

(No Model.)

J. ZELIFF.

WHIFFLETREE COUPLING.

No. 389,350.

Patented Sept. 11, 1888.

Fig. 1.

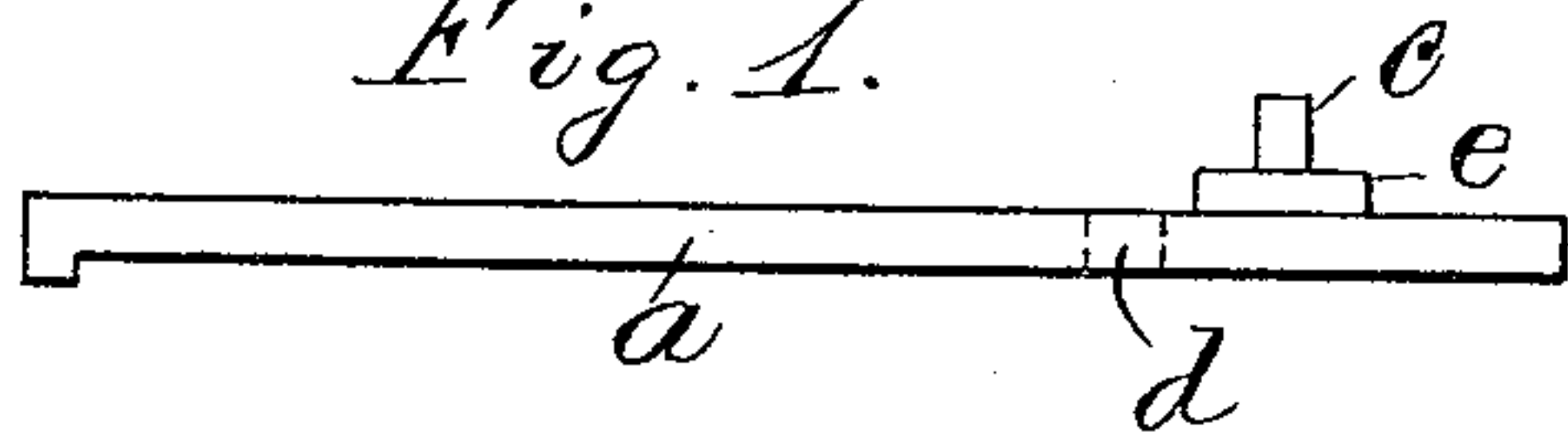


Fig. 2.

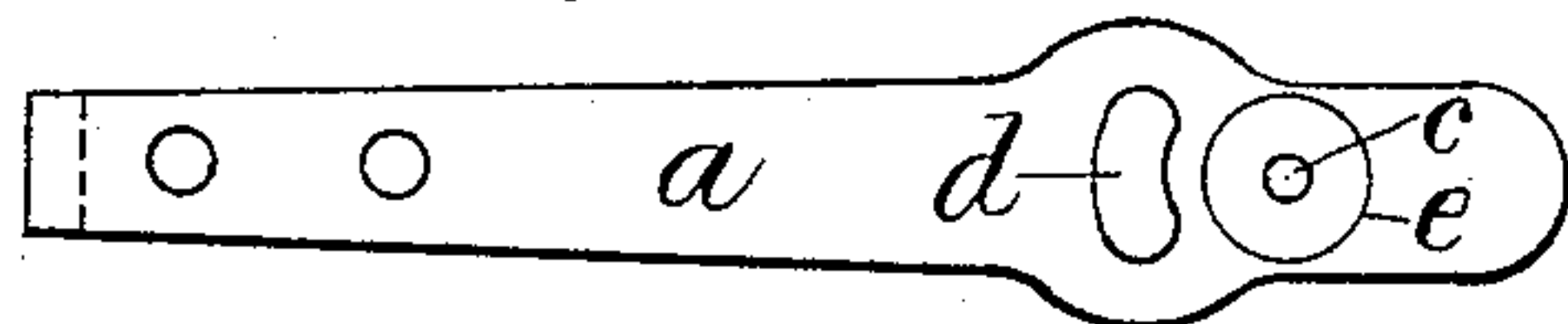


Fig. 3.

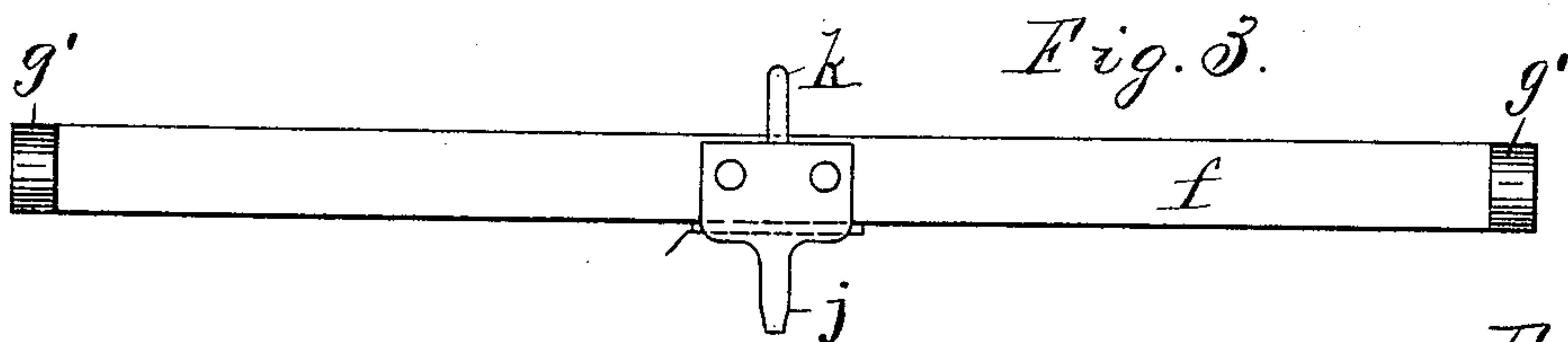


Fig. 4.

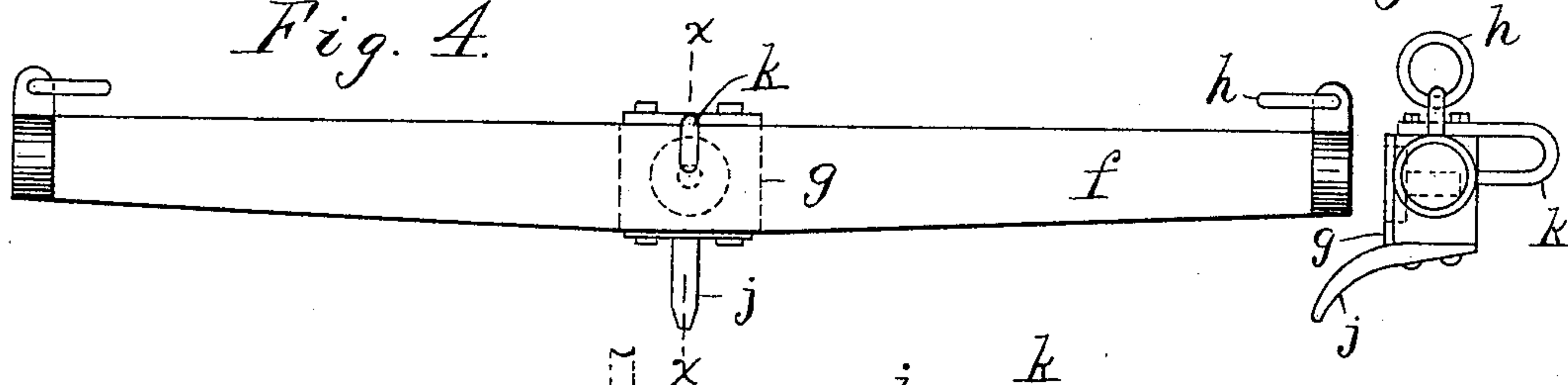


Fig. 5.

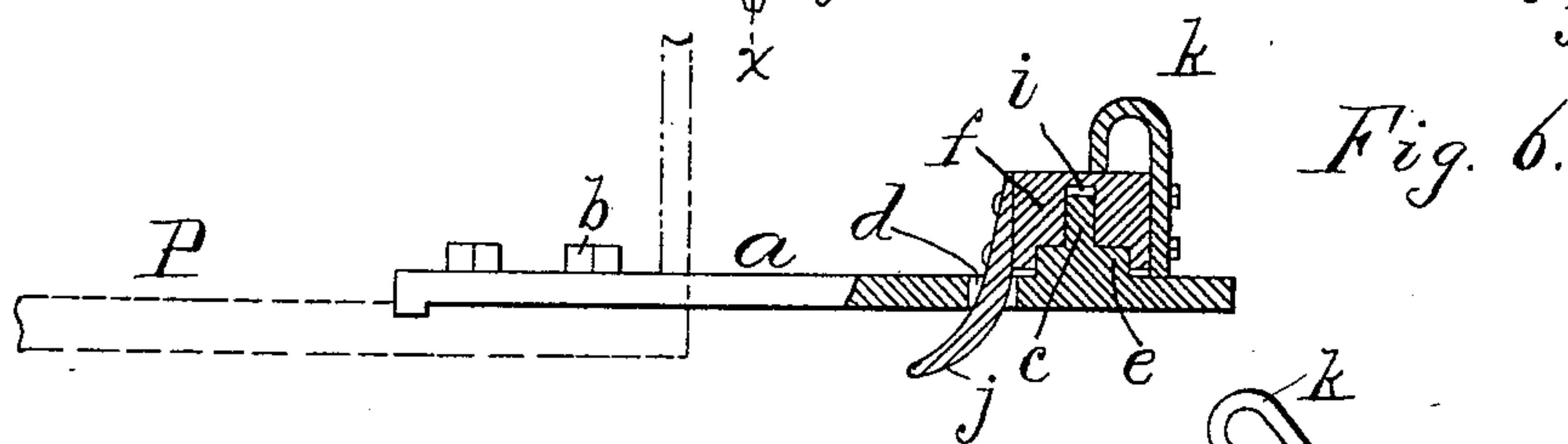
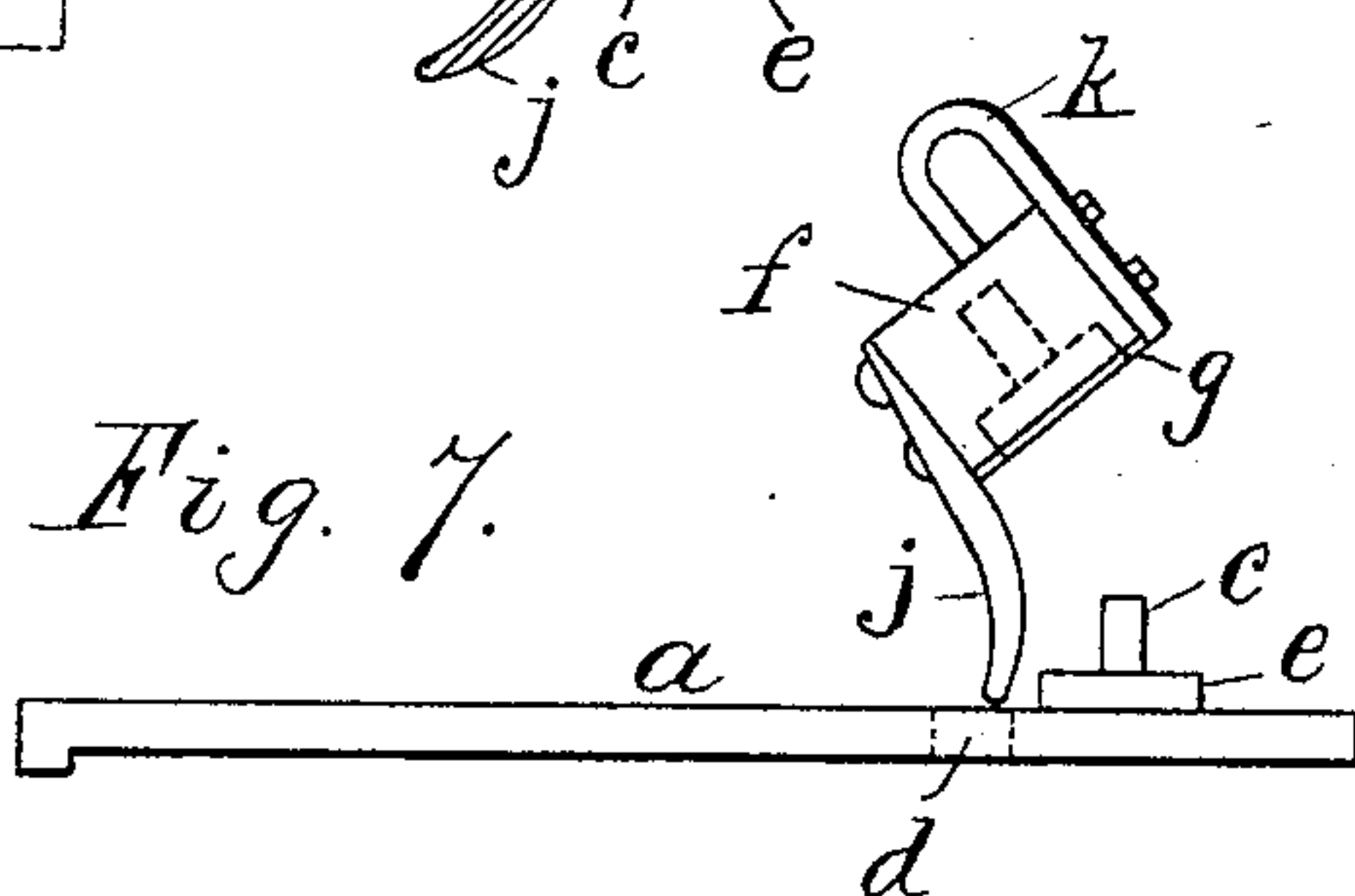


Fig. 7.



Attest:
L. Lee.
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Ernest Miller, Atty.

UNITED STATES PATENT OFFICE.

JAMES ZELIFF, OF WOODSIDE, NEW JERSEY.

WHIFFLETREE-COUPLING.

SPECIFICATION forming part of Letters Patent No. 389,350, dated September 11, 1888.

Application filed February 28, 1888. Serial No. 265,582. (No model.)

To all whom it may concern:

Be it known that I, JAMES ZELIFF, a citizen of the United States, residing at Woodside, Essex county, New Jersey, have invented certain new and useful Improvements in Whiffletree-Couplings, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to furnish a more convenient and effective means of attaching a whiffletree to a wagon-pole or to the platform of a horse-car and to hold the ends of the whiffletree securely up from the ground to prevent the traces from dragging into such a position that the horses may step over them.

The invention consists in the combination, with a plate secured to the pole or front of the car and provided with a stud and a slot in the rear of the stud, of a whiffletree pivoted upon the stud and provided with a downwardly-projecting lug fitted within the slot.

In one form of my invention the improvement consists in curving the said lug backwardly from the whiffletree and in applying a hook or staple to the front edge of the whiffletree to suspend the same in an inclined position with the lug projected normally downward.

In the drawings, Figure 1 is an edge view, and Fig. 2 a plan, of the draw-bar. Fig. 3 is a rear view, and Fig. 4 a plan, of the whiffletree. Fig. 5 is an end view of the whiffletree; and Fig. 6 is a diagram showing the whiffletree and draw-bar attached to the platform of a horse-car, a part of the platform *P* being shown merely in dotted lines and the whiffletree and part of the draw-bar being shown in cross-section on line *x x* in Fig. 4. Fig. 7 is a view of the draw-bar similar to Fig. 1, with the whiffletree represented over it in the position it would assume when suspended by a hand-hook, the collars and links which serve for the attachment of the traces at the ends of the whiffletree being omitted in Fig. 7, so as to show the recess and hole for the stud at the center of the whiffletree more clearly.

a is the plate, (shown as the butt of the draw-bar,) secured to the car-platform by bolts *b*, and provided near its outer end with an upwardly-projecting stud, *c*, and a transverse slot, *d*, in the rear of the stud. A circular boss, *e*, is represented at the base of the stud.

f is the whiffletree, provided at its ends with

collars *g'* and links *h* to attach the traces, as usual. The whiffletree is provided with a socket, *i*, at the center to admit the stud *c* and with a downwardly-projecting lug, *j*, affixed to its rear side to enter the slot *d*. The lug is preferably curved backward, as shown in Figs. 5, 6, and 7, so that when fitted in the slot *d* the whiffletree cannot be detached without tipping it backward, as shown in Fig. 7.

An eye or loop, *k*, is affixed to the top of the whiffletree upon its front side, so that when the whiffletree is lifted by a hand-hook, as is common when the driver applies the whiffletree to the draw-bar, the whiffletree may be tipped into an inclined position with the curved end of the lug hanging downward, as shown in Fig. 7, to readily enter the slot *d*. A plate, *g*, is fitted upon the underside of the whiffletree to sustain the wear, and is perforated to fit the boss *e*, which is preferably used at the base of the stud *c* to afford a broad bearing for the whiffletree and to increase the wearing-surface.

The principal function of the lug *j*, in conjunction with the slot *d*, is to limit the angular movement of the whiffletree upon the stud *c*, the lug striking one end of the stud if the whiffletree is turned more than fifteen degrees from its normal position at right angles to the draw-bar.

If the car gets off the track, the lug therefore operates when the horses pull laterally to increase the leverage of the whiffletree upon the draw-bar, and thus adds materially to the force exerted upon the car to pull it again upon the track. Such function of the lug *j* could be performed without curving it backward; but the curve obviously operates, as shown in Fig. 6, to prevent the whiffletree from lifting off of the stud *c* without tipping backward, as shown in Fig. 7, such backward tipping being wholly prevented by the draft upon the traces. The curve in the lug *j* is not, therefore, essential, but very desirable.

The invention may be applied to the pole of a wagon by providing the same with the stud *c* and slot *d* shown upon the draw-bar herein.

By my invention the stud *c* may be made very short and the whiffletree applied thereto with less effort than if it were made of great length to prevent the detachment of the whiffletree.

In my invention such detachment is prevented by the curved lug *j*, the rear end of which hooks under the plate *a* and wholly prevents such lifting without a backward tipping of the whiffletree.

The plate *a* (shown as a draw-bar herein) may obviously be prepared by the maker and provided with the stud *c* and slot *d* and used by the purchaser in connection with a wagon-pole or car-platform, as may be desired.

Having thus set forth my invention, what I claim herein is—

1. The combination, with the plate *a*, having stud *c* and transverse slot *d* in the rear of the stud, of a whiffletree fitted to the stud and provided with a downwardly-projecting lug to fit within the slot *d*, as and for the purpose set forth.

2. The combination, with the plate *a*, having stud *c* and transverse slot *d* in the rear of the stud, of a whiffletree fitted to the stud and provided with a lug, *j*, projected downwardly from the rear of the whiffletree and curved backwardly therefrom to fit within the slot *d*, substantially as herein set forth.

3. The combination, with the plate *a*, having stud *c* and transverse slot *d* in the rear of the stud, of a whiffletree fitted to the stud and provided upon its rear side with a lug projecting downwardly to fit within the slot *d*, and provided upon its upper front side with an eye or loop for lifting the whiffletree and sustaining it in an inclined position, substantially as herein set forth.

4. The combination, with the plate *a*, having stud *c*, boss *e*, and transfer-slot *d*, of the whiffletree provided with plate *g*, fitted to the boss *e*, and downwardly-projecting lug adapted to fit within the slot *d*, substantially as herein set forth.

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

JAMES ZELIFF.

Witnesses:

HENRY J. MILLER,
F. C. FISCHER.