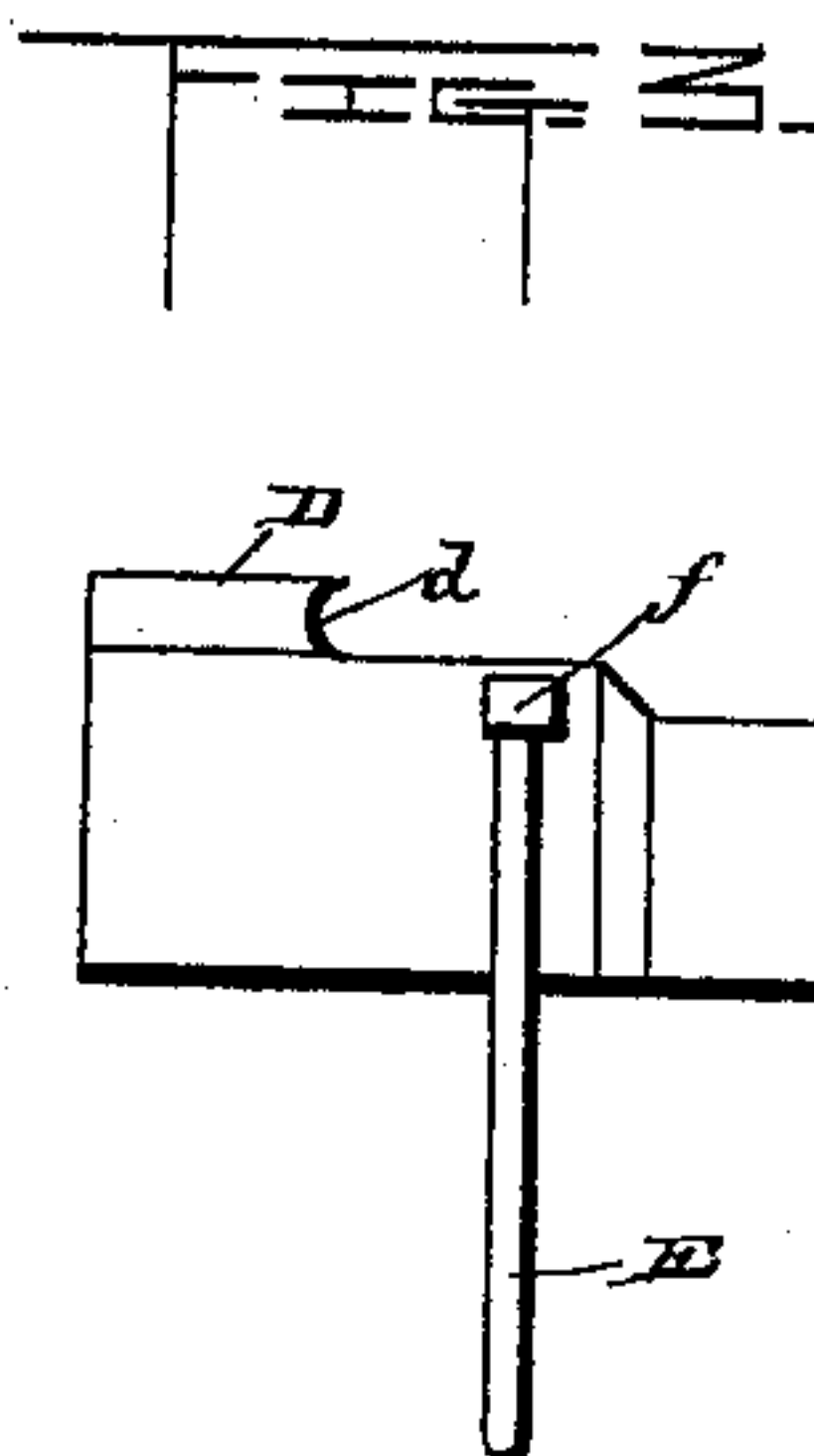
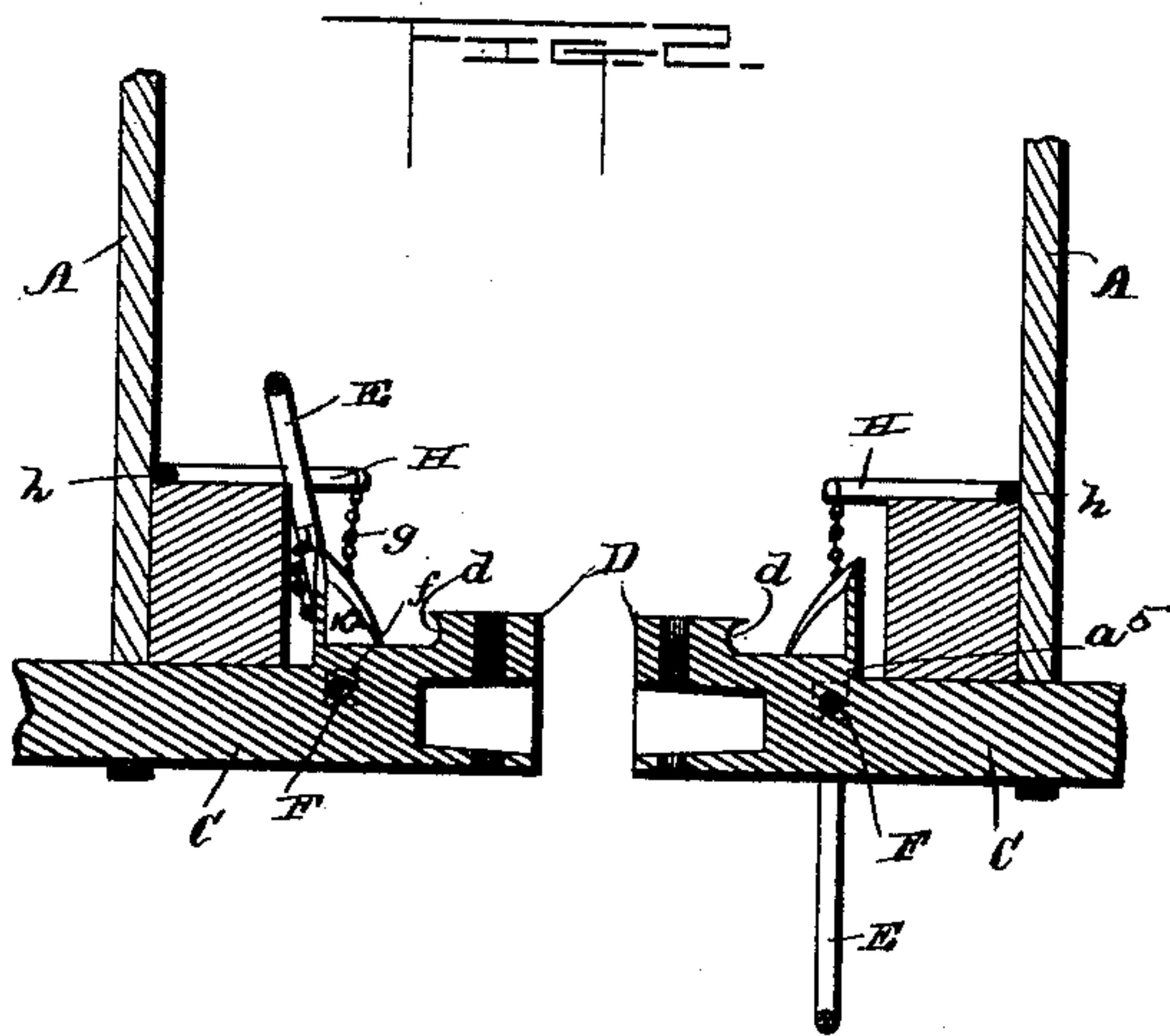
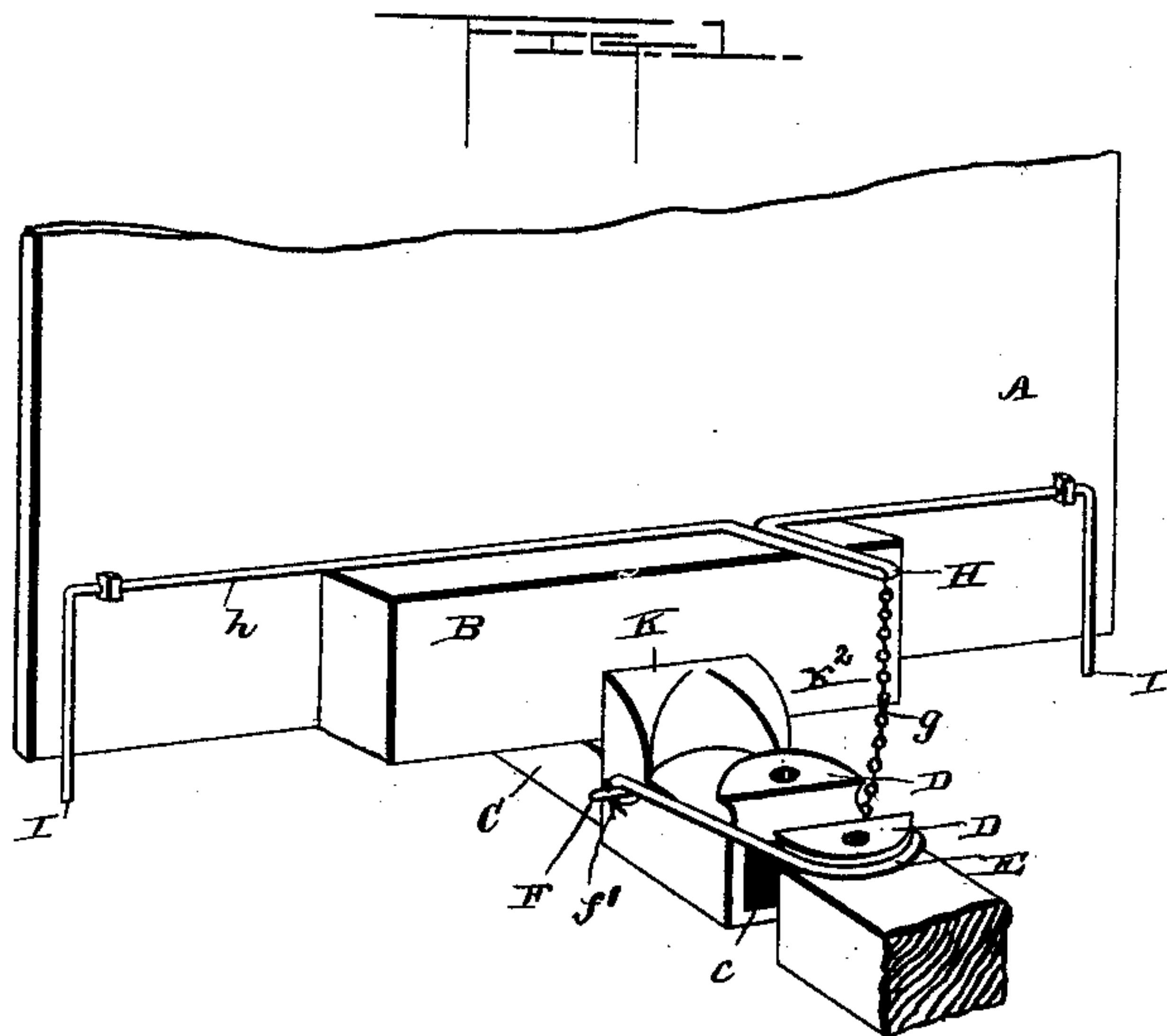


(No Model.)

R. A. RANDLETT & F. W. SMITH.
CAR COUPLING.

No. 415,334.

Patented Nov. 19, 1889.



WITNESSES.

R. B. Seward.

H. N. Lamb.

INVENTORS.

*R. A. Randlett and
F. W. Smith
By James B. Young and
E. C. Seward
Attorneys.*

UNITED STATES PATENT OFFICE.

REUBEN A. RANDLETT AND FRANK W. SMITH, OF TOPEKA, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 415,334, dated November 19, 1889.

Application filed April 13, 1889. Serial No. 307,086. (No model.)

To all whom it may concern:

Be it known that we, REUBEN A. RANDLETT and FRANK W. SMITH, citizens of the United States, residing at Topeka, in the county of Shawnee and State of Kansas, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in car-couplings.

The object is to provide a safety-coupler which will not require the operator to expose himself to injury between the cars to be coupled, and at the same time to provide a coupling which shall be simple, durable, and effective, and which will act automatically.

With these ends in view our invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 represents the end of the car with the draw-head and coupler in position thereon. Fig. 2 is a vertical longitudinal section showing the parts in position to couple automatically. Fig. 3 shows a modified form of draw-head.

A represents the end of a car; B, a pillow or abutment to receive the shock caused by the coming together of two cars, and C a draw-bar supported, as usual, to have a limited longitudinal movement. The draw-head on the outer end of the bar C is provided with a funnel-shaped opening *c*, as is usual, to receive the end of an ordinary link when it is desired to couple a car fitted with such common device to a car having our improved coupling. From the front upper portion of the draw-head a strong lug or hook D projects, the same being preferably formed integral with the draw-head and having its outer face flush therewith, while its inner face is cut under, as shown at *d*, forming a curved seat for the reception of the bight of the coupling-loop.

The coupling-loop E is U-shaped, and is pivotally secured to the draw-head, so as to rock freely up and down. The means which we prefer to employ for this purpose consist of a strong bolt F, which extends laterally

through the draw-head and receives upon its ends the free ends of the loop E. The head *f* of the bolt serves to retain one end of the loop in position, while the other end may be secured in position by a key or pin *f'*. To one side of the loop E a clip G is secured, to which is attached one end of a chain or other suitable flexible connection *g*, the other end of the chain being secured to an arm H, projecting laterally from a cross-rod *h*, journaled to the end of the car and provided with handles I—one at each side of the car—by means of which the rod may be rocked, the arm H thereby swung, and the loop E lifted out of engagement with the draw-head with which it is engaged.

To set the loop E in position to couple automatically, it is elevated and allowed to swing back toward the end of the car until it is slightly past the center, where it will remain until the shock of the approaching draw-head causes it to drop forward into engagement with said head, thereby effecting a coupling of the cars.

In order to protect the draw-head and the mechanism connected therewith from injury, and at the same time to furnish a guide to assist the falling loop into its seat, we provide a buffer K at the rear portion of the draw-head, which projects upwardly from a shoulder *a*⁵, formed on the draw-bar slightly above the hooked lug D, into a position to abut against the pillow B when the draw-head is driven back, the outer face of said buffer being inclined outwardly and downwardly and having a curved recess K², serving to give the bight of the coupling-loop a movement toward its seat.

It will be noticed that when the draw-bars are pressed in, in the act of coupling, the shoulder *a*⁵ of each draw-bar will contact with the pillow B, and will relieve the buffer K from undue strain, thus decreasing to a minimum the liability of breakage.

The coupling as thus constructed is well adapted to general use, admits of the lateral swing of the ends of the cars without suffering any undue strain, and is simple and durable.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The herein-described car-coupling, consisting of a draw-head having a funnel-shaped opening, the said draw-head being provided with a lug or projection uprising from its
5 front end and undercut on the side toward the end of the car, and with a buffer located a short distance back from the uprising undercut lug and having its side toward the lug slanting toward the undercut portion of the
10 lug and its opposite side upright, a vertically-swinging loop pivotally secured at its ends to the draw-head by a through - bolt, a rocking

rod journaled to the end of the car and provided with an outwardly-extending arm which projects over the swinging loop, and a flexible connection between the end of the arm
15 and the loop, substantially as set forth.

In testimony whereof we have affixed our signatures in presence of two witnesses.

REUBEN A. RANDLETT.

FRANK W. SMITH.

Witnesses:

J. M. GRIFFIN,

J. C. DALE.