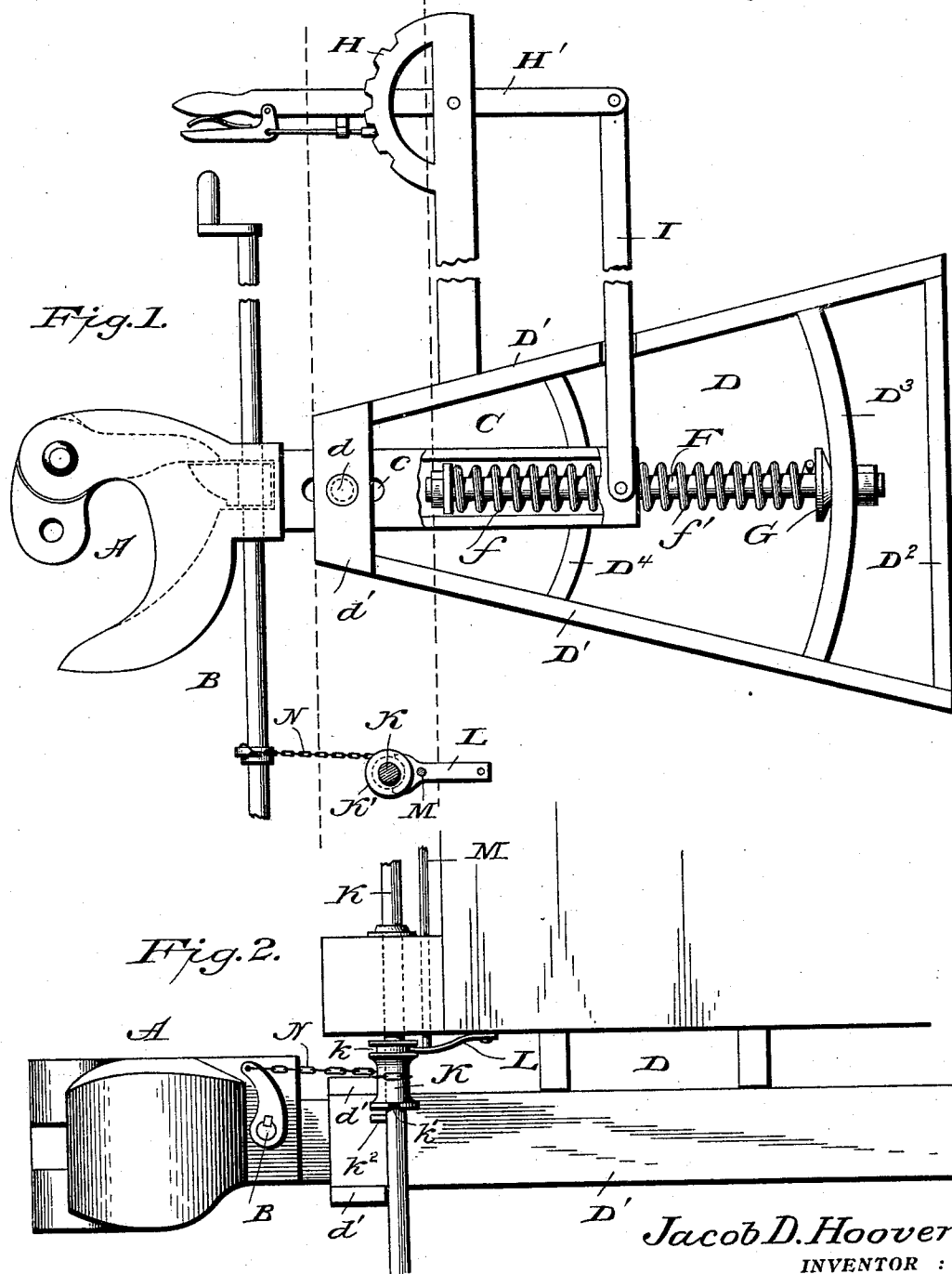


(No Model)

J. D. HOOVER.
CAR COUPLING.

No. 582,920.

Patented May 18, 1897.



WITNESSES:

L. S. Elliott.
W. L. Rice.

INVENTOR :

by *Eugene W. Johnson*
his attorney .

UNITED STATES PATENT OFFICE.

JACOB D. HOOVER, OF WINCHESTER, VIRGINIA, ASSIGNOR OF ONE-HALF
TO GEORGE R. BLAKE, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 582,920, dated May 18, 1897.

Application filed April 1, 1897. Serial No. 630,283. (No model.)

To all whom it may concern:

Be it known that I, JACOB D. HOOVER, a citizen of the United States of America, residing at Winchester, in the county of Frederick and State of Virginia, have invented certain new and useful Improvements in Car-Couplings; and I 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in car-couplers of the Janney type, the object of the present invention being to provide means of novel construction for connecting the draw-bar of such a coupling to the car-body so that the coupling-head will act efficiently on curves, also to provide means for adjusting the draw-head from the side of the car.

The further object of the invention is to provide means for raising the latch of the coupling-head by means of a bar which extends from the coupling-head to the side of the car, which can be operated either directly from the side of the car or from the top through the intervention of a vertical brake-bar.

Having the above ends in view, my invention consists in a draw-bar having a longitudinal slot which engages with a vertical pin, and a rear extension for engagement with the rearwardly-curved transverse bar or segment which permits of the adjustment of the draw-bar and coupling-head.

The invention also consists in providing the draw-bar rear of the coupling-pin with an arm which is connected to a forwardly-projecting lever for manually adjusting the draw-bar.

The invention further consists in means for operating the latch, which consists of a bar having a feather which engages with the latch, the bar being mounted or journaled in the coupling-head so as to project from each side thereof, the bar having arms for operating the same, one of the arms being flexibly connected to a spool carried by the brake-

bar, said spool being held normally raised by a spring, means also being provided for depressing the spool so that the same when depressed will be in positive engagement with the brake-bar.

My invention further consists in the construction and combination of the parts, as will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view showing the manner of attaching the coupling to the car, and the means for adjusting the coupling-head and operating the latch. Fig. 2 is a side elevation.

A refers to the coupler-head, having a knuckle and latch of the usual type. The latch is provided with an aperture having an enlargement and is retained in place by a bar B, which has to one side an enlargement or projection for engagement with the shoulders formed by the enlargement of the aperture through the latch. The coupling-head has a rearwardly-extended portion C, and at a suitable distance in rear of the coupling-head is a slot *c*, through which passes a pin *d*, which engages with a frame suitably secured to the under side of the car.

D refers to a frame consisting of rearwardly-diverging sill-pieces *D'*, which are connected together at their forward ends by transverse pieces *d'*, through which the pin *d* passes. The rear ends of the sill-pieces *D'* are connected by a transverse beam *D*². The frame thus constructed is rigidly attached to the under side of the car-body in any suitable manner, and between the sill-pieces is secured a segmental draft-beam *D*³, which may be either made up of two pieces or of a single piece. When made of a single piece, it is provided with a slot which extends nearly to the sill-pieces *D'*. A brace or support *D*⁴ may be provided beneath the rear portion of the draw-bar, to which the coupling-head is attached.

F refers to a rod which passes through the rear end of the draw-bar and is encircled within the draw-bar by a spring *f*, one end of which bears upon the inner end of the draw-bar, while the other abuts against the plate which is retained on the draw-bar by a nut. Rear of the draw-bar the rod *F* is encircled

by a spring f' , the forward end of which bears against the rear end of the draw-bar, while its other end impinges upon a washer G, the rear face of which is conical, said washer being held against the beams D^3 . The rear end of the rod F carries a nut. To the car-body in any suitable manner I attach a beam or plate having a segment-rack II, and pivoted thereto is a lever II', one end of which is provided with a suitably-operated pawl for engagement with the segment-rack, the other or inner end of the lever being pivotally connected to a strap or bar I, which is also pivoted to the rear end of the draw-bar. The lever and bar I provide means for setting or adjusting the draw-bar so that it may be held at the desired angle for coupling on curves, and the notches in the segment-lever are simply depressions which will permit the draw-head to adjust itself to the line of draft, as when considerable pressure is brought to bear upon the draw-head the pawl will slide out of the notches, a positive lock not being desirable in this instance.

K refers to a brake-bar which is attached to the car in the usual manner and is provided at its upper end with a hand-wheel (not shown) of the usual type. This brake-bar below the car-body and about on a line with the sill-pieces D' carries a spool K', the upper end of which is provided with a circumferential recess k and the lower end with a transverse recess k' for engagement with a projecting pin k^2 , carried by the brake-rod. The spool is held normally raised by a stiff spring L, which is attached to the under side of the car-body, the forward portion being bifurcated for engagement with the flanges of the recess k .

M refers to a rod the lower end of which is supported by engagement with the spring L, and this rod is of sufficient length to extend to the top of the car, it lying parallel and adjacent to the brake-bar, and when it is desired that the spool should engage positively with the brake-bar the rod M is depressed, which forces the spool downward so that the transverse recess therein will engage with the pin, so that by turning the brake-bar the spool will be turned in unison. To the spool is attached a chain or flexible connection N, the forward end of the chain engaging with an arm carried by the horizontal rod B, and said arm when the latch is down projects forwardly, so that its weight will assist in holding the latch in position to engage the rearwardly-projecting member of the knuckle. It will be noted that the draw-bar can be adjusted or swung at an angle by the brake rod or bar, and that the cars may be uncoupled by the same means, and that the brake can be used in the usual manner when the spool is raised or in its normal position. In use the draft will come upon the rod F to compress the spring f , and when the cars come together the spring f' will be compressed. The curved bar D^3 will receive the force of the draft and

has great rigidity, owing to its shape being curved in the arc of a circle, the pin d being the center thereof, and there is sufficient frictional contact between the bar D^3 , the nut, and conical-faced washer G to hold the draw-bar in whatever position it may have been placed. It will be noted that the adjustment may be made from either side of the car by manipulating the rod B or the lever II' or from the top of the car through the brake-rod.

Having thus described my invention, I do not wish to be limited to the precise construction or arrangement of the parts shown, but reserve the right to modify the same within the spirit and scope of my invention, and

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

1. In a car-coupling, the combination with the draw-bar having a slot, of a rearwardly-extending rod or tailpiece; together with a frame carrying a pin for engagement with the slot in the draw-bar, and a curved bar with which the rear end of the rod or tailpiece engages to permit a swinging movement of said tailpiece, substantially as shown and for the purpose set forth.

2. In a car-coupling, the combination with a frame having rearwardly-diverging side pieces, front cross-pieces and a curved or segmental cross-piece adjacent to the rear end of the frame; together with a draw-bar held in movable engagement with the frame and provided with a bar or rod having springs to take up the longitudinal movement of the draw-bar in the frame substantially as shown.

3. In a car-coupling, the combination with a draw-bar having a longitudinal slot in rear of the coupling-head, a bar F, carrying springs f, f' the rear spring impinging against a washer G, together with a frame having diverging side pieces, the forward end of the frame having a pin d , a cross-bar curved rearwardly and provided with a slot or opening through which the rear end of the rod F passes, a bolt on the rear end of the rod, the parts being organized substantially as shown so that the washer G, and bolt on end of rod F, will be held in frictional contact with the beam or cross-bar D^3 , for the purpose set forth.

4. In a car-coupling, the combination with a coupling-head having a rearwardly-extending draw-bar supported in connection with a frame so as to be moved laterally, of a bar carried by the coupling-head and connected with uncoupling mechanism, an arm carried by the bar; together with a chain or flexible connection and spool or drum loosely mounted on a vertical brake-rod and means for placing the same in positive engagement with the brake-bar, substantially as set forth.

5. In a car-coupling, the combination of a brake-rod having mounted thereon a spool or drum, a spring for normally holding the spool or drum out of positive engagement with the brake-rod, a bar or rod for depressing the spring and effecting a positive engagement of the spool with the brake-rod, a flexible con-

nection extending from the spool to an arm mounted on a rod which projects laterally from the coupling-head, for the purpose set forth.

5 6. In a car-coupling, the combination of the coupling-head and draw-bar mounted so as to be in swinging engagement with a frame attached to the car, a lever pivotally attached to a support having a segmental rack, the le-
10 ver carrying a pawl which frictionally engages

the rack, and a bar I, pivoted to the rear end of the lever and to the draw-bar, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB D. HOOVER.

Witnesses:

GEO. G. SHEETZ,

H. R. BRYARLY.