

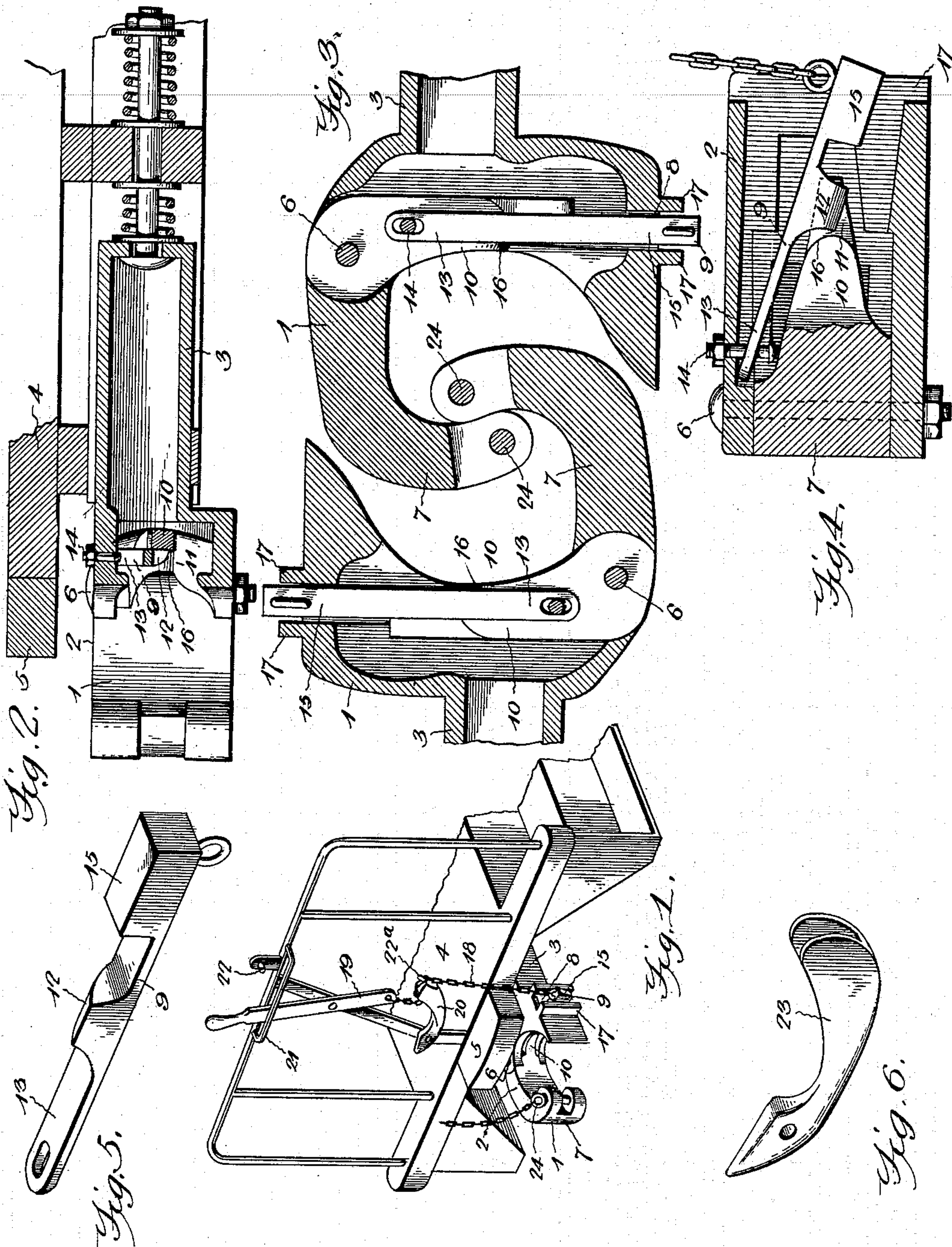
No. 612,178.

Patented Oct. 11, 1898.

T. RILEY.
CAR COUPLING.

(Application filed Mar. 17, 1898.)

(No Model.)



Witnesses
K. Kaufman, By *His* Attorneys,
T. J. Riley

Thomas Riley, Inventor.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS RILEY, OF AUSTIN, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 612,178, dated October 11, 1898.

Application filed March 17, 1898. Serial No. 674,245. (No model.)

To all whom it may concern:

Be it known that I, THOMAS RILEY, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, 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, to increase their strength, durability, and efficiency, and to provide a simple and comparatively inexpensive one capable of coupling automatically and adapted to be readily uncoupled without going between cars and when a car is stationary or in motion or on a straight track or on a curve.

A further object of the invention is to decrease the oscillating motion of draw-heads and to enable them to couple closer together and lessen the distance between the ends of cars.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention and shown applied to a car. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a transverse sectional view. Fig. 5 is a detail perspective view of the pivoted catch for locking the knuckle in its closed position. Fig. 6 is a detail perspective view of the guide-block.

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

1 designates a draw-head of the Janney type, having its upper face 2 arranged in the same horizontal plane as the upper face of its shank or draw-bar 3, whereby the draw-head is adapted to be arranged beneath a car 4, as clearly illustrated in the accompanying drawings. By this arrangement cars will couple closely and lessen the space between them and the oscillatory motion or vibration of the draw-head will be greatly lessened, thereby increasing the durability of the draft-rigging and decreasing the liability of the draw-bar

or its supports being broken or otherwise injured by such lateral motion.

In order to protect the draw-head further, the car is provided with a buffer 5, located centrally over the draw-head and adapted to receive the full force of the blow incident to coupling, and thereby relieve the car-coupling of the same. The outer edge or engaging face of the buffer 5 is located in advance of the central portion of the front end of the draw-head, as clearly shown in Figs. 1 and 2, and it is in position to protect the draw-head.

The draw-head is provided at one side with perforated ears, receiving a knuckle-pin 6, which couples a swinging knuckle 7 to that side of the draw-head in the usual manner, and the other side of the draw-head is provided with a vertical slot 8, through which projects a pivoted catch 9, which locks the knuckle in its closed position. The arm 10 of the pivoted knuckle swings horizontally in the usual manner and is provided at the front or outer face of its end with a recess 11, into which drops the body portion of the pivoted catch 9 when the knuckle closes.

The catch, which is adapted to swing vertically, is provided with a centrally-arranged depending head or engaging portion 12 and has its inner portion 13 reduced and connected to the top of the draw-head by a fastening device 14, consisting of a bolt and arranged to permit the catch to have sufficient play to swing into and out of engagement with the arm of the knuckle. The outer portion or arm 15 of the catch is heavier than the inner portion and operates as a weight to retain the engaging head in engagement with the arm of the knuckle, and the front face of the head is beveled and is adapted to be lifted by the arm of the knuckle when the latter closes, whereby the operation of coupling is rendered automatic. The engaging portion or head of the catch is slightly tapering, and the inner wall 16 of the recess 11 is oppositely inclined, the upper portion conforming to the inclination of the adjacent edge of the head of the catch.

The draw-head is provided at opposite sides of the vertical slot 8 with projecting flanges 17, and the outer end of the catch has an eye, into which is linked the lower end of a chain 18, which has its upper end attached to an

operating-lever 19, and in order to enable the operating or uncoupling lever 19 to be located near the center of the platform or away from the side of the car an oscillating lever 20 is employed and is mounted on the car in position to give the lower portion of the chain a direct upward lift.

The operating or uncoupling lever is fulcrumed between its ends and is mounted on the railing at the end of the car in a suitable keeper 21, and it is adapted to engage a stop 22 to lock the catch in an elevated position and prevent the draw-head from coupling. The oscillating arm or lever 20 is pivoted near one end and is slightly curved, as shown, and its outer end, which is located directly above the outer end of the catch, is provided with a stud or projection 22^a, adapted to engage one of the links of the chain. When the uncoupling-lever is operated, the oscillating arm or lever swings upward and lifts the catch, and this arrangement permits the operation of uncoupling to be performed when a car is in motion or at a standstill, and it is as easily operated on a curve as on a straight track.

In Fig. 6 of the accompanying drawings is shown a stationary guide-block 23, provided at its outer end with spaced ears or flanges located directly above the outer end of the catch and adapted to receive the chain, so that the uncoupling-lever will exert a direct lift upon the lower portion of the same.

The stationary guide-block 23 is designed to be substituted for the oscillating arm or lever 20 and is adapted to be arranged in the same position in which the arm or lever is shown in Fig. 1 of the drawings.

The outer end of the knuckle is bifurcated and perforated to form a link-opening and a coupling-pin perforation, and the car is preferably provided with a coupling-pin 24, connected with it by a chain of sufficient length to enable the pin to be readily placed in the coupling-pin perforation.

The invention has the following advantages:

The car-coupling, which is simple, inexpensive, strong, and durable, is adapted to be partially arranged beneath a car, so that two cars may be coupled closely together, and also to reduce the lateral vibratory motion of the draw-head to a minimum, and thereby increase the durability of the draft-rigging and lessen the liability of the parts being injured by the lateral vibration of the car-coupling.

The car-coupling is automatic in operation and is adapted to be readily uncoupled under all the various conditions to which a car is

subjected, and as the top of the draw-head is imperforate the car-coupling cannot accumulate moisture and become frozen and inoperative.

Changes in the form, proportion, and minor details of construction, such as adapting the uncoupling mechanism to a box-car or other form of car, may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a car-coupling, the combination of a draw-head provided at one side with a vertical slot, a knuckle pivoted to the other side of the draw-head and having its arm disposed transversely of the same and extending toward the opening thereof, said arm being provided at its front face with a vertical recess 11, the transversely-disposed catch extending through the opening of the draw-head and pivoted at its inner end to the top of the same and provided at its outer end with a weight, said catch having a depending engaging portion located between its ends and fitting in the recess 11, and means for operating the catch, substantially as described.

2. In a car-coupling, the combination of a draw-head provided at one side with an opening; a knuckle pivoted to the other side of the draw-head and having a transversely-disposed arm with a recess at its front face, a catch extending through the opening of the draw-head, pivoted at its inner end to the latter and provided between its ends with a depending portion engaging the recess of the arm, an operating-lever located above the draw-head, a chain extending from the catch to the operating-lever, and a horizontally-disposed guiding device secured at its inner end to a suitable support and having its outer end engaging the chain at a point near the lever, substantially as described.

3. In a car-coupling, the combination of a draw-head, a knuckle, a catch extending through one side of the draw-head, a chain connected with the catch, an uncoupling-lever attached to the chain and adapted to lift the catch, and an oscillating arm or lever located above the catch and provided with a projection or stud adapted to engage one of the links of the chain, 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.

THOMAS RILEY.

Witnesses:

R. C. WALKER,
FITZHUGH THORNTON.