No. 881,408 PATENTED MAR. 10, 1908.

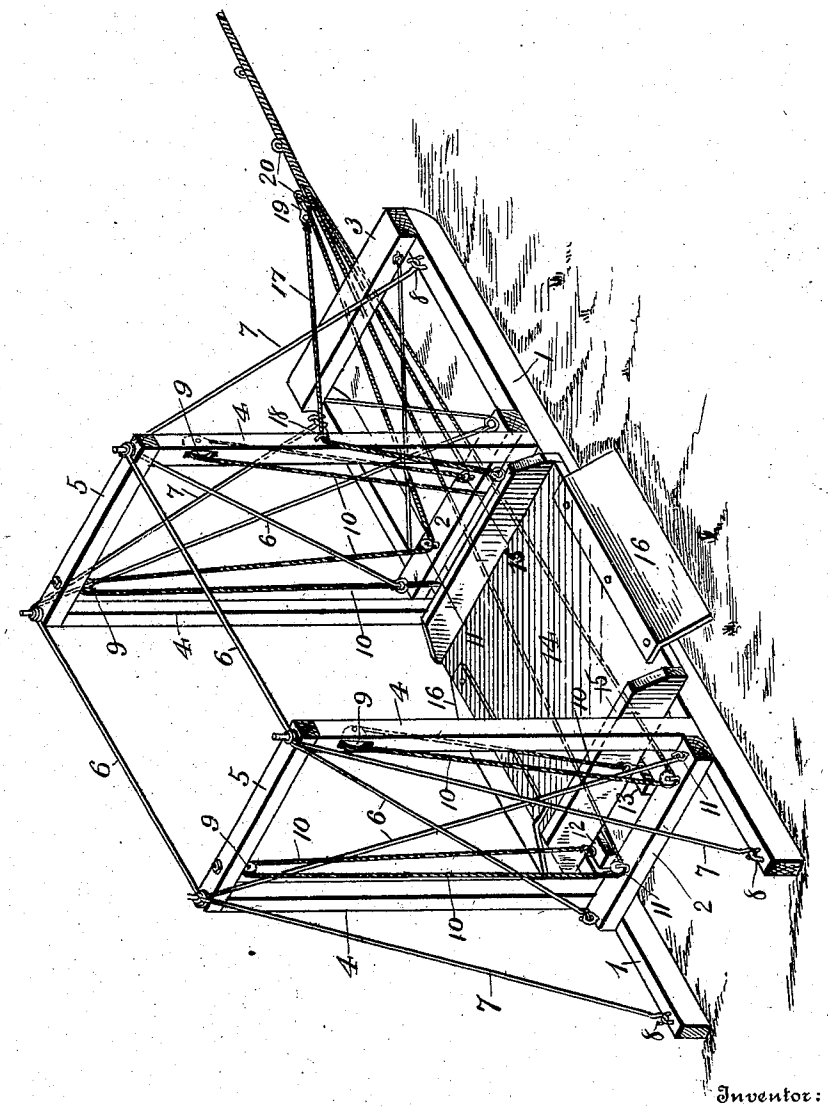
N. JORGENSEN.

LOADING APPARATUS.

APPLICATION FILED JULY 1, 1907.

3 SHEETS—SHEET 1.

Fig. 1



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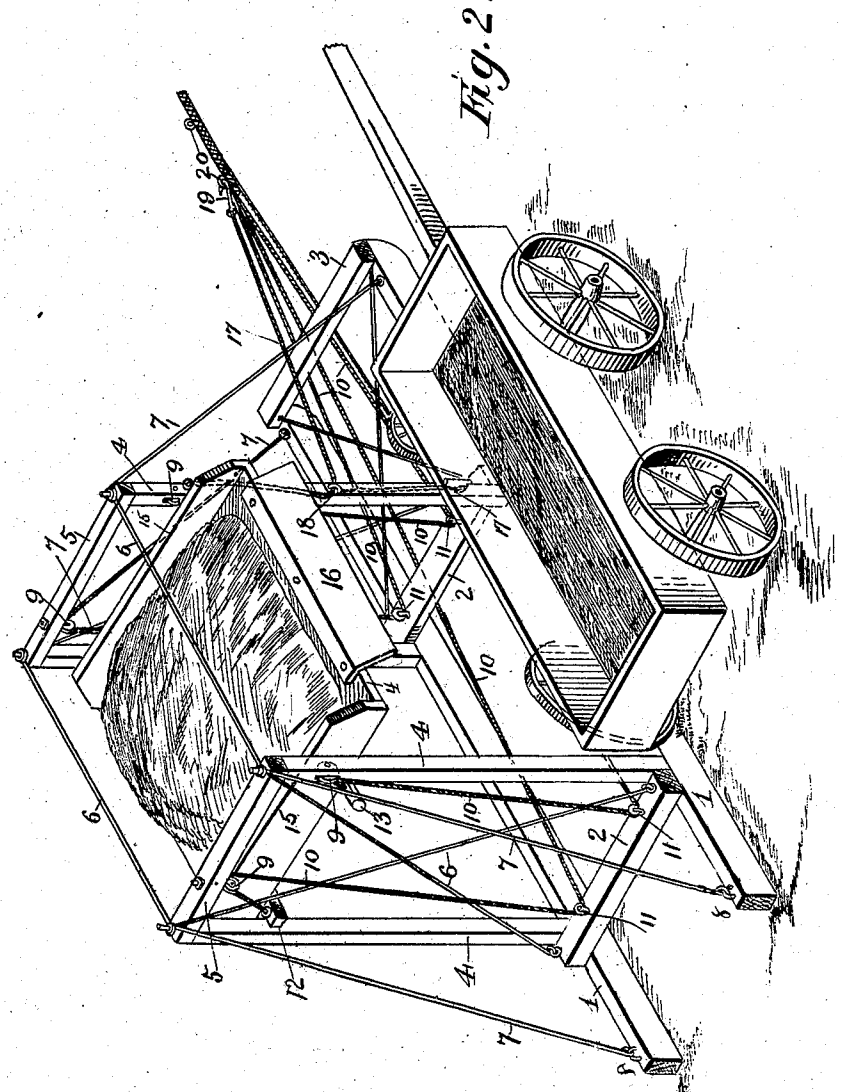
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

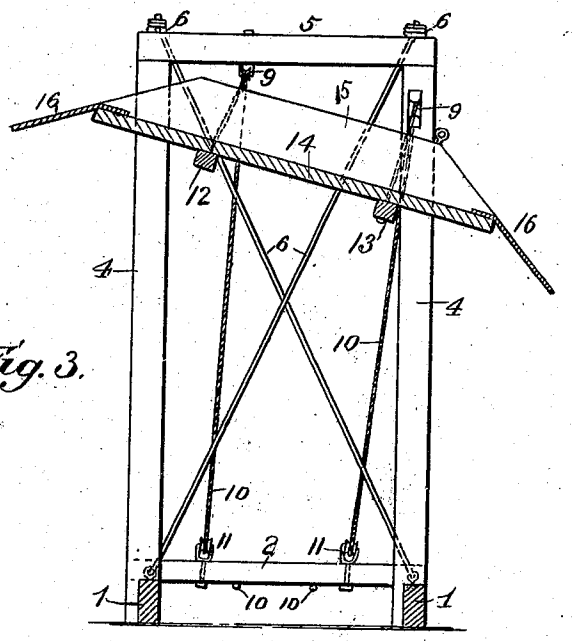


Fig. 3.

Fig. 4.

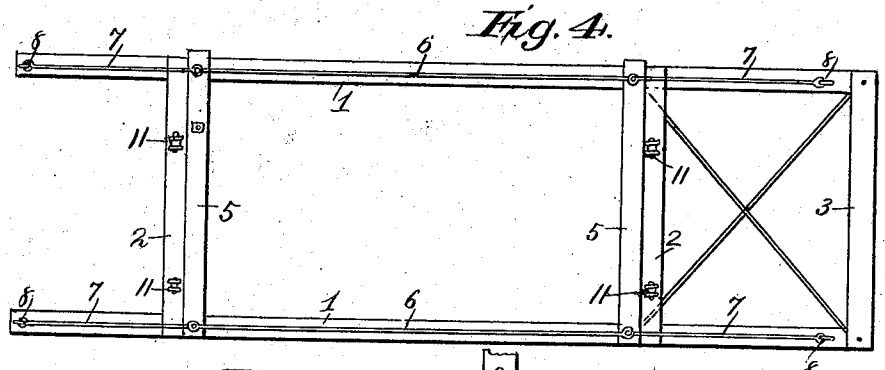
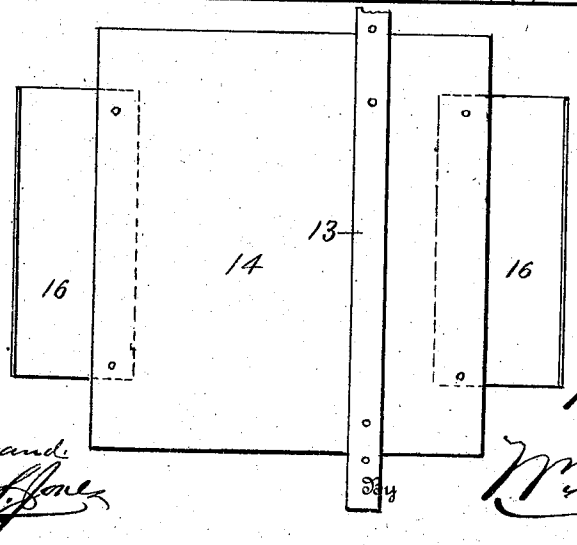


Fig. 5.



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UNITED STATES PATENT OFFICE.

NELS JORGENSEN, OF CRAIG, NEBRASKA.

LOADING APPARATUS.

No. 881,408. Specification of Letters Patent. Patented March 10, 1908.

Application filed July 1, 1907. Serial No. 381,697.

To all whom it may concern:

Be it known that I, NELS JORGENSEN, a citizen of the United States, residing at Craig, in the county of Burt and State of Nebraska, have invented certain new and useful Improvements in Loading Apparatus, of which the following is a specification.

This invention relates to that class of hoisting machinery which is used for loading wagons, and it has for its object to provide an improved loading apparatus which shall be specially adapted for the purpose of loading manure upon wagons.

A further object of the invention is to provide a simple and improved loading apparatus including a tiltable platform upon which the manure that is to be loaded may be deposited by the use of ordinary scrapers, and mechanism whereby the said platform may be conveniently raised and lowered.

Further objects of the invention are to simplify and improve the construction and operation of this class of device.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing,—Figure 1 is a perspective view showing the improved loading apparatus with the platform lowered and ready to be elevated. Fig. 2 is a perspective view showing the apparatus with the platform elevated and in position for dumping or discharging a load into the box of a wagon. Fig. 3 is a vertical transverse sectional view of the apparatus. Fig. 4 is a top plan view showing the apparatus with the tiltable platform removed. Fig. 5 is a detail view showing the tiltable platform detached and in inverted position.

Corresponding parts in the several figures are denoted by like characters of reference.

The framework of the improved loading apparatus includes a pair of sills 1—1, which are preferably disposed in parallel relation and which are connected and spaced apart by means of cross pieces 2—2 disposed at suitable distances from the ends of the sills. An additional cross piece 3 connects the sills near one end. Uprights 4—4 rise from the sills adjacent to the cross pieces 2, 2; there being four such uprights which are disposed at the four corners of a parallelogram, and said uprights or corner posts being connected, in pairs, by cap pieces 5, 5. Said corner posts are reinforced and sustained in an upright position by means of braces 6, 6 and guy members 7, 7, which latter are made fast to hooks or eye bolts 8 near the ends of the sills.

Near the upper ends of the corner posts 4—4 are disposed guide members, such as pulleys 9, over which are guided four flexible hoisting members, such as chains, cords, or wire cables 10, 10, said hoisting members being also guided beneath pulleys 11 which are mounted or supported near the ends of the cross-bars or braces 2, 2. After being guided beneath the pulleys 11, the flexible hoisting members 10 are gathered or connected together for the attachment of the draft, which may consist of animal power or which may be in the nature of a drum or winch adapted to be operated by a suitable motor of any description. The ends of the hoisting elements 10, 10, are connected with a pair of longitudinally disposed bars or lifting members, designated respectively, 12 and 13, said bars or lifting members being disposed approximately parallel to the sills 1, 1, and adjacent to the inner sides of the corner posts rising from said sills; the lifting platform 14 is secured upon the upper side of the bar 13, the projecting ends of which form trunnions to which the flexible lifting elements are attached, and upon which the platform may tilt, said platform being loosely supported upon the bar 12.

The lifting platform, which may be of any desired dimensions, is adapted to rest, when in a lowered position, upon the sills 1—1; said platform being provided at the sides thereof with flanges 15 for the purpose of retaining and guiding the material that is to be handled and loaded. The ends of the platform are provided with downwardly-inclined lips or shields 16 constituting approaches over which scrapers loaded with manure or other material may be guided onto the platform for the purpose of discharging the material upon the latter.

Suitably connected with one end of the tilting platform is a flexible trip member, such as a rope 17, which may be guided through a suitably disposed eye 18, said trip rope being adjustably connected with one of the flexible hoisting elements 10, as by means of a hook 19 engaging one of a plurality of eyes or loops 20 upon the element 10. Instead of connecting the trip rope with one of the hoisting elements 10 it will be considered within the scope of the invention to connect the free end of said trip rope adjustably with one of the corner posts or uprights 4, as shown by dotted lines in Fig. 2 of the drawings.

The operation and advantages of this invention will be readily understood from the foregoing description taken in connection with the drawings hereto annexed. When the platform 14 is in a lowered position, the material which it is desired to load into a wagon, such as manure, sand, gravel or the like, may be readily deposited upon said platform by means of scrapers operated by animal power, or said material may be deposited upon the platform, manually, by means of shovels, or in any suitable convenient manner. When a sufficient load has been accumulated upon the platform, draft is applied to the connected or gathered ends of the hoisting elements 10, thus raising or lifting the loaded platform to the desired elevation. At a predetermined point, which is determined by the point at which the trip rope is connected with or made fast upon one of the hoisting elements 10 or the post 4, the said trip rope becomes taut, and the platform will thus be tilted, as shown in Fig. 2 of the drawings, discharging the load into the box of the wagon which has been previously driven into position alongside of the loading device. When the draft is relaxed the tilting platform will be restored, by gravity, to its normal position in readiness for reloading. If preferred, the platform may be tilted manually, for the purpose of discharging its load, when the proper elevation has been attained.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. This improved loading apparatus is extremely simple and may be constructed and set up at a very moderate expense; it is eminently useful for the purpose of loading wagons with manure and other material which, by the use of this apparatus, may be loaded far more expeditiously and inexpensively than by hand. The improved loading apparatus is light in construction, and may be readily transported and assembled for operation in any place where it may be needed; and, when not in use, it may be conveniently dis-assembled and stored or packed for shipment in small compass.

What is claimed is:—

1. In a loading apparatus, a suitable framework including corner posts and means for sustaining said corner posts in an upright position, a vertically movable platform guided between said posts, a lifting bar secured upon the underside of said platform and having projecting ends forming trunnions upon which said platform may be tilted, an auxiliary supporting bar extending beneath the platform the latter resting loosely thereon, and suitably guided flexible hoisting elements connected with the lifting bar and the supporting bar.

2. In a loading apparatus, a frame including corner posts, a pair of parallel bars guided for vertical movement between said posts, suitably guided flexible hoisting elements connected with said bars, a tiltable platform secured upon one of said bars and resting loosely upon the other bar, and a trip rope connected with said tiltable platform.

3. In a loading apparatus, a frame including corner posts, a vertically-movable tiltable platform guided between said posts, a bar extending beneath the platform and having projecting ends forming trunnions, suitably guided flexible hoisting elements connected with said trunnions, and a suitably guided trip rope connected at one end with the tiltable platform and having its other end adjustably connected with one of the flexible hoisting elements.

4. In a loading apparatus, a pair of sills, cross bars connecting said sills, corner posts rising from the sills adjacent to the cross bars, caps connecting said corner posts in pairs, brace and guy members sustaining said posts, a pair of bars disposed intermediate the posts in parallel relation to the sills, a tiltable platform secured upon one of said bars and resting loosely upon the other bar, suitably guided flexible hoisting elements connected with the platform supporting bars, and a trip rope connected with the platform.

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

NELS JORGENSEN.

Witnesses:
E. J. MARTIN,
C. E. SHELLBERG.