

No. 891,668.

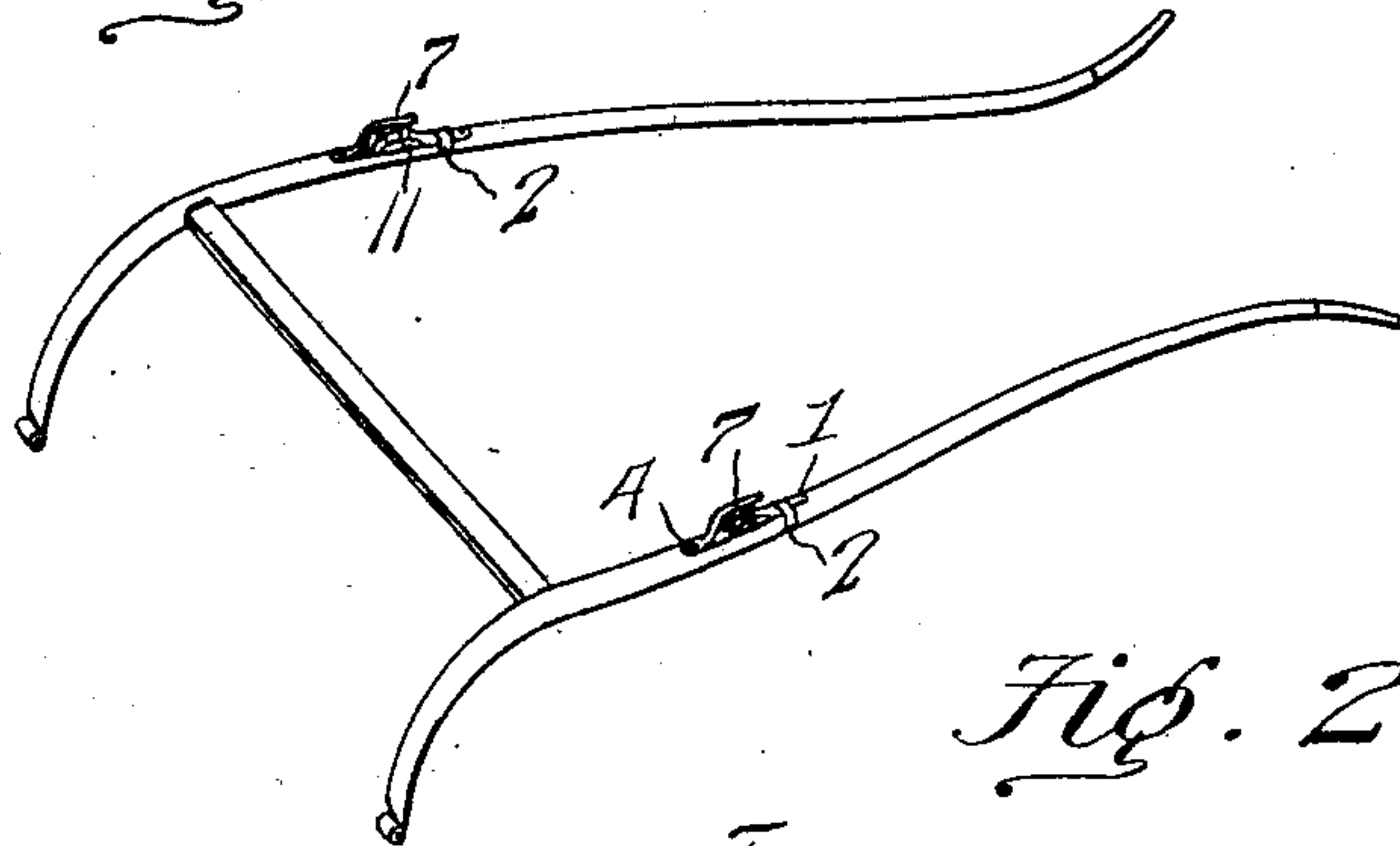
PATENTED JUNE 23, 1908.

R. B. CARPENTER.

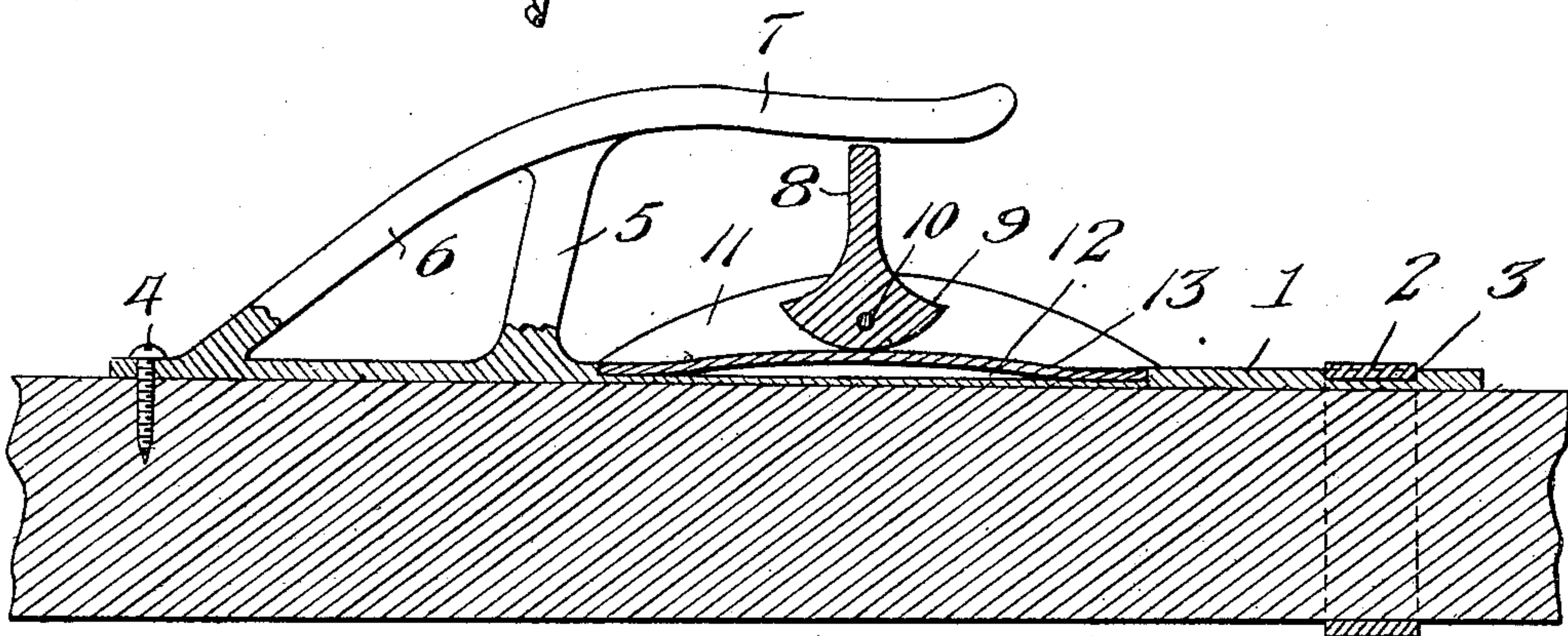
HOLDBACK IRON.

APPLICATION FILED JAN. 9, 1907.

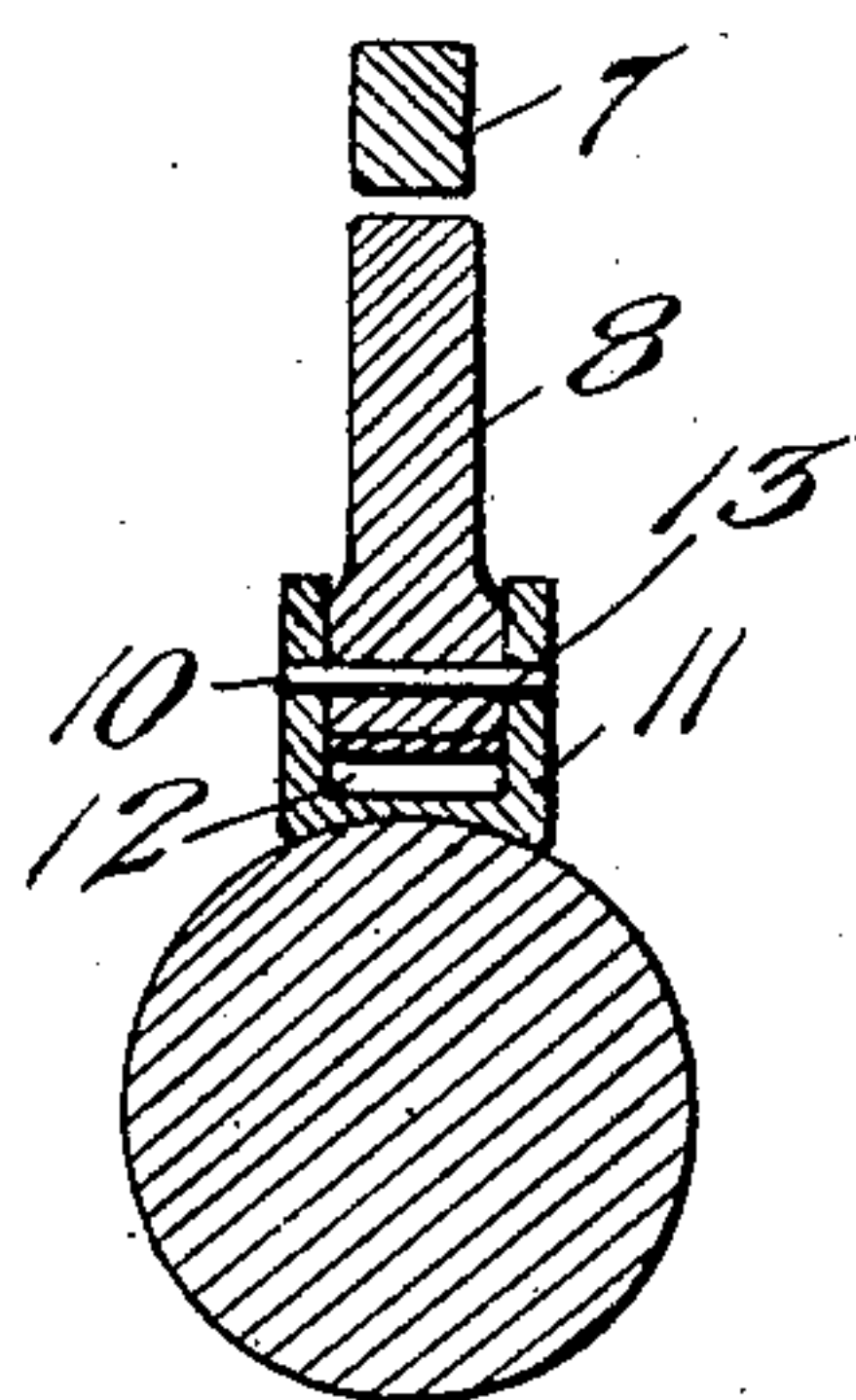
*Fig. 1.*



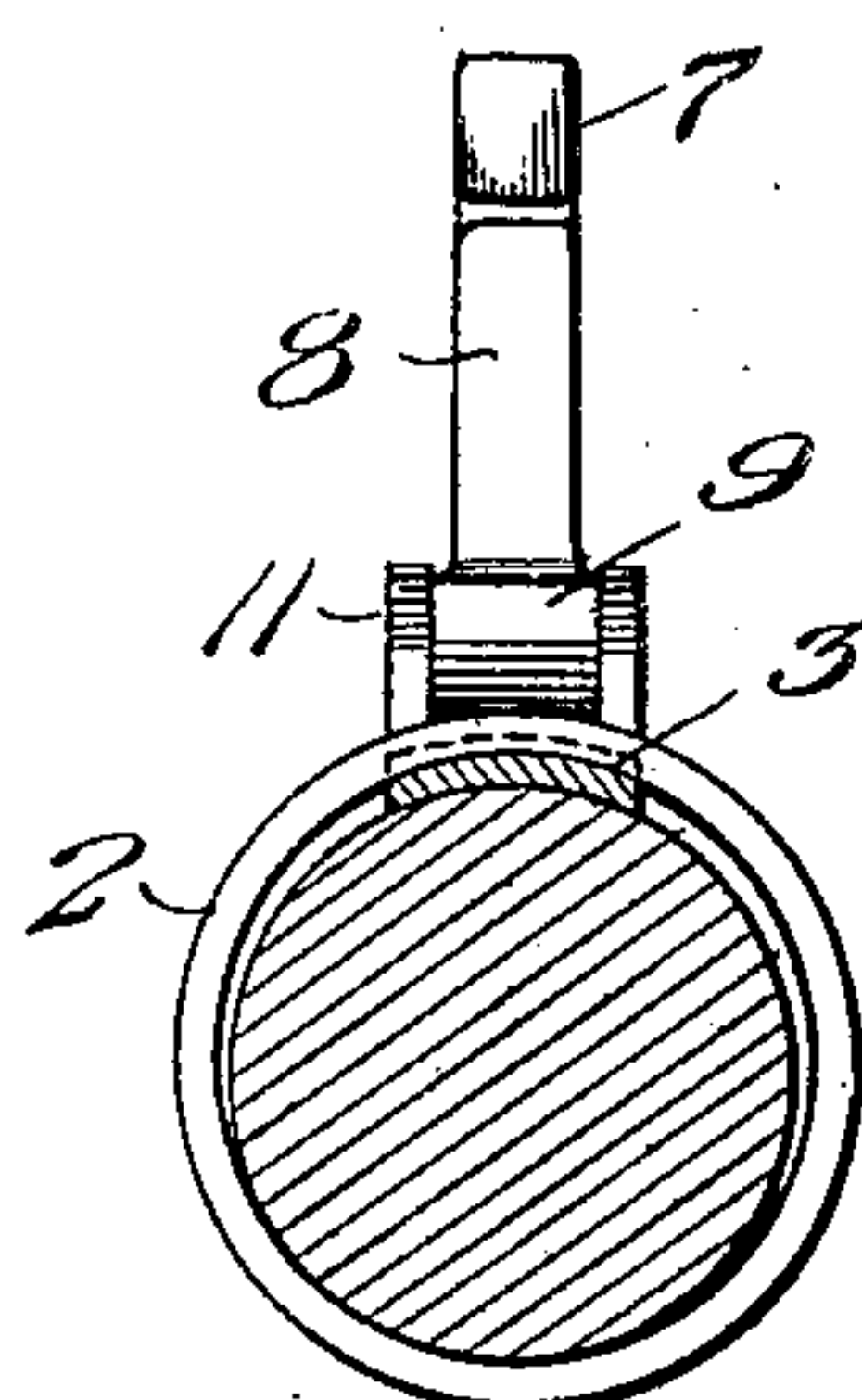
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Inventor

*Ray B. Carpenter*

Witnesses

*Frank B. Hoffman*  
*R. M. Smith*

By *Victor J. Evans*

Attorney



# UNITED STATES PATENT OFFICE.

RAY B. CARPENTER, OF MANCHESTER, NEW HAMPSHIRE.

## HOLDBACK-IRON.

No. 891,668.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed January 9, 1907. Serial No. 351,545.

*To all whom it may concern:*

Be it known that I, RAY B. CARPENTER, a citizen of the United States, residing at Manchester, in the county of Hillsboro and State of New Hampshire, have invented new and useful Improvements in Holdback-Irons, of which the following is a specification.

This invention relates to holdback irons, and it has for its object to simplify and improve the construction and operation of this class of devices. With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view showing a pair of thills equipped with the improved holdback irons. Fig. 2 is an enlarged longitudinal section through one of the thills also showing one of the holdback irons in sectional elevation. Fig. 3 is a cross-section of the same taken through the pivoted guard. Fig. 4 is a cross-section taken through the retainer band.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved device comprises a base 1 which is secured in position upon the thill by means of a ring 2 which I call the retainer band, said ring passing around the thill as clearly shown in Figs. 2 and 4 and engaging a notch or recess 3 near the forward end of the base 1; said recess forming a seat for the retainer band, which latter loosely engages the thill but serves to hold the front end of the base 1 tightly clamped upon the thill. A fastening member such as a screw 4 which is driven through the rear end of the base into the thill completes the attachment of the base upon the thill. It will be readily seen that by the manner of attachment just described, the thill is not weakened by perforations or bolt holes, the single screw 4 being small and light, and the base being connected with the thill mainly by the retainer band 2 which latter merely surrounds the thill from which it is slid endwise together with the base until the desired location is reached. The office of the screw or fastening member 4 is merely to prevent endwise displacement of the base with relation to the thill, and the retainer band, which is an integral ring, will be found amply sufficient to secure the base

of the holdback iron upon the thill with the required degree of intimacy.

The base 1 is provided with an outward extending stop arm 5 which is connected with the base by an inclined brace 6. This brace is extended beyond and forward of the arm 5 to form a fixed guard 7 beneath which the holdback strap is engaged and by means of which it is retained.

The base is provided along its edges with longitudinally disposed upward extending curved flanges 11 connected by a pin 10 upon which is pivotally mounted a guard member consisting of a finger 8 having a cam shaped head 9 at its lower end beneath which is placed a flat upwardly curved leaf spring 13 which is fitted in a recess 12 in the base plate, between the flanges 11; said spring serving to engage the cam shaped head of the guard finger 8, which latter will thus be normally retained with its free end adjacent to the stationary or fixed guard 7, and capable of swinging or moving in opposite directions; after being thus deflected from its normal position, the guard finger 8 when released, will be restored by the action of the spring 13 to its initial position, as will be readily understood.

In connecting the holdback strap with the device, the strap is drawn inward under the fixed guard 7, the terminal end of which projects beyond the free end of the pivoted or rocking guard 8 so as to form a guide finger, and the strap being also guided by means of the curved flanges 11 between which the finger 8 is pivoted. When the holdback strap is thus introduced, the pivoted guard will swing or rock out of the way to admit the strap. The spring 13 exerts a sufficient pressure upon the cam-shaped head of the pivoted guard to retain the latter normally in position with its free end adjacent to the fixed guard member 7, thus enabling it to resist the escape of the holdback strap under ordinary circumstances. In an emergency, however, when excessive pressure is brought to bear on said pivoted guard by the holdback strap, the guide will yield or rock in a forward direction out of the way, thus permitting the holdback strap to become disengaged from the fixed guard and to free the animal. It will be seen that this may be done without operating the pivoted guard manually by simply pulling the strap out from under the guard 7 when the pressure of the said strap against the pivoted guard 8



will rock or tilt the latter sufficiently to permit the strap to be freed; the movement of the free end of the pivoted guard in either direction being unobstructed except as by  
5 such resistance as is offered by the tension of the spring.

Under the construction herein described, the holdback iron is securely connected with the thill by means of a single small screw at  
10 one end thereof and weakening of the thill by holes or apertures for the passage of screws, bolts or other fastening devices is thus avoided. The retainer band 2 which surrounds the thill engages the recess or seat 3 in the  
15 base 1 of the holdback iron which is thus securely clamped upon the thill, while the single small screw in conjunction with the seat or recess serves to prevent longitudinal movement or displacement of the holdback  
20 iron. This method of securing the holdback iron upon the thill is found extremely simple and effective, and the thill is actually reinforced by the retainer band. The latter is made of a size and shape to accurately fit the  
25 thill, and the use of screw clips or clamps of a similar nature is entirely avoided.

The upwardly extending curved flanges 11 between which the guard finger 8 is pivoted will serve to form a casing for the spring, and

they will also guide the holdback strap in  
30 such a manner as to avoid interference with the cam-shaped head of the pivoted guard finger.

Having thus fully described the invention, what is claimed as new is:—

A holdback iron comprising a base having  
35 an outwardly extending stop arm and an inclined brace connecting said stop arm with the base and extended beyond and forward of the stop arm to form a fixed guard, said  
40 base being provided along its edges beneath the fixed guard with upwardly extending curved flanges and a seat or recess between said flanges, a guard finger pivoted to move  
45 backward or forward between the flanges and having a curved head, and an upwardly curved leaf spring seated in the recess between the flanges and engaging the cam-  
50 shaped head of the pivoted finger to retain the latter normally in an upwardly extending position with its free end adjacent to the fixed guard.

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

RAY B. CARPENTER.

Witnesses:

TIMOTHY J. HOWARD,  
HARRY E. LOVEREN.