L. McCALISTER.

EXTENSION LOCK.

APPLICATION FILED APR. 25, 1914.

1,179,730. Patented Apr. 18, 1916.

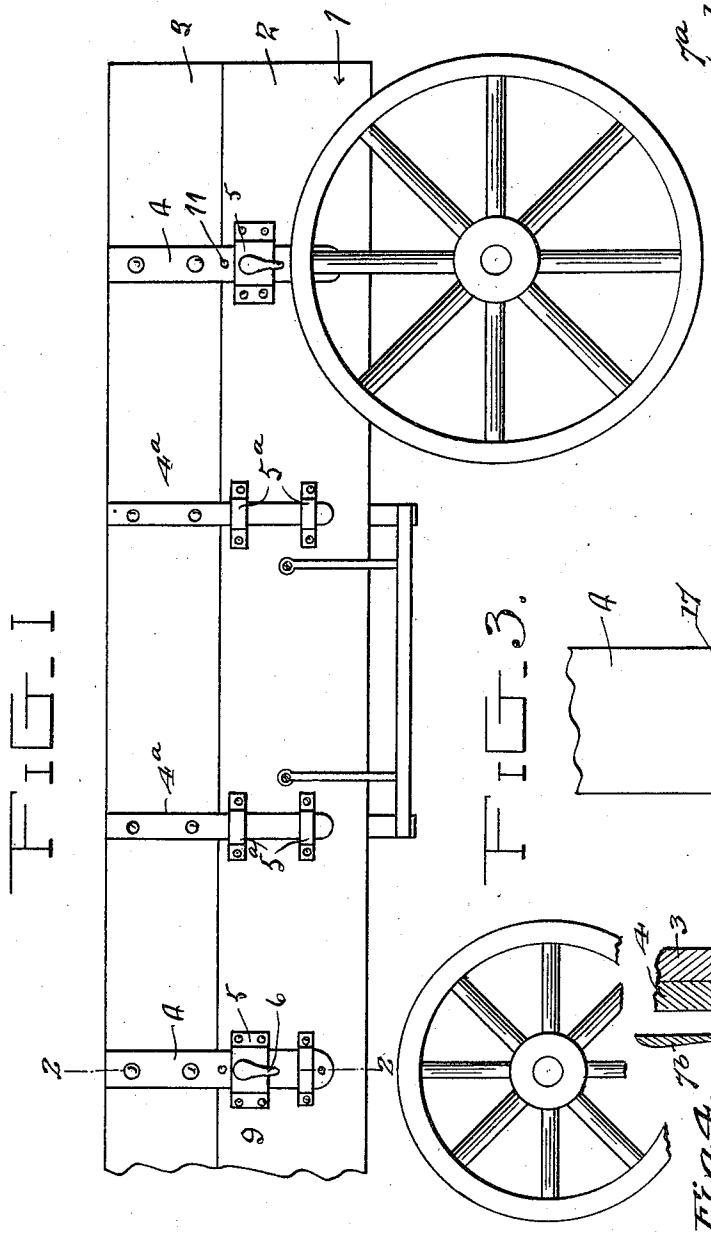


FIG. 1

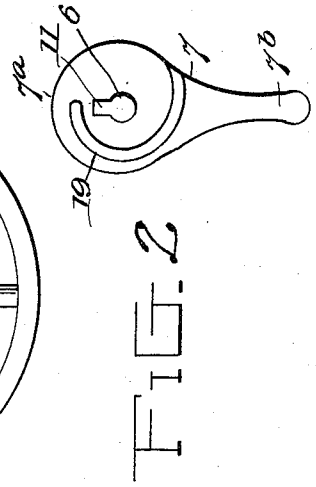


FIG. 2

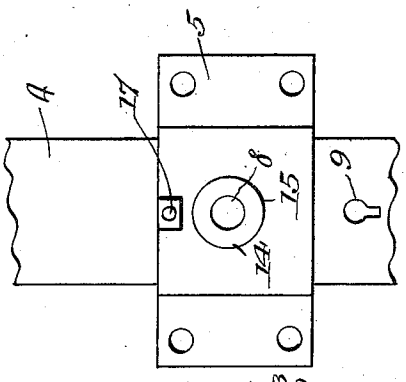


FIG. 3.

FIG. 4.

Witnesses

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EXTENSION-LOCK.

1,179,730. Specification of Letters Patent. Patented Apr. 18, 1916.

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To all whom it may concern:

Be it known that I, LEVI MCCALISTER, a citizen of the United States, residing at Hennessey, in the county of Kingfisher and State of Oklahoma, have invented certain new and useful Improvements in Extension-Locks, of which the following is a specification.

My invention relates to improved locking means for holding extension side boards of a wagon body securely in place so that danger of loss of a portion of the load of a wagon resultant in the derangement of the extension boards for the wagon body is prevented.

An important object of my invention is to provide simple and inexpensive locking means by means of which extension boards to enlarge the receiving capacity of a wagon body may be readily and rigidly secured in position.

Another important object of my invention is to provide a lock of the character described which consists of few parts, is reliable and efficient in operation, capable of being easily operated and which is cheap to manufacture.

The above and additional objects are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out as claimed.

With reference to the drawings, wherein I have illustrated the preferred embodiment of my invention as it is reduced to practice, and throughout the several views of which similar reference numerals designate corresponding parts—

Figure 1 is a fragmentary side elevation of a wagon showing an extension side board thereon and my improved lock in operative position, Fig. 2 is a view in rear elevation of the locking bolt and lever, Fig. 3 is a front elevation of a fragmentary portion of one of the end cleats, and its bracket, the locking bolt and lever being removed, and Fig. 4 is a transverse sectional view taken on the vertical plane indicated by the line 2—2 of Fig. 1, the locking lever and its handle being shown in raised position.

Referring to the drawings by reference characters, 1 designates, as an entirety, a wagon of the usual construction, and 2 the side boards of the body thereof. Mounted upon the side boards 2 in superposed relation thereto, are extension boards 3. The extension boards 3 rest at their lower longitudinal edges upon the upper longitudinal edges of the side boards 2 when the wagon is to be used for hauling grain and the like. When the wagon is to be used for hauling stock, the extension boards 3 are elevated with relation to the side boards 2 and firmly secured in such position. End cleats 4 and intermediate cleats 4^a are secured to the outer sides of the extension boards 3, and the lower ends of the cleats project below the lower longitudinal edges of the extension boards 3. Brackets 5^a are secured to the outer side boards 2 to recieve the projecting ends of the cleats 4^a, and brackets 5 are mounted upon the outer side of the side boards 2 to receive the projecting ends of the cleats 4. The projecting ends of the cleats 4^a and 4 are slidably mounted in the brackets 5 and 5^a so that the extension boards 3 may be raised and lowered. To secure the extension boards 3 in either their raised or lowered position, the brackets 5 are provided with locking bolts 6 and locking levers 7. The locking bolts 6 are carried by the locking levers 7, and they pass through openings 8 formed in the brackets 5, through openings 9 formed in the cleats 4, and through openings 10 formed in the side boards 2. The inner ends of the locking bolts 6 are provided with offset lugs 11 which when in engagement with the outer faces of wear plates 12 secured to the inner sides of the side boards 2, hold the bolts against accidental withdrawal. To permit the passage of the locking bolts 6 and lugs 11, the openings 9 in the cleats 4, the openings 10 in the side boards 2, and the openings 13 in the wear plates 12, are key-hole openings. Each cleat 4 is provided with a plurality of key-hole openings 9 so that the extension boards 3 may be supported at various points above the upper longitudinal edge of the side boards 2, or so that the extension boards 3 may be secured with their lower longitudinal edges resting upon the upper longitudinal edges of the side boards 2. The brackets 5 are provided with circular bosses 14, which surround the openings 8, and which are provided with in-turned flanges 15. The flanges 15 prevent the withdrawal of the bolts 6 beyond the brackets 5,

and when the offset lugs 11 of the bolts 6 are within the circular recesses 16 formed by the bosses 14 and flanges 15, the extension boards 3 may be elevated to adapt the wagon for carrying stock.

After the side boards have been elevated to the proper position, the bolts 6 are turned by the levers 7 to register the lugs 11 with the reduced portions of the openings 9, 10 and 13, after which the bolts 6 are shoved through the openings until their lugs 11 are beyond the plates 12. The bolts 6 are then turned by the levers 7 until the lugs 11 are out of registration with the reduced portions of the openings 13 and in engagement with the outer sides of the plates 12. The levers 7, each comprise an enlarged circular head 7^a and a handle 7^b, the bolts 6 projecting inwardly from the centers of the inner sides of the enlarged heads. When the lugs 11 are out of registration with the reduced portions of the openings 13, the handles 7^a are lowermost, and in view thereof, the preponderance of the weight of each lever is below its bolt, resulting in the bolts being held against accidental rotation. As the bolts 6 are held against accidental rotation, the lugs 11 will be held in such position as to prevent the accidental withdrawal of the bolts.

Pins 17 are secured to the cleats 4 at points above the highest of the openings 9, and when the extension boards 3 are in position to adapt the wagon for carrying grain, the pins 17 are located within the recesses 18 which are formed in the brackets 5 and which open out through the upper edges of the bracket. To secure the side boards in this position, the bolts are passed through the highest of the openings 9 and through the openings 10 and 13, after which the levers are turned to throw the lugs out of registration with the reduced portion of the openings 13. During the rotation of the levers, cam tracks 19, which are formed on the inner sides of the heads 7^a, are brought into engagement with the pins 17. The track 19 exert a downward pull upon the pins 17, bringing and holding the longitudinal edges of the extension boards 3 into engagement with the upper longitudinal edges of the side board 2.

From the foregoing description, taken in connection with the accompanying drawings, it should be apparent that I provide means whereby the extension boards of wagons may be effectively secured in either raised or lowered position, that said means is simple and durable, and that said means may be readily and quickly operated to secure the extension boards in raised or lowered position or operated to permit the extension boards to be moved into raised or lowered position.

In practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in the details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as set forth.

What is claimed is:

1. In combination, a wagon body having the sides thereof provided with key hole openings, extension boards, cleats secured to the extension boards and projecting below the lower edges thereof, said projecting portions of the cleats having key hole openings, brackets secured to said sides and having key hole openings, said brackets receiving the projecting portions of the cleats, bolts passing through all of said openings to secure the extension boards in raised or lowered position, offset lugs on the inner ends of the bolts, pins carried by the cleats, levers carried by the bolts, and cam tracks carried by the levers, said levers providing means by which the bolts may be turned to throw the lugs out of registration with the reduced portions of said openings and to hold the lugs in such position, and said levers providing means by which the cam tracks may be thrown into and held in engagement with the pins.

2. In combination, a wagon body, extension boards, cleats secured to the extension boards, and projecting below the lower edges thereof, brackets secured to the sides of the wagon body to receive the projecting portions of the cleats, pins carried by the cleats, levers slidably and rotatably mounted upon the brackets, cam tracks carried by the levers for engagement with the pins on the rotation of the levers, means to prevent the levers from having any accidental sliding movement with relation to the brackets after the cam tracks have been engaged with the pins, and means for preventing the levers from having any accidental rotation on the brackets after the cam tracks have been engaged with the pins.

In testimony whereof I affix my signature in presence of two witnesses.

LEVI McCALISTER.

Witnesses:
J. H. Hill,
E. Barker.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."