No. 627,714. Patented June 27, 1899.

S. BÄNDEL.

CAR COUPLING.

(Application filed Jan. 11, 1899.)

(No Model.)

Fig. 1.

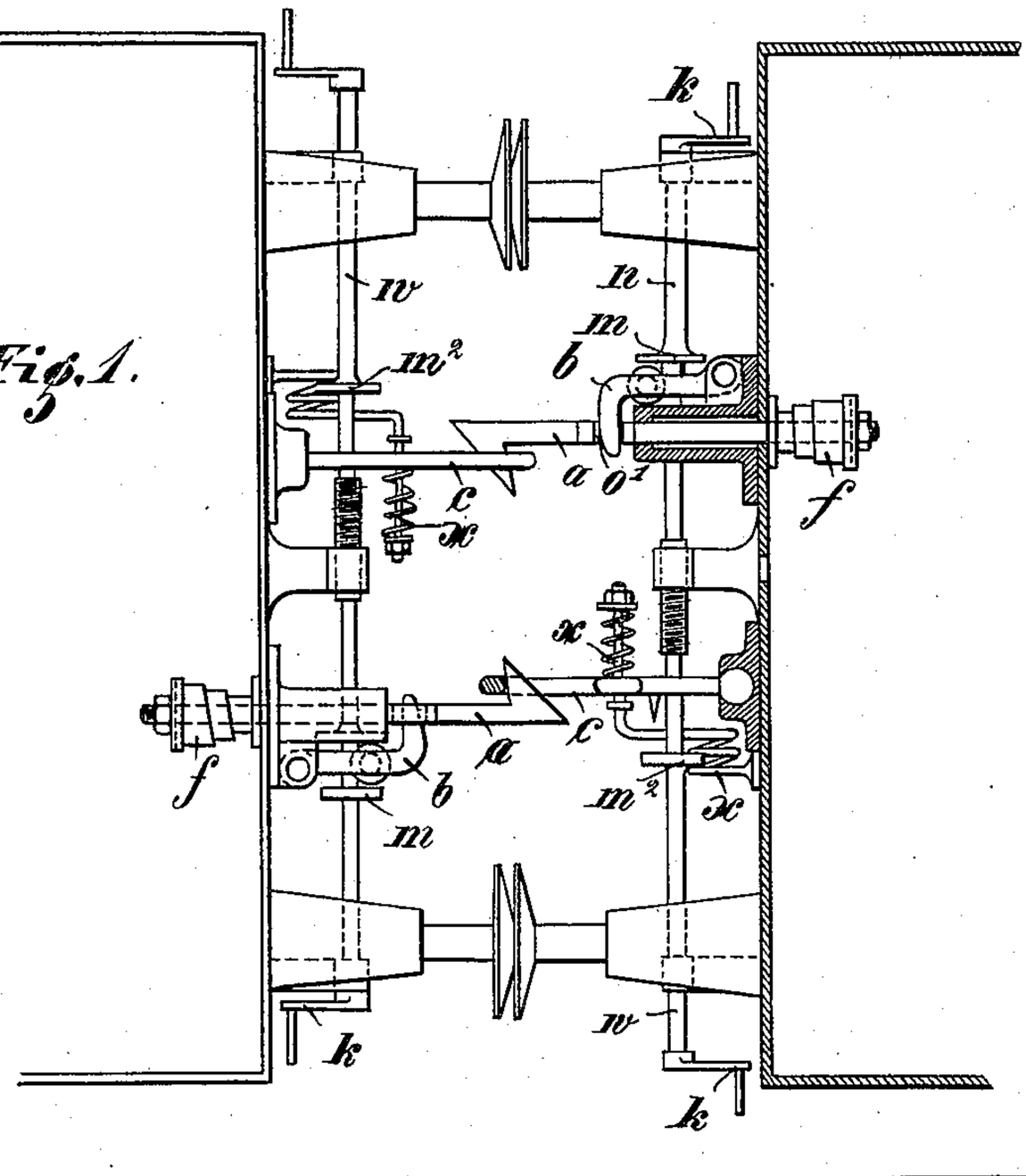


Fig. 2.

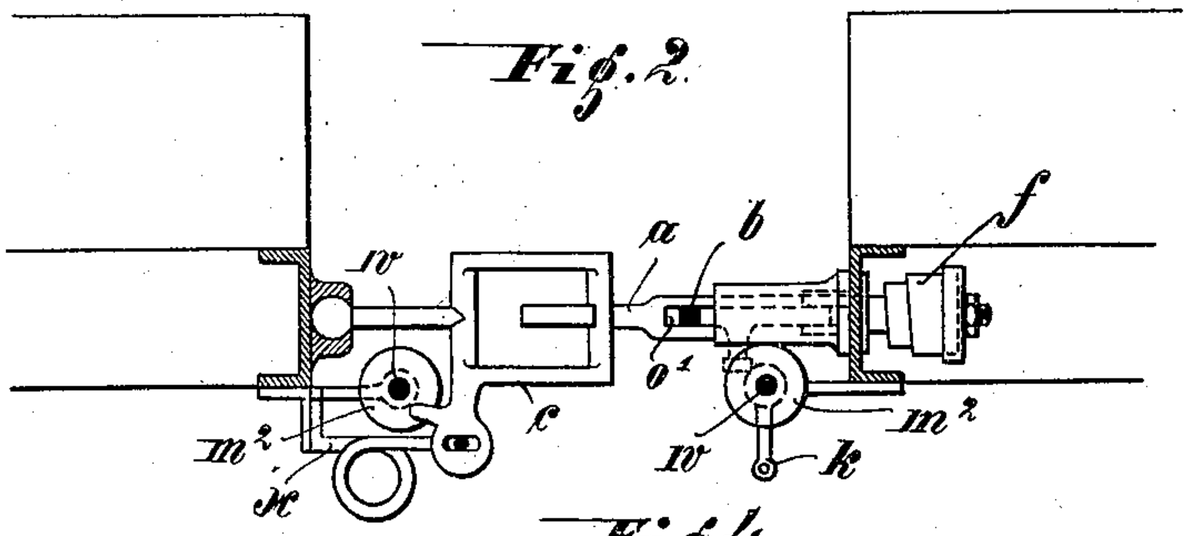


Fig. 4

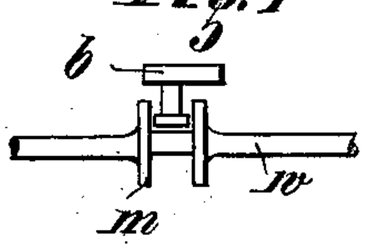
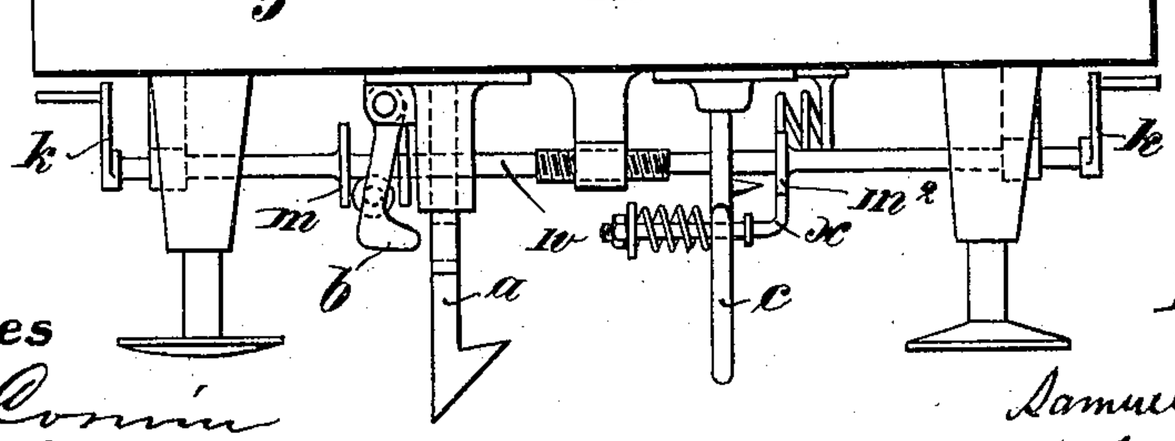


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL BÄNDEL, OF KÖNIGSHÜTTE, GERMANY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 627,714, dated June 27, 1899.

Application filed January 11, 1899. Serial No. 701,820. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BÄNDEL, a subject of the King of Prussia, German Emperor, residing at Königshütte, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Side Couplings for Railway-Carriages, (for which I have applied for patents in England, dated November 24, 1898; in Austria, dated November 21, 1898; in France, dated November 26, 1898, No. 271,291; in Belgium, dated November 26, 1898, No. 109,094, and in Hungary, dated November 27, 1898, No. 16,827,) of which the following is a specification.

The side coupling for railway-carriages represented in the accompanying drawings in the leading principle thereof may be considered as an abstract of the side couplings heretofore proposed, but differs therefrom in that, while being extremely simple, its construction avoids the defects of those previously proposed, while retaining the advantages thereof. In the operation of the improved device coupling takes place automatically and uncoupling is effected from the side. The hooking on of the draw-bars is effected with all the certainty that practical use can require, and that without the danger of disconnection during the travel of the vehicle. What has particularly to be pointed out in comparing the improved side couplings with existing side couplings is that the improved coupling is particularly supple and readily adapts itself to the closed position of the vehicles on traveling over curves of short radius and will also admit of a free and unconstrained transmission of power from vehicle to vehicle when the train passes from a horizontal or from a descending part of the track to a short steep ascending gradient, so that the whole train forms a vertically-undulating curve sometimes of appreciable flexion. This extraordinary and withal unconstrained movableness of the draw-bars and links especially forms a characteristic of this coupling which is most valuable in practice.

In Figure 1 of the drawings the coupling is represented coupled up and applied for use on passenger-cars. Fig. 2 is a side elevation of Fig. 1. Fig. 3 shows one-half of the coupling as adapted for goods-trucks. Fig. 4 shows a detail the object of which will presently be explained.

The coupling consists of a link *c*, fitted with a ball-and-socket joint and held in a raised position by a spring-support *x* and of a draw-bar *a*, having a nose-shaped head and moving in a straight line. This draw-bar when the vehicles are being coupled first pushes aside the link and when the buffers meet the link falls into engagement with the hook *a*. In both passenger-cars and goods-trucks the draw-bar is supported by a spring *f*, which is put under tension when the train pulls. The same takes place in uncoupling, as the link when the draw mechanism is pulled is forced to make a forward movement, even though a slight one. By reason of the compression of the spring *f* the buffers will also cease to be in contact when the train is pulling. If, however, the buffers are to remain in contact, as is prescribed for passenger-trains, the draw-bar is held fast, and therefore can make no forward movement when the train pulls. The hook *b* engages, as seen in Fig. 1, with a link *o'* of the hook *a*. The hook *a* is secured and released and two coupled vehicles are uncoupled by turning screws *w*, having cranks *k* and round disk-like cams *m* and m^2, the cam m^2 actuating the link *c*. A special device for pulling the vehicles together, which is only required in passenger-vehicles, is therefore dispensed with.

The simplicity and ready accessibility of the whole coupling will be readily apparent, as will also its unusual mobility, and consequently it will be subject to very little wear in practical use. By reason of this exceptional simplicity of construction and operation, combined with its great mobility and the infrequency of repairs that may be expected, this coupling is calculated to replace existing couplings not capable of being operated from the side with considerable advantage.

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

A side coupling for railway-carriages having a link *c*, supported in a horizontal position in a ball-and-socket joint in the buffer-beam, which link, when the vehicle is being coupled, automatically passes into engagement laterally with the draw-hook, *a*, carried

in straight direction, and which, in uncoupling the vehicle, is forced off the said hook by a horizontal shaft, *w*, lying transversely in front of the buffer-beam, the said coupling being characterized by the hook being supported behind the buffer-beam by a spring, *f*, which, in goods-trains, gives the necessary elasticity to the coupling, but in passenger-trains, is made inoperative by the hook *b*, mounted so as to be able to turn on the buffer-beam, this hook engaging with a link *o'* of the draw-bar, when the shaft *w* is moved laterally, as set forth, substantially as described.

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

SAMUEL BÄNDEL.

Witnesses:
CARL WEBER,
HERMANN BARTSCH.