N. McDOUGALL.

TRUCK.

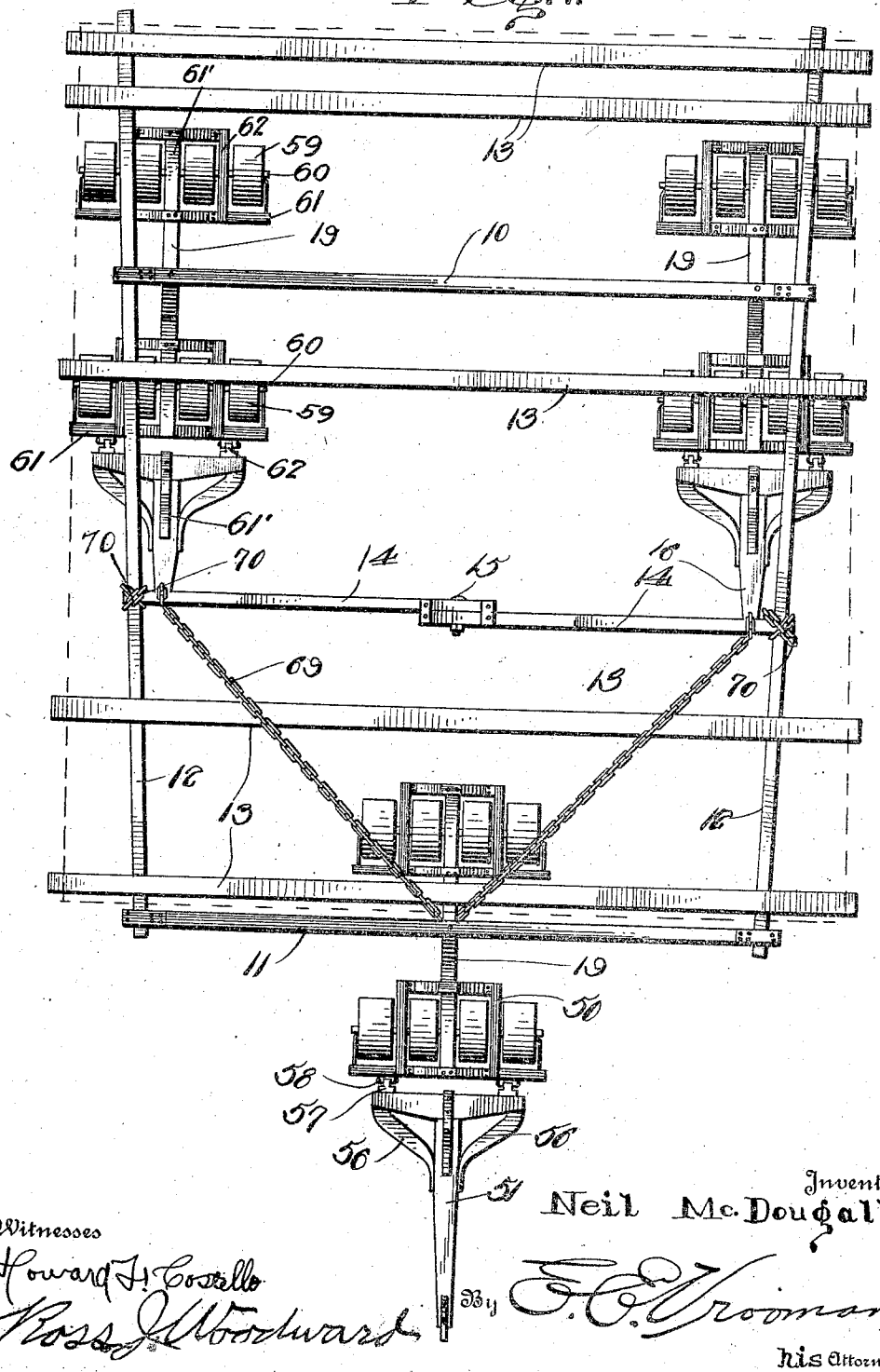
APPLICATION FILED SEPT. 27, 1913.

1,140,470.

Patented May 25, 1915.

6 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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6 SHEETS—SHEET 2.

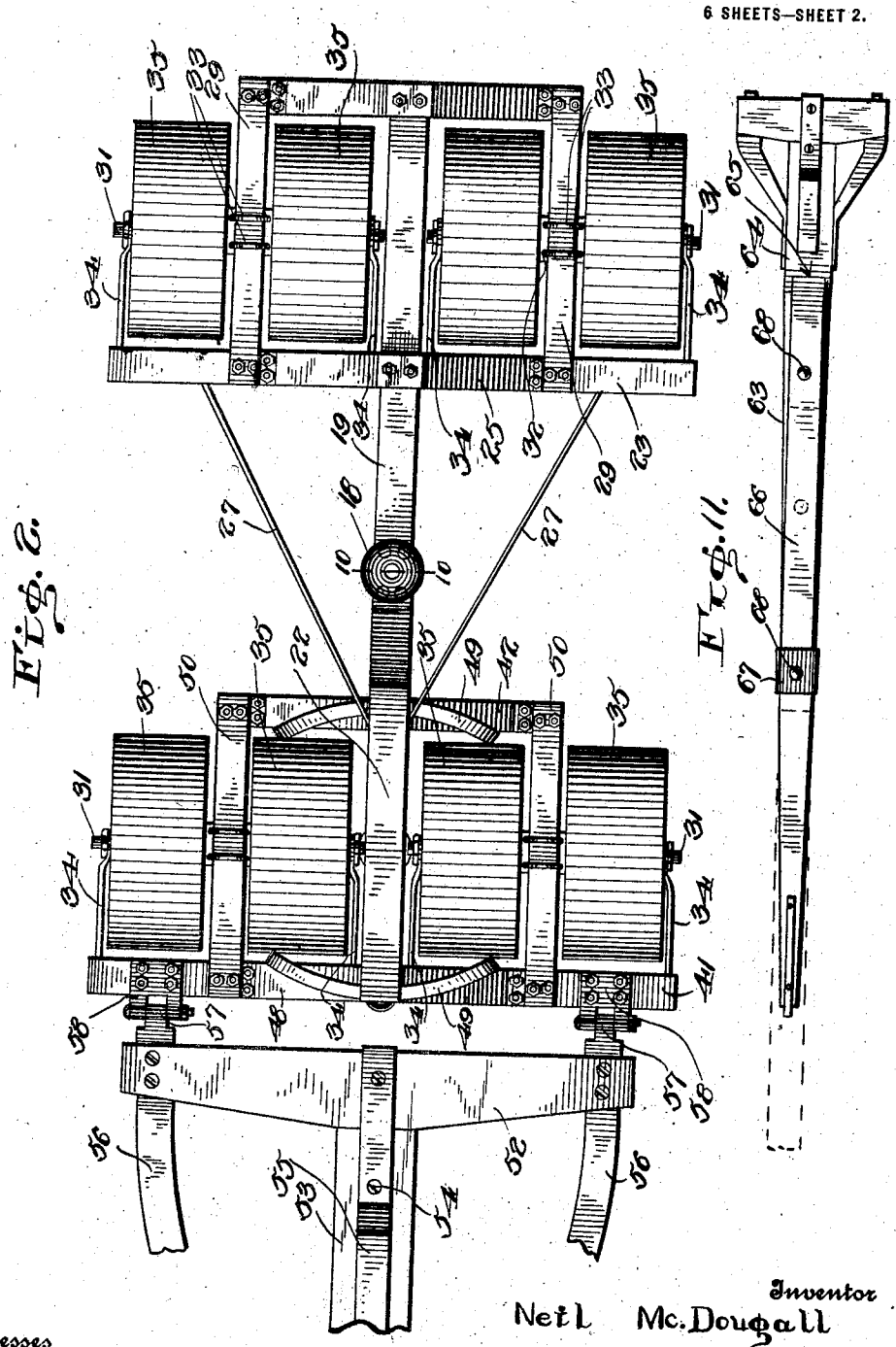


Fig. 2.

Fig. 1.

Witnesses

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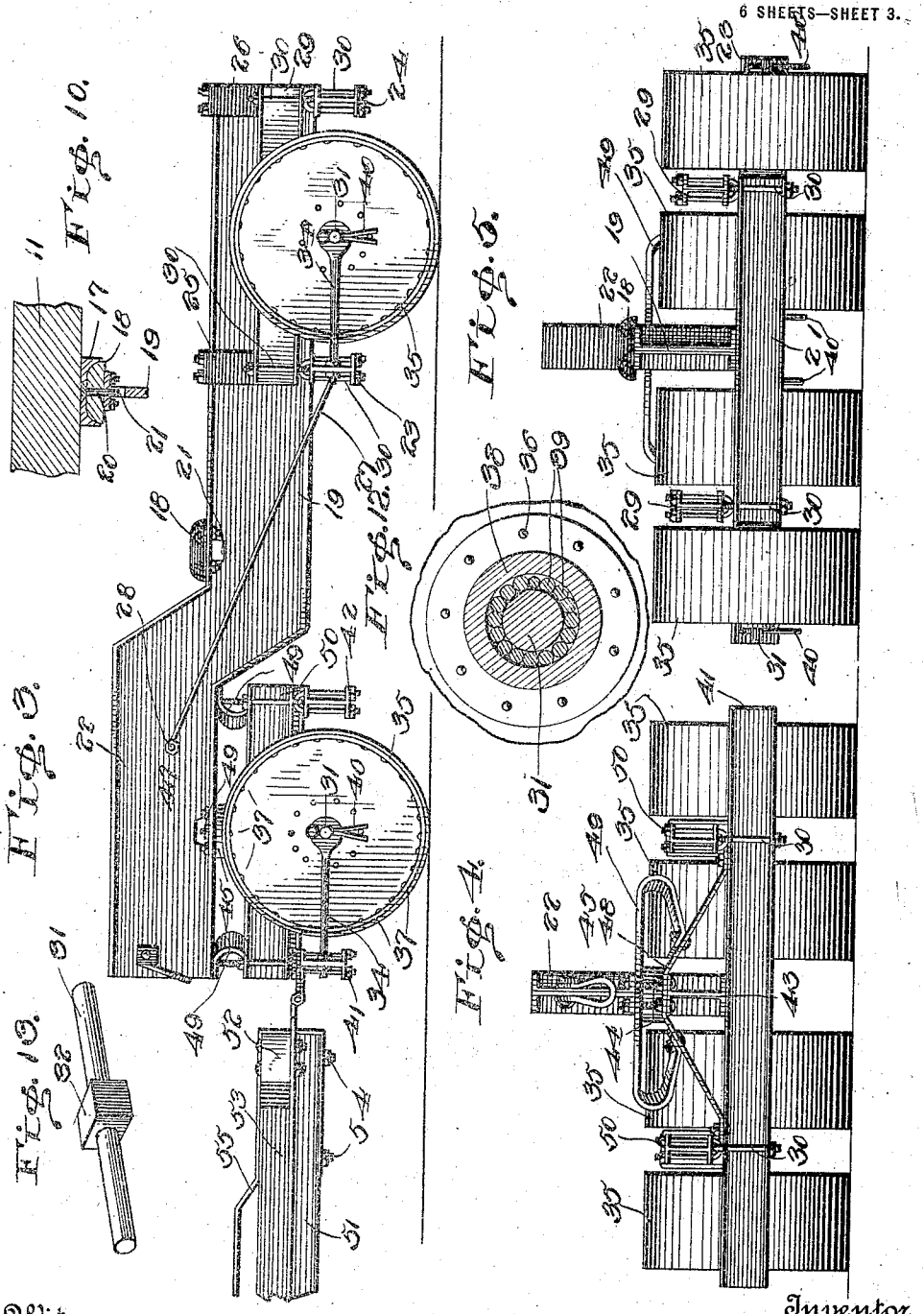
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6 SHEETS—SHEET 3.



Witnesses

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6 SHEETS—SHEET 4.

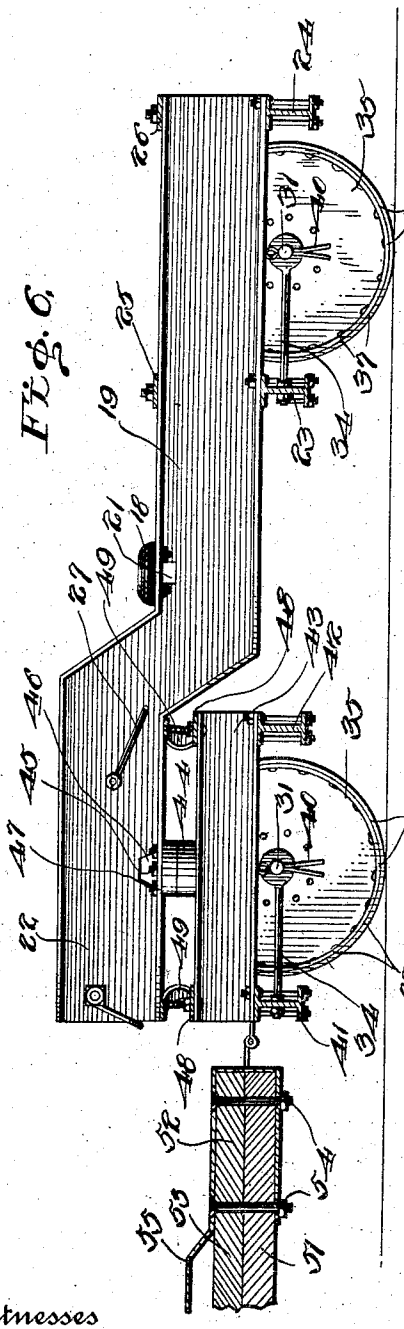


Fig. 6.

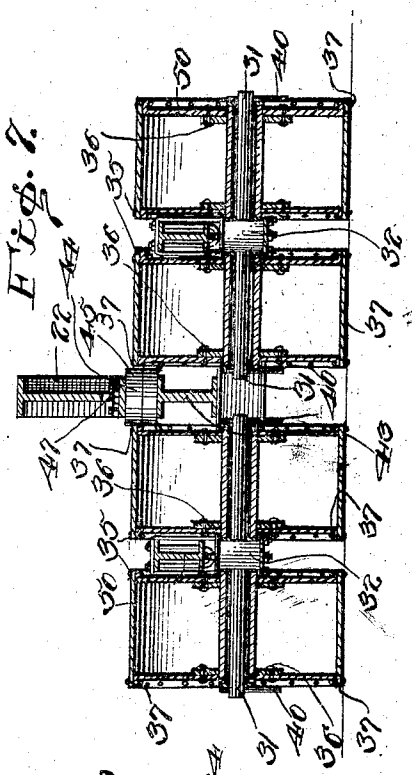


Fig. 7.

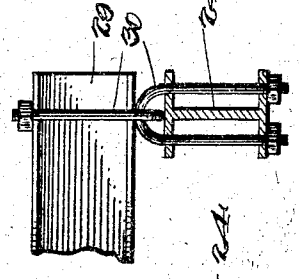


Fig. 9.

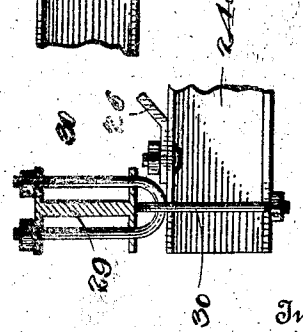


Fig. 8.

Witnesses

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1,140,470.

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6 SHEETS—SHEET 5.

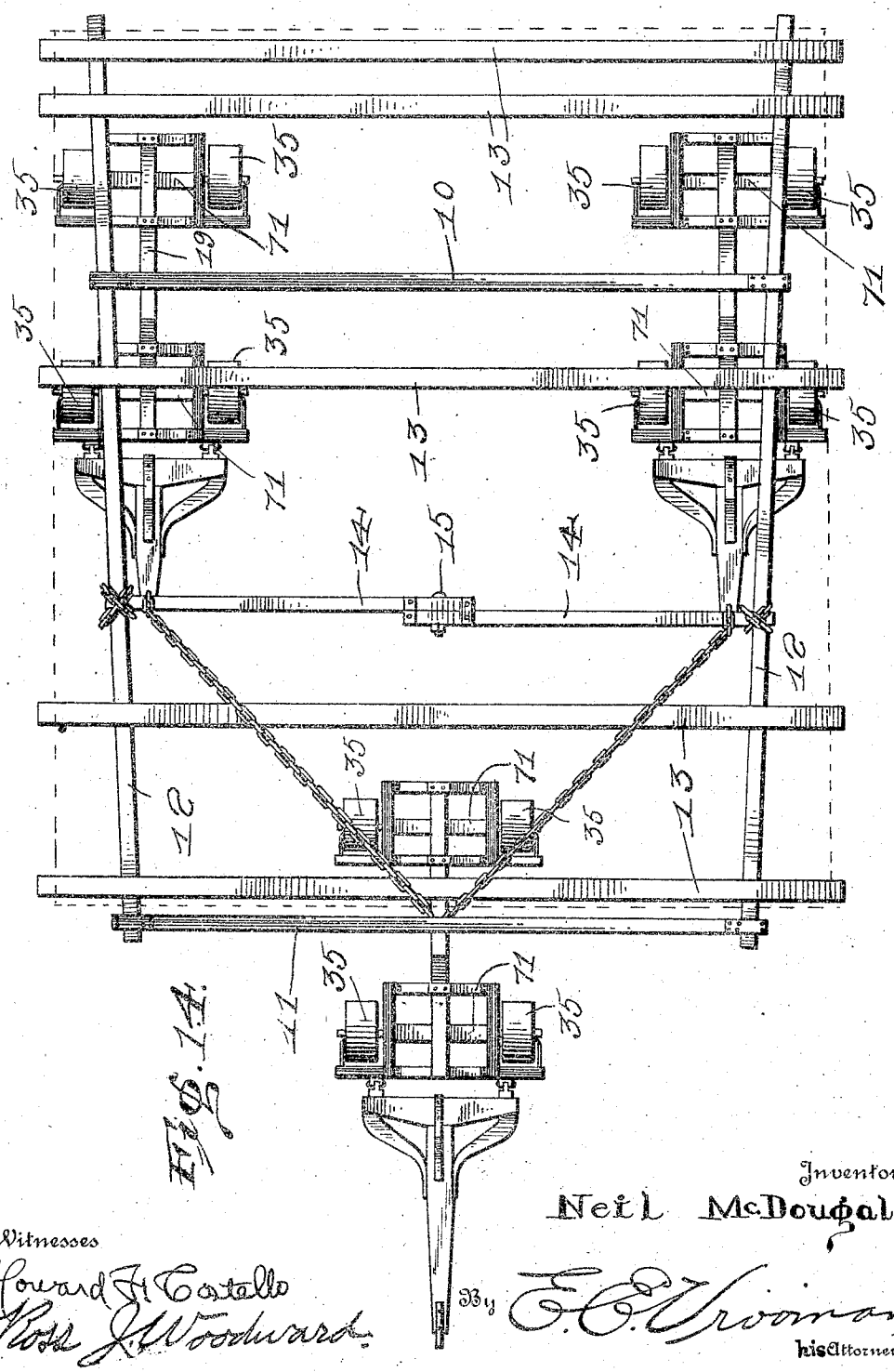


Fig. 5.

Witnesses

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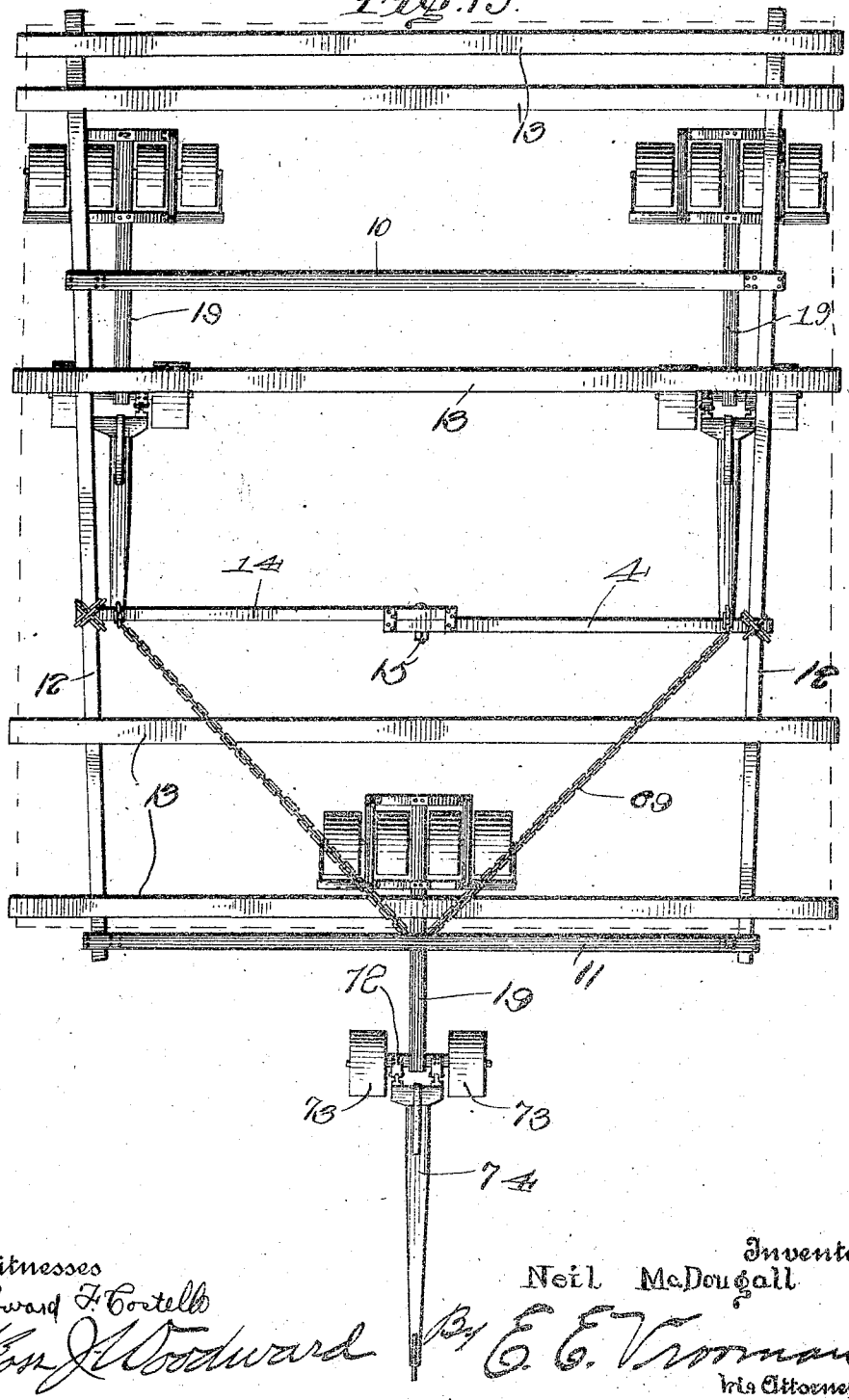
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Patented May 25, 1915.

6 SHEETS—SHEET 6.

Fig. 15.



Witnesses
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UNITED STATES PATENT OFFICE.

NEIL McDOUGALL, OF MINOT, NORTH DAKOTA.

TRUCK.

1,140,470. Specification of Letters Patent. Patented May 25, 1915.

Application filed September 27, 1913. Serial No. 792,237.

To all whom it may concern:

Be it known that I, NEIL McDOUGALL, a citizen of the United States, residing at Minot, in the county of Ward and State of North Dakota, have invented certain new and useful Improvements in Trucks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to an improved truck used for moving buildings or other heavy articles.

One of the objects of the invention is to provide a truck which will be very strong and not liable to break while in use.

Another object of the invention is to so construct the truck that the wheels may follow the unevenness of the ground without rocking the building.

Another object of the invention is to provide the truck with an improved type of frame formed from a number of parts removably secured together.

Another object of the invention is to provide the truck with an improved tongue having a removable section.

Another object of the invention is to provide an improved means for connecting the trucks used in moving the building.

With the above and other objects in view this invention consists of certain novel combinations, constructions, and arrangements of parts as will be hereinafter fully described and claimed.

In the accompanying drawings:—Figure 1 is a top plan view showing the trucks connected together. Fig. 2 is a top plan view of the forward truck. Fig. 3 is a side elevation of the forward truck. Fig. 4 is a front elevation of the forward truck. Fig. 5 is a rear elevation of the forward truck. Fig. 6 is a longitudinal sectional view through the forward truck. Fig. 7 is a transverse sectional view through the forward portion of the forward truck. Fig. 8 is a sectional view showing the manner of mounting the wheel supporting bars. Fig. 9 is a view taken at right angles to the view shown in Fig. 8. Fig. 10 is a sectional view along the line 10—10, in Fig. 2. Fig. 11 is a top plan view of the tongue of one of the rear trucks. Fig. 12 is a fragmentary sectional view through one of the wheels. Fig. 13 is a perspective view of one of the axles. Fig. 14 is a top plan view of the device showing each truck provided with four wheels. Fig. 15 is a top plan view of the invention showing the frame carried by six wheel trucks.

The forward and rear trucks shown in Figs. 1, 14 and 15 are connected by the rear bolster 10 and forward bolster 11. A side beam 12 is secured to each end of the bolsters 10 and 11 so as to carry the transverse beam 13. A pair of timbers 14 are secured to the side beams 12 and are adjustably secured at their inner ends by the bolt 15. The forward bolster 11 is provided with a centrally located cup 17, which cup fits about a bearing 18 secured to the main beam 19 of the forward truck and is prevented from working loose by a pivot pin 20 passing through the bearing 18 and into an opening 21 formed in the beam 19. The rear bolster 10 is also provided with cups at each end similar to the cup 17 which cups fit about bearings similar to the bearings 18. By this arrangement the trucks can turn without the building supporting frame being moved.

The main beam 19 of the forward truck comprises an I-beam construction and has its forward end portion 22 bent to extend in a higher plane than the rear end portion as clearly shown in Fig. 3. Relatively long and short I-beams 23 and 24 are secured to the lower flange of the I-beam 19 and are braced by means of the yokes 25 and 26. Bracing rods 27 are secured to the end portions of the I-beam 23 and have their forward ends secured to the forward end portion of the I-beam 19 by means of the bolt 28, which bolt passes through the web of the I-beam 19.

Wheel carrying I-beams 29 are connected with the cross beams 23 and 24 by means of the U bolts 30 and from an inspection of Figs. 8 and 9 it will be readily seen that this connection causes the wheel supporting beams to be pivotally mounted, thus permitting the wheels carried by the beams to follow the unevenness of the ground without rocking the truck. An axle 31 has its center block 32 connected with the wheel supporting beam 29 by means of the U bolts 33 and has its end portions connected with the cross beam 23 by means of the rods 34. These rods 34 are loosely connected with the web of the beam 23 so that the pivotal

movement of the beam 29 will not be interfered with.

The wheels are mounted upon the axles and each comprises a metallic casing 35 secured to the hub by the rivets 36 and having its tire secured by the rivets 37. The end portions of the axles pass through the hubs 38 of the wheels and after the rollers 39 have been put in place as shown in Fig. 12 the eyes of the rods 34 are placed upon the end portions of the axles and the securing keys 40 are passed through the axles. It is, of course, obvious that if desired nuts may be screwed upon the axles instead of using the keys 40.

The forward wheel carrying frame comprises the relatively long and short I-beams 41 and 42 which beams are connected by the cross beam 43 forming a rigid connection for the beams 41 and 42 and carrying a bearing 44 which fits into a cup 45 carried by the forward portion 22 of the main beam 19. This bearing 44 carries a pivot pin 46 extending through the cup 45 into an opening 47 formed in the main beam. Bracing yokes 48 pass over the end portions of the cross beam 43 and are connected with the beams 41 and 42, and arcuate strips 49 are secured to the yokes 48 to form supports for the forward portion of the main beam 19 when the forward wheel carrying frame is turned. These strips 49 rest upon the bolts holding yoke 48 upon beam 43. Beams 50 similar to the wheel carrying beams 29 are pivotally connected with the cross beams 41 and 42 by means of the U bolts shown in Fig. 7 and similar to those shown in Figs. 8 and 9, and axles similar to the axles 31 are connected with the pivot beams 50 in the manner already described. The wheels are the same as those already described and are held in place in the same manner as the rear wheels. The forward tongue 51 has its cross bar 52 positioned to the rear of the block 53 and the cross bar 52 and block 53 are held in place by the bolts 54 securing the strip 55 in place. The strips 56 are secured to the tongue 51 and cross bar 52 and have their end portions cut and coiled to form pivot ears 57 pivotally connected with the hinge plates 38 carried by the forward beam 41.

The rear trucks are constructed very similar to the forward truck with the exception that the forward wheels 59 are mounted upon an axle 60 pivotally connected with the beam 61 by the connecting links 62. A short tongue 61′ is connected to this beam 61, the free end of the tongue being held in position by the chain 69. This chain 69 passes around the beam 19 while the ends engage the tongues 61′ and are wrapped around the outer ends of the timbers 14 as shown at 70. It is obvious that two wheels may be used instead of the four rear wheels, thus making a four-wheel truck instead of a six-wheel one. The tongues 63 are each provided with a block 64 similar to the block 53, but it should be noted that this block 64 is provided with a pocket 65 in which the inner end of the extension 66 fits as shown in Fig. 11. The extension is slidably connected with the tongue by means of the collar 67 and is adjustably held in place by the bolts 68.

When using the device to move a building the building is first raised by means of suitable jacks and the trucks are then placed beneath the building and connected as shown in Fig. 1 so that when the building is lowered it will rest upon the bolsters 10, 11, and the transverse beams 13. After the building has been lowered the draft animals are connected with the trucks and the building can then be easily moved from one place to another. When the trucks are moved the wheels are permitted to follow the unevenness of the ground without rocking the trucks, thereby preventing any danger of the building being rocked. The strips 49 support the forward end portion 22 of the main beam 19, thus preventing the bearing from working hard, thereby causing it to be difficult to turn the frame carrying the front wheels of the forward truck. After the building has been taken to the desired place the building is again jacked up and the trucks removed.

In Fig. 14 the frame and trucks are formed similar to Fig. 1 with the exception of the number of wheels used with the truck. In this figure the axles 71 extend transversely across the truck and support a wheel 35 at each end thereof, thereby eliminating the two central wheels upon each axle.

The device as disclosed in Fig. 15 is also constructed similar to Fig. 1 excepting the forward portion of each truck. In this case each beam 19 is provided with a short forward axle 72 which carries the two wheels 73 and a tongue 74. In this form the greatest strain will be carried by four rear wheels 35 of each truck, each truck being provided with six wheels.

Having thus described the invention what is claimed as new, is:—

1. A truck comprising a main beam, transversely extending beams secured to the rear portion of said main beam, yokes passing over said main beam and having their end portions secured to said transversely extending beams to brace the same, bracing rods connected with the forward transversely extending beam and with the forward portion of said main beam, wheel carrying beams pivotally connected with said transversely extending beams and extending parallel to said main beam, axles connected with said pivotally mounted beams, wheels mounted upon said axles, and rods loosely connected

with the forward transversely extending beam and provided with eyes through which said axles pass.

2. A truck comprising a main beam, supporting wheels connected with the rear end portion of said main beam, a wheel supporting frame at the forward end portion of said main beam and comprising a plurality of transversely extending beams, a center beam rigidly secured to said transversely extending beams and pivotally connected with said main beam, yokes passing over said center beam and having their end portions secured to said transversely extending beams, arcuate supporting strips having their end portions secured to said yokes and positioned beneath said main beam to form supports for said main beam, wheel carrying beams pivotally connected with said transversely extending beams, axles connected with said pivotally mounted beams, and wheels mounted upon said axles.

3. A truck comprising a main beam, supporting means at the rear end portion of said main beam, a wheel carrying frame pivotally connected with the forward end portion of said main beam and comprising a plurality of transversely extending beams, beams connecting said transversely extending beams, axles connected with certain of said last mentioned beams, yokes extending over the remaining one of said last mentioned beams and having their end portions connected with said transversely extending beams, supporting strips connected with said yokes and passing beneath said main beam, and supporting wheels mounted upon said axles.

4. A building moving device of the character described comprising a forward truck, a plurality of rear trucks, a rear bolster having its end portions pivotally connected with said rear trucks, a forward bolster pivotally connected with said forward truck, side timbers having their end portions supported by said bolsters and transversely extending bars secured to said side timbers and having their inner end portions positioned in overlapped relation and adjustably connected together.

5. A truck comprising a main beam, transversely extending beams secured to the rear portion of said main beam, means engaging said transversely extending beams and passing over said main beams for bracing the beams, wheel carrying beams pivotally connected with said transversely extending beams, axles connected with said pivotally mounted beams, wheels carried by said axles, and brace means loosely connected with the forward transversely extending beam and said axles.

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

NEIL McDOUGALL.

Witnesses:
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R. E. HOPKINS.