Jacob Skeen.

Timber Wagon.

109956

PATENTED DEC 6 1870

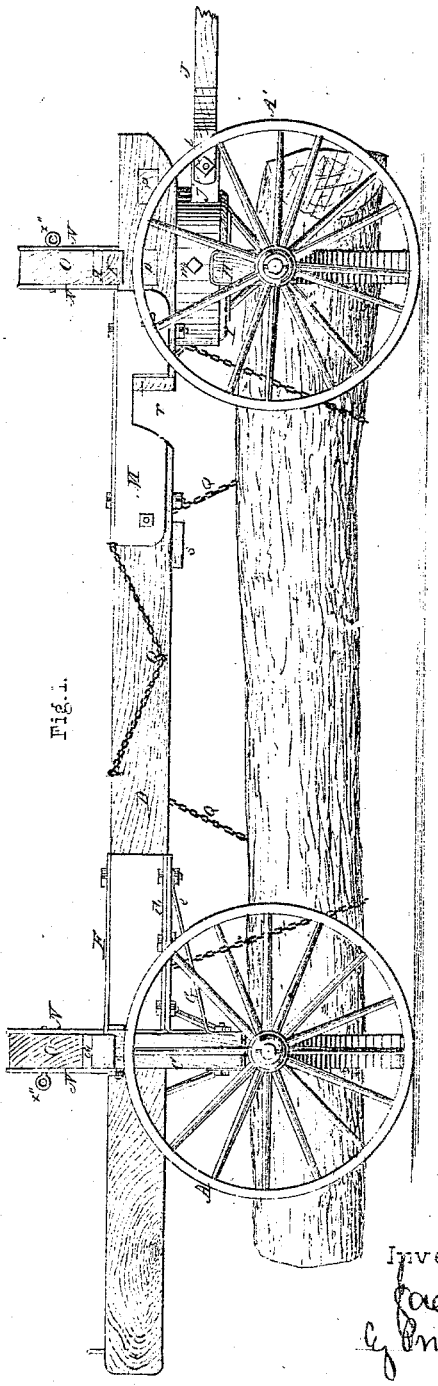

Fig. 1.

Witnesses.

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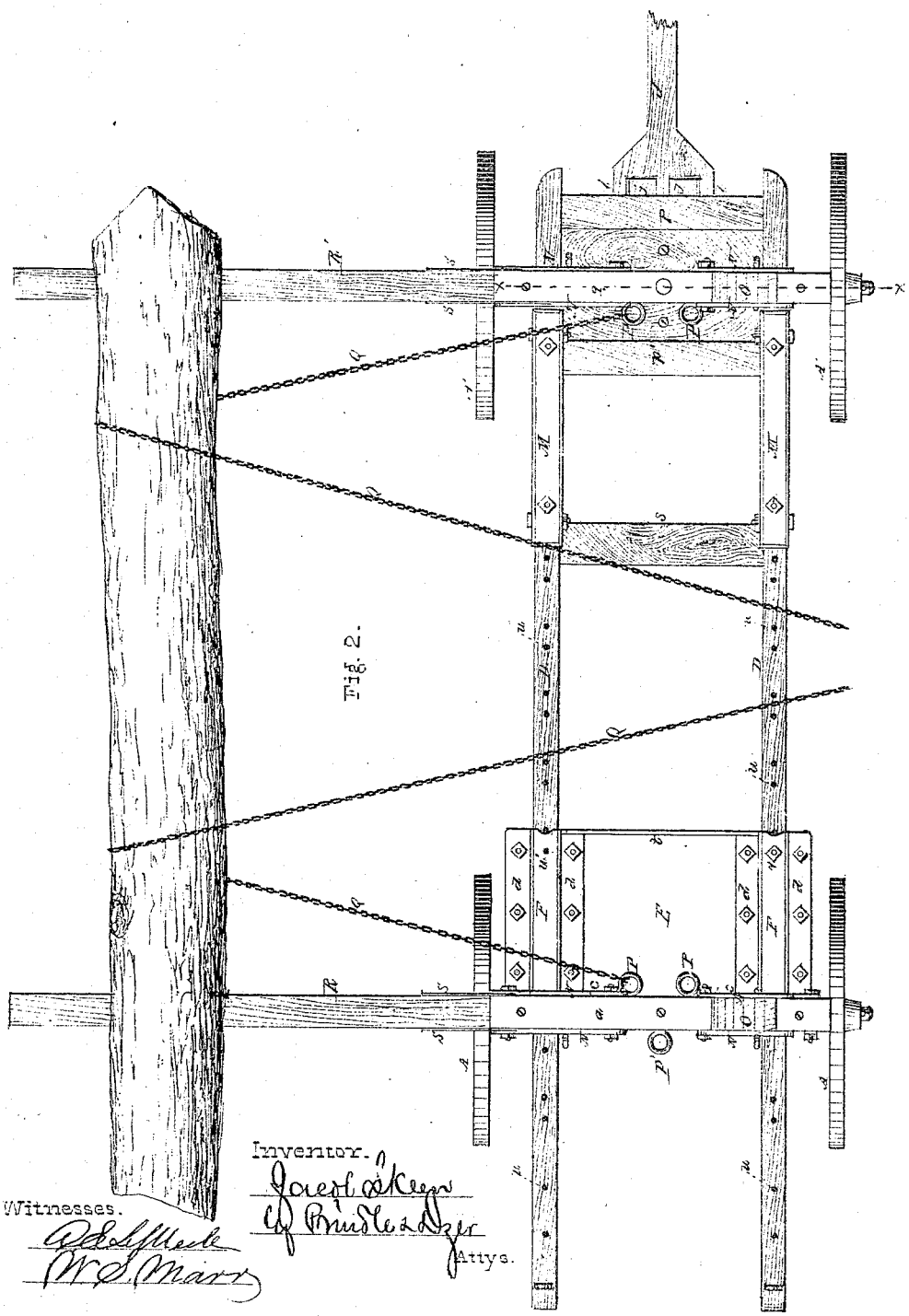

Fig. 2.

Witnesses.

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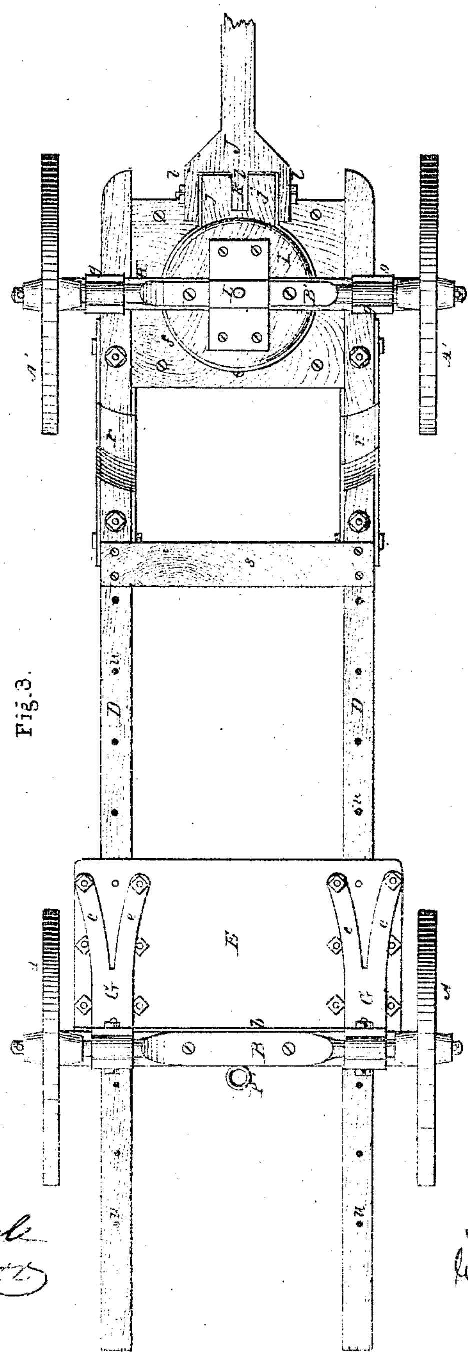

Fig. 3.

Witnesses.

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Sheet 4.

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Fig. 4.

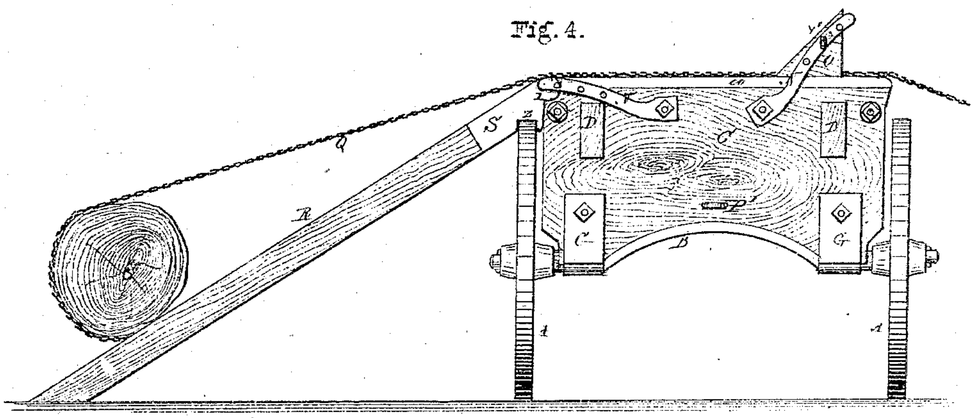


Fig. 5.

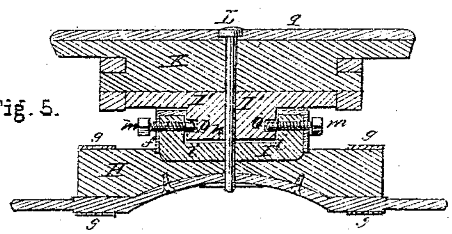


Fig. 6.

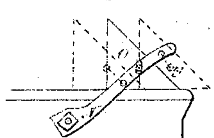


Fig. 7.

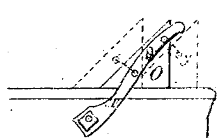


Fig. 8.

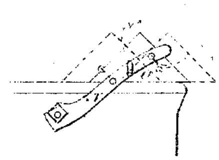


Fig. 9

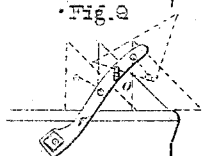


Fig. 10

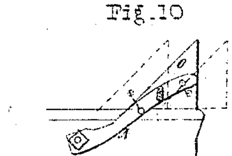


Fig. 11.

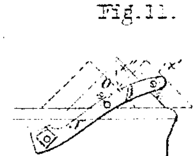
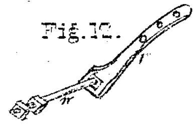


Fig. 12.



Witnesses.

Inventor.

Jacob Skeen

by Prindle & Dyer

Attys

United States Patent Office.

JACOB SKEEN, OF MOUND CITY, ILLINOIS.

Letters Patent No. 109,956, dated December 6, 1870.

IMPROVEMENT IN WAGONS FOR LOADING TIMBER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JACOB SKEEN, of Mound City, in the county of Pulaski and in the State of Illinois, have invented certain new and useful Improvements in Timber-Wagons; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of my wagon in position for loading a log;

Figure 2, a top plan view of the same;

Figure 3, a bottom plan view of the same;

Figure 4, a rear end elevation of the same;

Figure 5, a vertical cross-section on the line *x x* of fig. 2;

Figures 6, 7, 8, 9, 10, and 11, views of the stakes and stake-blocks in various positions of the same; and

Figure 12, a view of one set of the stakes and the pin connecting the same.

Like letters of like kinds denote similar parts in the drawing.

My invention relates to timber-wagons constructed for the purpose of carrying logs, timber, steam-boilers, or other heavy bodies, safely and conveniently, for loading and unloading the same in a simple and expeditious manner, and for securing the same in position, without regard to size, by a series of adjustable stakes and blocks connected therewith; and

My invention consists in the novel construction of the fifth wheel and hounds combined, and the means employed for retaining the upper and lower portions of the fifth wheel together; in the construction of the adjustable stakes in the blocks connected with them, and in the various combinations of their separate parts; in the skids used for loading and unloading the wagon; in the means employed for varying the distance apart of the front and hind wheels, and for securing them at various distances; in the contrivances for turning the wagon in a small compass; in the method of connecting the tongue directly to the fifth wheel; and in the method of securing to the rear axle-block the sleeves in which the side rails traverse; and in the combination and arrangement of various parts, all as more fully hereinafter described and set forth.

In the drawing—

A represents the hind wheels, and A′ the fore wheels, which are of nearly uniform size, and turn upon hind axles B and fore axles B′, which rise with an arch in their centers, for convenience in passing over stumps and other obstacles.

Upon the hind axle a bolster or block, C, is secured, the outer end of which projects over the inner ends of the hubs, and its top a little over the inner rims of the wheels.

This axle-block is preferably made of suitable wood in a single piece, but may be of two pieces, the upper one removable, and has its upper surface protected by a metallic plate, *a*.

The rails D pass horizontally and parallel with each other through this block C near its top and outer ends in suitable openings.

A plate, E, preferably of sheet metal, passes across the wagon under the rails, having a flange, *b*, bent down at right angles from its rear side, which is secured to the front side of the block C.

A metallic cap, F, forged or struck out of sheet metal, has flanges *c* bent at right angles, and secured to the front side of the block C, and flanges *d* bent at right angles, and secured upon the outside and inside of each rail, to the plate E.

The caps may be extended through the opening, and secured to the outside of the block C.

These caps thus serve as sleeves, in which the rails D traverse back and forth.

Metallic straps G, having forked front ends *e*, are secured to the under side of the plate E, by bolts passing through said plates near either end thereof, and through the flanges *d*, and are so arranged that the forked ends are secured, one upon the outer and the other upon the inner side, near the bottoms of the rails.

These straps, passing back and inclining downward a little, touch the block C just below the lower edge of the flange *b*, where they are bent downward around the axle B, and brought up on the outside of said block where they are secured by bolts passing through said block and the outer and inner parts of the strap, thus serving to secure the plate E and also the axle-tree in position.

An axle-block, H, is secured upon the forward axle B′, by means of bolts and by means of the straps *g* passing around the ends of the axle-block and around the axle.

The fifth wheel is recessed into and secured upon this axle-block by means of bolts and a strap, *h*, passing under the axle and secured to the under side of the fifth wheel, and is composed of an under wheel, I, which is circular in form, having a circular recess, *i*, in its upper central portion, and hounds *j* upon its front.

It may be made of wood, in which case it is bound around its sides and top, and along the outsides of the hounds with the metallic casing *f*, or it may be made in one piece of suitable metal.

The hounds *j* are two ears, projecting forward from the center of the wheel I with a space, *k*, between them, to which the tongue J, provided with outside and central ears *l*, is pivoted by a bolt, which passes through the ears of the hound and of the tongue.

The wheel I is also provided on either side with

set-screws *m*, which pass through the walls of the wheel into the recess *i*, where said screws have their inner ends smooth and rounded.

The upper wheel of the fifth wheel, shown by the letter I', is a plate secured between the front ends of the rails D to cross-bars, hereinafter described, having dependent from it, but making a part of it, a wheel, *n*, of a size and form to fit loosely into the recess *i*, which wheel has a groove, *o*, passing around it, into which the smooth ends of the set-screws *m* engage when the whole wheel is in position.

The front ends of the rails D are connected together by the cross-bars *p* and *p'*.

The bolster K is secured to the rails, before named, at a point between said cross-bars, having its upper part projecting over said rails and a little over the rims of the forward wheels, and having its top covered with a plate, *q*.

The king-bolt L passes down through the bolster and the fifth wheel, and has its head countersunk into the plate *q*.

At a point behind the cross-bar *p'*, and in the wake of the forward wheels, a recess, *r*, is cut in the under sides of the rails, beveled on its sides from front to rear, so as to allow the front wheels to pass under without touching.

A metallic cap, M, covering the top and sides of the rails above and on each side of this recess, give strength to the rail and protect the sides of the recess.

A cross-bar, *s*, connects the under sides of the rails at a point behind the recess just named, and a strip or bar, *t*, passes from side to side between the front inner ends of the caps F, so as to make a shallow box on the top of the plate E.

The rails D are perforated vertically with holes *u* in pairs, at corresponding points on each rail, extending from the cap M to the rear end of the rails, and the covering-plates F have similar holes, *u'*, into all of which holes pins *v* fit, for the purpose of retaining the fore and hind wheels at desired distances.

The stakes N, each composed of two similar metallic bars arranged in parallel planes, and bent in the form shown in figs. 6 to 11, inclusive, are pivoted to the front bolster and to the hind axle-block; one bar in each pair on opposite sides of said bolster and block, at points about one-third of the length of said bolster, and of said block from the outer ends thereof, by means of pins *w*, which pass through the lower ends of said bars, and through said bolster and axle-block, respectively.

These pins have square shoulders where the bars of the stakes are fitted upon them, are round where they pass through the bolster and the axle-block, and have their ends threaded so as to be secured in place by nuts. The bars of the stakes being so secured will move uniformly together.

The bars have each three holes *x* opposite each other in the pairs, into which are fitted pins x^2, having the points threaded, to engage with corresponding screw-threads in said bars.

Upon these pins, and between each pair of bars composing one stake, the angular block O is pivoted through a hole, *y*, near one corner of it.

This block is of a width to fit conveniently within the stake, and of a size in other respects to allow it to be revolved, on certain conditions hereinafter named, within said stake.

Eye-bolts P are secured to the insides of the front bolster and the rear axle-block, near their upper sides and between the stakes, to which a chain or rope, Q, is attached for loading or unloading.

Another eye-bolt, P', is placed in the rear side of the hind-axle block, for the purpose of drawing back the wagon or its hind wheels.

The skids R R' have each an outer end beveled so as to rest more firmly on the ground, an inner end notched, as shown by the letter *z*, to fit over the rim of the wheel, and the same end, protected by side plates S, provided with extended ears 1, which clasp each side of the end of the front bolster and the hind axle-block. The front ends of the skids are beveled, so as to correspond with and fit closely to the outer ends of the bolster and of the axle-block. These skids are made of suitable wood, of a length sufficient to give a proper slope in use, and may be protected by iron straps throughout their whole length when great strength is required.

The wagon, as exhibited in the drawing, is intended for use with oxen, but is equally adapted for horses, in which case a properly-arranged pole may be substituted for the tongue.

In the operation of the wagon, when it is desired to draw short logs or heavy bodies of no great length, the hind wheels are placed as near as possible to the fore wheels, and secured in place by proper pins passing down through the cap F into the rails D, and, in like manner, when long and heavy bodies are to be drawn, the wagon is extended to its greatest length or to any desired length, and secured as before mentioned. The extension or contraction of the wagon is effected without removing the team, by taking out the stay-pins in the caps F, trigging the hind wheels, or locking them to the straps G, and hauling or backing with the team. If the team is backed so as to shorten the wagon, the pins should be placed in the forward holes of each pair of the holes in the rails, and, when the front end of the cap F strikes against such pin, the hole in the cap will be found to correspond with the hole in the rail beneath it. If the team hauls so as to lengthen the wagon, the same pins should be placed in the forward holes of each pair of the holes in the rail behind the axle-block, and, when the pin is drawn forward with the rails against said axle-block, the holes in the caps F will be found to correspond with the holes in the rails under them.

Where there are difficulties in the way of backing the team, a portion of it may be detached and brought to the rear of the wagon and attached to the eye-bolt on the rear of the hind axle-block, and the hind wheels of the wagon readily drawn back.

Where wagons are needed for hauling extremely long timber I make each of the rails D in two pieces, dividing them at the recess *r*, and providing the rear part of the rails with an iron plate on its top, upon that portion which passes under the cap M, and securing them with the same bolts which fasten said plate to the rails. In this way I readily remove short rails, and replace them by rails of any desired length.

In the operation of loading, the wagon is brought to the side of the log or body to be carried, the skids are placed in position, as shown in the drawing, each resting on the crown of the rim of a wheel, with its beveled end against the bolster and the end of the hind axle-block, respectively, with its ears embracing the ends of the same and the corresponding stakes, their blocks being removed, bent down, so as to embrace the outsides of the ears to the skids. The bight of the chain is then passed under the log, over it and over the wagon, a portion of the team attached, and the log rolled up upon the wagon. In unloading the skids are placed as before, and the log rolled off by suitable levers, or let down gently by means of the chain placed as before, and fastened to a rope wound around a tree or any convenient immovable object. The position of the log upon the wagon is determined in advance by arranging the stakes with their blocks on the side of the wagon opposite the log. By means of the movable blocks to the stakes, each block may oppose a vertical face at six different points of distance from the center of the wagon, or a face at an angle of about forty-five degrees from a vertical plane

at six different points of distance from said center, and by turning the block around, a similar number of similar faces are opposed at still different distances from the center of the wagon, all as illustrated in figs 6 to 11, inclusive.

After the log is in place upon the wagon the remaining stake-blocks are pivoted to their proper stakes, and placed in position to hold the log firmly. In this way as many logs may be placed upon the wagon as can be carried, and the eye-bolts on the front bolster and on the hind axle-block will be found convenient in binding the load.

A great advantage in the construction of the wagon consists in the fifth-wheel, and in the cutting away of the rails, so that the wagon may be turned in a small compass, for getting it clear of obstacles or for drawing it out of holes. It will be seen that the front wheels may be turned at any angle and even entirely around, which becomes important in drawing timber from the forests where no roads are used, but the wagons are drawn in the most convenient direction over the rough surface of the ground, avoiding trees and other obstacles by short turns, and where the wheels are subject to be constantly mired in soft places. A further advantage of the fifth-wheel lies in its security. It turns readily, but cannot be pulled apart by any twisting or inclination of the wagon. The bolt is for additional security in case of breakage of the fifth-wheel in places remote from shops where repairs can be made.

The advantage in making the hounds a part of the fifth-wheel lies in economy, simplicity, strength, and convenience in operation, and the same reasons apply for connecting the tongue directly to the fifth-wheel. The recesses in front of and behind the front bolster will be found convenient for carrying spare bolts, chains, and the like, and also the box upon the plate E. The skids can be carried conveniently between the rails resting upon the plate E and the cross-bar *s*.

Having thus fully set out the nature, description, method of operation, and advantages of my invention,

What I claim as new therein is—

1. The fifth-wheel I I′, constructed and connected substantially as described and shown, for the purposes set forth.

2. The combination of the tongue J and the fifth-wheel I I′, both being constructed and arranged substantially as described and shown, for the purposes set forth.

3. The stakes N, provided with blocks O, and constructed, arranged, and operating substantially as described and shown, for the purposes set forth.

4. The skids R R′, provided with plates S and ear 1, constructed substantially as described and shown, for the purposes set forth.

5. The means employed in turning the front wheels under the wagon, consisting of the fifth-wheel I I′ and the rails D and plates M, the two latter provided with the beveled recess *r*, all constructed and arranged substantially as described and shown.

6. The means employed for changing and regulating the length of the wagon, consisting of the rails D provided with holes *u*, the caps F provided with holes *u′*, the pins *v*, and the hind-axle block C, all constructed and arranged substantially as described and shown.

7. The combination of the plate E, the cap F, the straps G, and the hind-axle block C, all constructed and arranged substantially as described and shown, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of November, 1870.

JACOB SKEEN.

Witnesses:

W. S. MARR,

EDM. F. BROWN.