

1,014,590.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

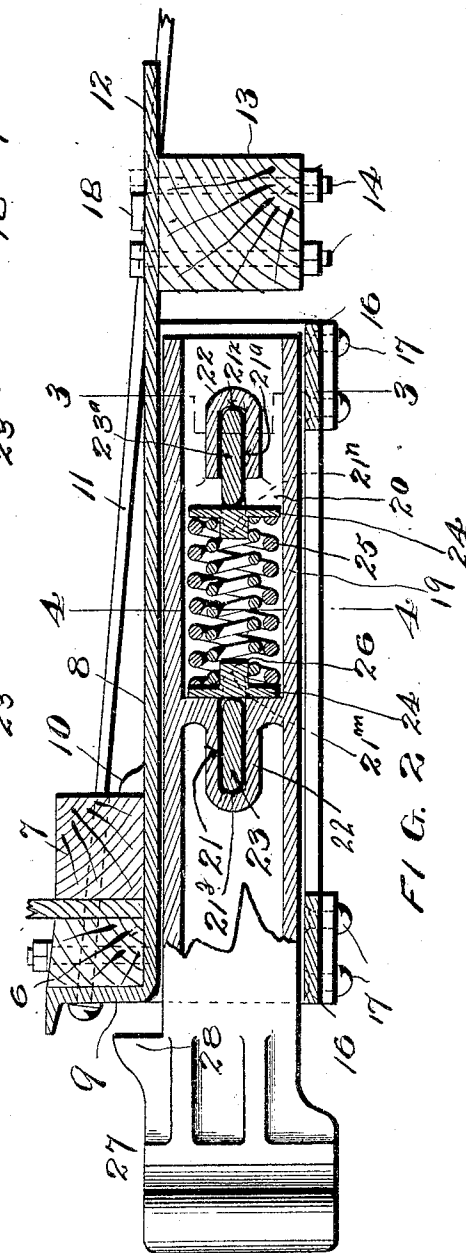
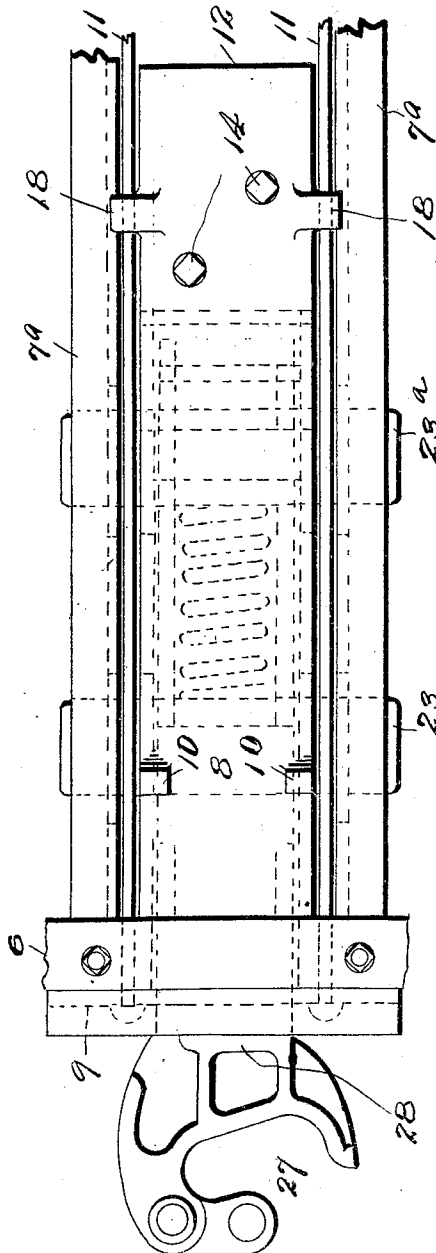


FIG. 2.

WITNESSES

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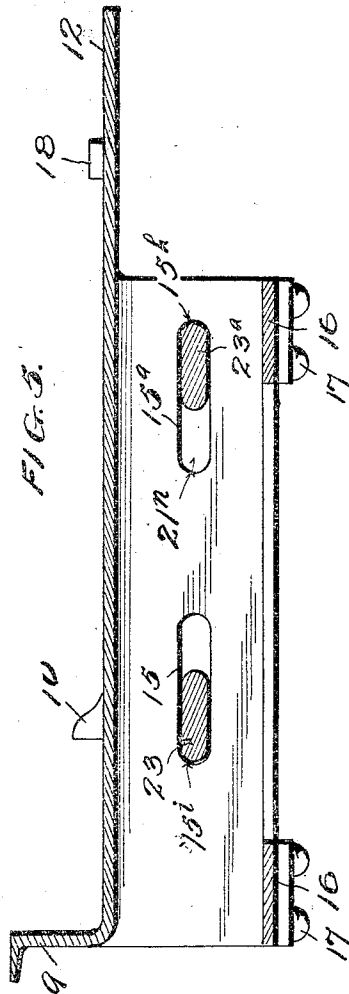
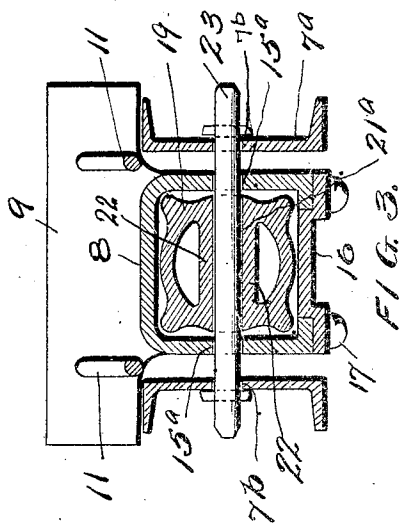
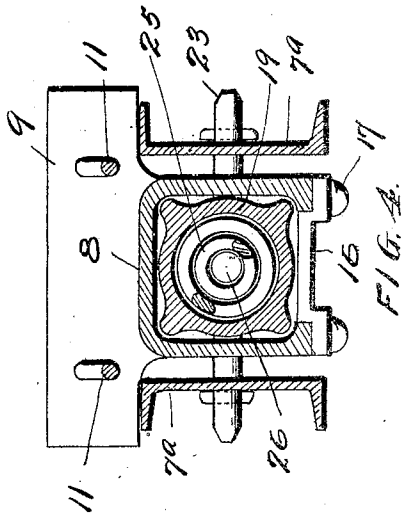
C. L. Parker, Attorney

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DRAFT GEAR.
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2 SHEETS—SHEET 2.



WITNESSES

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DRAFT-GEAR.

1,014,590.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed December 20, 1910. Serial No. 598,431.

To all whom it may concern:

Be it known that I, CHARLES A. GILMORE, a citizen of the United States, residing at McComb, in the county of Pike and State of Mississippi, have invented certain new and useful Improvements in Draft-Gear, of which the following is a specification.

My invention relates to coupling mechanism to be used in connection with railway cars.

An important object of this invention is to provide a coupling mechanism, embodying a yielding member, so that the car to which the mechanism is attached will receive a minimum amount of shocks or jerks, when being coupled to another car, or when being set in motion from a state of rest.

A further object of my invention is to provide a device of the character described, adapted to fulfil the double function of a coupler mechanism and buffer.

A further object of this invention is to provide a device of the above character, having a simplified structure, which is positive and reliable in operation.

Other objects and advantages of this invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a plan view of the coupler mechanism, Fig. 2 is a central longitudinal section therethrough, Fig. 3 is a transverse vertical section, taken on line 3-3 of Fig. 2, Fig. 4 is a similar view, taken on line 4-4 of Fig. 2, and Fig. 5 is a central longitudinal section through the draw-bar casing, other members of the coupling mechanism being removed for the sake of clearness.

In the drawings wherein is illustrated, a preferred embodiment of my invention, the numerals 6 and 7 designate transverse end beams of a railway car having connections with central longitudinal beams 7^a. To the transverse end beams is secured the outer end of a draw-bar casing 8, having upstanding flanges 9 and 10 engaging respectively the transverse beams 6 and 7, as shown. The flange 9 is rigidly connected with beams 6 and 7, by truss rods 11, extending longitudinally of the car and having connections therewith, in the usual manner. The top wall of the draw-bar casing 8 is extended at its inner end, as shown at 12, and has rigid

connections with a transverse beam 13, by means of bolts 14. The side walls of the casing 8 are provided near their centers with spaced longitudinal slots 15 and 15^a formed therethrough, as clearly illustrated in Fig. 5, which register with pairs of slots 7^b formed through the beams 7^a. The lower wall of the casing 8 is preferably formed open, as shown, and the ends of the side walls of the casing 8 are connected by transverse strips 16, bolted thereto, as shown at 17. The extension 12 of the upper wall is provided with a pair of oppositely extending ears 18, which engage the truss rods 11, as clearly shown in Fig. 1.

Mounted within the draw-bar casing 8, is a hollow draw-bar 19, which is capable of moving longitudinally within said casing. This hollow draw-bar is provided with a preferably cylindrical axial opening 20, as shown. The side walls of the draw bar 19, are provided with pairs of spaced longitudinally disposed slots 21 and 21^a adapted for registration respectively with the slots 15 and 15^a formed through the side walls of the draw-bar casing 8. A web or section of material 22 surrounds the inner slots 21 and 21^a of the draw-bar 19, as shown in Figs. 2 and 3. Transverse bars 23 and 23^a are disposed respectively within the registering slots 15, 21, 15^a and 21^a and normally occupy positions adjacent the outer end walls of these slots. These transverse bars engage circular heads 24, which are disposed between the same, as shown. In order to obtain an elastic member having a desired degree of stiffness, I preferably employ a pair of compressible coil springs 25, one of which is disposed within the other, as shown in Fig. 2. These compressible springs are arranged between and for engagement with the heads 24. The heads 24 are provided with reduced inwardly extending portions 26, disposed within the axial opening of the smaller inner spring 25, and firmly gripped by the same for holding said heads 24 in permanent engagement with the springs 25. The outer end of the draw-bar 19 carries a coupler-head 27 of any preferred or well known type, having an upper lip 28 which engages flange 9 when the draw-bar is in its innermost position.

In the use of my coupling mechanism, when the draw-bar 19 is moved inwardly, which is effected when two cars are being

coupled, the inner transverse bar 23^a remains in its normal position adjacent the outer end walls 15^a of the slots 15^a and forms a stationary abutment for the springs 25.

5 The outer transverse bar 23 is moved inwardly from the outer end walls 15ⁱ of the slots 15, and remaining in engagement with the outer end walls 21ⁱ of the outer slots 21, engages the springs 25 to compress the same

10 against the inner transverse bar 23^a. The draw-bar is thus first yieldingly retarded in its inward movement. This inward movement is stopped when the lip 28 engages the flange 9 of the casing 8. When the cars

15 have been coupled, and the same started in their travel from a state of rest, the draw-bar 19 is first moved longitudinally in an outward direction. During this outward movement of the draw-bar, the outer transverse bar 23 remains in engagement with the

20 outer end walls 15ⁱ of the outer slots 15 and thus serves as a stationary abutment for the springs 25. The inner transverse bar 23^a remains in engagement with the inner end

25 walls 21ⁱ of the inner slots 21^a and travels outwardly with said end walls, engaging the springs 25 and compressing the same against the now stationary outer transverse bar 23. The draw-bar 19 is thus yieldingly retarded

during its outward movement. This outward movement of the draw-bar is stopped 30 when the inner end walls 21^m of the outer slots 21 engage the outer transverse bar 23 and the inner transverse bar 23^a engages the inner end walls 21ⁿ of the inner slots 15^a. 35

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

In apparatus of the character described, the combination with an outer draw-bar casing provided at its outer end with an out- 40 standing flange, of a transverse beam engaging the flange, longitudinal securing rods passing through the beam and flange, said outer draw-bar casing being provided at its 45 inner end with an extension carrying lateral tongues disposed above and engaging the longitudinal securing rods, a draw-bar in the draw-bar casing, and draft gearing connecting the draw-bar and said outer draw- 50 bar casing.

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

CHARLES A. GILMORE.

Witnesses:

GORDON FLYNN,
N. ALFORD.