(No Model.) 2 Sheets—Sheet 1.

W. & J. H. LEONHARDT.

LUMBER WAGON.

No. 409,411. Patented Aug. 20, 1889.

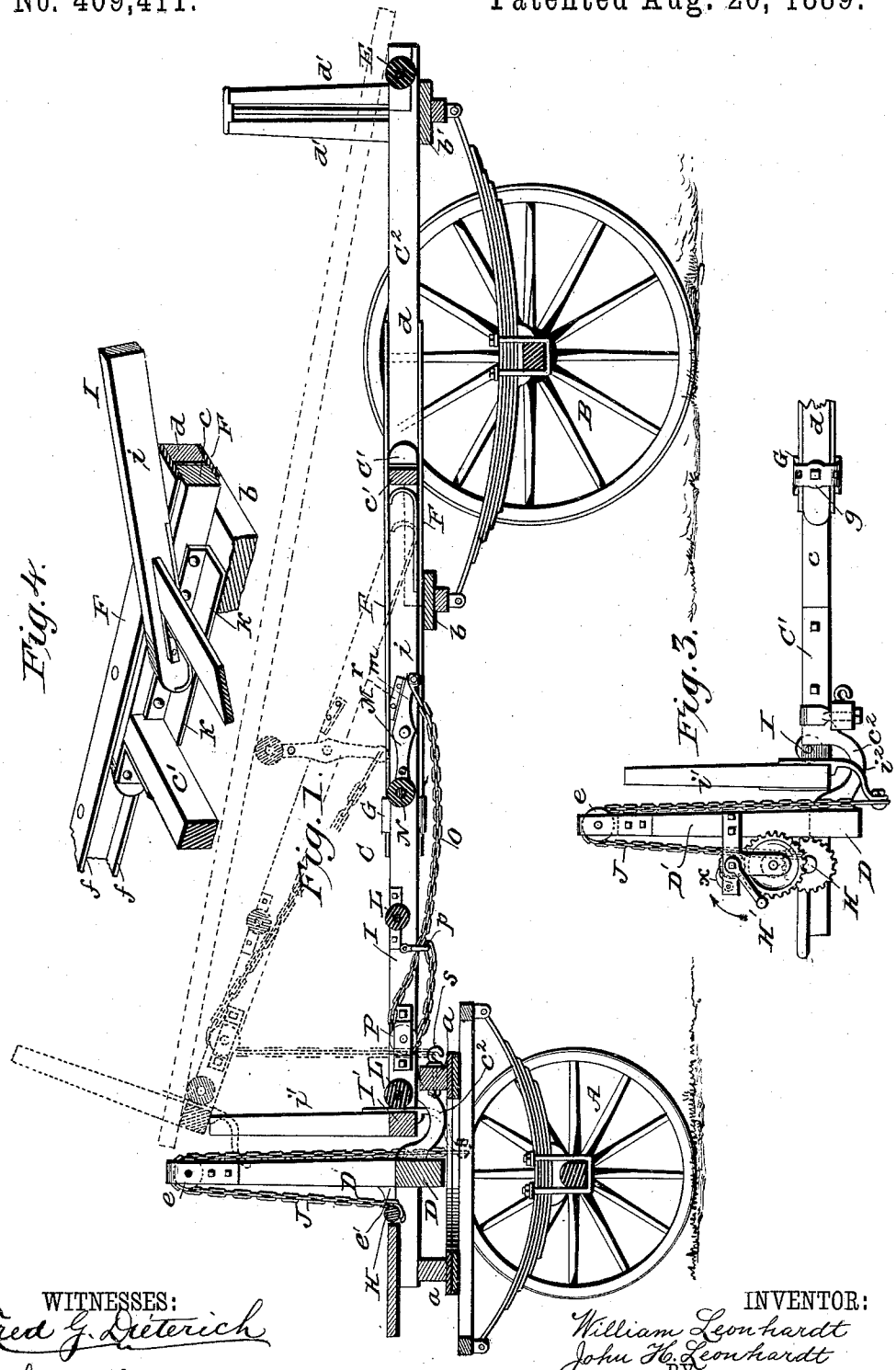


Fig. 1.

Fig. 4.

Fig. 3.

WITNESSES:
Fred G. Dieterich
Solon C. Kemon

INVENTOR:
William Leonhardt
John H. Leonhardt
BY
Munn & Co
ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

W. & J. H. LEONHARDT.

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Fig. 2.

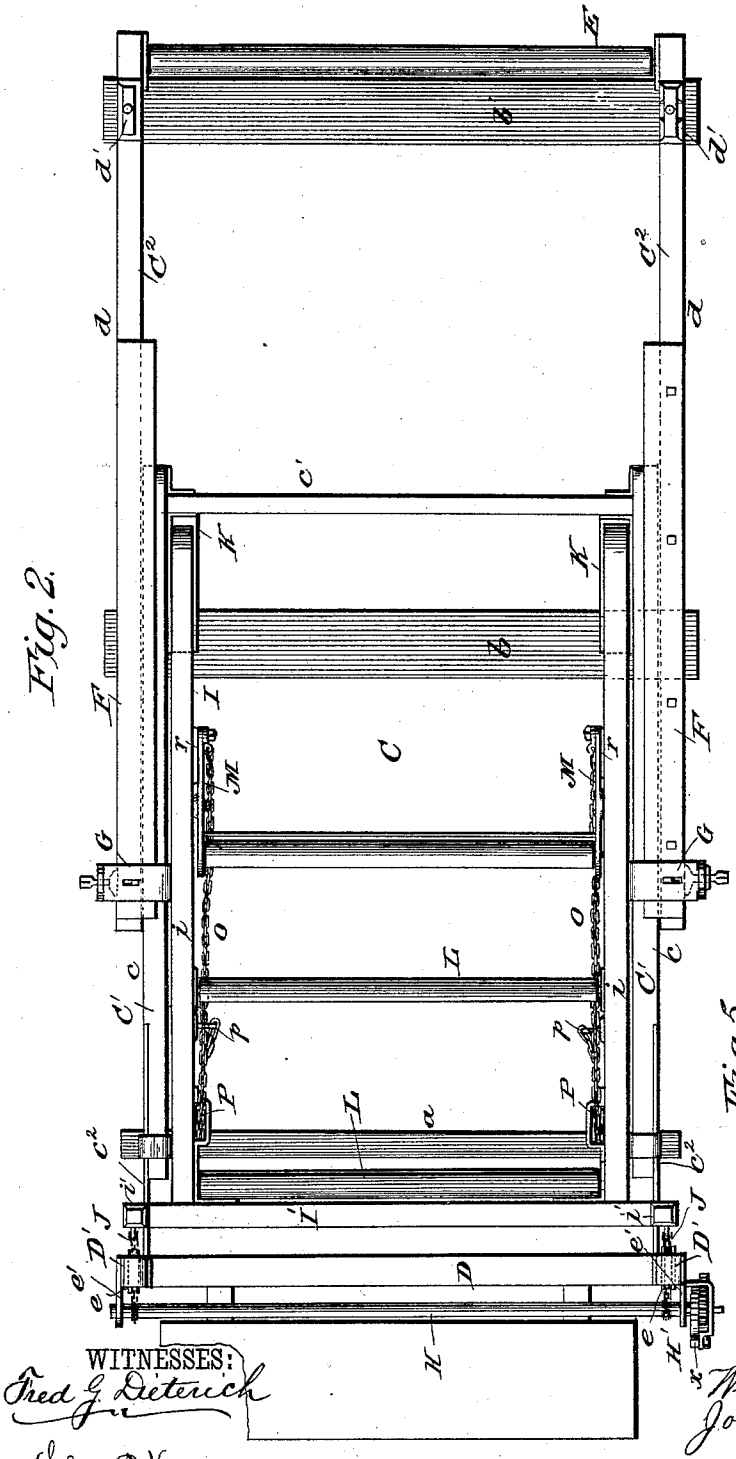


Fig. 6.

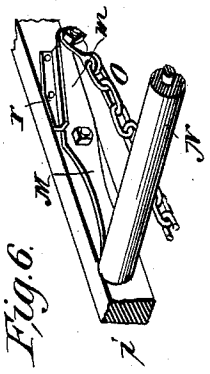
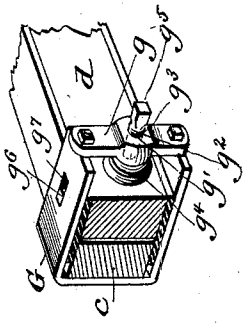


Fig. 5.



WITNESSES:
Fred G. Dieterich
Jos. C. Kenyon

INVENTOR:
William Leonhardt
John H. Leonhardt
BY
Munn & Co
ATTORNEYS.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM LEONHARDT AND JOHN H. LEONHARDT, OF BALTIMORE, MARYLAND, ASSIGNORS TO THE LEONHARDT WAGON MANUFACTURING COMPANY, OF SAME PLACE.

LUMBER-WAGON.

SPECIFICATION forming part of Letters Patent No. 409,411, dated August 20, 1889.

Application filed December 12, 1888. Serial No. 393,337. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM LEONHARDT and JOHN H. LEONHARDT, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Lumber-Wagons, of which the following is a specification.

The object of our invention is to furnish an improved wagon more especially adapted for hauling lumber and the like, the body of which may be extended and adjusted for supporting lumber of different lengths, and which has its forward portion provided with a supplemental frame which has a pivotal bearing at its rear end upon the main frame and has its forward end adapted to be elevated, whereby the lumber may be the more readily discharged at the rear end of the wagon; and to this end our invention consists in the peculiar construction and novel combination of parts, as will be hereinafter fully described in the annexed specification and be particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of our improved wagon. Fig. 2 is a top plan view of the same. Fig. 3 is a detail side view of the front end of the wagon, and Figs. 4, 5, and 6 are detail views which will hereinafter be specifically referred to.

In the accompanying drawings, A A indicate the front truck, and B B the rear truck, of ordinary construction, to which are connected the transverse bars *a a b b'*, which support the main frame or body C of the wagon, which consists of the fixed frame C' and the endwise, movable portion C^2. The frame C' is formed of the side beams *c c* and a cross-beam *c'*, and is connected at its forward ends to the cross-bar or bolster D by means of the metal brackets c^2 c^2, as shown. This frame is supported upon the cross-bars *a* and *b*. The movable portion C^2, which is supported upon the cross-bars *b b'*, is formed of the side beams *d d*, which embrace the beams *c c* at their forward ends, the roller E, journaled in the outer ends of said arms *d*, and the standards *d' d'*, projecting from the beams *d d*, as shown.

The upper and lower faces of the beams *d d* have secured thereto metal plates F F, in the inner edges of which are extended, as at *f f*, and overlap the side beams *c c*, forming guides to facilitate the operation of adjusting the sliding frame C^2 in or out. To securely hold the said frame in any adjusted position, a suitable clamping device (shown in detail, Fig. 5) is provided therefor. This device consists of a C-shaped clip G, which embraces the beams *c* and *d*, and a cross-bar *g*, which connects the ends of the clip. This bar is provided with a screw-threaded aperture *g'*, which receives the projecting screw-threaded shank g^3 of a clamp-screw g^2, the inner end of which is provided with a bearing-shoe g^4, while its outer end is squared at g^5 for the ready application of a suitable crank. By this construction it will be seen that when the sliding frame C^2 is moved out or in to a desired point by tightening the screw g^2 the beams *d d* will be securely held against the beams *c c*. Lugs g^6 project from the beam *d* and enter slots g^7 in the clip G, to prevent lateral movement of the same.

Standards D' D' are secured upon the ends of the bolster D, and have secured at their upper ends pulleys *e e*, and in forwardly-projecting brackets *e' e'* at the lower ends of the standard is journaled a transverse shaft or windlass H, which is operated by the gear mechanisms H'. (Clearly shown in Fig. 3 of the drawings.) A supplemental frame I is disposed between the side beams *c c* of the main frame C', which consists of the side beams *i i* and the cross-bar I', which is disposed just to the rear of the bolster D and has its ends extended laterally beyond the ends of the beams *c c*, and is provided at each of such ends with the standards *i' i'* and with depending metal arms i^2 i^2, to which the ends of the operating-chains J J are attached. These chains are passed up over the pulleys *e* on the standards D, and have their outer ends connected to the shaft H, as clearly shown in Fig. 2. The rear end of the frame I has a pivotal bearing connection with the main frame, such bearing being shown in detail in Fig. 4 of the drawings. By reference

to said figure it will be seen that the ends of the arms *i i* rest upon angle-plates K K, secured to the main frame. Bearing-rollers L L are journaled transversely in the frame I, the purpose of which will presently appear.

By constructing the movable frame I as described it will be observed that when the forward end of the frame is elevated by the operation of the windlass the lower end of the frame will have a movable pivotal bearing on the frame C′. This relieves undue strain upon the chain and frame, and facilitates the raising of said frame, requiring less power to raise it.

M M denote arms pivoted to inner faces of the beams *i i* (see Fig. 6) near their outer ends in the upper ends of which is journaled a roller N, which normally projects with its upper peripheral face slightly above the frame and forms with the transverse rollers previously described a bearing for the timbers to be placed upon the wagon. Chains O are connected to each of the lower ends *m m* of the arms M, which pass forward and over pulleys P P, journaled on the inner faces of the arms *i i* near their front ends, and which are carried back and connected to hooks *p p* when said arms M are down in their normal position. Stops *r r* are provided to limit the upward movement of said arms M.

The operation of our wagon is as follows: When it is desired to use the wagon with a load of short timbers, the arms M and roller N remain in their normal or down position. The sliding frame is adjusted to any desired distance and held in place by the securing-clips G being properly adjusted. To discharge the load, power is applied to the windlass, which winds up the chains J and raises the forward end of the frame I to a position shown in dotted lines, Fig. 1. By pivoting the frame as before stated it will be seen that the frame as it rises will pull forward a short distance, and thereby prevent strain being applied to any fixed point on the frame C′. When the frame I is elevated to the position shown, the timbers may be easily withdrawn from the wagon or discharged at the outer end by moving the wagon forward, the rollers facilitating the downward movement of the timbers. When, however, it is desired to haul very long timbers, the ends of the chains O are disconnected from the hooks *p p* and are attached to hooks *s s*, secured to the cross-bar *a*. By this arrangement it will be seen that as the frame I is elevated the arms M will be drawn to a vertical position, affording an additional bearing for the timber, and thereby relieve the end rollers L and E from the entire strain of the weight of the timbers. After unloading, by withdrawing the pawl X out of engagement, the frame I will drop back into position.

From the foregoing description, taken in connection with the drawings, the operation and advantages of our invention will be readily understood. By it we produce a strong and durable wagon which will greatly facilitate the removing of the timbers therefrom in a quick and easy manner.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a lumber-wagon, the combination, with the main frame or body portion and the windlass mechanism secured thereto, of the supplemental frame I, having a movable bearing at its rear end on the body portion, its forward end connected with the said windlass mechanism, said frame I adapted to be moved forward while its front end is raised upward by the windlass, substantially as and for the purpose specified.

2. In a lumber-wagon, the combination, with the main or body portion, of the supplemental frame disposed between the side beams of the body portion, said frame having a movable pivotal bearing at its rear end on the said side bars of the main frame, and a windlass mechanism secured upon the main frame and connected to the forward end of the supplemental frame, substantially as shown, and for the purpose specified.

3. The combination, with the main frame or body portion, of the supplemental frame I, disposed between the side beams of the main frame, said supplemental frame consisting of parallel side bars *i i*, a forward cross-bar I′, and transverse rollers L L, journaled in the side bars *i i*, the rear ends of said bars *i i* having a movable bearing in the side beams of the main frame, and means for elevating the front end of the supplemental frame, substantially as shown and described.

4. A lumber-wagon consisting of the trucks A B, the main frame C, consisting of the fixed portion C′ and the rearwardly-extensible portion C^2, a cross-bar mounted on the front truck and connected with the fixed frame C′, standards mounted on the cross-bars, and the supplemental frame I, disposed upon the fixed portion C′, having a pivotal bearing at its rear end upon said frame, its forward end disposed to the rear of the cross-bar D, and windlass mechanism H′, mounted to the cross-bar, and a chain connected to said windlass, passed over the standards D′, and connected to the lower front edge of the frame I, whereby said frame may be elevated at its forward end, substantially as and for the purpose described.

5. The combination, with the truck-frames, the main frame supported thereon, pulleys *p p*, journaled in the forward portion of said frame, and the supplemental frame I, arranged as described, of the adjustable bearing secured to said frame I, said bearing consisting of the arms M, pivotal on the arms *i i* of the frame, a roller N, journaled in the upper ends of said arms, chains connected at one end to the lower end of the arms M, passed over the pulleys *p p*, and connected at their free ends to main frame when the bearing-rollers are in their lower position, and con-

nected with the front truck-frame when said bearing-roller N is to be raised, substantially as and for the purpose set forth.

6. In a lumber-wagon, substantially as described, the combination, with the beams *c d*, of the clip device G for holding said beams in adjusted positions, said device consisting of the ⊂-shaped clip passed about the beams *c d*, the cross-bar *g*, and the adjusting-screw g^2, passing through said bar and bearing against the bar *d*, substantially as and for the purpose described.

7. In a lumber-wagon, the combination, with the trucks A B, the cross-bar D, mounted thereon, the raising mechanism secured thereto, the main frame C, supported on the trucks, said frame consisting of the stationary portion C′, composed of the side bars *c c* and the end bar *c′*, said bars connected at their forward ends to the cross-bar D, the movable portion C^2, consisting of the side beams *d d*, embracing the beams *c c* of frame C′, and a transverse roller-bearing E, journaled in the rear ends of said beams *d d*, of the supplemental frame I, consisting of the side beams *i i*, disposed within the forward ends of the beams *c c*, a transverse beam I′, connecting the forward end of said beams *i i*, and roller-bearings L L, journaled transversely in said beams, said beams having a pivotal bearing at their rear ends upon the beams *c c* and connected at their forward ends with the raising mechanism, substantially as and for the purpose described.

WILLIAM LEONHARDT.
JOHN H. LEONHARDT.

Witnesses:
ROBT. K. WEBSTER,
GEO. F. FAUST.