

No. 720,398.

PATENTED FEB. 10, 1903.

B. BRAND.  
CAR COUPLING.

APPLICATION FILED SEPT. 29, 1902.

NO MODEL.

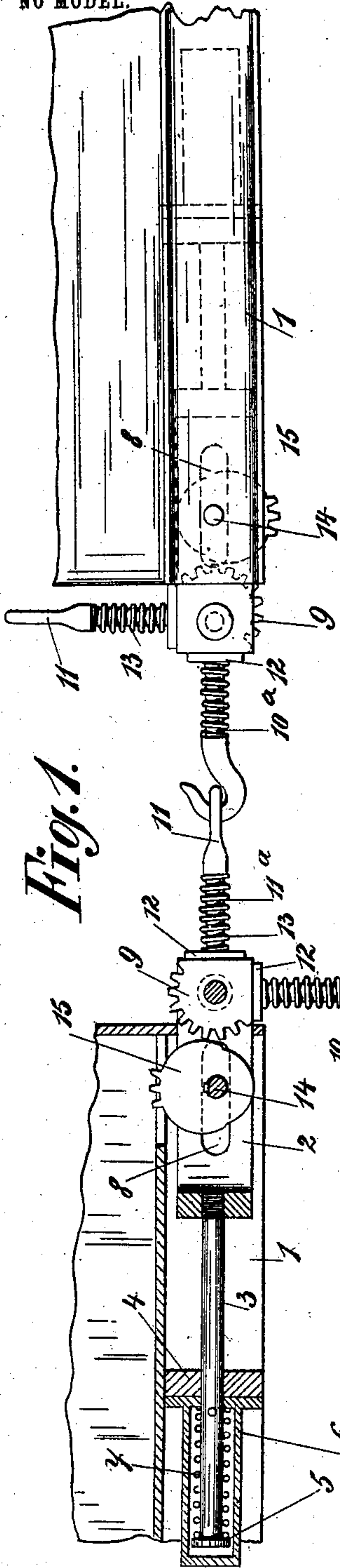
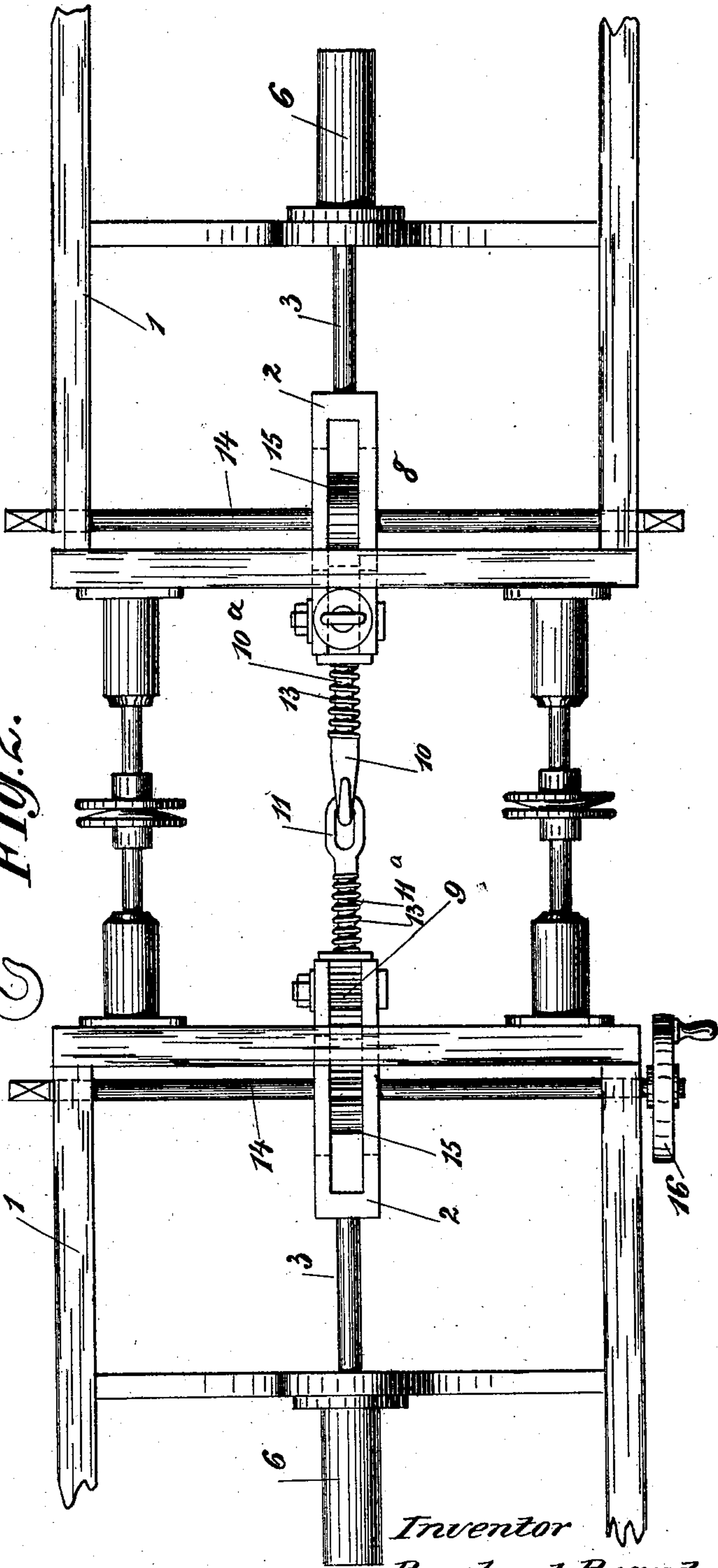


Fig. 1.

Fig. 2.



Witnesses:  
*Paul Hunter*  
*J. M. Cariffe*

Inventor  
*Bernhard Brand*  
By *Munn*  
Attorneys



# UNITED STATES PATENT OFFICE.

BERNHARD BRAND, OF BRAILA, ROUMANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 720,398, dated February 10, 1903.

Application filed September 29, 1902. Serial No. 125,282. (No model.)

*To all whom it may concern:*

Be it known that I, BERNHARD BRAND, a subject of the King of Roumania, residing at Braila, Roumania, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The subject of the present invention is a coupling for railway-cars which can be operated from the side of the car.

The characteristic of the invention lies in the fact that the coupling hooks or links, as the case may be, are rigidly connected with toothed sectors which are pivotally secured in the fork-shaped end of a draw-rod moving in rectilineal guides and pressed in a backward direction by springs and which can be so actuated by means of a toothed eccentric disk on a shaft provided with a crank-handle or the like at the side of the car that a rotation of the toothed disk in a forward direction may be effected, and consequently a turning of the sector carrying the hook for the purpose of effecting the coupling.

In the accompanying drawings is shown an illustration of the invention.

Figure 1 shows an elevation of the apparatus, partly in longitudinal section; and Fig. 2 shows a plan view of the apparatus from above.

In an opening in the rear side of the lower frame 1 of the car moves a draw-head in the form of a fork 2, which is continued in a backward direction by a draft-rod 3. This rod 3 passes through a transverse bar 4 of the frame and is provided at its end with a flange or disk 5, by means of which the rod 3 slides in a cylinder 6. Between the end wall of this cylinder and the disk 5 is arranged a spiral spring 7, which causes the rod 3 to be always returned into the position shown in Fig. 1. The fork 2, which is provided with transverse slots 8 in its branches, carries the toothed sector 9, which in its turn carries two coupling-hooks 10 or links 11, as the case may be, at an angle of ninety degrees to one another. On the stems 10<sup>a</sup> or 11<sup>a</sup> of these hooks or links movable plates 12 are provided, which by means of springs 13 are pressed against the front end of the fork 2, and by this means an

automatic turning of the sector 9 with the hooks or links is prevented. Through the said slots 8 in the fork 2 passes a shaft 14, upon which is keyed a combined eccentric and toothed disk 15. The arrangement on the opposite car is precisely identical, with this exception, that if on the first car the hook 10 is vertical on the second car the hook 10 lies horizontally. On both sides of the car the shaft 14 carries a crank-disk or other handle to rock the shaft.

The apparatus is actuated as follows: To effect a coupling, the two cars are moved toward each other and the hooks and links automatically engage. If two cars which are provided with and coupled by means of this apparatus are to be uncoupled, one may advantageously move the hook or the link of one car from its previous position by turning the crank arranged at the side of the car, so turning the shaft 14 of this car in the direction of travel of the hands of a clock, upon which the eccentric formation of the disk 15, working in conjunction with the toothed sector 9, overcomes the influence of the spring 7 and presses forward the fork 2. Upon this, however, there follows an engagement of the toothed sector of the disk 15 with the teeth of the sector 9, as a result of which the latter is rotated and the link 10 or hook 11, as the case may be, is removed from engagement.

The special construction of the apparatus may be altered without departing from the nature of the invention.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a railway-car coupling, the combination of the frame 1, a transverse bar 4, a draft-rod 3 sliding therein, a spring 7 influencing said rod, said spring being inclosed in the cylinder 5, with a disk 9 carrying the hooks and links of the coupling, and pivoted in the forked draw-head 2 attached to the draft-rod 3, all coöperating, substantially as described.

2. In a railway-car coupling, the combination of a draw-head, a shaft 14 provided with toothed eccentric disk 15, a toothed sector 9 carrying the hooks and links forming the coupling, said sector 9 being pivoted in the

draw-head, the latter being capable of moving against the influence of a spring 7, all co-operating, substantially as described.

3. In a car-coupling, the combination with  
5 a draw-head, of a pivoted coupling device having a toothed sector, a transverse shaft having a toothed eccentric disk for engaging said sector, a plate on the coupling device, in front of the toothed sector, and a spring tend-

ing to press said plate toward the sector, to normally prevent movement of the sector on its pivot.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

BERNHARD BRAND.

Witnesses:

WOLDEMAR HAUPT,  
HENRY HASPER.