

S. T. LAMB.
Car-Couplings.

No. 146,918.

Patented Jan. 27, 1874.

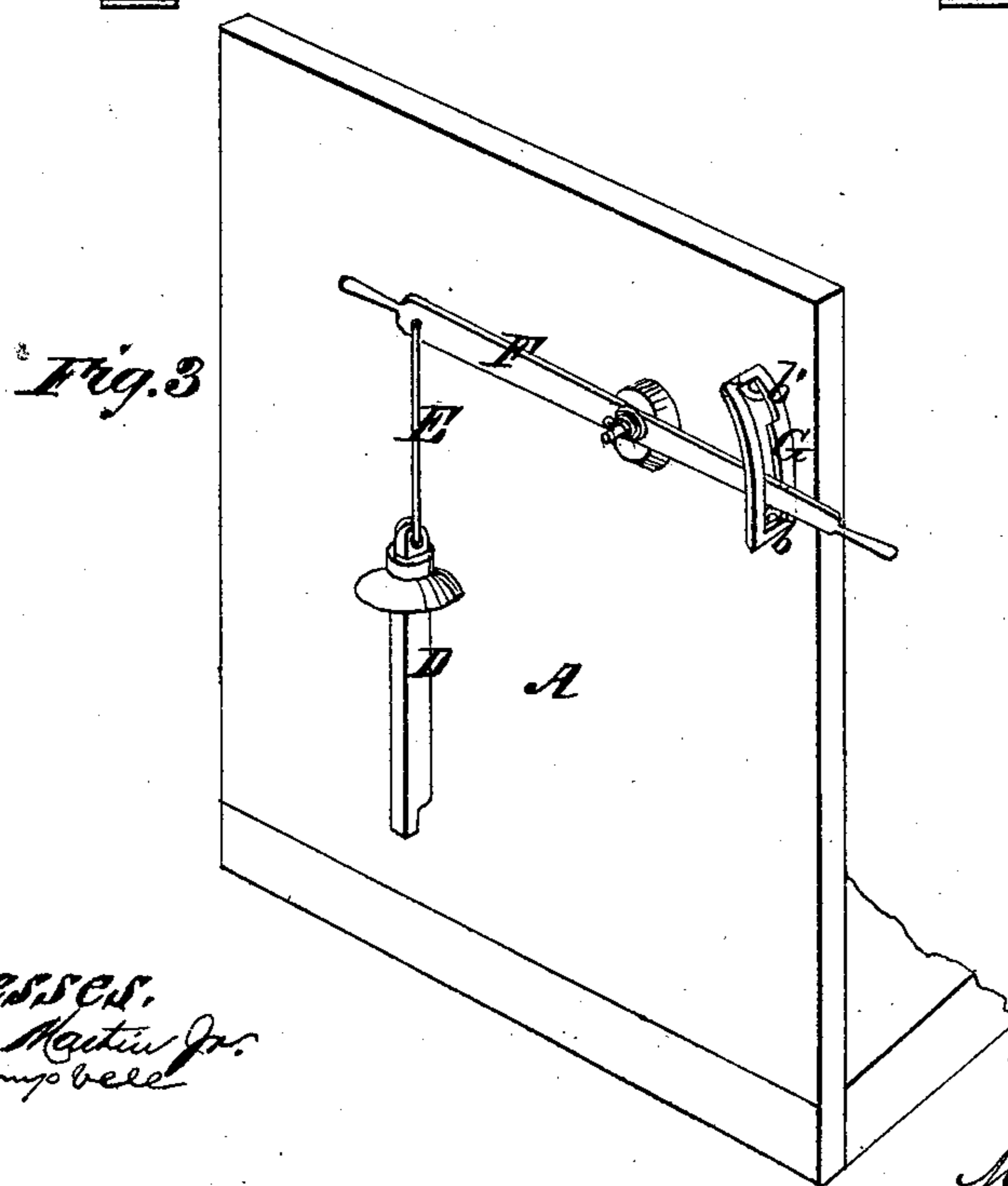
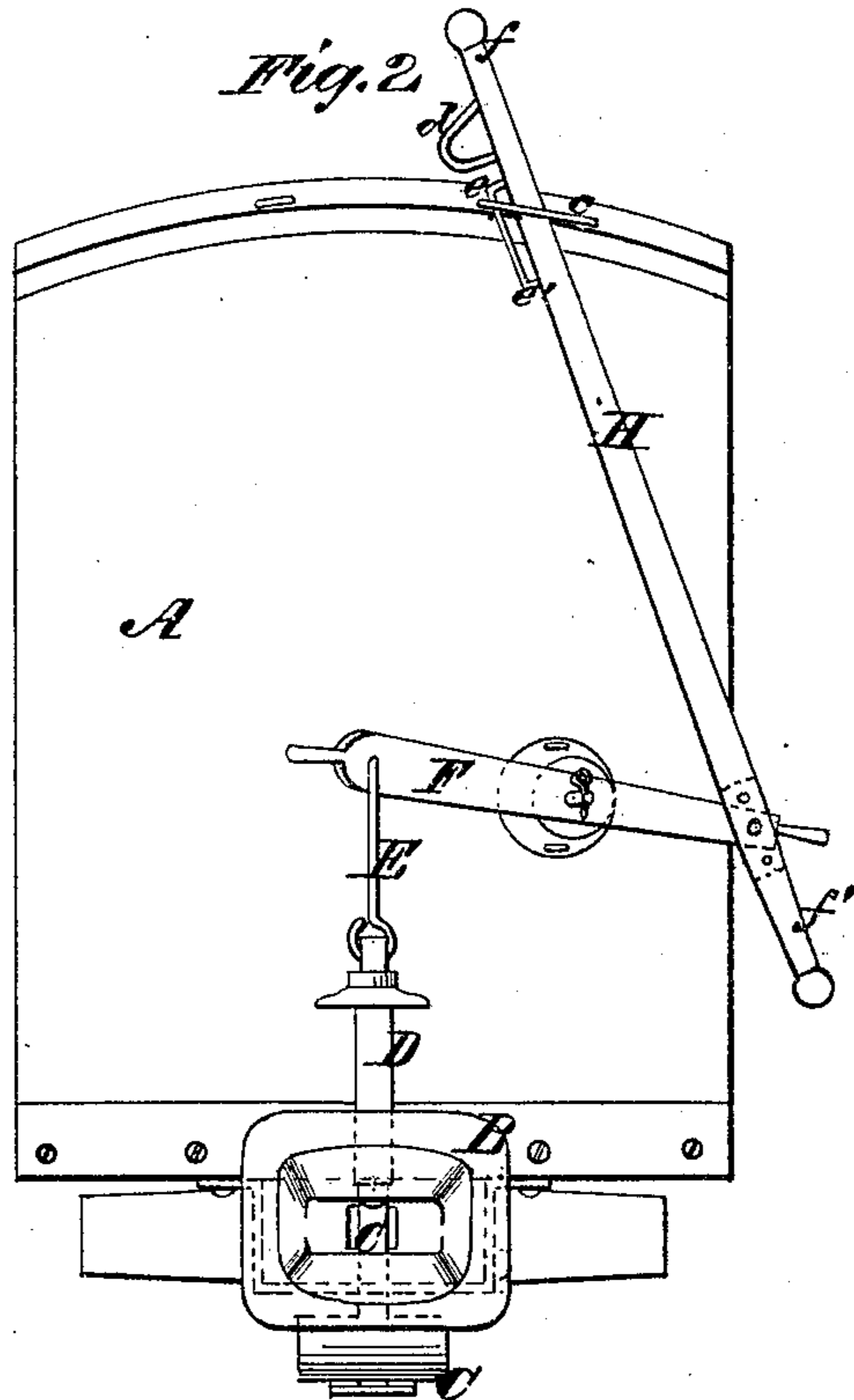
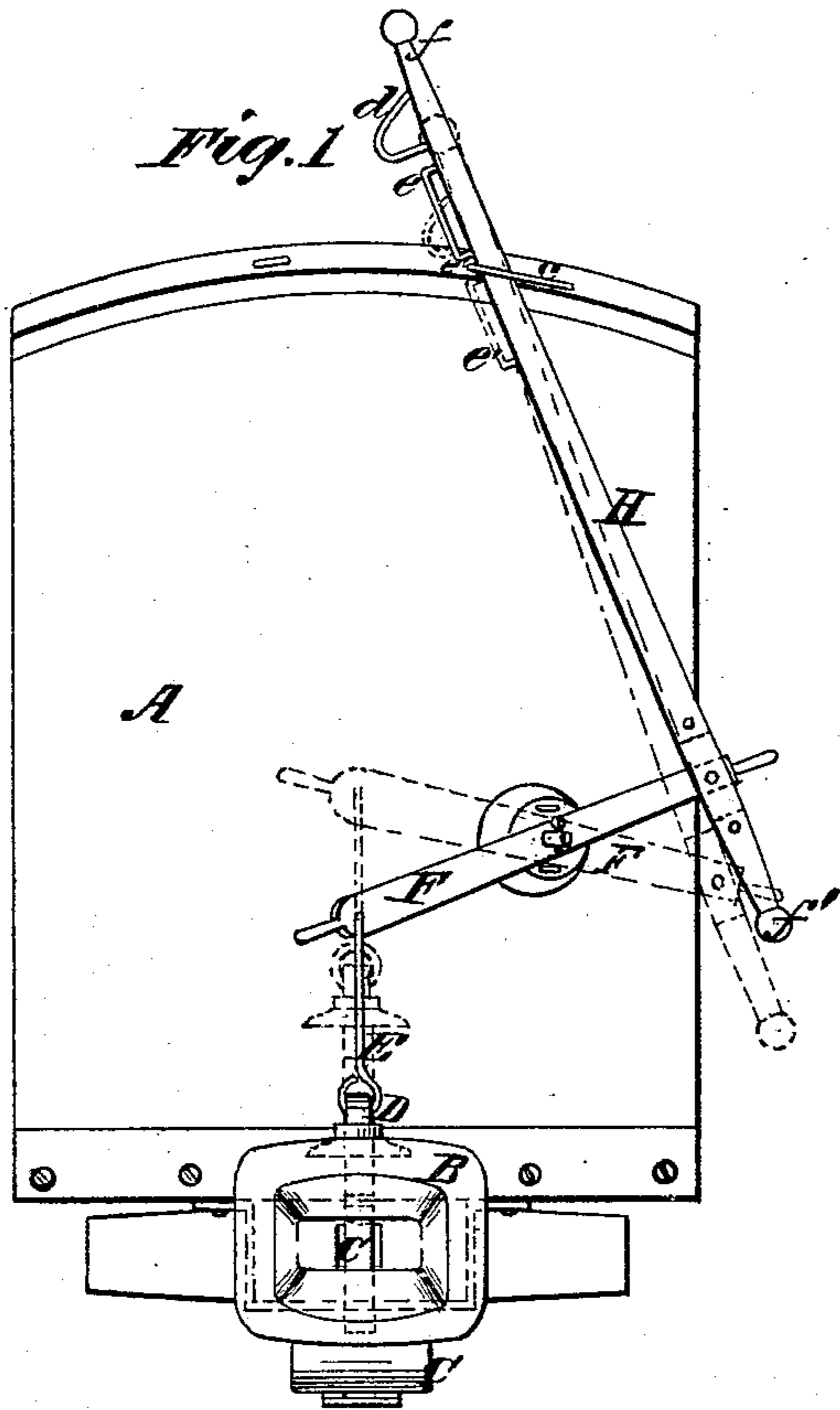
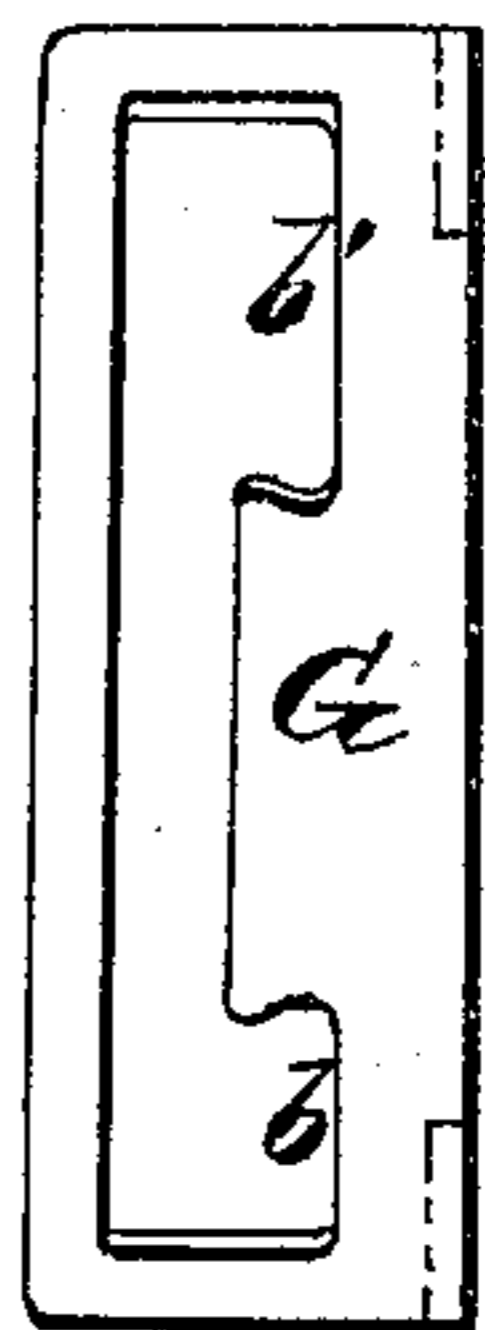


Fig. 4



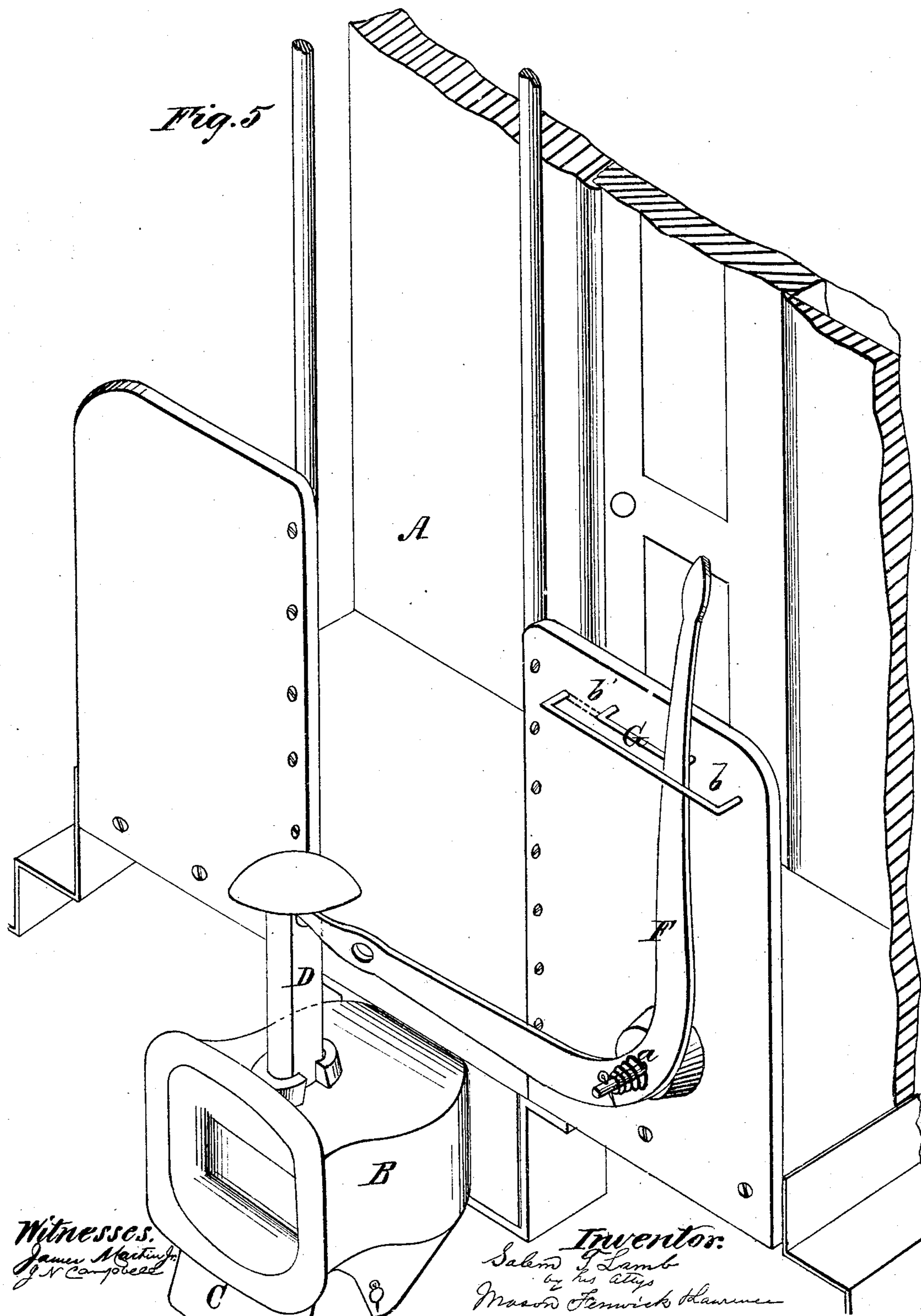
Witnesses.
James Martin Jr.
J. W. Campbell

Inventor.
Salem T. Lamb
by his attys
Mason Fenwick Lawrence

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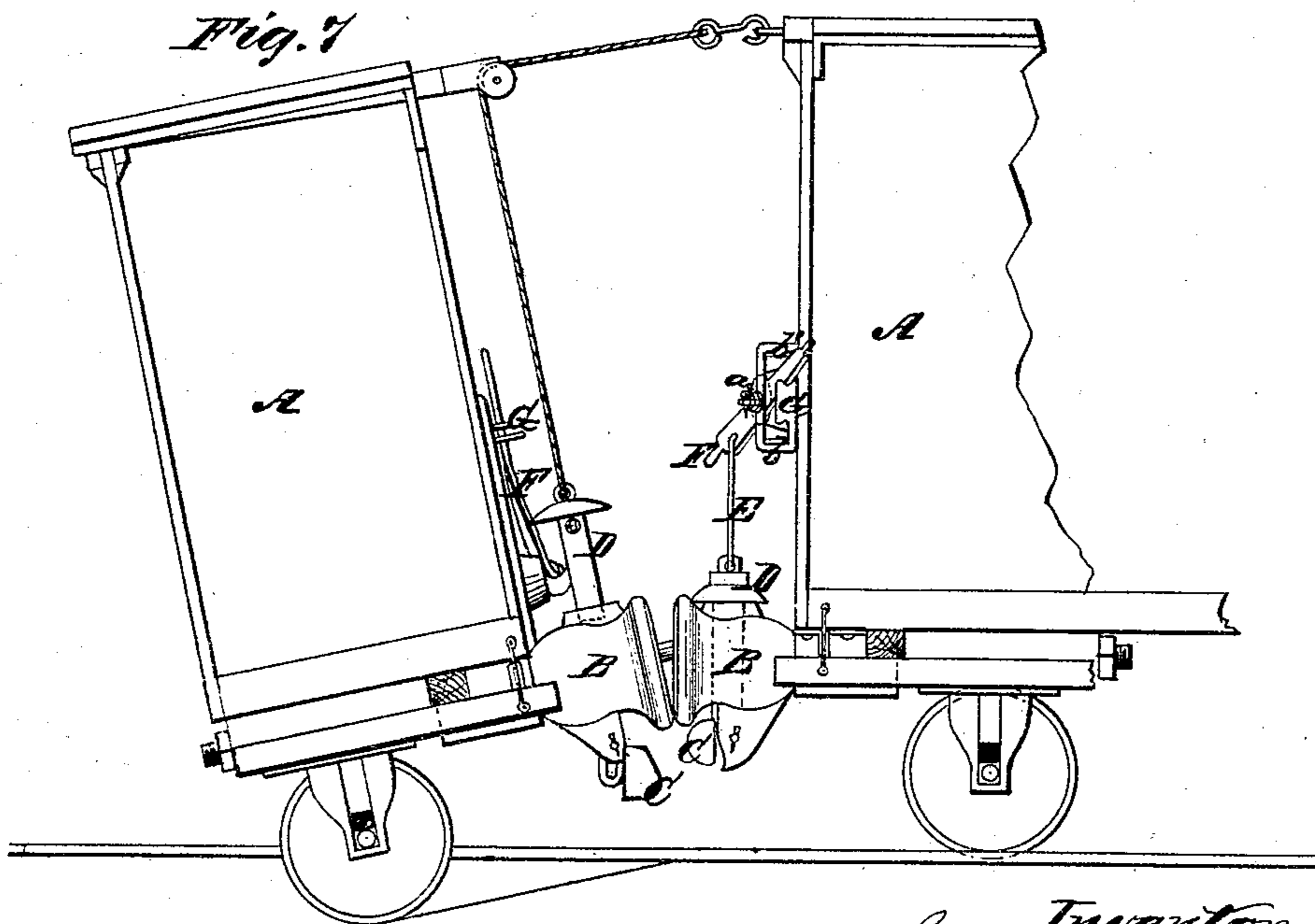
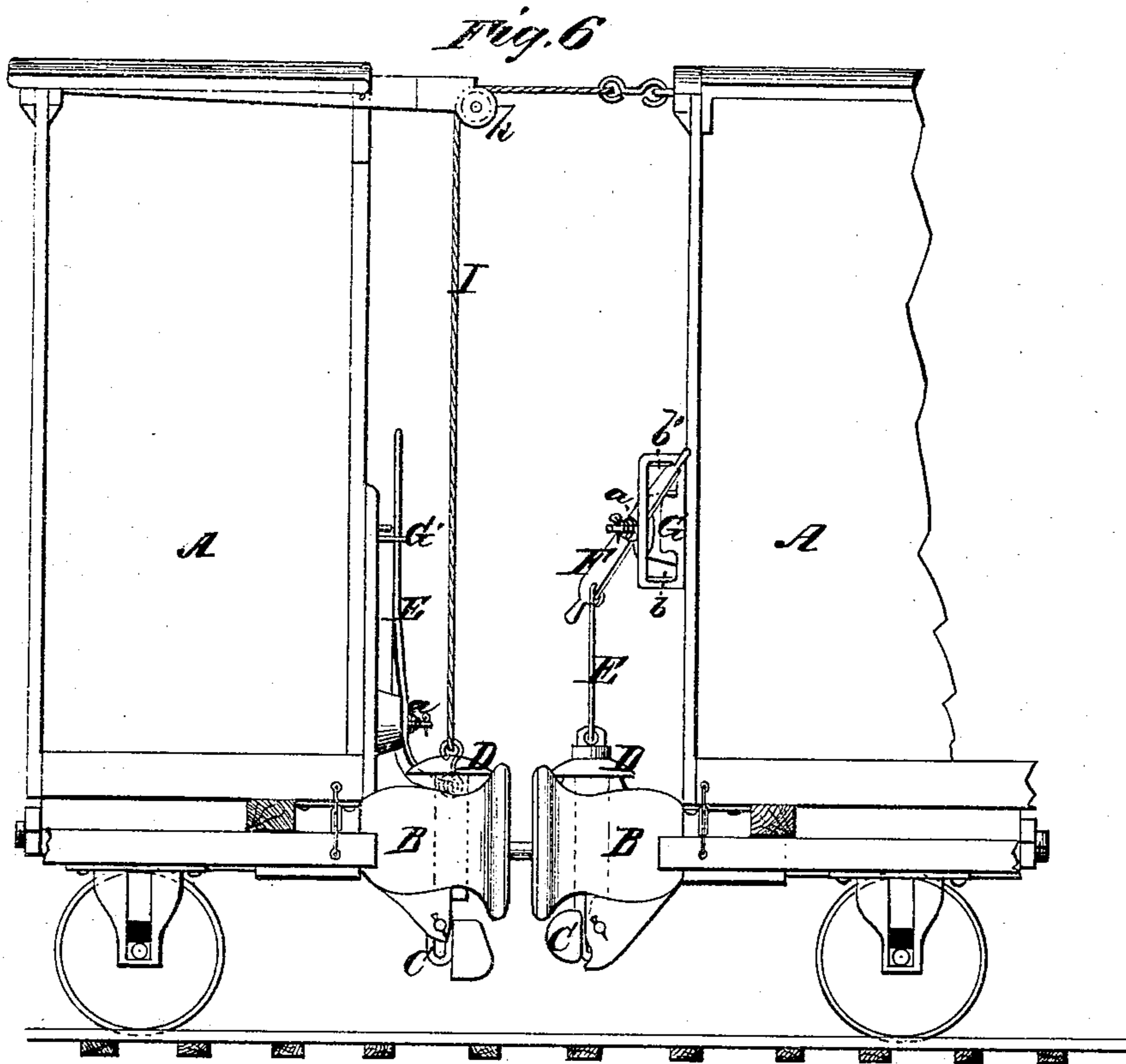
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UNITED STATES PATENT OFFICE.

SALEM T. LAMB, OF NEW ALBANY, INDIANA, ASSIGNOR TO HIMSELF AND BENJAMIN F. AVERY, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,918**, dated January 27, 1874; application filed January 15, 1874.

CASE B.

To all whom it may concern:

Be it known that I, SALEM T. LAMB, of New Albany, in the county of Floyd and State of Indiana, have invented a new and useful Improvement in Devices for Operating the Coupling-Pins of Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is an end view of a box-car with my device for operating the coupling applied to it, the pin being down, the dotted lines showing the pin positively held up. Fig. 2 is also an end view of the same car and devices, the pin being raised but not positively held up, it resting on a trip which is used in the draw-head. Fig. 3 is a perspective view of the end of half box-car, showing a modification of the mechanism whereby it is adapted for this character of cars. Fig. 4 is an edge view of the lever lock-plate used with the plan shown in Fig. 3. Fig. 5 is a perspective view of the end of a passenger-car, showing a modification of the mechanism whereby it is adapted for use on such cars. Fig. 6 is a side elevation of two cars, showing an automatic uncoupling device combined with the hand mechanism shown in the Figs. 3 and 5. Fig. 7 is a similar view illustrating the manner in which the automatic device operates to pull out the coupling-pin when a car runs off the track.

My improvements are specially designed for use with the self coupling which is claimed under my application "A," filed simultaneously with this application, but they are not confined to the construction therein shown, as they may be used with other self-coupling devices.

The nature of my invention consists, first, in the combination with the coupling-pin of an automatic coupler, of a vertically-vibrating and sliding lever, and a locking device, and also in the combination, with the vibrating lever, of an auxiliary lever and a locking device, whereby the pin can be lifted out of the link and held up positively; also, can be set and held up by the trip, so as to fall when the link strikes the trip, and likewise can be positively

locked in the link, either by a single or a compound lever, and either from a position on the top of a car or the side or platform thereof. Second, it consists in the combination of a cord or chain, and a hand-lever and a locking device, with an automatic coupling, whereby the pin can be locked up positively, also adjusted to rest upon the trip and left free to fall into the link when the trip is struck by the link, and after it has dropped into the link is left in a condition to be lifted automatically when a car runs off the track, and whereby it is automatically lifted out of the link when such accident occurs. Third, it consists in the automatic uncoupling device, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

A represents the car; B, the draw-head; C, the trip of the coupling-pin; and D the coupling-pin. The draw-head and trip are constructed as shown in my application "A," and need not be particularly described here, as they are not claimed under this patent. It is proper, however, to say that the trip is hung below the horizontal axis of the draw-head on a pivot, and its upper end is always inclined by its weighted end to a position which brings it under the coupling-pin when said coupling-pin is raised. E is a vertical rigid rod hinged to the upper end of the coupling-pin; F, a hand-lever pivoted about midway of its length to the front of the car. This lever is fitted to swing up and down, and to slide back and forth on its pivot, and in its back and forth movements it is controlled by a spring, *a*, so arranged on the pin that it bears against the face of the lever. This sliding movement permits the lever to be unlocked from the notches *b b'* of a curved locking device, G, which is applied on the car near the outer end of the lever, and the spring causes this lever to fall back into the notches *b b'*, accordingly as circumstances require.

The device thus far described answers for half-box cars, and to employ it upon full-box cars I have contrived an auxiliary lever, H, to

be pivoted to the lever F, and substituting for the locking device G a staple, *c*, attached to the top of the car, and the stops *d*, *e*, and *e'*, attached to the lever H, as shown in Figs. 1 and 2. The lever H is constructed with two handles, *f f'*, and is pivoted to the lever G at a point some distance below the lower handle, *f'*.

To raise and positively lock-up the coupling-pin with this device the manager takes hold of the upper or lower end of the lever H and depresses or pulls it down until the coupling-pin is raised and the staple of the car comes between the two stops *d* and *e*. This raises and locks the pin up, as shown in dotted lines in Fig. 1. Now, to set the pin for being tripped, he moves the upper end of the lever upward and outward until the upper stop *e* passes slightly above the staple, and the coupling-pin rests down upon the trip C. This adjustment places the parts in condition for the automatic coupling of the cars when they come together. As soon as the cars have been coupled the stop *e'* comes over the staple and locks the coupling-pin down in the link, so that a separation of the cars cannot take place.

In Fig. 5 the lever F is modified only in form, so as to take a positive hold upon the under side of the pin. This form dispenses with the vertical rod E. Under this construction the locking device is substantially the same as in Fig. 3.

To render cars capable of automatically uncoupling, and at the same time have the coupling-pin under the control of the manager, I have attached a cord or chain, I, to one of the pins, and run this cord up to and over a pulley, *h*, at the top of the same car, and hook the end of this cord to a staple at the top of the other car, as shown. When this cord is used, the stop-notch *b'* is not used, and the space is filled out, as shown in dotted lines in Fig. 5. Under this arrangement the lever is

used for locking the pin positively in an elevated position—also, for adjusting it upon the trip—and the pin is tripped as in all the other plans; but it is not locked down in the link and draw-head, but is left unlocked, in order that, if a car runs off the track, the cord or chain may pull the pin out of the link, and thus uncouple the cars, as shown in Fig. 7. This result of uncoupling is due to the separation of the cars more rapidly at the top than at the platform.

On some cars the cord or chain I can be hooked directly to the head of the coupling-pin, and on such cars the lever may be dispensed with.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the coupling-pin D of an automatic coupler, of a vibrating and sliding lever, F, a spring, *a*, and a locking device, G, substantially as and for the purpose described.

2. The combination, with the coupling-pin of an automatic coupler, of a rigid link or rod, E, lever F, an auxiliary lever, H, staple *c*, and stops *d e e'*, substantially as and for the purpose described.

3. The combination, with the coupling-pin of a self-coupler, of the lever F, a locking device, G, with a single stop, *b*, and a cord or chain, I, connected to the pin and to the two cars, substantially as described.

4. The cord or chain I, connected to the coupling-pin D and carried up over a support or pulley, *h*, of one car and connected to the top of an adjoining car, substantially as and for the purpose described.

SALEM T. LAMB.

Witnesses:

J. N. CAMPBELL,
JAMES MARTIN, Jr.