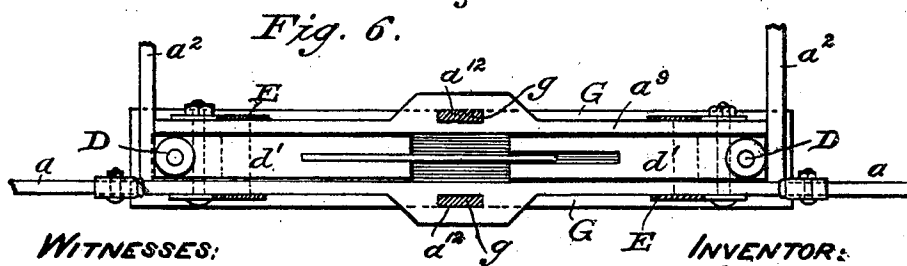
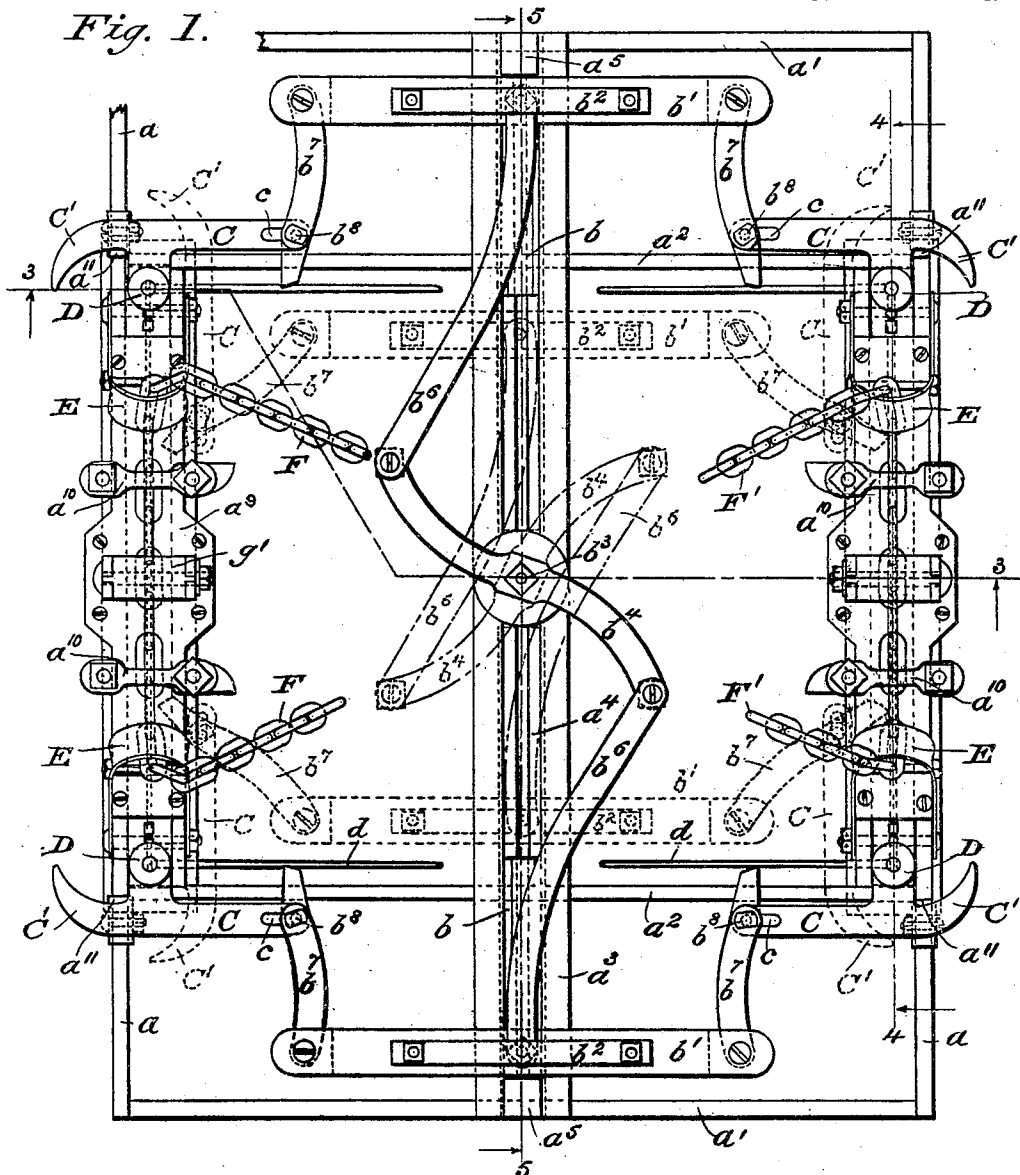


G. JEWITT.
LUMBER HANDLING DEVICE.
APPLICATION FILED JULY 11, 1904.

3 SHEETS—SHEET 1.

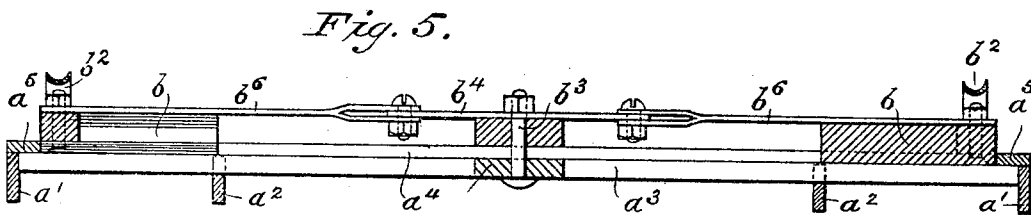
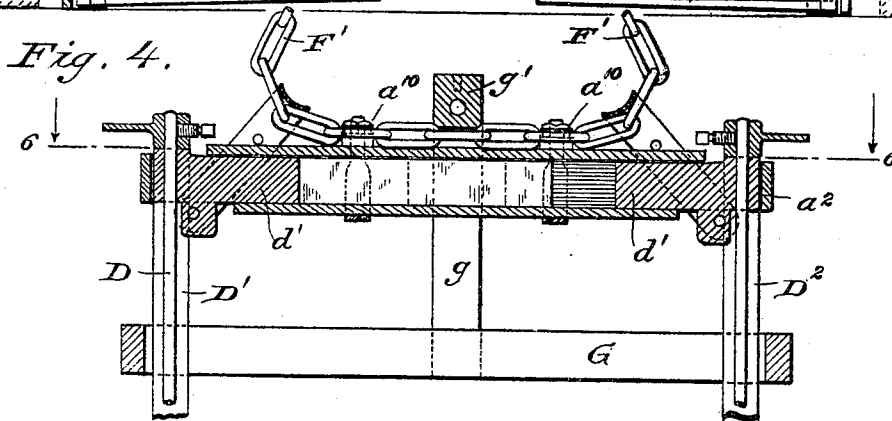
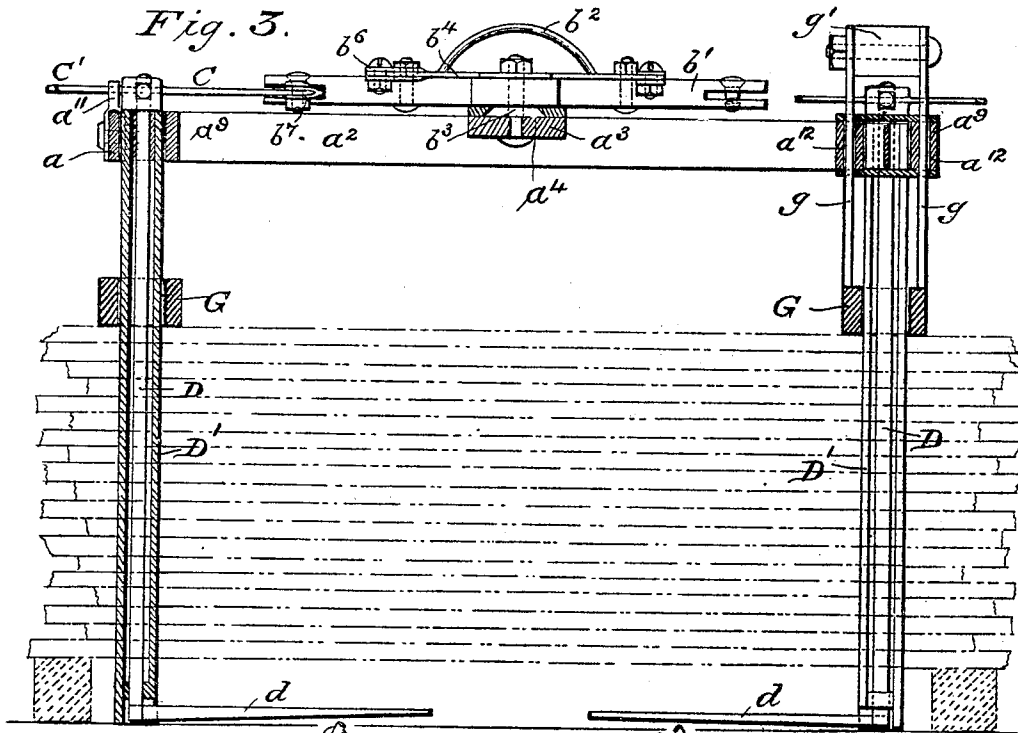


WITNESSES:
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INVENTOR:
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UNITED STATES PATENT OFFICE.

GABRIEL JEWITT, OF CLEVELAND, OHIO.

LUMBER-HANDLING DEVICE.

No. 795,514.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed July 11, 1904. Serial No. 216,182.

To all whom it may concern:

Be it known that I, GABRIEL JEWITT, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Lumber-Handling Devices, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to machines or devices for handling lumber in the loading or unloading of vessels or cars, its object being to effect such handling in an economical manner.

The said invention consists of means hereinafter fully described, and particularly set forth in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure 1 represents a plan of a device embodying my invention. Fig. 2 represents an end view thereof. Fig. 3 represents a vertical section taken upon the planes indicated by lines 3 3, Fig. 1, and viewed as indicated by the arrows adjacent thereto. Fig. 4 represents a detail vertical section taken upon the plane indicated by line 4 4, Fig. 1; and Fig. 5 represents a detail vertical section taken upon the plane indicated by line 5 5, Fig. 1. Fig. 6 represents a longitudinal detail section taken upon the plane indicated by line 6 6, Fig. 4.

The embodiment of the invention as illustrated includes a horizontally-disposed rectangular rigid frame adapted to be suspended from a derrick, crane, or other suitable hoisting device consisting of end bars *a a*, Fig. 1, side bars *a' a'*, brace-bars *a'' a''*, and a transverse centrally-disposed guiding-bar *a'''*. Longitudinally of the guiding-bar *a'''* is formed a guiding-slot *a⁴*, whose extremities are closed by means of stops *a⁵ a⁵*. Slidably mounted in this slot are two blocks *b b*, upon whose outer ends are rigidly secured, respectively, two transversely-disposed handle-bars *b' b'*, upon each of which is secured a handle *b²*. Upon a vertical pivot *b³*, fixed upon the center of bar *a'''*, is mounted a double arm *b⁴*, and articulating with one end of such arm and the middle of one handle-bar *b'* are two

connecting-links *b⁵ b⁵*. Articulating with the end of handle-bars *b' b'* are links *b⁷*, whose inner ends are pivoted to four horizontally-operating cranks *C C*, &c., the pivoted ends of the latter being provided with elongated bearing-slot *c* for receiving the pivotal pins *b⁸* of the links *b⁷*. These cranks are respectively fixed to the upper end of four vertical rods or legs *D D*, &c., which are oscillatorily mounted in two pairs of vertically-depending posts *D' D'*, *D² D²*, as shown in Fig. 4. These posts are made of channel or hollow form, so as to permit the legs *D D* to extend through their interior, as shown in Fig. 3. The legs are made so as to extend almost down to the bottom of their respective posts, and their lower ends are provided with laterally-extending feet *d*, which normally lie parallel with the sides of the frame pointing toward each other, as shown. The inner surfaces of the pairs of posts, therefore, form the lateral limits of a space below the frame, which I shall designate the "lumber-space," whose lower portion is normally unobstructed in a vertical direction. The posts are so spaced from each other so that the ends of the feet overlap when the rods or legs *D D* are turned through an angle of ninety degrees, so as to move the feet inwardly toward each other, such position being shown in Fig. 2. It will therefore be observed that in such position the feet extend across close the lumber-space and are adapted to support a rectangular pile of boards placed in said space so as to lie longitudinally with reference to the frame, such pile of lumber being shown in dotted lines in Figs. 2 and 3. The parts are so arranged that when the feet lie in their normal positions, as shown in full lines in Fig. 1, the handle-bars *b' b'* will be at the outer extremities of their strokes. It will therefore be seen that the structure above described may be lowered, so as to cause the posts *D' D'*, *D² D²* to straddle a pile of lumber, and by manually moving the handle-bars toward the middle of the frame or inwardly the said feet may be made to simultaneously turn inwardly and extend transversely below such pile, the latter being of course supported upon suitable cross-pieces for providing a free space beneath for receiving said feet. For the purpose of actuating the handle-bars as described the previously-mentioned handles *b² b²* are provided.

In addition to the above-described movement of the bars or legs *D* each pair of legs has an inward movement, so that the pairs

may be caused to approach or recede from each other. This movement is provided for by causing the legs to be slidably mounted in the frame. To this end the front and back members *a* of the frame are each provided immediately of their extremities with a hollow enlarged portion *a'*, Fig. 4, forming a slide-way for blocks *d'* *d''*, projecting into the ends of these portions, respectively, as shown. These blocks are rigidly attached to the posts *D'* *D''*, respectively, and have a limited movement between the frame members *a'* *a''* and the adjacent ends of the portions *a'*. Secured to each block is a pivotal yoke *E*, the two yokes at one end of the frame receiving hoisting-chain *F* and the two yokes at the other end receiving a chain *F'*. These two chains are united at the top (not shown) by a suitable ring which may be attached to the hook of a hoisting-cable. These chains are fixed to the end members *a* by means of clips *a''* *a''*, Fig. 1. Each crank *C* is provided with an outwardly-projecting arm *C'*, which engages a stud *a''*, fixed to the frame, when the crank is caused to swing outwardly, as will further appear.

Assuming the parts to be in the position illustrated in full lines in Fig. 1 and the device to be swung from a hoisting-line, the mechanism operates as follows: The hoisting-line is lowered until the device may be caused to straddle a prepared pile of lumber, as previously described. The handle-bars are then pushed toward each other, so as to cause the feet to swing under the pile. The arms *C'* of the cranks as a result of such movement become disengaged from studs *a''*, as shown in dotted lines. The hoisting-lines being now drawn upwardly, the chains *F* and *F'* draw or tend to draw together the two pairs of posts and to thus contract or tend to contract the lumber-space as a result of the weight of the lumber and machine by causing or tending to cause the pairs of posts *D'* *D''* to approach each other. A pile of lumber of the proper size will hence be compressed from the sides and firmly held by the posts *D'* *D''* from slipping endwise. When it is desired to discharge the load from the machine, the latter is lowered to the desired point until the posts rest upon the floor or ground, suitable cross-pieces being provided for receiving the pile of lumber and forming a space between it and the floor or ground. The handle-bars are now drawn apart, thus removing the feet from below the pile. During this movement arms *C'* engage studs *a''* and cause the posts to recede from each other, thus laterally releasing the pile. These movements having been completed, the machine may be raised, leaving the lumber in place.

In addition to the elements above described as embodied in my invention I also provide means for exerting a downward pressure upon the pile when supported by the machine. To this end vertically-sliding weights *G* are sup-

ported upon the two ends of the frame and are of divided formation, so as to permit the posts *D'* and *D''* to extend between the two parts thereof, as shown in Fig. 3. These weights are supported by vertical guides *g*, attached to their middles, respectively, which guides slide in ways *a''*, formed in the part *a'* of the frame, as shown in Fig. 6. The two guides *g* are each joined at the top by a cross-piece *g'*, which sustains the weight when no lumber is in the receiving-space, as shown in Fig. 2. When the structure is lowered to straddle a pile of lumber, the upper surface of the latter pushes the weights upwardly, so that during transportation of the pile they are caused to bear down upon such surface by the action of gravity.

It will thus be observed that the pile has pressure exerted upon it laterally and vertically. Such conditions effectually prevent the lumber from slipping out of the lumber-space endwise during transportation.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism therein disclosed, provided the means or the equivalent of such stated means embodied in the following claims be employed.

I therefore particularly point out and distinctly claim as my invention—

1. In a lumber-handling device, the combination of a frame, of a plurality of downwardly-extending legs oscillatorily mounted upon said frame, legs upon the same side of such frame being capable of a movement toward and from each other.

2. In a lumber-handling device, the combination of a frame, downwardly-extending posts secured to opposite sides of said frame, oscillatory rods extending downwardly through such posts and provided at the bottom with feet extending laterally therefrom and means for oscillating each of said feet in a horizontal plane.

3. In a lumber-handling device, the combination of a frame, two pairs of oscillatory perpendicular rods mounted upon opposite sides respectively of said frame, each rod provided with a horizontally-extending foot, rods of the same pair capable of movement toward and from the rods of the oppositely-disposed pair.

4. In a lumber-handling device, the combination of a frame, two pairs of perpendicular posts mounted upon opposite sides respectively of said frame, each post being capable of movement in horizontal planes, and gravity-operated means for causing said pairs of posts to move toward each other.

5. In a lumber-handling device, the combination of a frame, two pairs of perpendicular posts mounted upon opposite sides respectively of said frame, each post being capable of movement in horizontal planes, rods oscillatorily mounted in said posts respectively and each provided with a foot extending laterally

therefrom, means for simultaneously oscillating said rods, and means for effecting the simultaneous horizontal movement of said posts.

6. In a lumber-handling device, the combination of a frame, two pairs of oppositely-disposed downwardly-extending posts mounted upon said frame, said pairs of posts being capable of a movement toward and from each other, downwardly-extending rods mounted in said posts respectively and each provided with a laterally-extending foot, means for simultaneously oscillating said rods, and gravity-operated means for effecting the simultaneous operation of said posts.

7. In a lumber-handling device, the combination of a frame, two pairs of perpendicular posts mounted upon opposite sides of said frame respectively, each pair of posts being movable toward and from the other, gravity-operated means for effecting the approach of such pairs, and means for effecting movement thereof in the opposite direction.

8. In a lumber-handling device, the combination of a frame, two pairs of perpendicular posts mounted upon opposite sides of said frame respectively, each pair of posts being movable toward and from the other, gravity-operated means for effecting the approach of such pairs, and manually-operated means for effecting movement thereof in the opposite direction.

9. In a lumber-handling device, the combination of a frame, two pairs of posts depending from opposite sides of said frame respectively, each pair of posts being movable toward and

from the other, depending oscillatory legs mounted upon said frame and passing through said posts and means for oscillating such legs, and gravity-operated means for effecting the approach of such pairs of posts, said oscillatory means adapted to effect the movement of said posts in the direction opposite such direction of approach.

10. In a lumber-handling machine, the combination of a frame, downwardly-depending means for forming a laterally-limited lumber-receiving space, and means mounted in said frame movable vertically and arranged to exert pressure upon the top of a pile of lumber when located in such space.

11. In a lumber-handling machine, the combination of a frame, downwardly-depending means forming a laterally-limited lumber-receiving space, means actuated by the weight of the lumber for exerting pressure upon said pile laterally and means for exerting pressure upon the top of said pile.

12. In a lumber-handling machine, the combination of a frame, downwardly-depending means forming a laterally-limited lumber-receiving space, means actuated by the weight of the lumber for exerting pressure upon said pile laterally and gravity-actuated means for exerting pressure upon the top of said pile.

Signed by me this 29th day of June, 1904.

GABRIEL JEWITT.

Attest:

D. T. DAVIES,
A. E. MERKEL.