

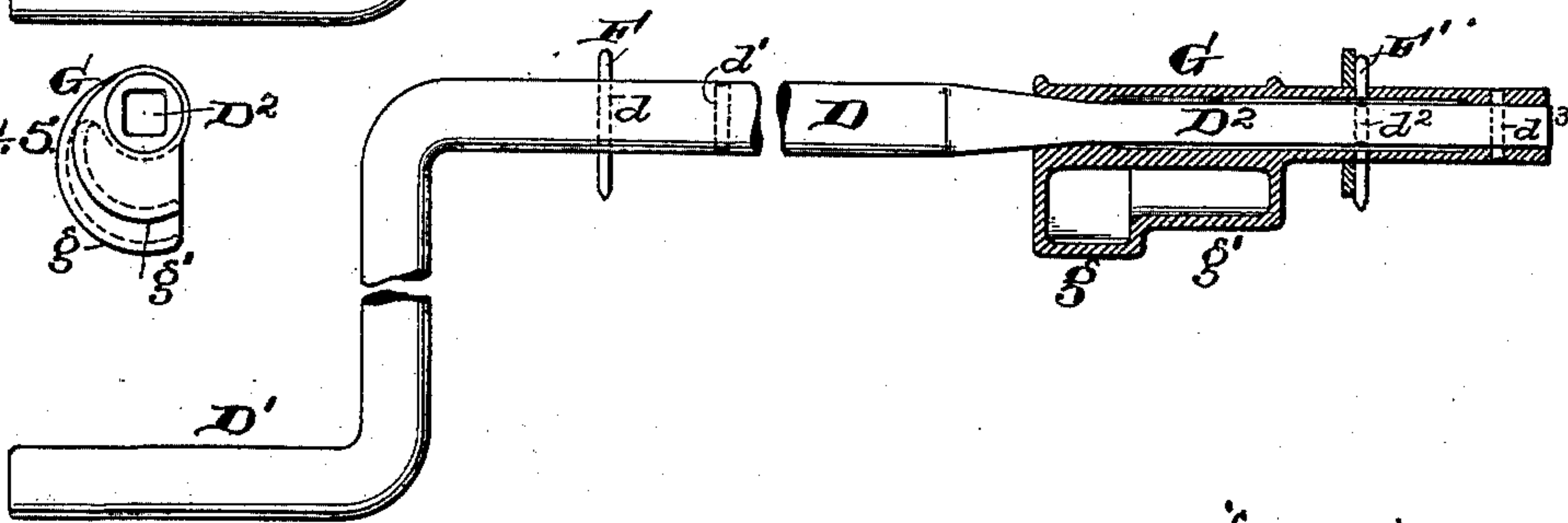
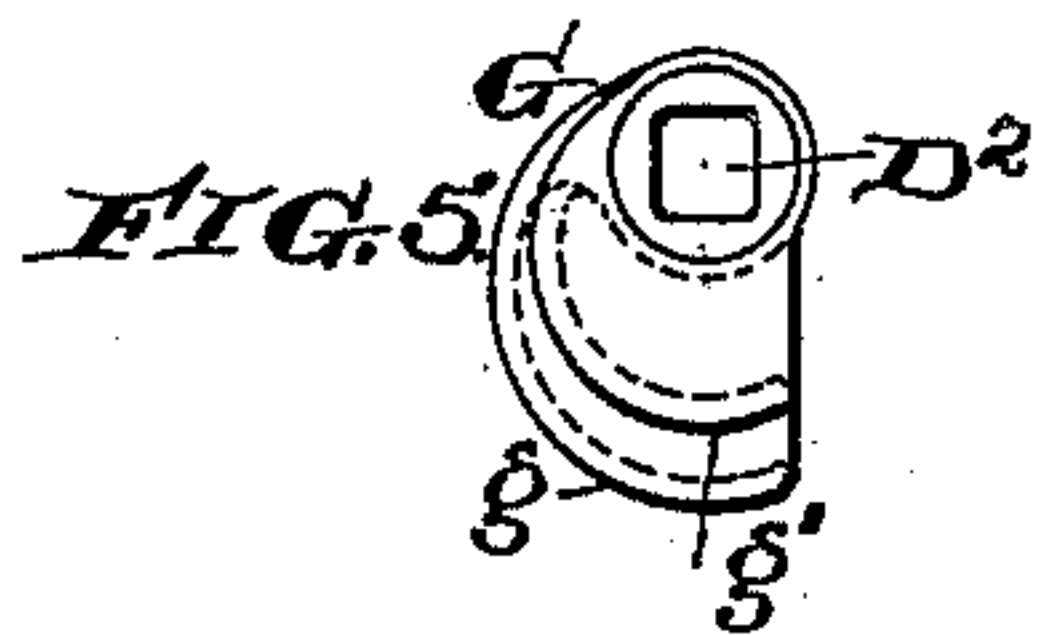
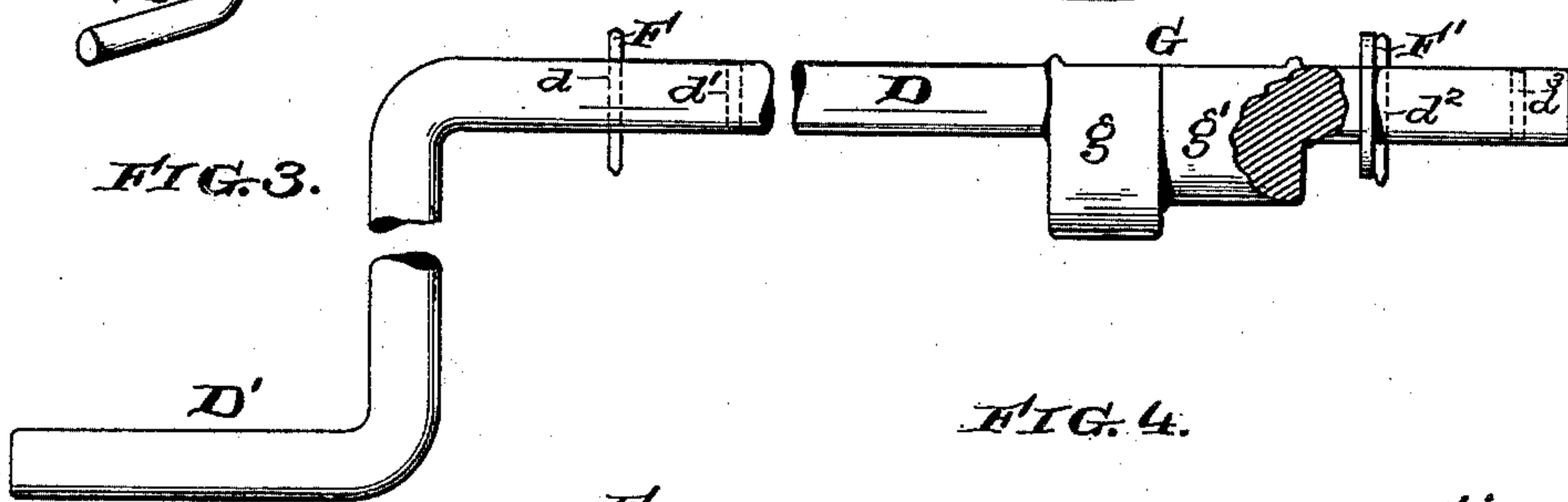
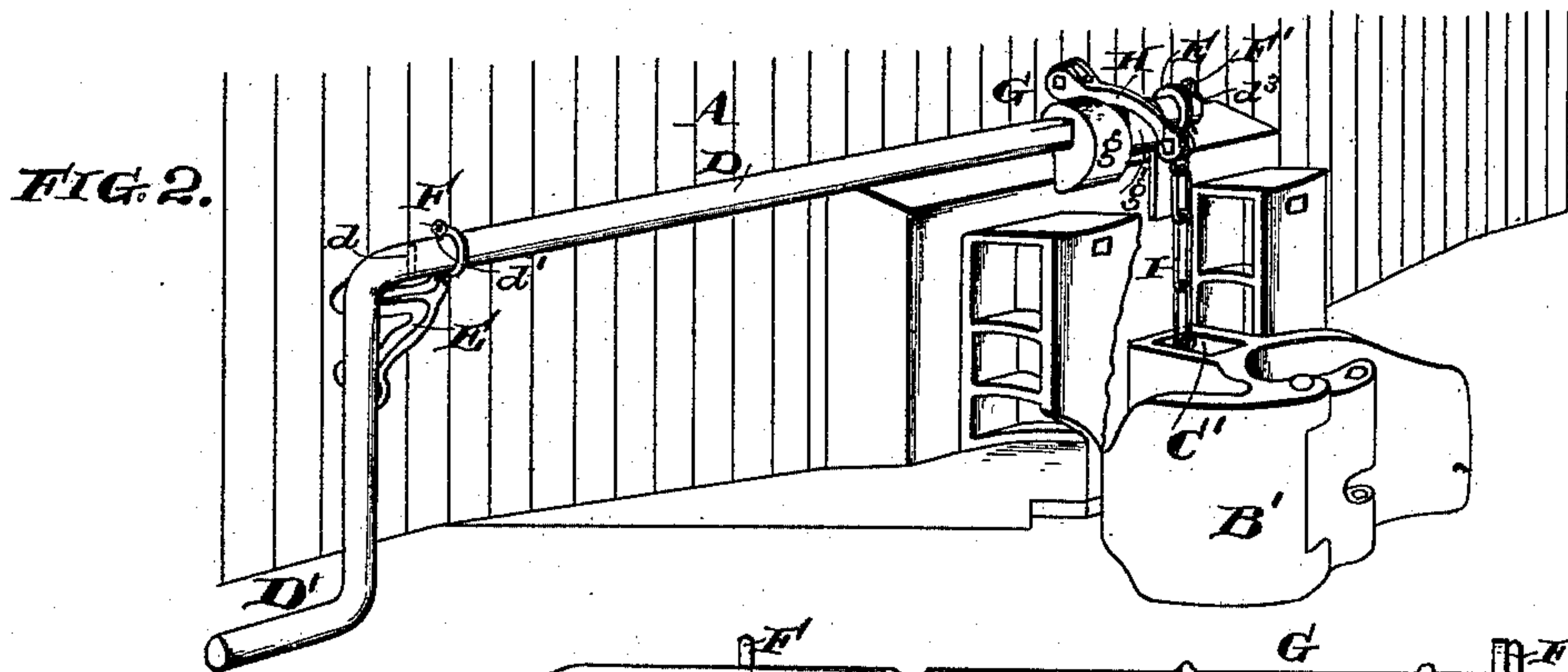
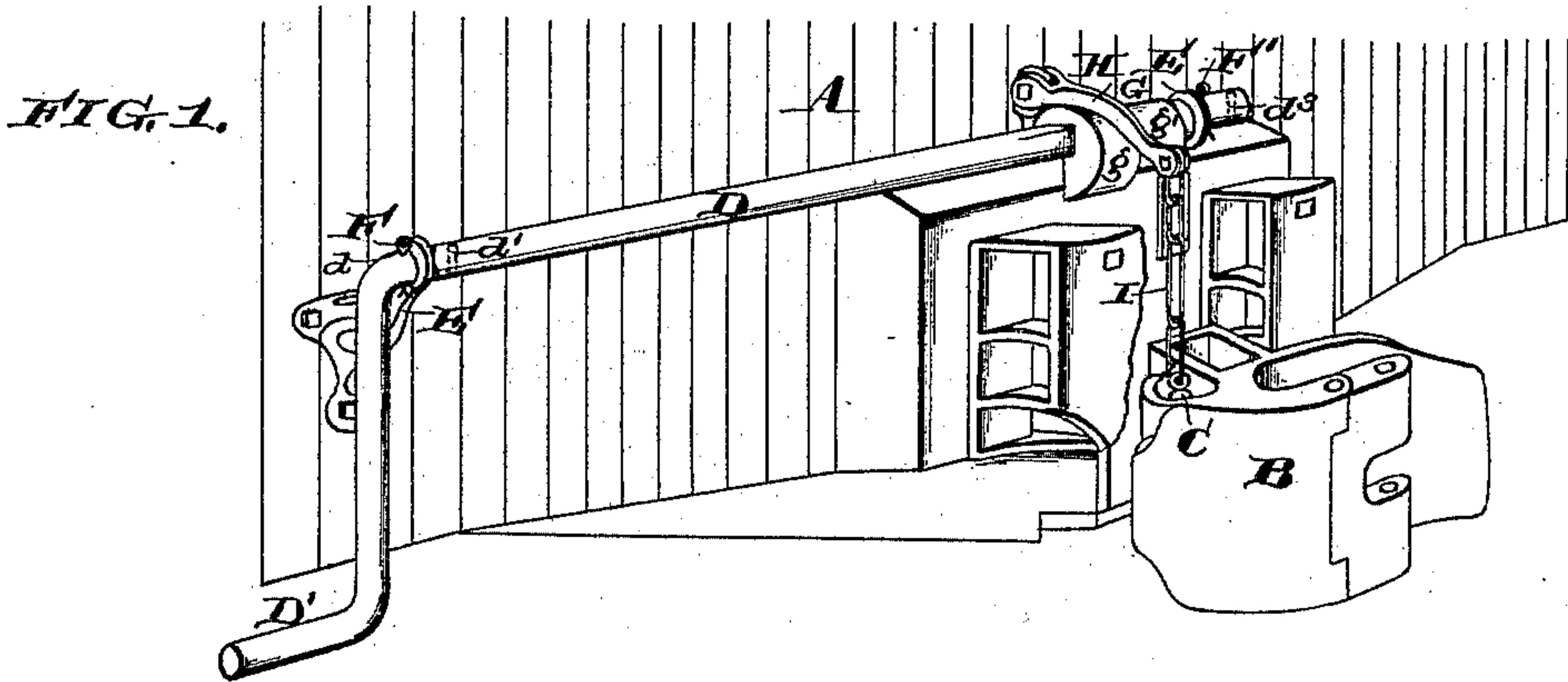
(No Model.)

2 Sheets—Sheet 1.

S. H. HARRINGTON.
UNLATCHING DEVICE FOR CAR COUPLINGS.

No. 426,565.

Patented Apr. 29, 1890.



Witnesses:
Henry Doring
Hiram Burstein

Inventor:
Samuel H. Harrington
by his attorney
James T. Chambers

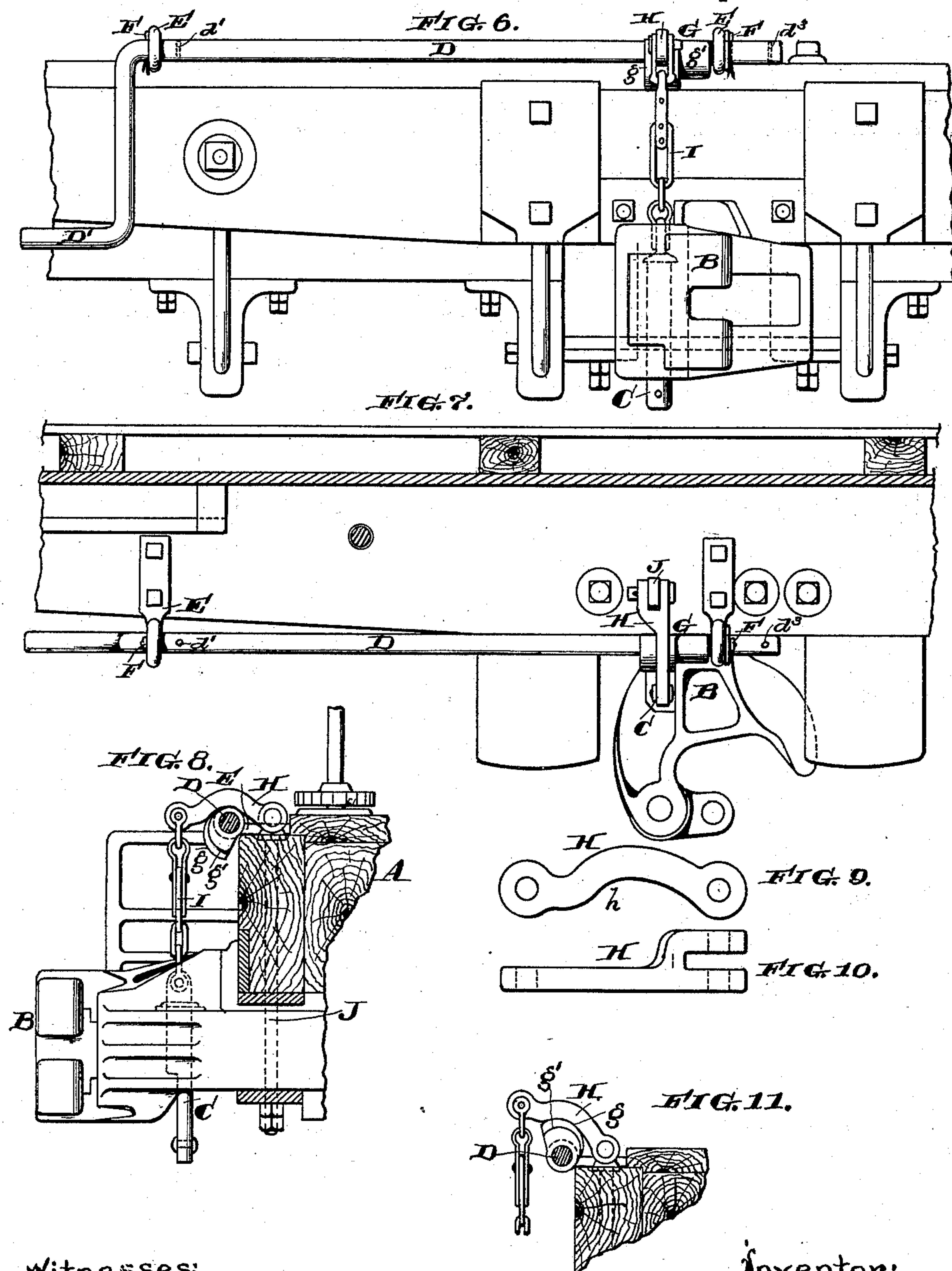
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UNITED STATES PATENT OFFICE.

SAMUEL H. HARRINGTON, OF BINGHAMTON, NEW YORK.

UNLATCHING DEVICE FOR CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 426,565, dated April 29, 1890.

Application filed February 19, 1890. Serial No. 341,036. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. HARRINGTON, of Binghamton, county of Broome, State of New York, have invented a new and useful
5 Unlatching Device for Car-Couplers, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

10 My invention relates to mechanism for lifting the latch of car-coupling devices, particularly of those couplers generally known as "vertical plane couplers," such as are now known as the "master car-builders' type."

15 The object of the invention is, first, to provide a device by which the latch can be lifted with great power; second, one which will be readily adjusted for use with couplers the latches of which require elevations to different heights—as, for instance, the Janney coupler, whose latch requires a lift of, say, three
20 and one-half inches, and the Gould coupler, whose latch need not be lifted more than one inch.

25 The nature of my invention will be best understood as described in connection with the drawings, in which I have illustrated it in what I believe to be its best form, and in which—

30 Figure 1 is a perspective view of the end of a freight-car equipped with my device and with a Janney coupler, the device being shown as adjusted for said coupler. Fig. 2 is a similar view showing a Gould coupler in place of the Janney and the device being adjusted for
35 use with the said Gould coupler. Fig. 3 is a view of the crank-shaft and cam as made of a single forging; Fig. 4, a view of the same parts, showing the cam as formed of a casting and secured upon the shaft. Fig. 5 is a side view
40 of the cam. Fig. 6 is a front elevation of a car having a projecting end sill, showing my device applied to it; Fig. 7, a plan view of the same; Fig. 8, a side elevation; Figs. 9 and 10, respectively, side and plan views of the lever
45 acted on by the cams; and Fig. 11, a side elevation showing the effect of throwing up the cam to the fullest extent.

A is the car; B, a Janney coupler; C, its latch; B', a Gould coupler, and C' its latch. To permit the jaw of the Janney coupler to open, the
50 latch is drawn up three and one-half inches, while an upward movement of one inch will

permit the Gould jaw to open. I have therefore chosen these two couplers as affording a good illustration of the operation of my device and its adaptability to either coupling-head, and because, also, as the said couplers couple together readily and are in joint use on many roads, it will be frequently necessary to use a car sometimes with a Janney and sometimes with a Gould coupler.

To a bolt (see J, Fig. 8) or other strong support I pivot above the coupling-head a lever-arm H to chain I or other connection uniting the latch-pin of the coupler. Beneath the lever-arm I secure a cam, as G, which is attached to a crank-shaft D, so as to turn with it, and which in turning raises the lever H, and through it and connection I the latch-pin or lock. In normal position the lever-arm rests on the part of the cam nearest the center of the shaft, and the train-man, actuating shaft D by its crank-arm D', lifts the lever-arm with great force, and a force which is greatest at the beginning, when it is most required to start the latch, and even a moving and heavily-loaded train can be uncoupled with comparative ease—a matter of great importance in handling freight-trains. The shaft D is supported on bearing-brackets E E, as shown.

Preferably I make the cam G double—that is, I provide one cam-face *g* with a throw of, say, three and one-half inches and an adjoining cam-face *g'* with a throw of one inch, and in that case I make the cam longitudinally adjustable, so that either face *g* or *g'* can be brought beneath and made to support and actuate the lever-arm H. The adjustment of the cam can be made on the shaft D; but, preferably, I secure the cam rigidly to the shaft either by forging it upon it, as in Fig. 3, or attaching it to a squared spindle D², as in Fig. 4, and then I make the shaft D longitudinally adjustable in its bearings E, so as to effect the desired adjustment of the double cam.

In the drawings pin-holes *d d' d² d³* are formed in shaft D, and to bring cam-face *g* under the lever-arm H for use with coupler B the shaft is shifted to the position shown in Fig. 1 and pins F F inserted in holes *d* and *d²*, so as to rest against or close to the bearings E, as shown. To adjust the device to the coupler B', the pins F are removed and the

shaft shifted to the position shown in Fig. 2, so as to bring cam-face g' under lever H. The pins F are then inserted in holes d' d^3 , as shown, and the device is again ready for action.

It is desirable that some device should be provided by which the latch-pin of a coupler can be held up out of engagement, so that two cars can be pushed against each other without coupling. This I accomplish by forming the lever-arm H with an upward bend h , so that when the cam resting against it is fully thrown up it will hold it in place, as is shown in Fig. 11.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an unlatching device for car-couplers, the lever H, in combination with a crank-shaft, a cam attached to said shaft and arranged to support and actuate the lever H with gradually-decreasing leverage and increasing speed, and means for connecting said lever with the latch-pin of a coupler, all substantially as and for the purpose specified.

2. As an unlatching device for car-couplers, the lever H, in combination with a longitudinally-adjustable double cam G, having act-

ing surfaces g g' of different throws arranged to come in turn beneath and to support and actuate the lever H as the cam is shifted, a cam-actuating crank-shaft D, and means for connecting the lever H with the latch-pin of a coupler, all substantially as and for the purpose specified.

3. As an unlatching device for car-couplers, the lever H, means for connecting the end of said lever with the latch-pin of a coupler, a longitudinally-adjustable crank-shaft D, and a double cam G, attached to said shaft and having acting faces g g' of different throws arranged to come beneath, support, and actuate the lever H in turn as the shaft is shifted.

4. As an unlatching device for car-couplers, the lever H, formed with upward curve h , as described, means for connecting the end of said lever with the latch-pin of a coupler, a longitudinally-adjustable crank-shaft D, and a double cam G, attached to said shaft and having acting faces g g' of different throws arranged to come beneath, support, and actuate the lever H in turn as the shaft is shifted.

SAMUEL H. HARRINGTON.

Witnesses:

T. F. KEOGH,
A. W. CUMMING.