

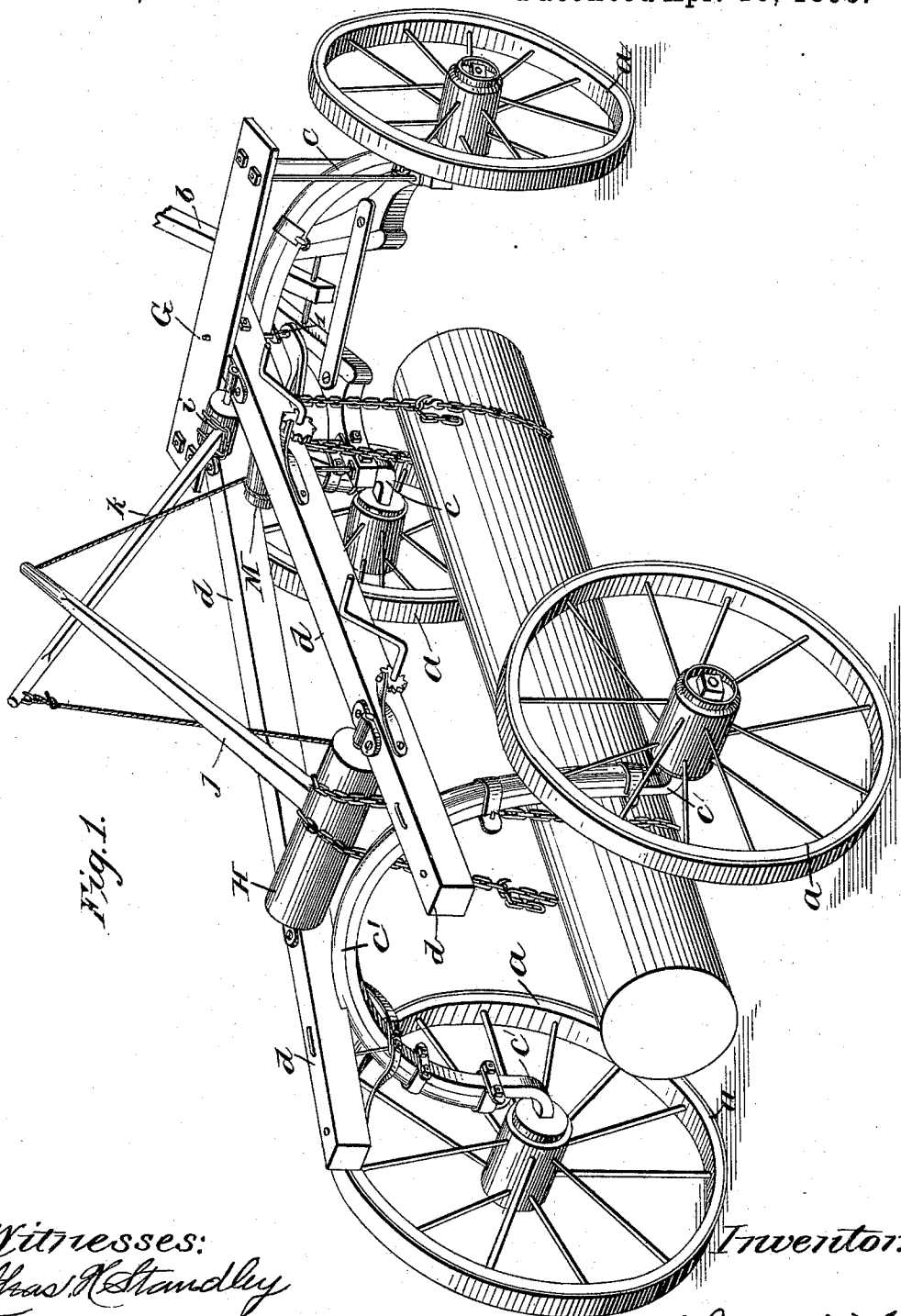
(No Model.)

2 Sheets—Sheet 1.

M. B. BOUDINOT.  
WAGON.

No. 537,628.

Patented Apr. 16, 1895.



Witnesses:  
*Chas. H. Standley*  
*Chas. Binnin*

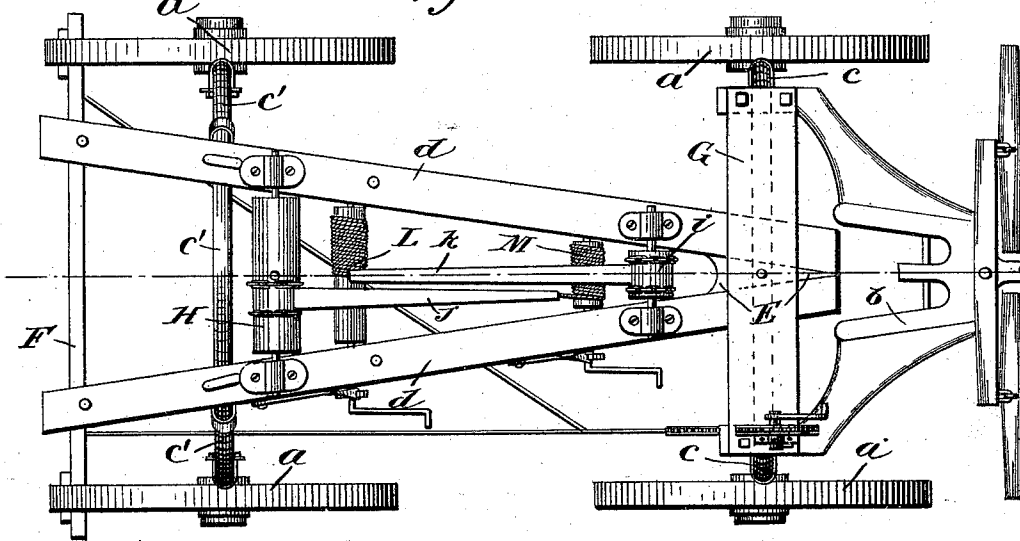
Inventor:  
*Melville B. Boudinot*

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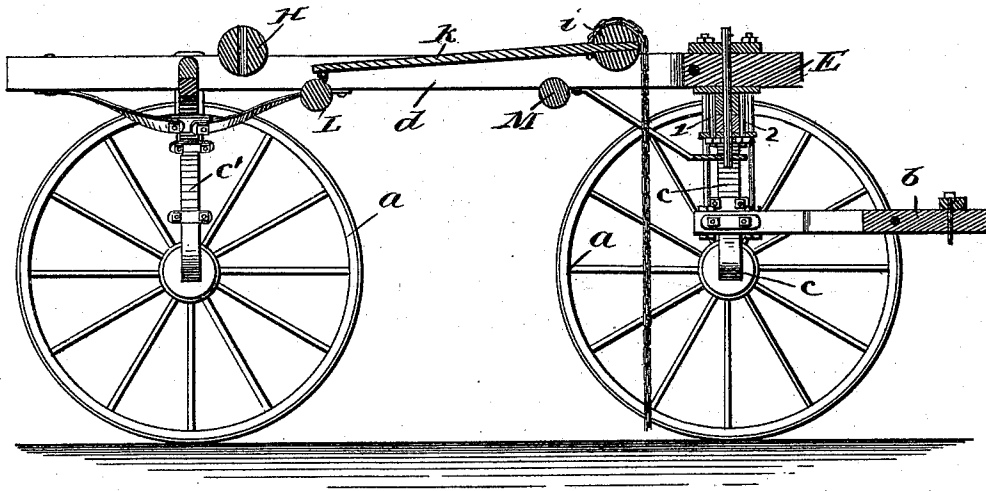
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*Fig. 2.*



*Fig. 3.*



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*Inventor:*  
*McMill B. Boudinot*

# UNITED STATES PATENT OFFICE.

MELVILL B. BOUDINOT, OF VINCENNES, INDIANA.

## WAGON.

SPECIFICATION forming part of Letters Patent No. 537,628, dated April 16, 1895.

Application filed August 9, 1893. Serial No. 432,786. (No model.)

*To all whom it may concern:*

Be it known that I, MELVILL B. BOUDINOT, a citizen of the United States, residing at Vincennes, in the county of Knox and State of Indiana, have invented certain new and useful Improvements in Wagons for Hauling Logs, Boilers, Safes, Stone, or other Heavy Bodies; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to wagons for carrying logs, heavy timber, and any other material or article of great weight, and the invention consists in certain improvements in the construction of such a wagon as hereinafter particularly described and claimed.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the wagon supporting a log ready to be transported. Fig. 2, is a top view of the wagon. Fig. 3, is a central longitudinal section in a plane indicated by the broken line in Fig. 2.

In the drawings, *a a a a* are the wheels, which may be of equal size, or the front wheels may be a little (but not much) smaller. *b* is the tongue or draft-pole of the wagon connected by hounds to the front axle.

*c c'* are the front and rear axles respectively, each of which is upwardly arched as shown, so that its central portion is about on a level with the tops of the wheels. The axles are preferably of Bessemer steel covered on its upper face with a strip of hard wood (such as hickory) shaped to conform to the arch of the axle and clipped thereto by metallic clips as shown.

*G* is the seat-board of the wagon.

The axles are connected by two wooden coupling bars, beams, or reaches *d d*, which preferably are protected on their upper and lower surfaces by metallic plates bolted thereto. The two beams *d d* at their rear ends are secured to the arched rear axle-tree *c'*, a little distance on either side of the apex thereof by clips and bolts as indicated; and from thence they converge and are secured together and

to the front axle-tree *c* at the central point of the latter. The front ends of the beams are secured together by bolts which pass horizontally therethrough and through a triangular metallic block *E* (Figs. 2 and 3) which occupies the space between the beams just behind the meeting front ends thereof. The beams are connected to the front axle *c* by a king-bolt passing through the axle, the block *E*, and the seat-board *G*. The seat-board is further secured and steadied by bolts passing through its ends and through the hounds, which secure the tongue *b* to the axle *c* a short distance above the spindles of the axle.

By securing the hounds of the tongue *b* to the arched front axle near the extremities thereof, the tongue is given its proper height while not obstructing or interfering with the arching of the axle or the direct raising of the load. Heretofore it has been considered impracticable to arch the front axle without interfering with the proper connection of the draft tongue and of the king-bolt pivot, but my construction makes it entirely practicable to arch the front axle.

The coupling-beams *d d* have a level horizontal position, and to effect this either the front wheels are made smaller or the front axle is made less highly arched so that the apex of the arch of the front axle (upon which the converging ends of the coupling beams rest) will be on the same level as the points of connection between the coupling beams and the rear axle.

The log or other load to be carried is supported beneath the arched axles of the wagon by chains, which are hung upon two rollers *H* and *i*, the former of which is journaled between the coupling beams just forward of the rear axle *c'*, and the latter of which is similarly journaled just back of the front axle *c*. The roller *H* has a lever arm *j* rigidly secured thereto between its ends, and the roller *i* has a similar lever-arm *k*; and the chains which support the load are preferably secured to the rollers by being looped around the base of these lever arms, as shown. The lever arms *j* and *k* are not located directly in line with each other so that when they are swung toward each other they do not conflict but will lie parallel side by side, as will be seen from Fig. 2. Adjacent to roller *H* is a

windlass L for roller *i*, and adjacent to roller *i* is a windlass M for roller H. Each of said windlasses is journaled between the coupling beams and is provided with an operating crank on its shaft at one side of the wagon. The lever-arm *j* of roller H is connected to windlass M by a rope or chain, and the lever-arm *k* of roller *i* is connected to windlass L in the same manner. Each windlass has also a ratchet and pawl, as shown, for preventing backward rotation of the windlass shaft.

The load carried by the wagon is supported by the rollers H and *i*, and the windlasses *j k* simply act upon said rollers to lift the load from the ground. In operation, the wagon is driven or backed over the log or other load to be moved, the lever-arms of rollers H *i* are turned back toward the ends of the wagon, and the chains carried by said rollers are attached to the load and drawn taut by hand. The windlasses are then operated by their cranks, which pull upon the lever-arms *j k* and draw them toward each other and toward the center of the wagon. The swinging of the lever-arms *j k* turns their respective rollers through a certain arc and thus elevates the load. The diameter of the rollers H *i* is great enough so that only a partial rotation thereof (not more than one hundred and eighty degrees) such as is given by the lever-arms is amply sufficient to lift the load to the proper distance from the ground. The turning of the windlasses does not directly lift the load as in former wagons of this character, but simply acts upon the lever-arms of the lifting rollers, thus giving great leverage power and requiring very much less exertion on the part of the workmen. The construction also enables the load to be dropped instantly by releasing the pawls which hold the windlass shafts.

If the wagon is to be used for carrying loose material or small articles which cannot conveniently be secured by the two lifting chains, such as stone, brick, tiling, pig-iron, castings, safes, or any heavy merchandise, the stuff is placed upon a wooden platform of proper dimensions which is provided for the purpose, and this platform can then be secured and lifted exactly in the manner in which logs or timber are taken up.

Fig. 2 shows the wagon furnished with a brake F, consisting of a transverse bar located behind the rear wheels and carrying a brake-shoe for each wheel, said bar being carried by a metallic frame extending forward to one side of the seat-board as shown, and said brake being operated by a chain controlled by a sprocket-wheel and crank as shown.

The construction of the axles and the coupling beams is such as to give great strength, enabling the wagon to sustain very great weight. The arching of both axles allows a log to be lifted directly up beneath the wagon without shifting at the same time properly dividing the load between the two axles, and allows the wagon to be either driven or backed

over the load so that all preliminary hauling is dispensed with.

The wagon may be driven or backed over a quantity of lumber, sewer-pipe, telegraph poles, railroad iron, bridge timbers, heavy sills, piles, &c., and the same can be readily taken up *en masse* without the labor required in taking it up piece by piece; and the same is true in unloading.

I claim as my invention—

1. In a wagon for lifting heavy weights, the lifting rollers bearing the lever arms, in combination with the windlasses connected with said lever arms to swing the same and thus partially rotate said lifting rollers, substantially as set forth.

2. In a wagon for lifting heavy weights, a lifting roller carrying a lifting chain, a lever-arm on said lifting roller movable between a substantially horizontal outward position and a substantially horizontal inward position, and a windlass connected with said lever-arm and located beyond the extremity thereof in its inward position, substantially as set forth.

3. A wagon having front and rear axles each arched upwardly between its ends so that its central portion is highly elevated above the plane of the hubs, and lifting mechanism on said wagon for elevating a load to be supported by and beneath both of said arched axles, substantially as set forth.

4. The arched front axle having its central portion highly elevated above the wheel-hubs, the draft tongue occupying substantially the same horizontal plane as said hubs, and hounds which serve as the means of connection between said tongue and said axle, said hounds being joined to said arched axle near the hub-spindles thereof, substantially as set forth.

5. The arched rear axle, the arched front axle, and the horizontal connecting beams separated at their rear ends and supported upon and secured to said rear axle on either side of its apex, converging and united at their front ends, and secured to the front axle by a king-bolt, substantially as set forth.

6. The arched front axle, the hounds connected to said axle near its ends, and the seat-board bolted to the apex of said arched axle by the king-bolt and also secured by bolts passing through the ends of said seat-board and through the hounds.

7. In a wagon, the connecting beams *dd* of the wagon body converging above the front axle, the triangular metallic block E between the converging ends of said beams and connecting the same, and the king-bolt passing through said block E to pivot the wagon body to the front axle, substantially as set forth.

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

MELVILL B. BOUDINOT.

Witnesses:

A. L. GREENHOW,  
GEO. PENNINGTON.