No. 736,330. PATENTED AUG. 11, 1903.

J. C. YEISER.

CAR COUPLING.

APPLICATION FILED JULY 14, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1

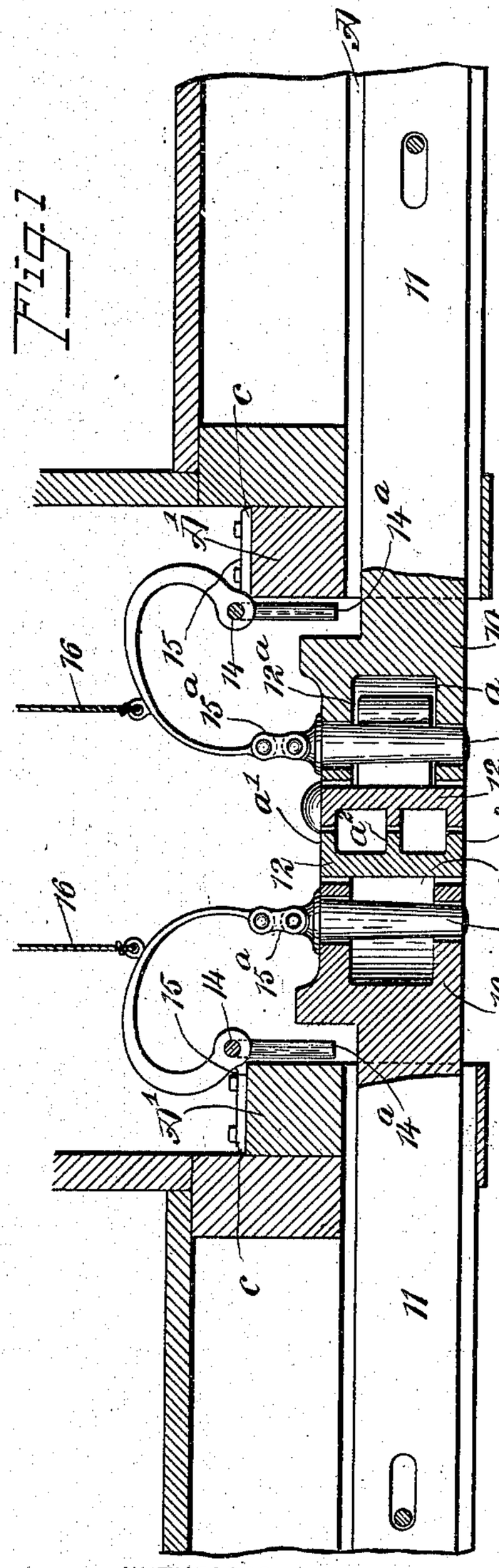
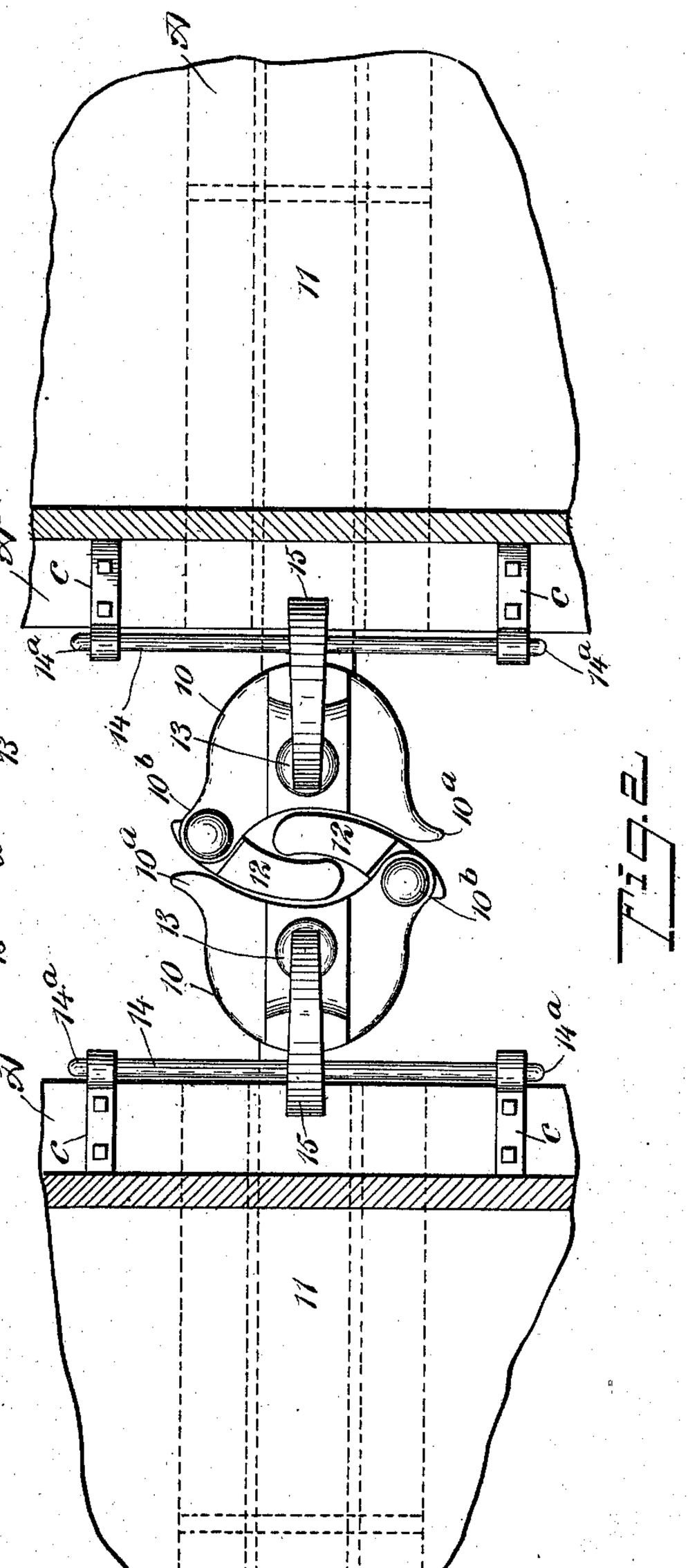


FIG. 2



WITNESSES:

J. A. Brophy

Wm. P. Patton

INVENTOR

John C. Yeiser

BY

Munn & Co.

ATTORNEYS.

No. 736,330. PATENTED AUG. 11, 1903.

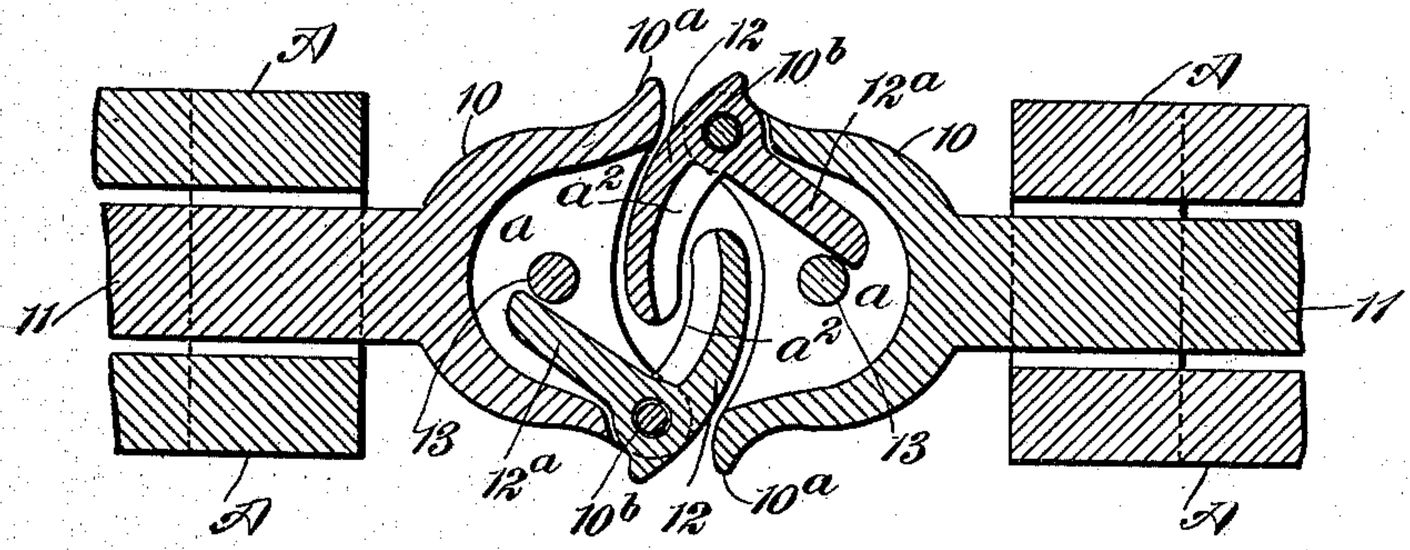
J. C. YEISER.

CAR COUPLING.

APPLICATION FILED JULY 14, 1902.

NO MODEL. 2 SHEETS—SHEET 3.

Fig. 3



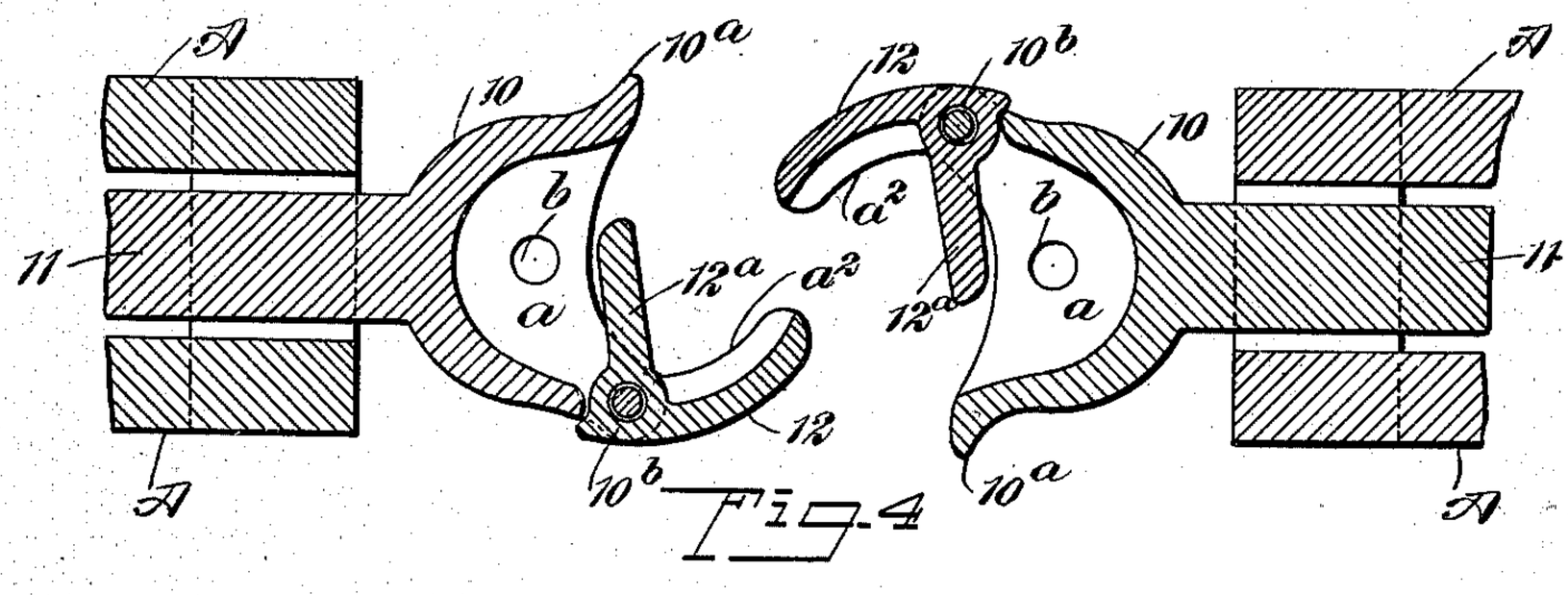


Fig. 4

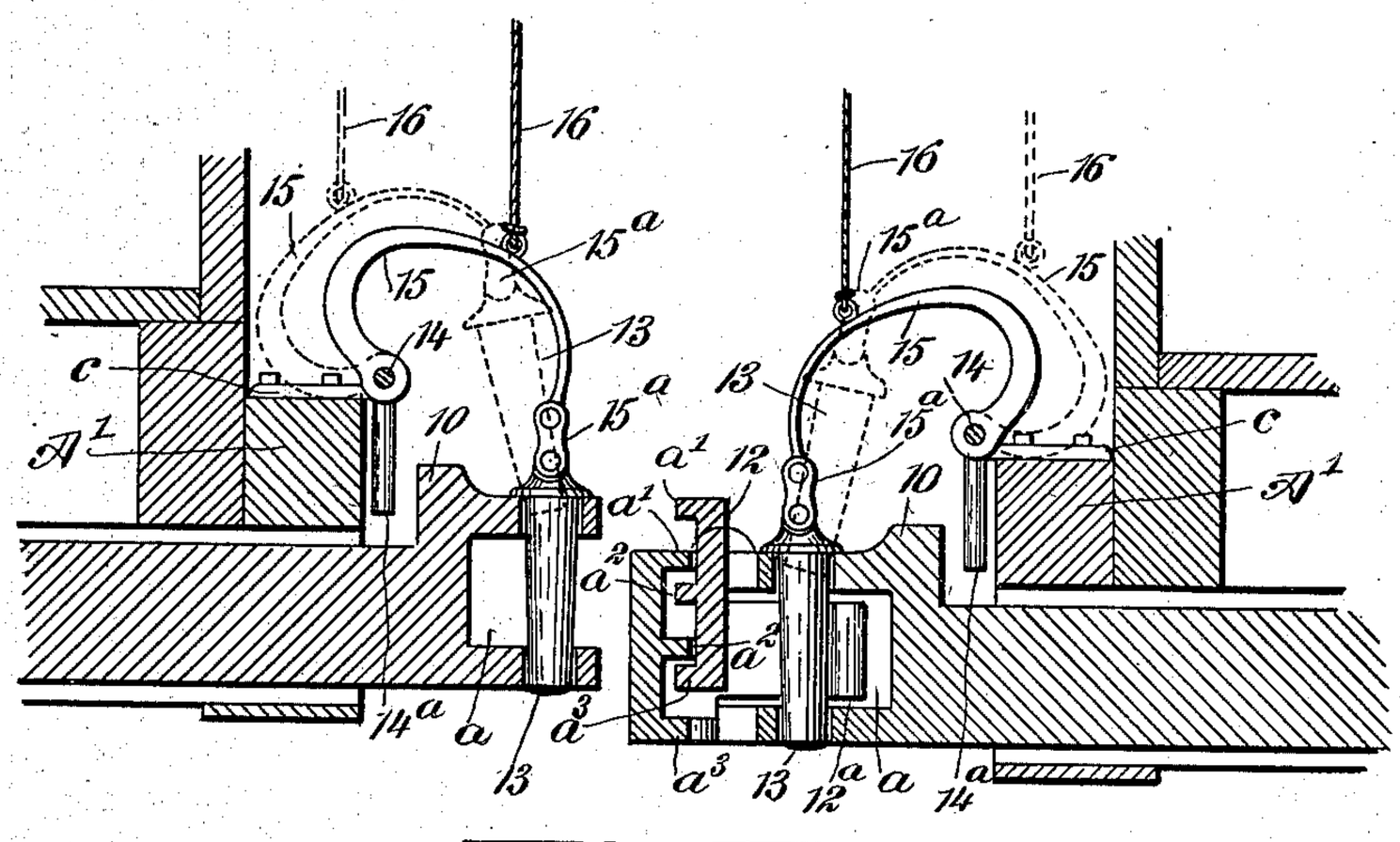


Fig. 5

WITNESSES:

J. A. Brophy

Wm. L. Patton

INVENTOR

John C. Yeiser

BY

Munn & Co.

ATTORNEYS.

No. 736,330. Patented August 11, 1903.

UNITED STATES PATENT OFFICE.

JOHN CLARKE YEISER, OF AUSTIN, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 736,330, dated August 11, 1903.

Application filed July 14, 1902. Serial No. 115,606. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLARKE YEISER, a citizen of the United States, and a resident of Austin, in the county of Travis and State of Texas, have invented new and useful Details of Construction for a Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to car-couplings of the Janney type, and has for its object to provide novel details of construction for a car-coupling of the class specified which improve the operation and adapt the couplings in pairs when applied to cars for a reliable coupled connection automatically when one or both cars having the improved couplings approach on a railroad-track that is either straight or curved.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view, partly in section, showing the improved car-coupling applied upon cars and in coupled condition. Fig. 2 is a plan view of the same. Fig. 3 is a sectional plan view of the two car-couplings having features of improvement shown in coupled adjustment. Fig. 4 is a view similar to Fig. 3, but showing the couplings disconnected; and Fig. 5 is a sectional side view showing the improvement applied to couple two cars that differ in height from bumper-beams to the track-rails, the uncoupled adjustment of the couplings being shown in dotted lines.

The draw-head 10 of the car-coupling is of the usual form, with the exception that the chamber *a* therein is of greater width at the front than is shown in ordinary side-latching car-couplings—that is to say, the space between the horn 10^a and the knuckle-joint 10^b is increased in breadth by flaring the opposite sides of the draw-head considerably, the purpose of which is to facilitate the coupling together of two couplings on cars moving on sharp curves of a railroad and also to confer necessary flexibility to the connection thus effected. The draw-bar 11, that is preferably integral with the draw-head, extends therefrom near the transverse center and is loosely coupled with spaced timbers of a car-frame A, so as to be adapted to have necessary side play, and it may here be stated that, if desired, the usual buffer-springs (not shown) may be employed in connection with the inner portion of the draw-bar 11.

The knuckle-block provided as a coacting detail for the draw-head comprises the coupling-jaw 12, curved slightly, so as to render the inner face concave, and from the normal outer end of this jaw a locking-tongue 12^a extends at a suitable angle thereto, as clearly shown in Figs. 3 and 4. The knuckle-block is hinged at the junction of the jaw 12 and tongue 12^a in any approved manner, so that when the jaw 12 extends transversely at the open front side of the draw-head 10 the tongue 12^a will project rearwardly within the chamber *a*, and, as shown, said tongue has proper clearance from the walls of the draw-head chamber, so as to avoid contact therewith in an objectionable manner.

An important novel detail of construction consists in forming three spaced ribs a' a^2 a^3 (see Fig. 5) on the concave inner surface of the coupling-jaw 12, the ribs a' and a^3 being located at or near the upper and lower sides of the coupling-jaw, respectively, while the rib a^2 is positioned midway between the other ribs. In service the ribs on the jaws 12, which are in coupled condition, will have contact, respectively, as shown in Fig. 1, when both car-couplings are of an equal height from the track; but in case one car-coupling is disposed in a plane higher than the other coupling then the ribs will occupy the spaces intervening them on each car-coupling, so that a safe coupled connection of the jaws is assured, as it will be seen that when the coupling-jaws are disposed as shown in Fig. 5 they cannot become detached by one sliding downward, as such a movement will obviously be arrested by contact of the ribs on one jaw with those on the other jaw.

The locking-tongue 12^a on the knuckle-block is held in coupled adjustment, so that the coupling-jaw 12 will be prevented from release when coupled with a like jaw on a

similar car-coupling by a keeper-pin 13, that loosely engages opposite perforations *b*, formed in the upper and lower walls of the draw-head chamber *a*, the pin when inserted after the tongue 12ª is rocked fully into said chamber passing down in front of said tongue, as is clearly shown in Fig. 3.

To adapt the improved car-coupling for an automatic coupled connection with a like car-coupling, the keeper-pin 13 is supported and held in position by the following novel means: Upon the bumper-timber A′ of the car-frame A, that is transversely disposed at an end of said frame, the rock-shaft 14 is held to rock by bracket-boxes *c* or equivalent means, and from each end of said shaft a crank-handle 14ª projects at a right angle. In the same vertical plane with the perforations *b* an arm 15 is projected from the rock-shaft 14, above and toward said perforations. It will be seen in Figs. 1 and 4 that the arm 15 is curved upward, forward, and downward, so that its forward depending end will be positioned above and near to the upper wall of the chamber *a*, nearly opposite the perforation *b* therein. The keeper-pin 13 is shackled upon the free forward end of the rock-arm 15 by means of two similar-spaced link-plates 15ª, or one of such plates only may be employed, as shown in Figs. 1 and 5, and it will be noticed that when the keeper-pin 13 is fully inserted through the perforations *b* the rock-shaft arm 15 will by its weight serve to keep the pin from upward release, the weight of the handles 14ª, that are then pendent, coacting therewith to prevent an accidental detachment of the keeper-pin 13 from contact with the locking-tongue 12ª. Preferably the portion of the rock-arm 15 that is connected with the rock-shaft 14 is widened and thickened as compared with the outer end portion thereof, so that increased strength is afforded thereto. When two cars having the improvement are to be coupled automatically, this may be readily effected if the keeper-pins 13 are raised, so as to nearly remove them from the perforations *b* in the respective upper walls of the draw-heads 10, this adjustment serving to dispose the rock-arms 15 inclined rearwardly, as shown in dotted lines in Fig. 5. Now as the weight of the rearwardly-inclined pins 13, together with their shackled connection with the elevated ends of the rock-arms 15, prevents them from lateral displacement it will be evident that if the two cars to be coupled are moved forcibly toward each other, so as to interlock the coupling-jaws 12 by folding them transversely of the draw-head 10, the impact of said coupling-jaws upon the top and lower walls of the draw-heads between the horns 10ª and the hinge-joints 10ᵇ will so jar the supported pins 13 as to cause them to fall by gravity into the perforations *b*, and thus lock the tongues 12ª within the draw-head chambers *a*.

Upon each rock-arm 15 a flexible connection 16 is attached by one end, and thence extends up to the roof of the cars, if the cars have boxed bodies, so that at any time it is necessary to detach one car from another a pull on the rope or chain attached to the keeper-pin sufficient to lift said pin nearly out of the draw-head 10 will release the knuckle-block tongue 12ª, and of course detach the car from one with which it has been coupled.

It will be seen that the provision of the ribs *a′ a² a³* on the jaws 12 will serve as a means to prevent the fall of a car-coupling that has been pulled loose from the car-frame at the draw-bar end, as the keeper-pins will hold the coupling-jaws closed, and manifestly the ribs will prevent the fall of the loose coupling, as the ribs will become interlocked before this coupling can fall down upon the railroad-track.

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

1. In a car-coupling, the combination with a draw-head having a chamber therein, of a coupling-jaw provided with ribbed projections and pivoted in said draw-head, an arm mounted adjacent to the draw-head, and a locking-pin linked to said arm and adapted to pass through the draw-head and prevent the movement of the jaw upon its pivot, substantially as set forth.

2. In a car-coupling of the Janney type, the coupling-jaw provided with three ribbed projections on its inner face, two of said ribs being disposed respectively at the upper and at the lower edges of the coupling-jaw, and the other rib intermediately of the upper and lower ribs.

3. In a car-coupling, the combination with a draw-head having a chamber therein, of a coupling-jaw formed of two relatively angularly arranged portions pivoted at their point of meeting in the chamber of the draw-head, said draw-head having registering apertures formed therein, a rocking arm mounted above the draw-head, a pin hinged to the rocking arm and adapted to pass through the apertures in the draw-head, the construction being such that one of the portions of the jaw will be held between the pin and the back wall of the draw-head, and the movement of the jaw upon its pivot will be prevented, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN CLARKE YEISER.

Witnesses:
H. M. LITTLE,
E. B. HANCOCK.