No. 856,489. PATENTED JUNE 11, 1907.

E. F. PENDEXTER.

CAR COUPLING.

APPLICATION FILED JULY 16, 1906.

Fig. 1.

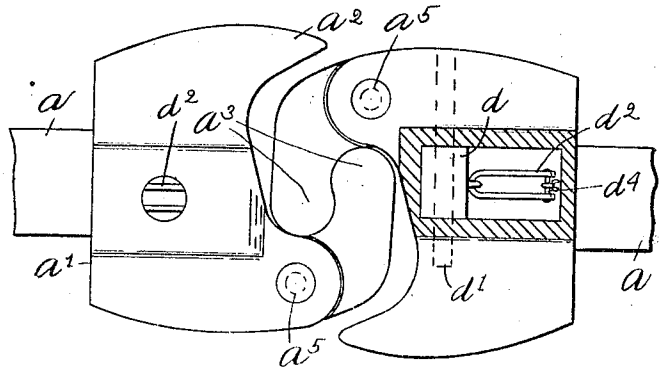
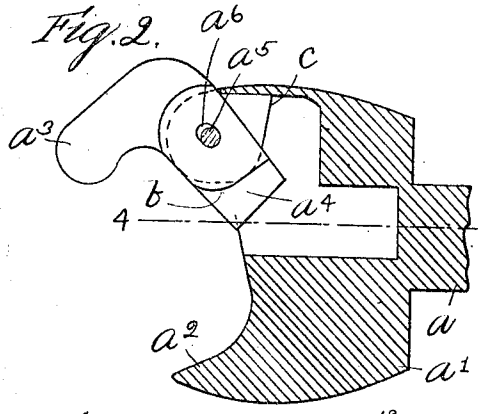


Fig. 2.



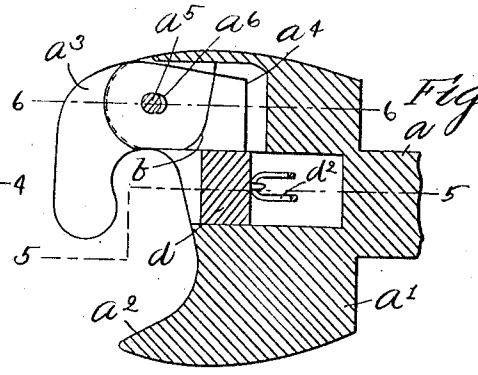
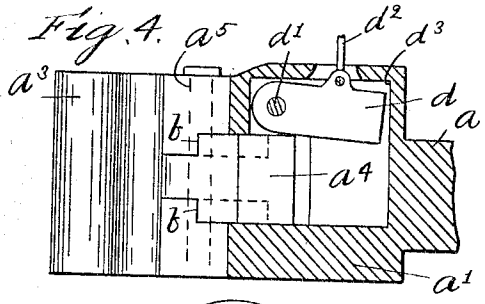


Fig. 3.

Fig. 4.



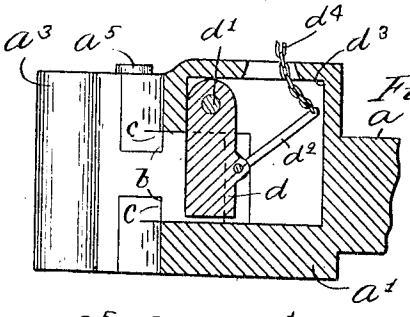


Fig. 5.

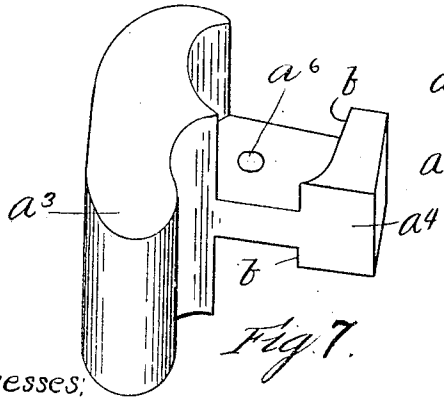


Fig. 7.

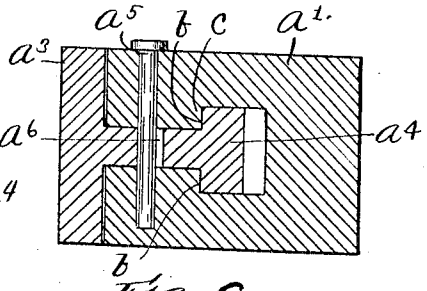


Fig. 6

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UNITED STATES PATENT OFFICE.

EDWARD F. PENDEXTER, OF MILFORD, MASSACHUSETTS.

CAR-COUPLING.

No. 856,489. Specification of Letters Patent. Patented June 11, 1907.

Application filed July 16, 1906. Serial No. 326,351.

To all whom it may concern:

Be it known that I, EDWARD F. PENDEXTER, of Milford, county of Worcester, State of Massachusetts, have invented an Improvement in Car-Couplings, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to car couplings of the knuckle type, and has for its object to provide the knuckle with abutting shoulders back of the pivot, extending both upward and downward, which are adapted to engage abutments provided in the draw-head, to thereby relieve the pivot pin of the severe strain to which it is ordinarily subjected; also to form said abutting shoulders and abutments in such manner that the knuckle will be drawn rearward a short distance when swung into locking position, a slot being provided for the pivot pin in lieu of the hole which is usually provided therefor, to permit of such rearward movement, whereby the entire strain will be resisted by the abutments which are provided in the draw-head; also to provide a pivoted gravitating latch which holds the knuckle in its locking position, the pivot of the latch being arranged at right angles to the length of the head, and an improved locking-device being employed for said latch, which holds it in its locking position, but which is adapted to be released by the hand lever which is employed for lifting the latch.

Figure 1 shows in plan view a car coupling embodying this invention. Fig. 2 is a sectional detail of one of the coupling members, showing the interlocking member swung open. Fig. 3 is a similar sectional detail showing the interlocking member swung into locking position. Fig. 4 is a vertical section of one of the coupling members taken on the dotted line 4—4, Fig. 2. Fig. 5 is a vertical section of one of the coupling members taken on the dotted line 5—5, Fig. 3. Fig. 6 is a vertical section of one of the coupling members taken on the dotted line 6—6, Fig. 3. Fig. 7 is a perspective view of the interlocking member removed.

The draw bar a and draw head a' having the guard a^2 are all as usual. The knuckle, which is pivoted to the draw head, has the usual guard-engaging portion a^3 and latch-engaging portion a^4, said portions being arranged at approximately right angles to each other.

a^5 represents the usual pivot-pin for the knuckle. Instead of providing the usual circular hole through the knuckle for the pivot pin a^5 I have provided a slot a^6, which provides for a movement of the knuckle in a rearward direction for a short distance relative to the pivot pin, which latter will occupy a position at the forward end of said slot when the knuckle is swung into locking position.

The end of the latch-engaging portion a^4 of the knuckle is formed with abutting shoulders b, b, on its upper and under sides, back of the slot a^6, the engaging or acting faces of which are made straight from the outer side of the knuckle to a point near the inner side thereof and then curved at the inner side thereof.

The knuckle-receiving recess in the head is formed with two like bosses above and below, one extending downward and the other upward, and said bosses enter the spaces in the upper and under sides of the knuckle between the guard-engaging portion a^3 and the latch-engaging portion a^4 and the circular hole which is provided for the pivot-pin a^5 extends through both of said bosses. The rear walls of both bosses serve as abutments c, c, against which the shoulders b, b, respectively engage when the knuckle is moved into interlocking position. These abutments are, therefore, located back of the pivot-pins a^5. The abutments c, c, are shaped to correspond to the shape of the abutting shoulders b, b, and when so shaped it will be seen that as the knuckle is swung on its pivot into locking position it will be moved rearward a short distance so that the strain will be resisted by the abutments in the head, and the pivot pin will be absolutely relieved of all strain. In this type or class of coupling this is an important feature, as ordinarily, the pivot pin resists the strain, and it occasionally happens that the upper or under support for said pin is broken off, or the pin itself is broken, a result which is not liable to happen with the construction herein shown. Furthermore, the abutting shoulders and abutments are formed of large area and therefore capable of resisting a much greater strain than the pin.

d represents a latch which is contained in a recess in the head and adapted to occupy a

position to hold the knuckle in its locking position, and said latch is herein pivoted at d' by means of a pivot pin which is extended at right angles to the draw-head, so that instead of lifting it bodily, as is now common, to disengage the locking member, it will be lifted on its pivot. A link or it may be a pin d^2, is loosely connected to the rear side of said latch, near its lower end, which, when the latch falls by gravity into its locking position, will fall beneath a shoulder d^3 in the head, to thereby lock said latch in its locking position and prevent it from working up, little by little, as is now the trouble with the latch as usually constructed. The upper end of the link or pin d^2 is connected by a chain d^4 to the usual pivoted operating lever, not herein shown, so that when said lever is operated to pull on the chain d^4, the link or pin, which serves as the locking-device for the latch, will be lifted to release the latch and then the latch will be lifted. Therefore it will be seen that the locking-device for the latch is first released and then the latch is lifted by the same operation of the operating lever.

By providing abutting shoulders and abutments to resist the strain on the knuckle, it will be seen that the pressure of the latch-engaging portion of the knuckle on the latch is reduced to the minimum, as contrasted with the employment of the usual pivoted knuckle, and as a result said latch can be more easily lifted than would otherwise be the case.

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

1. In a car coupling of the class described, a pivoted knuckle having abutting shoulders back of its pivot extending upward and downward, and having a slot for the pivot pin, a pivot pin for the knuckle, a draw-head to which the knuckle is pivoted, having its knuckle-receiving recess formed with bosses, above and below, through which the pivot pin extends, which occupy positions in front of the abutting shoulders on the knuckle and which are formed with abutments against which the shoulders on the knuckle abut, substantially as described.

2. In a car coupling of the class described, a pivoted knuckle having abutting shoulders back of its pivot, extending upward and downward, the engaging faces of which are made straight from the outer side of the knuckle to a point near the inner side thereof, and then curved at the inner side of the knuckle, a pivot pin for the knuckle, a draw-head to which the knuckle is pivoted, having its knuckle-receiving recess formed with abutments above and below, the engaging faces of which, against which the shoulders on the knuckle abut, being shaped to correspond with the shape of the engaging faces of said shoulders, substantially as described.

3. In a car coupling of the class described, a pivoted knuckle on the drawhead, a pivoted gravitating latch for said knuckle contained in a recess in the drawhead, a locking device for said latch comprising a pin or link pivoted to the rear side thereof and extending upward, and its upper end designed to engage a shoulder on the drawhead, said pin or link being entirely within the drawhead, and means for lifting said latch, substantially as described.

4. In a car coupling of the class described, a pivoted knuckle on the drawhead, a pivoted gravitating latch for said knuckle contained in a recess in the drawhead, a locking device for said latch extending upwardly from the rear side thereof and situated entirely within the drawhead and means for releasing said locking device and lifting the latch, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDWARD F. PENDEXTER.

Witnesses:
CLIFFORD A. COOK,
CHESTER F. WILLIAMS.