

(No Model.)

2 Sheets—Sheet 1.

F. A. FOX.
CAR BUFFER.

No. 390,958.

Patented Oct. 9, 1888.

FIG. 3

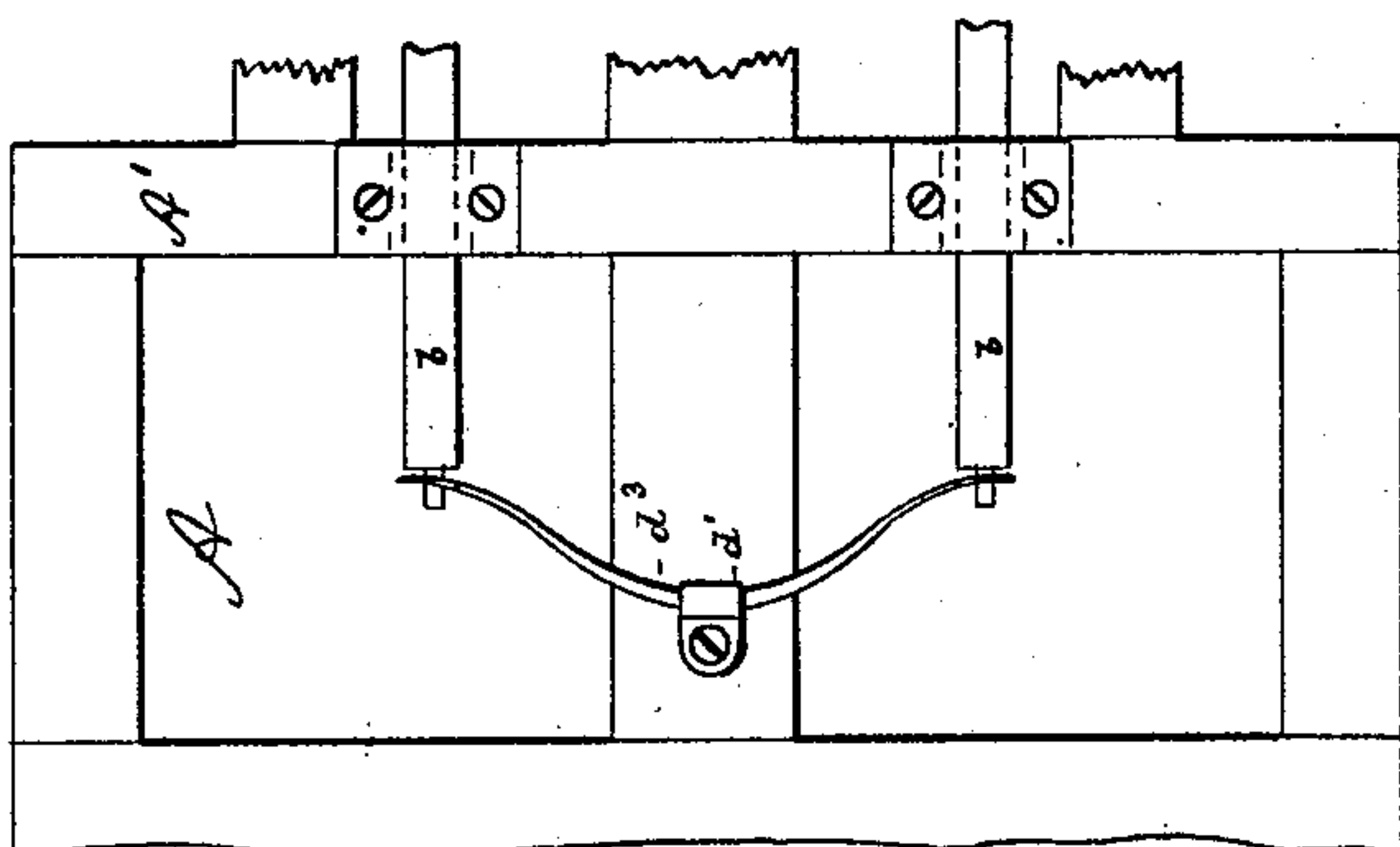


FIG. 2

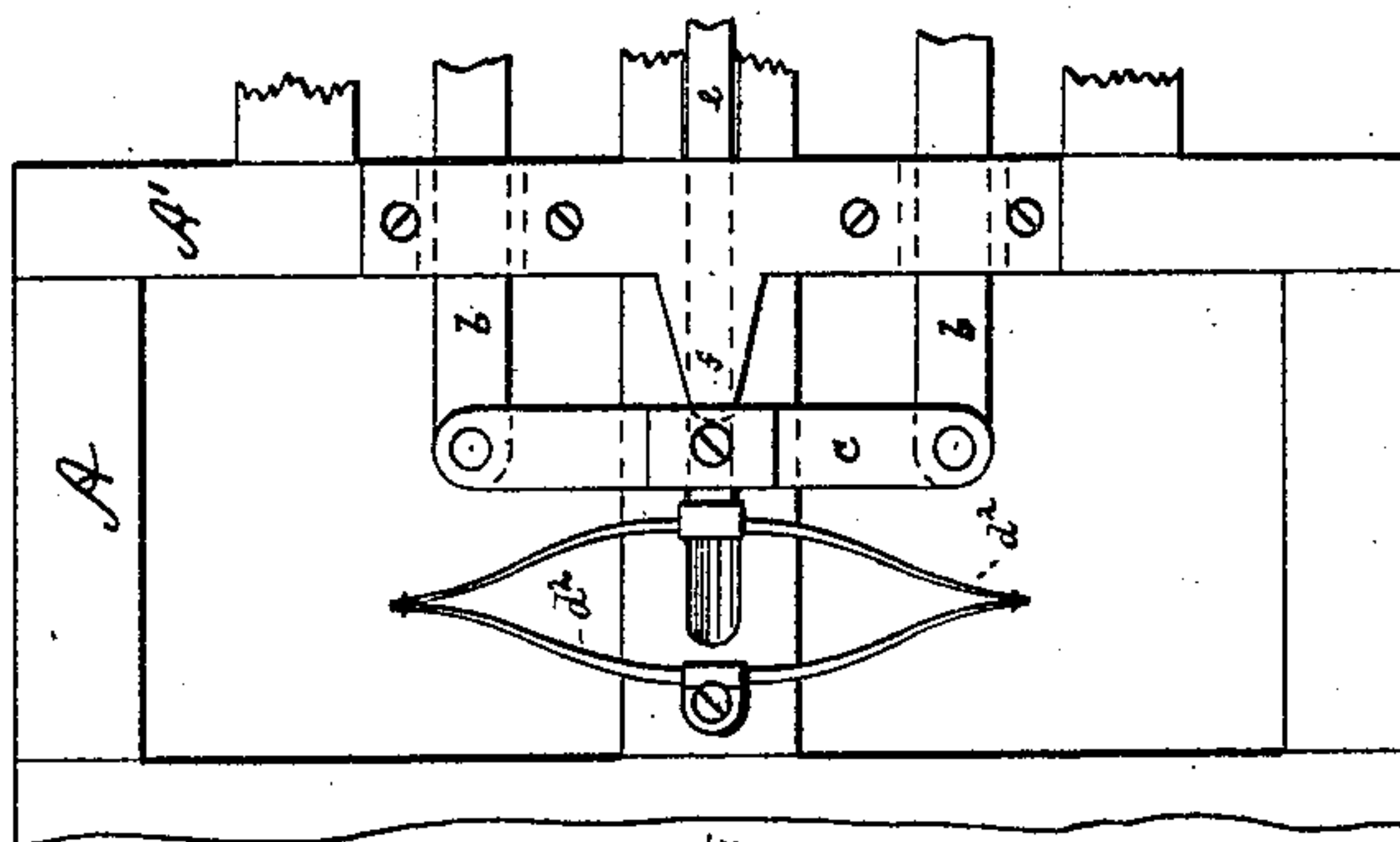
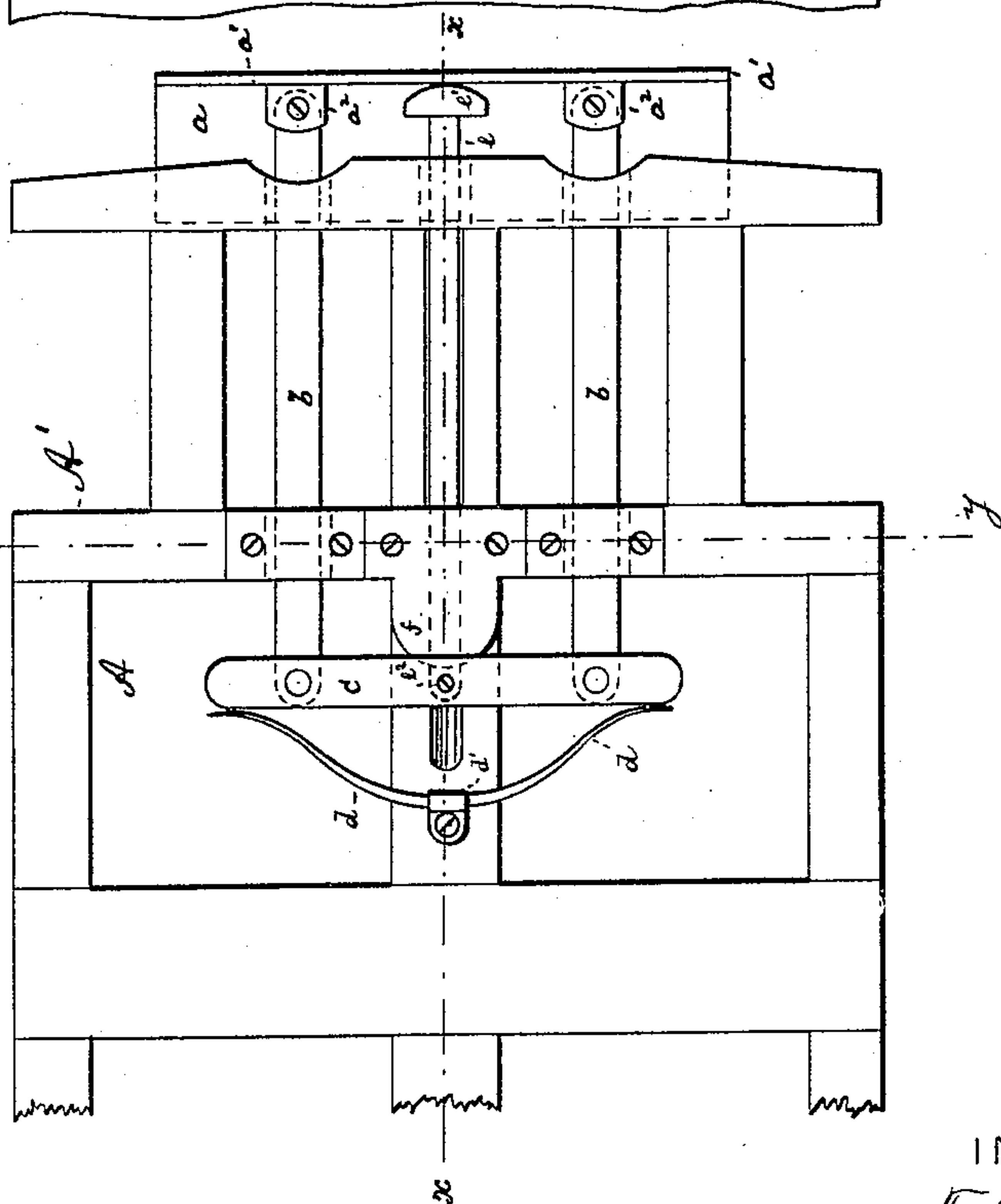


FIG. 1



WITNESSES.

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by his attorneys.
Roeder & Briesen.

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FIG. 4



FIG. 6

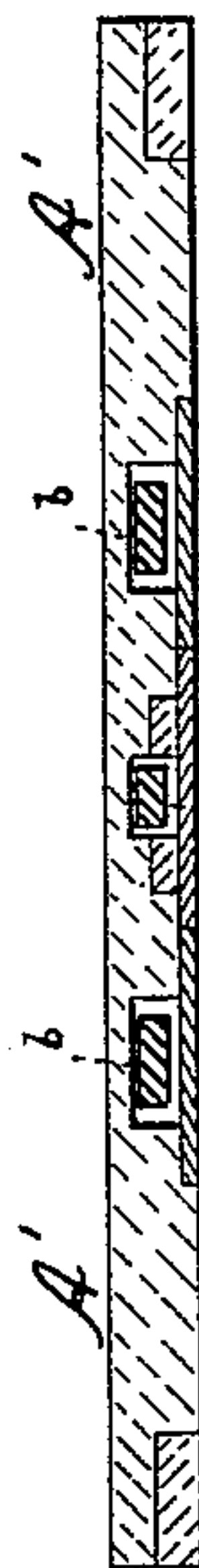
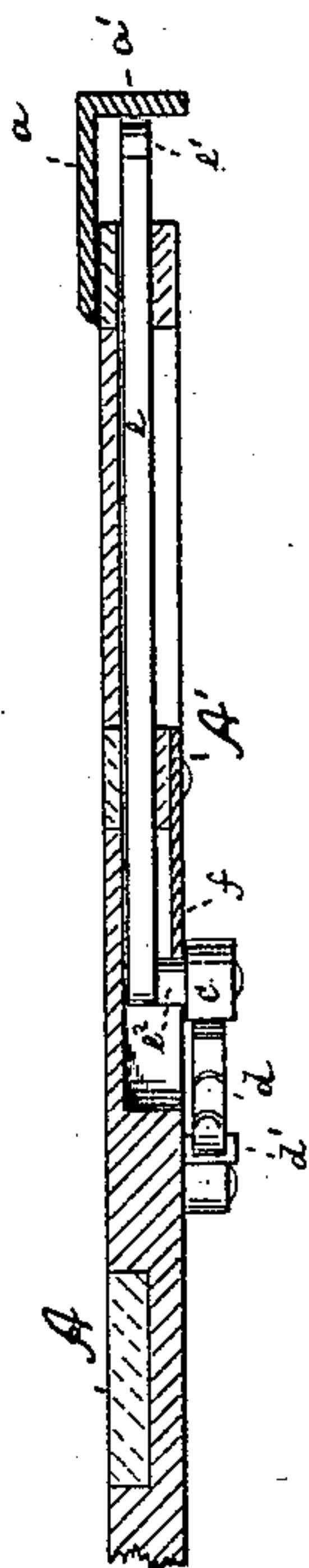


FIG. 5



WITNESSES,

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UNITED STATES PATENT OFFICE.

FRANK A. FOX, OF NEW YORK, N. Y.

CAR-BUFFER.

SPECIFICATION forming part of Letters Patent No. 390,958, dated October 9, 1888.

Application filed May 14, 1888. Serial No. 273,861. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. FOX, of New York city, New York, have invented a new and Improved Car-Buffer, of which the following is a specification.

This invention relates to a car-buffer so constructed that the two buffer-heads of a pair of adjoining cars will be in contact from end to end, even if the cars round a curve.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a bottom view of a buffer constructed according to my invention. Figs. 2 and 3 are bottom views of modifications. Fig. 4 is a top view of a pair of adjoining buffers, showing the position of the parts on rounding a curve. Fig. 5 is a vertical longitudinal section on line $x x$, Fig. 1; and Fig. 6, a vertical transverse section on line $y y$, Fig. 1.

With particular reference to Figs. 1, 4, 5, and 6, the letter A represents the platform of a car, and a is the buffer-head. This head is in the form of an angle-plate with its flange a' depending over the edge of the platform. The width of the buffer-head is preferably such that it extends over the main portion of the platform, as shown. To the flange a' there is secured a pair of lugs, a^2 , equidistant from the center, and to each lug there is pivoted a bar, b , the other end of such bar being pivoted to an oscillating bar, c . The bars b pass through enlarged openings in the cross-beam A' of the platform, Fig. 6, and thus the bars are free to oscillate sidewise, while at the same time they are free to move backward and forward.

The oscillating bar c is not pivoted to the platform A, but is free to slide backward and forward with the bars b and to vibrate with such bars. The whole construction $a b c b$ forms in effect a rectangle in which each side is pivotally connected to the adjoining side, so that the inclination of the sides to one another may be varied. Against the rear edge of bar c there bear the two ends of a leaf-spring, d , such leaf-spring being disconnected from bar c , but connected by an eye, d' , to the platform A in such a manner that the spring may vibrate around its point of attachment. The eye is pivoted preferably by a lubricated pin to the platform.

In order to give additional strength to the center of the buffer-head a , I re-enforce it by the head e' of a bolt, e , placed directly back of the buffer-head and pivoted by pin e^2 to the cross-bar c . This bolt e is of particular service if the buffer is to be mated with a narrow or center bearing buffer.

The operation of the parts is as follows: The buffers of two adjoining cars will by the leaf-springs be held in contact with one another. When the cars round a curve, the unequal pressure upon the ends of the buffer-heads will cause the vibration of the bars c , so that the buffer-heads will stand at an angle to the edge of the platform, as shown in Fig. 4. Thus the buffer-heads will always be in contact from end to end.

An important feature of this invention is the employment of a leaf-spring so arranged that one arm of such spring is under the same tension as the other arm. This is effected by permitting the spring to turn on its point of attachment. So, also, I deem it of importance to not pivotally connect the bar c to the platform A, as by this simple means the buffers may yield in the act of coupling, while at the same time the oscillation of the bar on rounding curves is permitted. The forward motion of bar c is limited by a stop, f .

In Fig. 2 I have shown a double leaf-spring, d^2 , in lieu of the single leaf-spring d .

In Fig. 3 the bar c is omitted and the leaf-spring d^3 is made to assume a double function—viz., that of a spring and of the bar. In this modification the ends of the spring should be slotted for the accommodation of the reduced ends of the bars b , the slots being of sufficient width to permit lateral motion of such ends.

What I claim is—

The combination of angle-plate a , having lugs a^2 on flange a' , with a pair of bars, b , pivoted to such lugs, and with the oscillating bar c , pivoted to the bars b , and with a leaf-spring pivoted to the platform and bearing against the oscillating bar c , substantially as specified.

FRANK A. FOX.

Witnesses:

F. V. BRIESEN,
ALFRED JONGHMANS.