

wall of the socket, lugs upon the wall of the socket to limit the upward movement of said straps, a fastening connecting the forward ends of the straps, a key or supporting-strip holding the front ends of said straps in proper position and detachably connected at its lower end to the plate and wall of the shell, and a shoe or tread-plate detachably secured to the plate of the shell, substantially as described.

6. In a horseshoe the combination of a shell or socket formed of hinged sections and a longitudinally-adjustable section, a plate connected to the shell and formed of corresponding hinged sections and longitudinally-adjustable sections, slotted arms connected to the rear portions of the plate, a fastening adjustably connecting said arms, a tread-plate detachably secured to the sectional plate of the shell, straps connected to the longitudinally-adjustable part of the shell and extending forwardly therefrom, and a key detachably connecting the free ends of said straps and detachably secured to the shell, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BERNARD F. LOCRAFT.

Witnesses:

H. B. WILLSON,  
BENJ. G. COWL.