

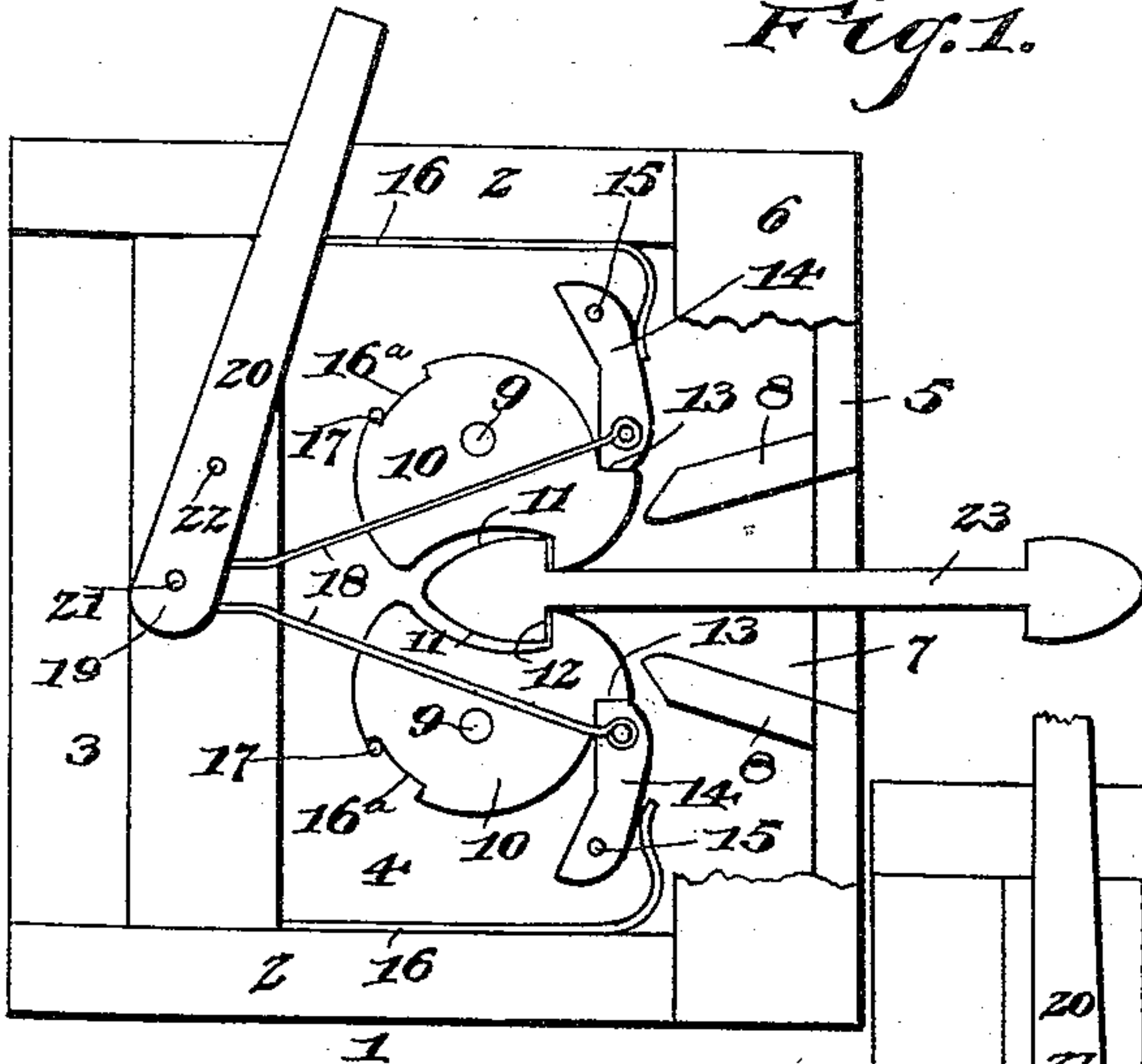
(No Model.)

B. LOHR.  
CAR COUPLING.

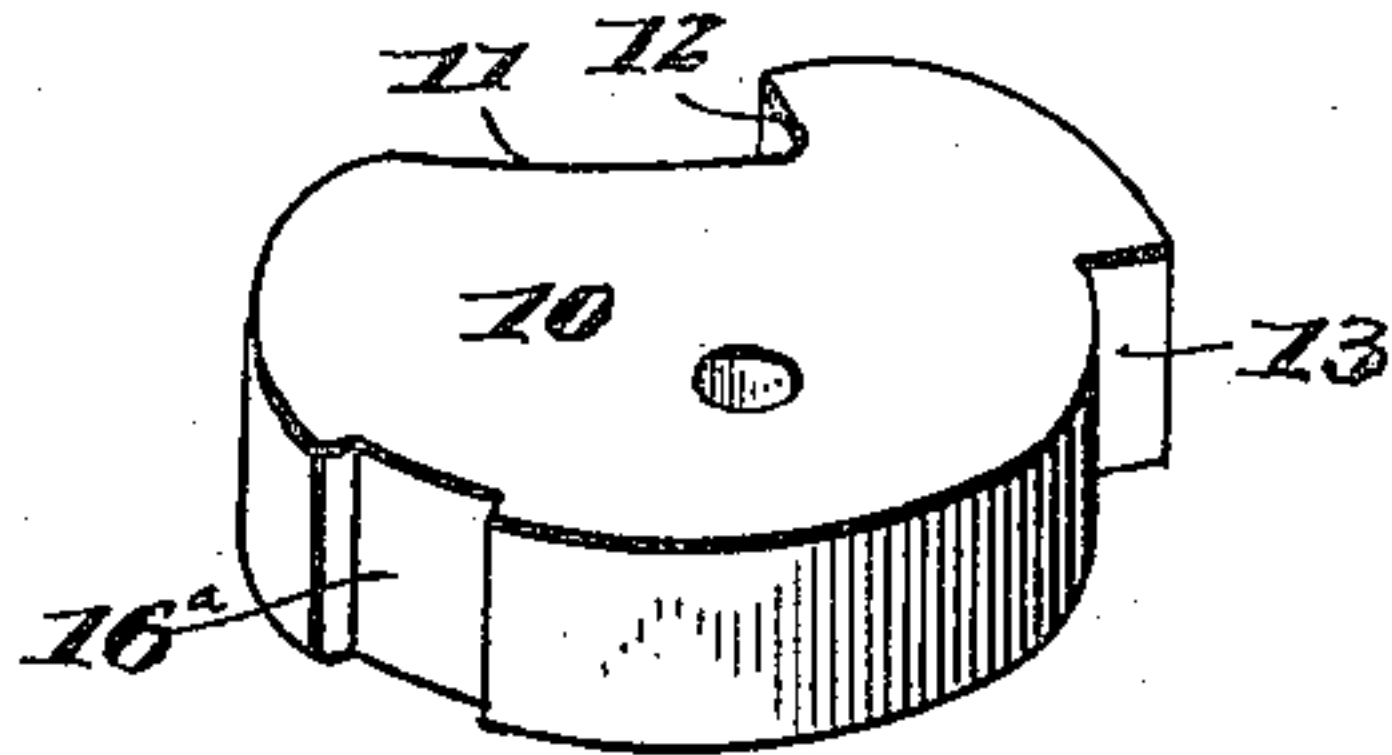
No. 529,396.

Patented Nov. 20, 1894.

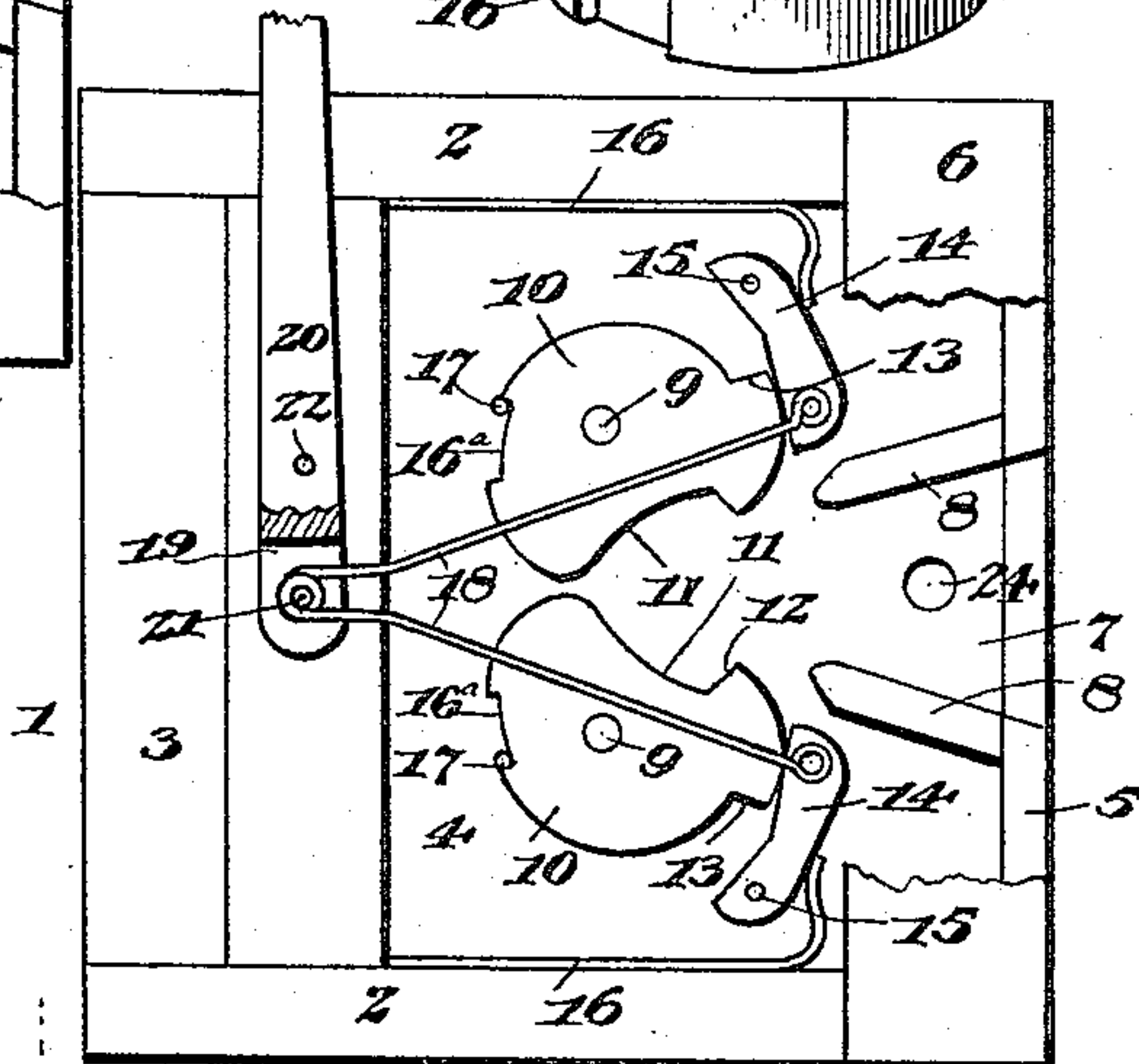
*Fig. 1.*



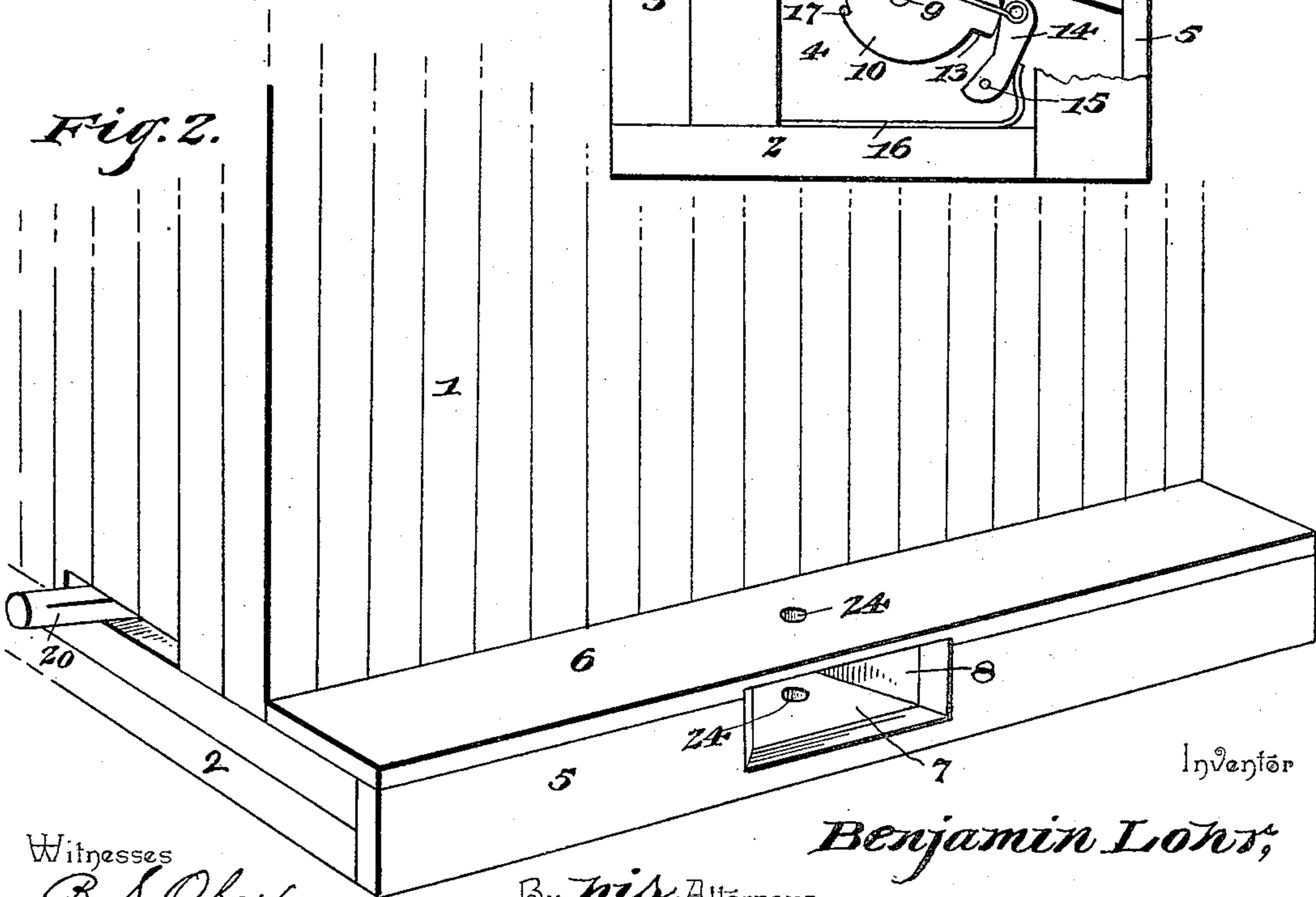
*Fig. 4.*



*Fig. 3.*



*Fig. 2.*



Witnesses

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By *his* Attorneys.

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# UNITED STATES PATENT OFFICE.

BENJAMIN LOHR, OF FISHERTOWN, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 529,396, dated November 20, 1894.

Application filed June 9, 1894. Serial No. 514,072. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN LOHR, a citizen of the United States, residing at Fishertown, in the county of Bedford and State of Pennsylvania, have invented a new and useful Car-Coupling, of which the following is a specification.

My invention relates to an improvement in that class of car couplings in which an arrow-head link is employed and adapted to operate with a jaw or other retaining device, whereby it is secured to the car; and the invention consists of an appliance wherein the principal feature is the combination of two notched disks arranged side by side and adapted to have the head of the link placed in such notches, together with pawls and their applying and releasing mechanism, whereby the disks may be held immovably and the link thereby retained.

In the accompanying drawings: Figure 1 represents a plan view of the operative parts of my coupling, the car being partly broken away to disclose the same; Fig. 2, a perspective view of a part of a freight-car equipped with my improvements; Fig. 3, a plan view illustrating the parts in a second position; Fig. 4, a detail perspective of one of the coupling disks.

The reference numeral 1 indicates the car to which I have shown my improvements as applied, which car may be of any construction. Secured to the under side of the car, and extending longitudinally therewith, are the beams 2, which are provided at their rear ends with the transverse beam 3, while the whole structure is covered on its lower side with the flooring or casing 4, thereby forming a box or compartment on the under side of the car. The front of this box is provided with the beam 5, which extends upwardly to the platform 6 of the car.

Formed in the beam 5, and centrally aligned with the car, is the bell-shaped opening 7, which communicates with the cavity or box aforesaid, and may be faced with metal to protect it from the blows of the link, if so desired. Secured to the flooring 4, and adjacent to the sides of the opening 7 are the guides 8, which extend rearwardly and inwardly and operate to furnish a guide for the link as it passes into the box of the coupler. Located

in the box, and revoluble on the spindles 9, are the disks 10, which are two in number and provided with the recesses 11, formed in their periphery. These recesses 11 are formed with an abrupt shoulder 12 lying in their front end, while the sides of the recesses curve outwardly so that when the two recesses align horizontally, or are directly contiguous, a substantially triangular opening will be formed.

13 indicates two shoulders which are formed one on each of the disks, and near the recesses 11, their normal location being on the front side of the disks and opening outwardly. These shoulders are adapted to operate with the pawls 14, which are pivoted to the spindles 15, rising from the flooring 4, and by these means the disks are kept from revolving outwardly. Operating with the pawls 14 are the springs 16, which are one for each pawl, and which are secured to the inner sides of the adjacent beams 2 and project forwardly and inwardly to the pawls. The movements of the disks are limited by the peripheral notches 16<sup>a</sup>, formed in their rear sides, and operating with the studs 17, which are one for each disk and fixed to the floor 4. Thus it will be seen that it will be quite impossible for the disks to move farther than the length of the notches 16<sup>a</sup>, and these slots are formed of a length equal to the distance which it is necessary for the disks to move when operating to couple or uncouple the cars.

Pivotally connected to the front end of the pawls 14 are the rods 18, which may be formed independently or integral, preferably the latter, and which proceed rearwardly and inwardly to the bifurcated inner end 19 of the lever 20, to which they are pivotally connected by means of the pin 21. The lever 20 is fulcrumed to the pin 22, of the beam 3, and projects horizontally and laterally to the side of the car, as will be seen by reference to Fig. 2. By means of this lever the rods 18 may be reciprocated and the pawls 14 moved out of engagement with the disks, thereby releasing the link.

23 indicates the link, which consists of an iron bar provided with the usual arrow or spear heads. This link is adapted to operate with the disks of the coupler and by entering the recesses 11 to be locked therewith. It will be seen that the rear or inclined faces of



the recesses 11, lie inward of the spindles 9, so that by applying force to the disks at this point they will be revolved as far as the slots 16 and pins or studs 17 will allow. On 5 the other hand, as soon as the pawls 14 are released from the shoulders 13, the link will be free to pull out of the recesses 11, since outward movement of the link will result in a similar rotary movement of the disks, whereby 10 the link is released.

The position which the parts assume directly prior to the coupling operation is shown in Fig. 3, and there it will be seen that the disks are revolved outwardly as far as the 15 slots 16<sup>a</sup> and their studs 17 will allow, and the pawls 14 swung out beyond the shoulders 13. Now, as the link, in the coupling operation, moves into the cavity or box of the coupler, the inclined sides of the recesses 11 are 20 engaged by its head, which will cause the disks to swing back and in close engagement with the head. As the shoulders 13 pass the pawls 14 the pawls will drop behind them and thereby lock the disks against the link, making 25 its removal impossible without raising the pawls.

To uncouple the cars, the lever 20 should be swung rearwardly, which will raise or move pawls 14 forwardly and allow the disks to 30 move outwardly, thereby releasing the link.

24 indicates a vertically-extending passage which communicates with the orifice or opening 7, and by which the usual link may be 35 connected to the coupler, if such an operation may be desired.

When my invention is applied to a passenger-car the lever 20 will be arranged on a

horizontal axis, so that it will extend vertically and be in position to be reached from the platform of the car, as the levers of the 40 usual couplings.

Having described the invention, what I claim is—

In a car coupling, the combination with a draw-head or box, of two disks revolubly 45 mounted on independent axes and transversely aligned with each other, each of said disks having a peripheral notch, two pins rigid on the draw-head or box and respectively seated in the slots, whereby the move- 50 ments of the disks are limited, the disks also having matching peripheral recesses capable, when immediately adjacent to each other, of receiving and retaining the head of a link, two spring-pressed pawls pivotally mounted 55 directly adjacent to the respective disks and capable of engaging shoulders thereon, whereby to hold the disks with the recesses thereof directly adjacent to each other, a rod pivotally 60 connected to the free end of each pawl and extending rearwardly therefrom, and a lever fulcrumed adjacent to the draw-head or box and pivotally connected to the rods, the said 65 lever and rods being capable of furnishing means for disengaging the pawls and their respective disks so as to release the link of the car coupling, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN LOHR.

Witnesses:

J. FRANK REED,  
W. S. REED.