A. TAWLKS.

CAR COUPLING.

APPLICATION FILED JAN. 27, 1910.

990,349.

Patented Apr. 25, 1911.

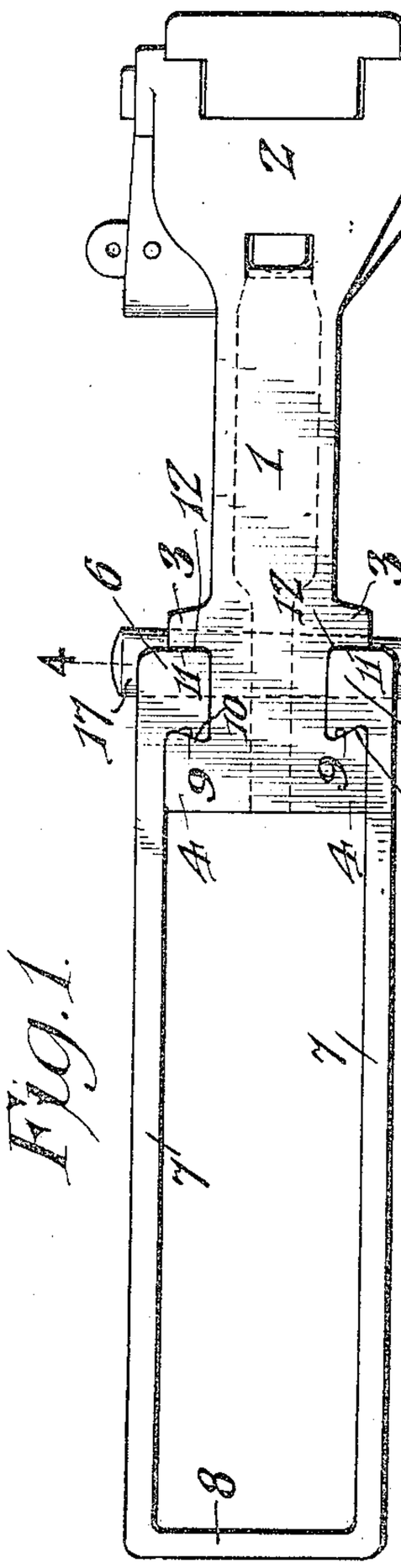

Fig. 1.

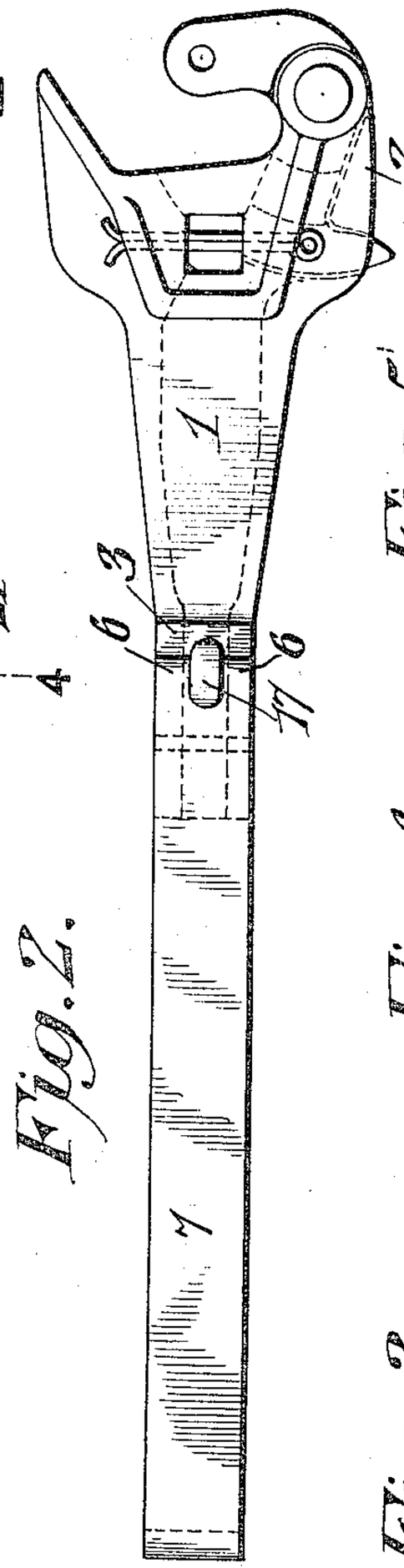

Fig. 2.

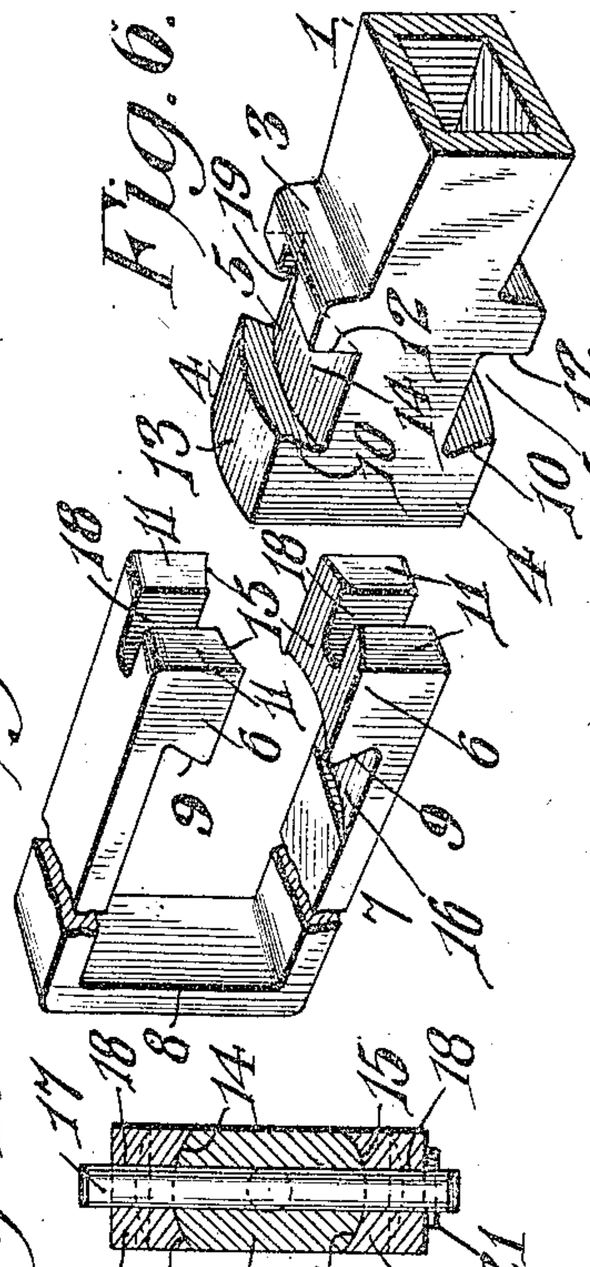

Fig. 5.

Fig. 4.

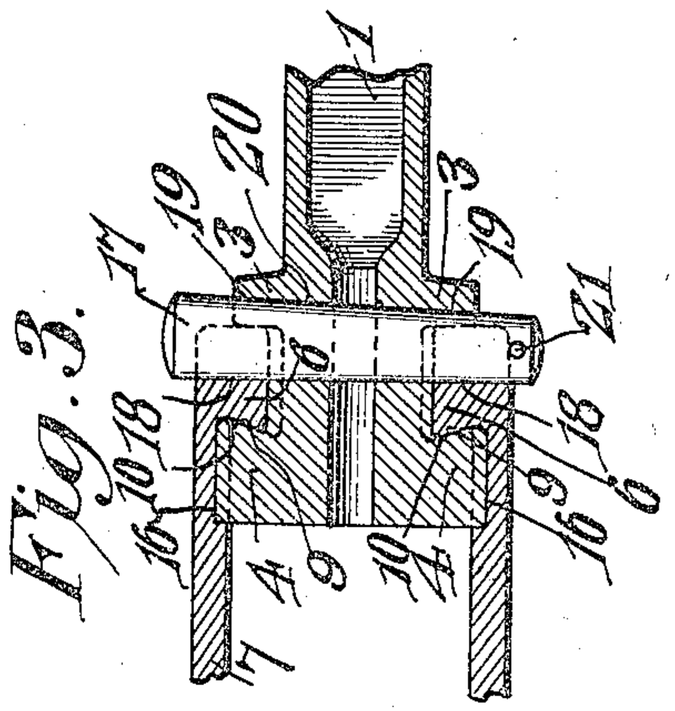

Fig. 3.

Witnesses

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CAR-COUPLING.

990,349. Specification of Letters Patent. Patented Apr. 25, 1911.

Application filed January 27, 1910. Serial No. 540,441.

To all whom it may concern:

Be it known that I, ALLAN TAWLKS, a citizen of the United States, residing at Harvey, in the county of Wells and State of North Dakota, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car couplings.

The object of the present invention is to improve the construction of car couplings, and to provide simple, inexpensive and efficient means for connecting the draw bar of a car coupling with the draft rigging, whereby the car coupling may be quickly removed and replaced, so that cars will not be delayed in transit when laden with freight by the breakage of a car coupling or draft spring or other portion of the draft rigging.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of a car coupling, constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a detail sectional view, illustrating the construction for detachably connecting the draw bar with the draft yoke. Fig. 4 is a transverse sectional view on the lines 4—4 of Fig. 1. Fig. 5 is a detail perspective view of the draft yoke. Fig. 6 is a similar view of the rear portion of the draw bar.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a draw bar having a suitable coupler head 2 at its outer end, and provided at its inner end with upper and lower front and rear lugs 3 and 4, arranged in pairs and forming an intervening groove 5 for the reception of outer or front lugs 6 of a draft yoke 7. The draft yoke 7, which is approximately U-shaped, is composed of upper and lower sides or portions and a connecting vertical inner or rear portion 8, and it is designed to receive the draft springs and the follower plates (not shown) in the usual manner. As the draft yoke is adapted to receive different arrangements of cushioning means, illustration of the follower plates and the draft spring or springs is deemed unnecessary.

The lugs 6, which are arranged at the inner faces of the upper and lower sides or portions 7 of the draft yoke are beveled or undercut at their inner transverse edges 9 to form engaging portions, and the rear lugs 4 of the draw bar 1 have their front transverse edges 10 correspondingly beveled or inclined to form grooves or ways in which the lugs of the draft yoke are interlocked when the parts are assembled. The outer transverse faces 11 of the lugs 6 of the draft yoke are vertical, and the rear transverse edges or faces 12 of the front or outer lugs 3 of the draw bar 1 are also vertical to fit the end faces or edges 11 of the draft yoke.

The draw bar is engaged with and disengaged from the draft yoke by rotating it a quarter of a revolution to carry the front and rear lugs 3 and 4 from the sides of the draw bar to the top and vice versa. The draw bar is introduced between the spaced lugs 6 of the draft yoke with the front and rear lugs 3 and 4 at opposite sides of it, the space between the lugs 6 being sufficient for this purpose. When the grooves 5 are brought opposite the lugs 6, the draw bar is rotated one quarter of a revolution to swing the front and rear lugs 3 and 4 into engagement with the lugs 6. This partial turning of the draw bar on its longitudinal axis carries the front and rear lugs 3 and 4 to their normal position at the top and bottom of the draw bar, and they are disengaged from the lugs 6 by rotating the draw bar backward one quarter of a revolution to arrange them at opposite sides of the draw bar. This manner of interlocking the draw bar and the draft yoke enables the former to be quickly connected with and disconnected from the draft yoke, and a car coupling may be readily removed from a car in the event of the breakage of any of the parts of the draft rigging, and it may be quickly replaced without causing any material delay of a car when the same is in transit. This is especially advantageous when handling fast freight or perishable goods, and it obviates the inconvenience and trouble of cutting a

car out from the center of a train when the draft rigging becomes defective.

In order to enable the draw bar to be partially rotated to engage it with and disengage it from the draft yoke, the rear lugs 4 have rounded faces 13 and a draw bar is rounded at the bottom 14 of each groove 5. The bottoms of the grooves 5 and the lugs 14 present transverse convexly curved bearing faces, and the lugs 6 are provided with inner concavely curved bearing faces 15 to fit the bearing faces 14 of the grooves 5, and the upper and lower sides or portions of the yokes have transverse recesses 16, presenting concave faces to fit the rear lugs 3. These bearing faces permit the car coupling to be rotated to connect its draw bar with and disconnect it from the draft yoke.

The car coupling is held against rotary movement by means of a vertical key 17, tapered from the top to the bottom to form a wedge-shaped engaging member and extending through recesses 18 and 19 of the yoke and the front lugs 3 of the draw bar and through a slot 20 of the latter. The slots or bifurcations 18 extend through the ends of the upper and lower sides of the yoke from the outer faces of the sides to the inner bearing faces 15 of the lugs 6. The draw bar is preferably hollow, as shown, and the slot extends vertically through the rear portion of the draw bar and connects the recesses 19. The tapering wedge-shaped key engages both the draw bar and the draft yoke, and it is adapted to take up the wear and it prevents lost motion and provides a solid joint or connection between the draw bar and the draft yoke. By this construction inclined faces are provided at both the front and back of the lugs 6 of the yoke, which are thereby rigidly interlocked with the draw bar and effectually prevented from spreading. The lugs may be made of a size to permit them to be freely engaged with and disengaged from one another, and the key will maintain the parts in tight engagement when it is placed in position. It is preferably fastened in place by a pin 21, arranged at the bottom of the car coupling and piercing the lower end of the key and engaging the lower side or portion of the yoke at opposite sides of the recess 18 thereof. When it is desired to detach the car coupling, the pin is removed and the key is detached. This will permit the partial rotary movement necessary to disengage the lugs of the draw bar from those of the draft yoke.

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

The combination of a draft yoke having spaced sides provided at their outer ends with inwardly extending lugs having inclined rear faces, the sides of the yoke being bifurcated at their terminals at the outer faces of the lugs, a draw bar provided with front and rear lugs arranged in pairs and forming intervening grooves to receive the lugs of the yoke, the rear lugs having inclined faces to interlock with the inclined rear faces of the lugs of the draft yoke and the front lugs being provided with recesses arranged in alinement with the bifurcations of the yoke, and a tapering key arranged in the recesses of the front lugs and the bifurcations of the yoke and passed through the draw bar and presenting inclined faces to the parts at the front of the dovetailed lugs.

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

ALLAN TAWLKS.

Witnesses:
ALAY WAITNER,
I. S. BESSEL.