

UNITED STATES PATENT OFFICE.

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DEVICE FOR ATTACHING HAY-LOADERS TO WAGONS.

SPECIFICATION forming part of Letters Patent No. 524,960, dated August 21, 1894.

Application filed April 14, 1894. Serial No. 507,532. (No model.)

To all whom it may concern:

Be it known that I, MAX F. STADTMULLER, a citizen of the United States, residing at Pomeroy, in the county of Calhoun, State of Iowa, have invented certain new and useful Improvements in Devices for Attaching Hay-Loaders to Wagons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improved device for attaching hay loaders to wagons, the object being to provide a device of this character that shall always be ready for coupling, one that is automatic in its coupling action, and one that can be easily operated to release the parts and simultaneously set them ready for coupling again.

Another object is to so construct the parts that any slight difference in height between the wagon and loader will not affect the operation of the coupling and a still further object is to provide a device in which a coupling can be made when the parts are arranged at an angle as well as when the parts are brought together in a straight line.

With these objects in view my invention consists in the peculiar construction of the various parts and their novel combination or arrangement all of which will be fully described hereinafter and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of a loader and wagon connected by means of my improved device. Fig. 2 is a top plan view showing the parts coupled. Fig. 3 is a similar view showing the parts uncoupled. Fig. 4 is a bottom plan view. Fig. 5 shows a slight modification.

Referring to the drawings, A represents a hay loader of any suitable construction provided with a draft pole or beam B and connected thereby with the wagon C, upon which the hay is to be loaded. The feature of my invention consists in the connection between the pole or beam of the loader and the rear bolster or axle of the wagon or hay rack. This coupling device consists of two parts D and E attached respectively to the pole and bolster as clearly shown in Fig. 1. The part D

which is really the coupling device consists of a base plate d rigidly secured to the end of the pole B and projecting some distance beyond said end. This projecting portion is cut away to provide a flaring mouth d' and extending inward from said mouth is a longitudinal slot d^2 . A swinging locking member d^3 is pivoted upon the upper face of the plate d at one side of the slot d^2 said member extending rearward some distance. The forward end of member d^3 is hook shaped as shown at d^4 and adjacent to said hook is the bevel faced projection d^5 . The rear end of the member is also formed with an oblique face d^6 the purpose of which will appear presently.

A locking catch or lever d^7 is pivoted upon one side of the draft pole or beam B and extends upward through a slot d^8 formed in the base plate d said catch being adapted to engage the rear end of the swinging member and hold the same locked so that the hook portion will extend across the slot of the plate said catch or lever being normally held forward by means of a spring d^9 attached to the side of the pole or beam B.

The part E comprises a flat plate e securely connected to the bolster and axle of the wagon or hay rack by means of the clips e' . A vertical post or bar e^2 is secured upon the outer end of said plate said post or beam being adapted to enter the slot in the plate d and engage the locking member thus effecting a coupling. If desired two plates e may be used and the post bolted between them, or if desired the plate can be dispensed with and a staple employed, the vertical member of the staple serving the purpose of the post or bar e^2 . The normal position of the parts when uncoupled is shown in Fig. 3 in which the swinging member is shown extending across the slot of the plate, the beveled face d^5 being opposite the said slot. The catch lever d^7 is also drawn forward by means of its springs. When the parts are brought together the post engages the swinging member forcing it back so that the oblique end d^6 engages the catch lever and forces said lever back. As soon as the end of the swinging member passes said lever the spring forces it back again thus locking the swinging member in position and at this time the hook portion extends across the slot d^2 and prevents the

post or bar being withdrawn except by releasing the catch lever and to do this a string F is connected therewith and extends around a pulley or sheave *f* within reach of the operator who can uncouple the parts whenever desired. The swinging member is pivoted beneath a plate G connected to the base plate and provided with a shoulder *g* against which the member abuts in its rearward motion the forward motion of said member being limited by means of the stop *g'* secured near the forward end of the main plate *d*. The plate G also prevents any upward motion of the swinging member.

15 Upon the under side of the base plate are produced the ribs HH which extend parallel a short distance and then diverge to extend parallel with the edges of the mouth *d'*. The end of the pole or beam B rests between the parallel portions of the ribs and the curved portions are gradually tapered until they finally vanish in the bottom of the plate. The plate E may also have a strengthening rib if desired. The ribs HH besides strengthening the plate *d* also tend to elevate the pole or beam whenever the parts are of unequal height as the tapering ribs tend to elevate the pole or beam as the parts are drawn together the said ribs sliding upon the upper face of the plate E. When it is desired to uncouple the parts the cord F is drawn and the sections moved apart. This throws the swinging members outward as the post is withdrawn and in so swinging the inclined projection *d^b* is again brought opposite the slot *d^a* and the device is set ready for coupling again. The mouth of the slot is made flaring to facilitate the coupling of the parts when they are brought together at an angle instead of being brought together in a line.

40 Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination with a longitudinally slotted base plate, of a swinging member pivoted at one side and having a hooked end, and a spring actuated locking catch adapted to engage the opposite end of said swinging member substantially as shown and described. 45
 2. The combination with a base plate slotted longitudinally of the swinging member having a hook at one end, the stops upon opposite sides of the plate and the spring actuated locking catch all arranged substantially as shown and described. 50
 3. The combination with a base plate having a longitudinal slot of the swinging member having a hooked portion an inclined projection and an oblique end, the locking catch and spring and the stops upon opposite sides of the plate, substantially as shown and described. 55
 4. The combination with a base plate slotted longitudinally and provided with ribs tapering at the ends, of the plate and post or bar mounted thereon and means carried upon the base plate for locking said post or bar within the slot, substantially as shown and described. 60
 5. In a device of the character described, a coupling plate adapted to be secured to the axle or rack, said plate carrying a coupling pin or bar upon its upper face and provided with bracing flanges or ribs upon its under face, substantially as shown and described. 65
- In testimony whereof I affix my signature in presence of two witnesses. 70

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Witnesses:

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