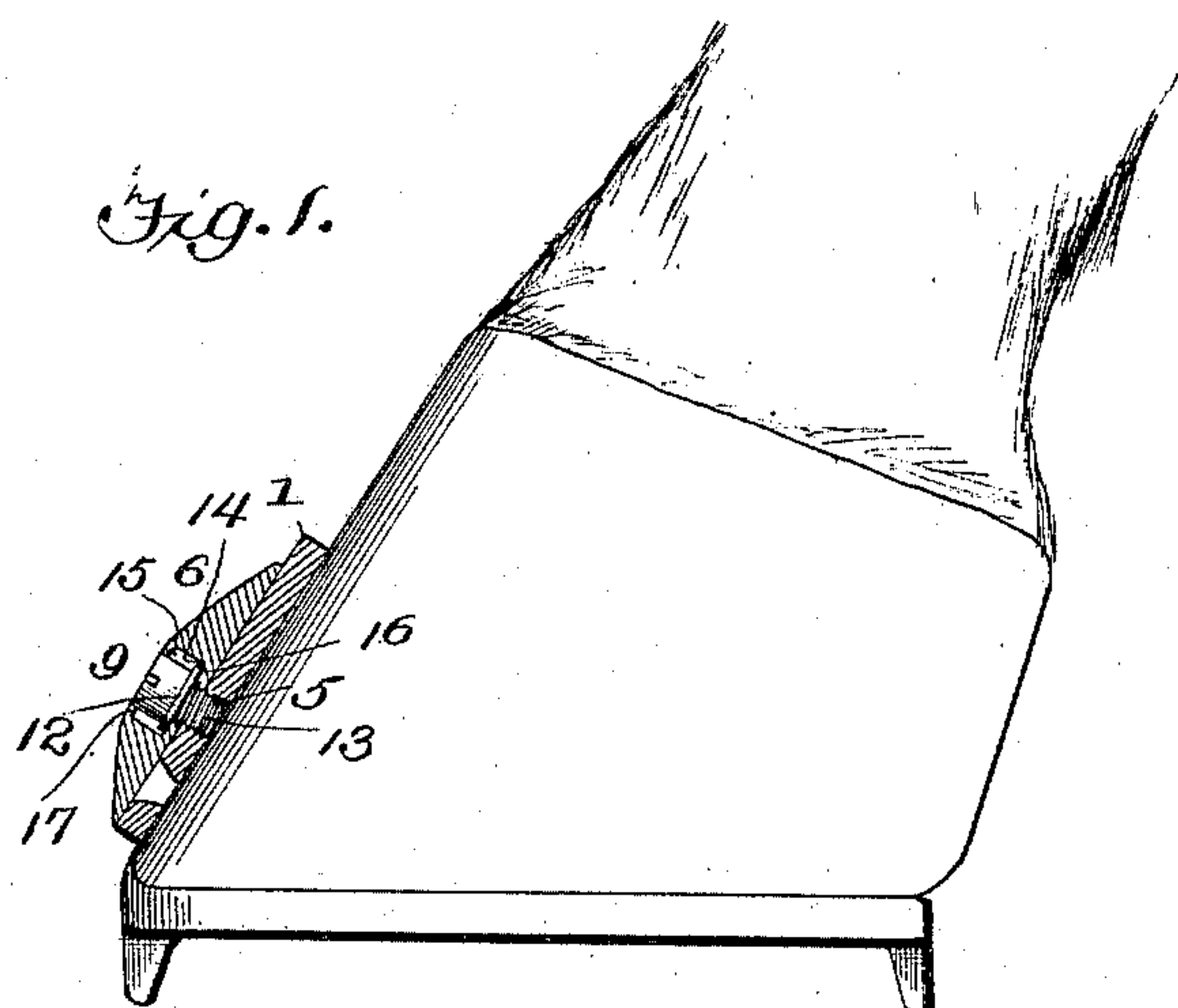


(No Model.)

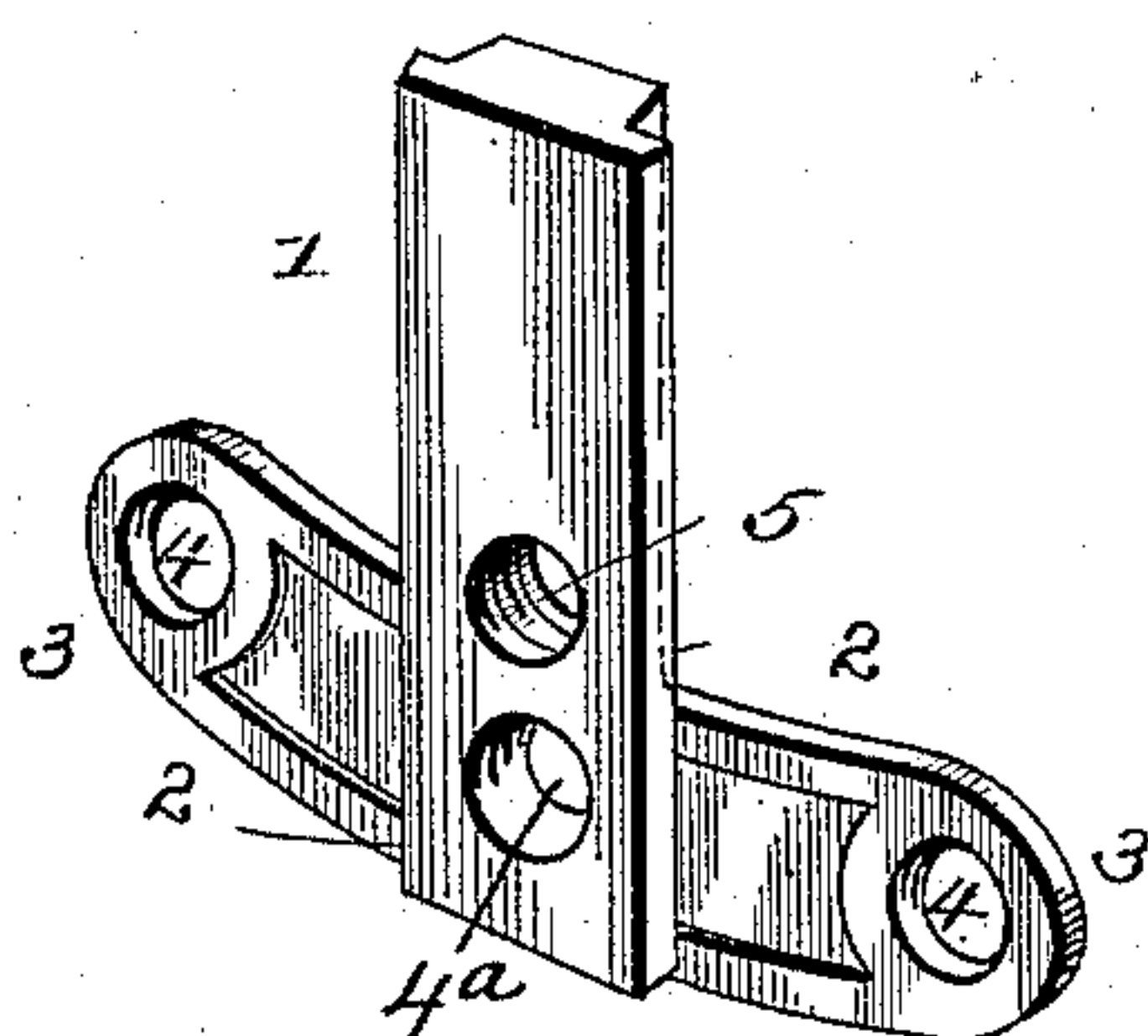
J. PINKERMAN.  
TOE WEIGHT.

No. 488,450.

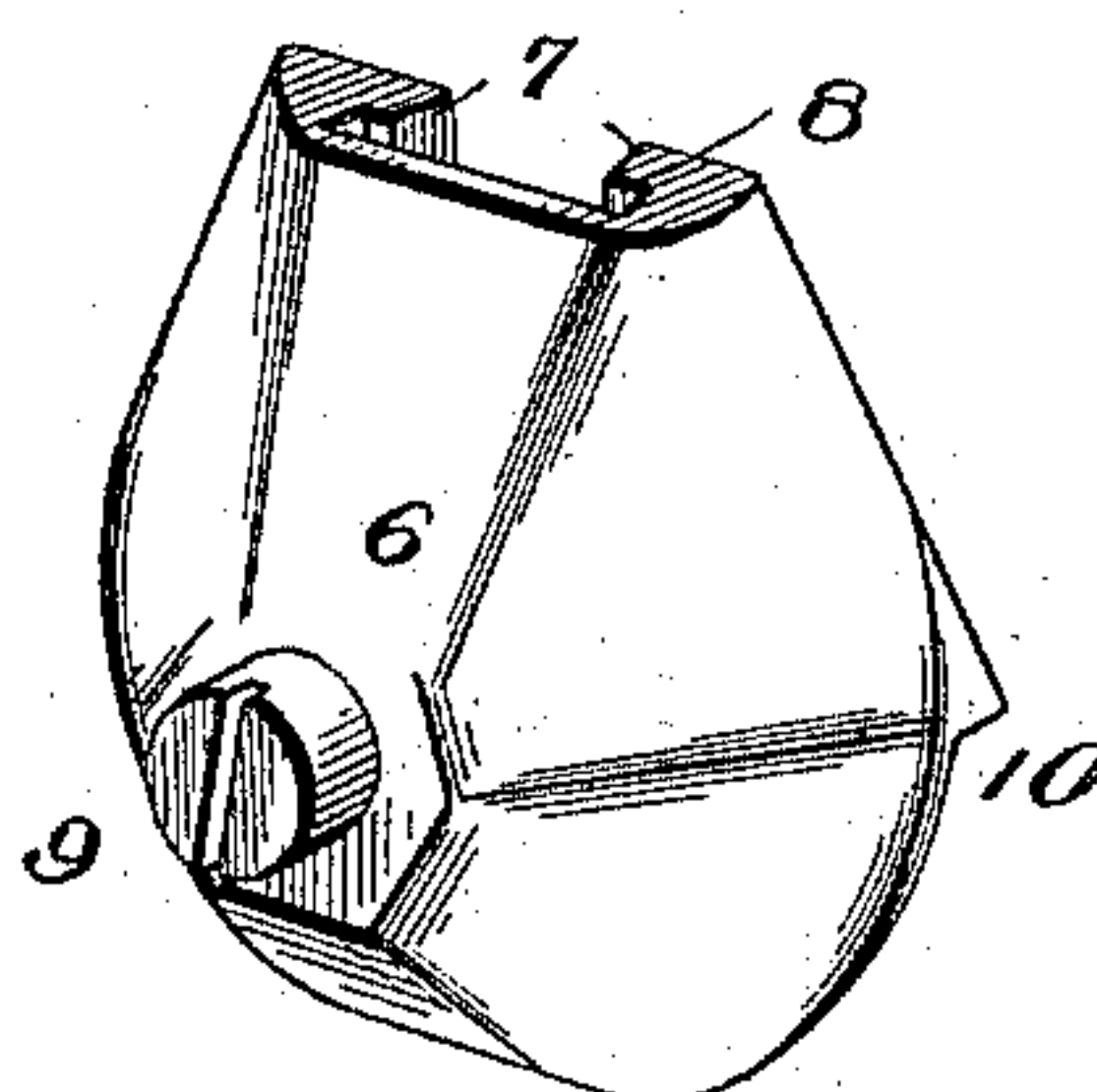
Patented Dec. 20, 1892.



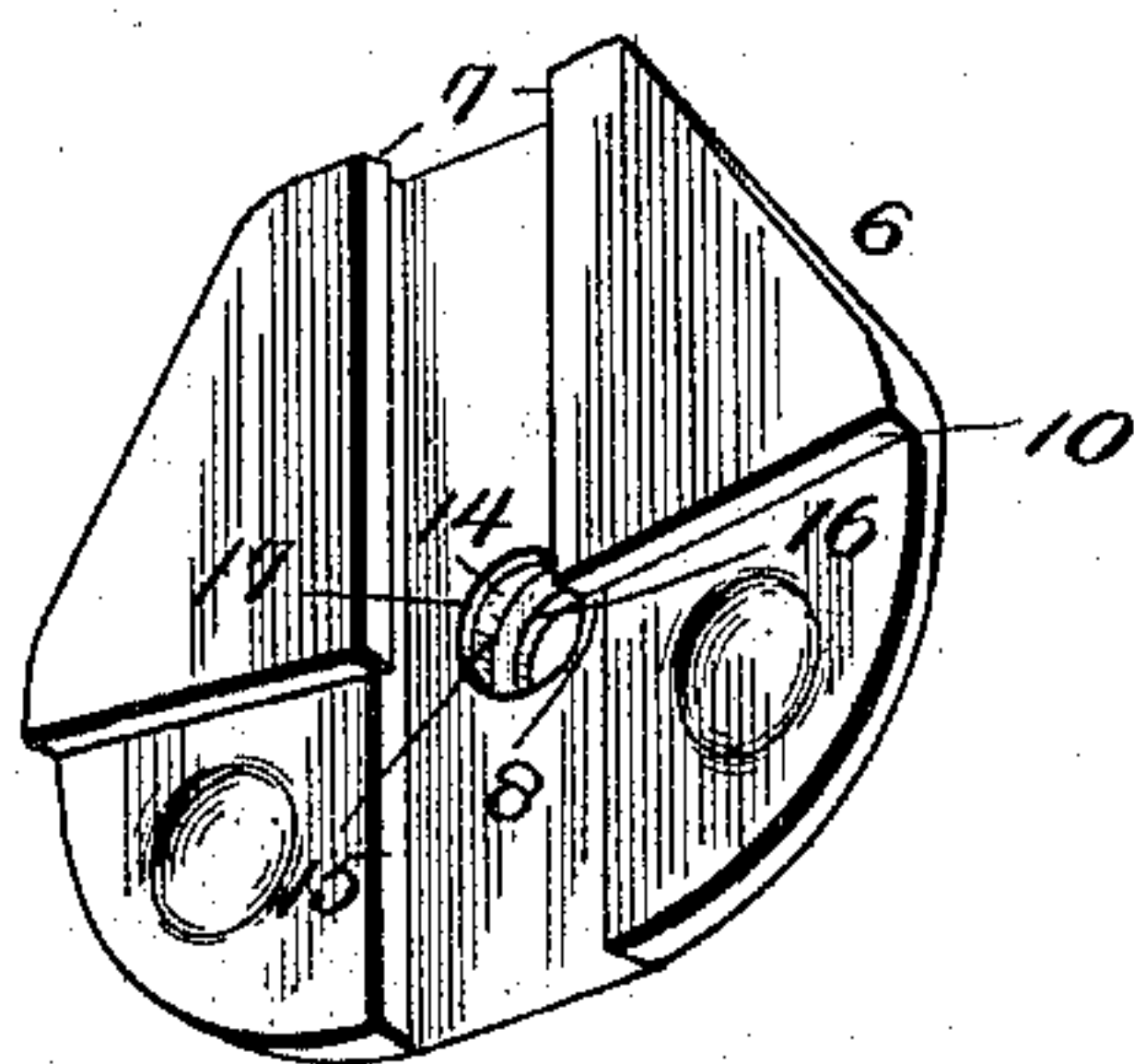
*Fig. 2.*



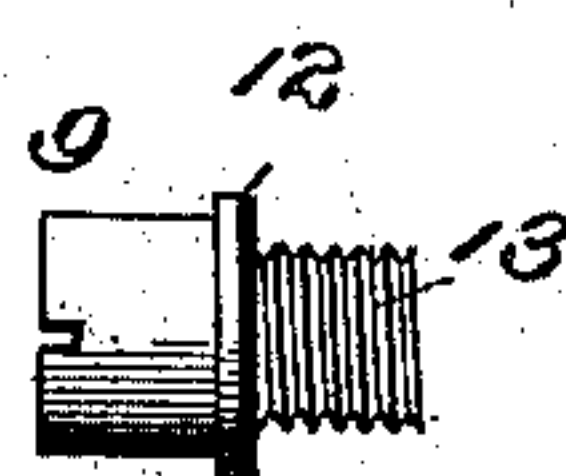
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses

John Dammie  
J. A. Rutledge

Inventor  
James Pinkerman  
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Attorney



# UNITED STATES PATENT OFFICE.

JAMES PINKERMAN, OF COLUMBUS, OHIO.

## TOE-WEIGHT.

SPECIFICATION forming part of Letters Patent No. 488,450, dated December 20, 1892.

Application filed September 9, 1892. Serial No. 445,440. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES PINKERMAN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Toe-Weights for Trotting-Horses, of which the following is a specification.

This invention relates to that type of toe-weights for trotting horses wherein the weight is dove-tailed to the spur or standard and is secured by a set screw carried by the weight and impinging at its inner end against the spur or standard.

The object of my invention is to provide a new and improved construction whereby the screw is permanently confined in operative connection with the toe-weight to prevent its accidental displacement or loss, and also whereby the screw, when tightened, operates to force the toe-weight in close contact with the spur or standard to produce a tight joint between the parts.

To accomplish this object the invention consists essentially in the combination with a spur or standard having a screw threaded socket, of a toe-weight having a transverse orifice, and a screw passing through the orifice to engage the socket and provided with a collar which is loosely engaged with the toe-weight in such manner that while the screw is susceptible of freely rotating it cannot be displaced from operative connection with the weight.

The invention also consists in certain other features of construction and combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a vertical central sectional view of a toe-weight constructed according to my invention and applied to the hoof of a horse. Fig. 2 is a detail perspective view of the spur or standard. Fig. 3 is a detail perspective view looking at the outside of the weight. Fig. 4 is a similar view looking at the inside of the same, and Fig. 5 is a detail side elevation of the screw.

In order to enable those skilled in the art to make and use my invention I will now describe the same in detail, referring to the drawings wherein

The numeral 1 indicates a metallic spur or standard having lateral flanges 2 by which to give it a dove-tailed form. The lower portion of the spur or standard is constructed with wings or lugs 3 having screw holes 4 through which ordinary screws may be inserted and screwed into the hoof of the animal for the purpose of securing the spur or standard in a fixed position on the hoof. The vertical portion or body of the spur or standard is formed at or near its center with a screw threaded socket 5, and the toe-weight 6 is provided with inwardly projecting flanges 7 to form a dove-tailed groove 8 for engaging the dove-tailed spur or standard, in such manner that the weight can be slipped lengthwise upon the latter and be screwed thereto in a fixed position through the medium of the screw 9. The inner surface of the toe-weight is constructed with approximately horizontal shoulders 10 adapted to rest upon the upper edges of the wings or lugs 3 when the toe-weight is in such position on the spur or standard that the threaded portion of the screw can enter the screw threaded socket 5. The screw is formed with a central head having a notch to receive a screw driver and at the base of this head is arranged a collar or annulus 12, from which projects the screw threaded portion 13. The screw passes through a transverse orifice 14, Fig. 4, in the toe-weight and the collar 12 lies within a circular or other suitably shaped recess or cavity 15 located centrally in the weight as clearly illustrated in Fig. 1. The diameter of the recess or cavity 15 is greater than the orifice 14 so that inner and outer flange or lip-like portions 16 and 17 are provided which constitute shoulders or abutments to limit the lengthwise movement of the screw, in such manner that while the screw can move for its engagement and disengagement from the screw-threaded socket 5, such screw is permanently confined in operative connection with the toe-weight to prevent its accidental displacement or loss, which occurs in those constructions where an ordinary metal screw passes through the toe-weight into the spur or standard.

The dove-tailed connection of the toe-weight with the spur or standard effectually prevents lateral separation of one from the other and by providing the screw socket 5 with which



the screw engages, the toe-weight is forced in close contact with the spur or standard to produce a tight joint between these parts. In this respect my invention is advantageous over those prior constructions where the point of the screw impinges against the surface of the spur or standard and forces the toe-weight in an outward direction from the support or standard when such screw is tightened.

10 The screw with its collar may be applied to the toe-weight in any suitable manner, but in the construction exhibited by the drawings it is necessary to so form the toe-weight that either the flange or lip-like portion 16 or 17 is  
15 left projecting so that it can be pressed down into the position illustrated by Fig. 1 after the collar 12 has been inserted into the cavity or recess 15.

The spur or standard could be provided  
20 with more than one screw socket 5 for the purpose of securing the toe-weight at different elevations, but as this is an obvious expedient I do not deem it necessary to illustrate the same in the drawings.

25 The spur or standard may be provided at its lower end with a screw hole 4<sup>a</sup> for the passage of a screw so that if the screws employed to pass through the wings or lugs 3 should work loose, a third screw can be inserted.  
30

Having thus described my invention what I claim is:

1. The combination with a spur or standard having a screw-threaded socket, of a toe-

weight having a transverse orifice, and a 35 screw passing through the orifice to engage the socket and provided with a collar which is loosely engaged with the toe-weight for preventing displacement of the screw, substantially as described. 40

2. The combination with a dove-tailed spur or standard having a screw-threaded socket, of a toe-weight having a transverse orifice and a dove-tailed groove which engages the 45 dove-tailed spur or standard, and a screw having a laterally projecting part loosely engaging with the toe-weight to prevent lengthwise displacement of the screw while permitting it to freely rotate for engaging and disengaging the screw-threaded socket, substantially 50 as described.

3. The combination with a spur or standard having a screw-threaded socket, of a toe-weight having a transverse orifice, and a 55 screw passing through the orifice to engage the socket and held in permanent operative connection with the toe-weight to prevent its lengthwise displacement or loss while permitting the screw to freely rotate for engaging and disengaging the screw-threaded socket, 60 substantially as described.

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

JAMES PINKERMAN. [L. S.]

Witnesses:

N. W. DICK,

N. L. HELPHREY.