No. 845,580.

PATENTED FEB. 26, 1907.

J. RUPPERT.

WAGON.

APPLICATION FILED OCT. 11, 1906.

4 SHEETS—SHEET 1.

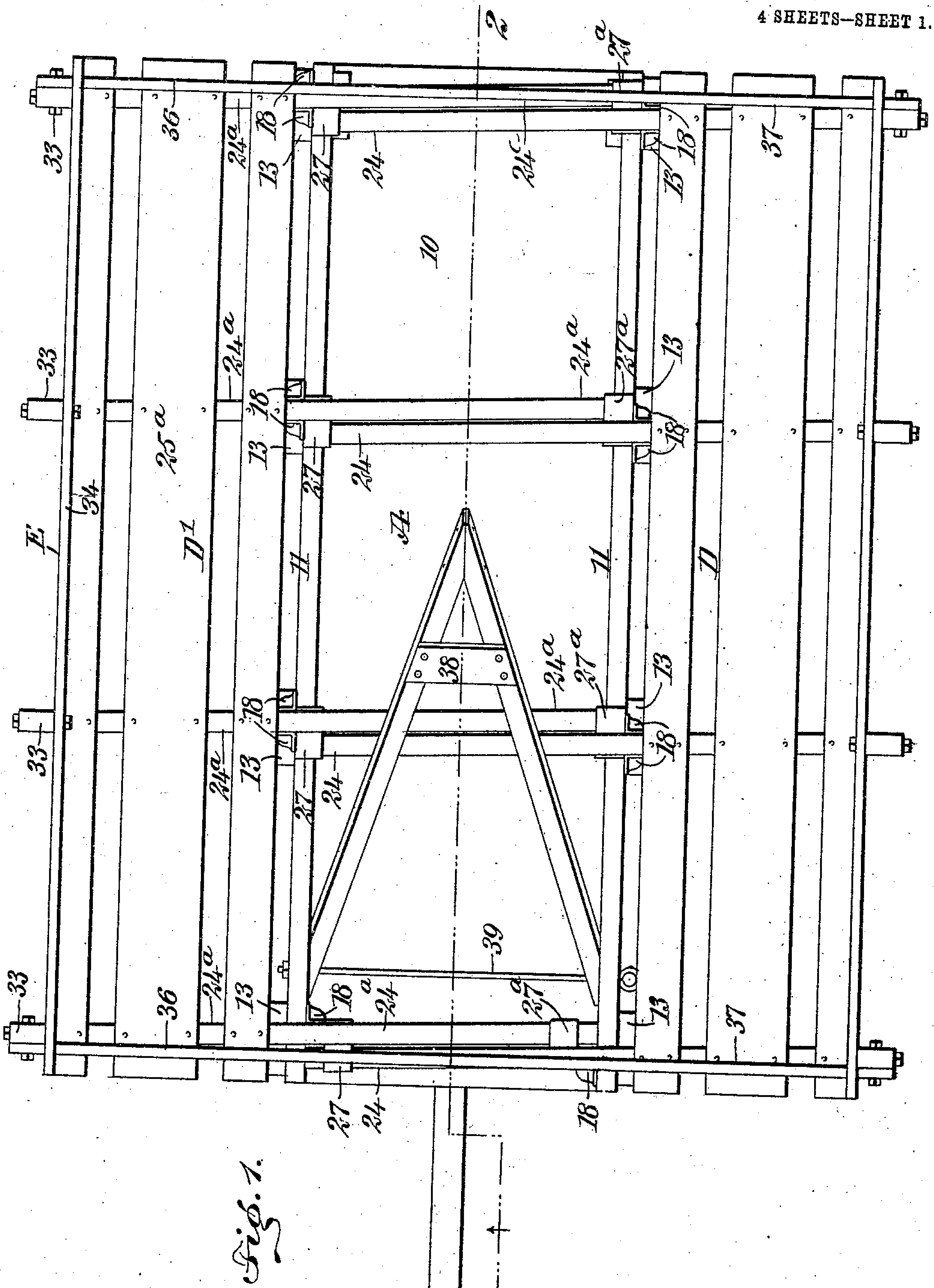

Fig. 1.

WITNESSES

H. C. Abbott

[illegible]

INVENTOR

John Ruppert

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., WASHINGTON, D. C.

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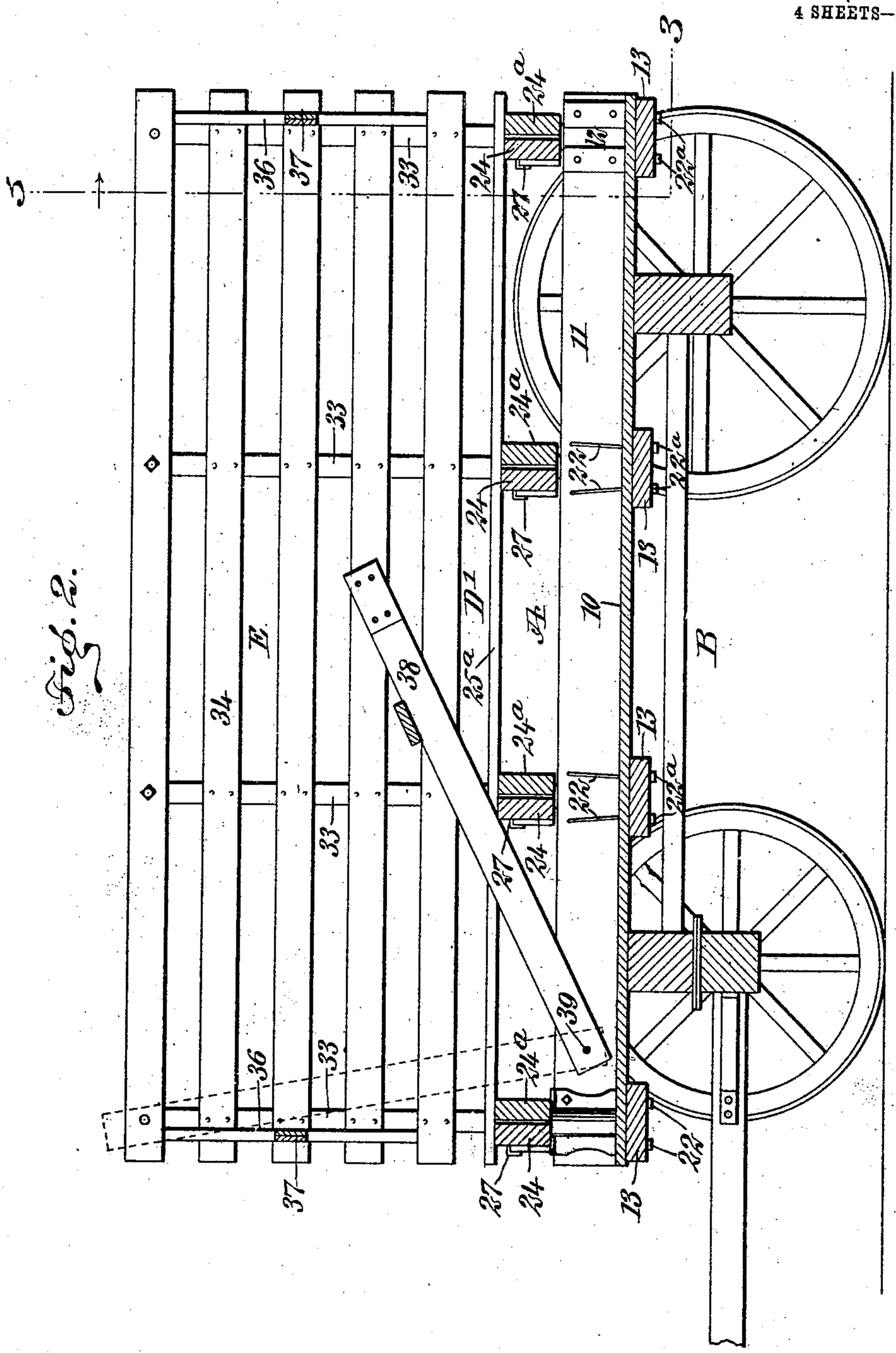

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Fig. 3.

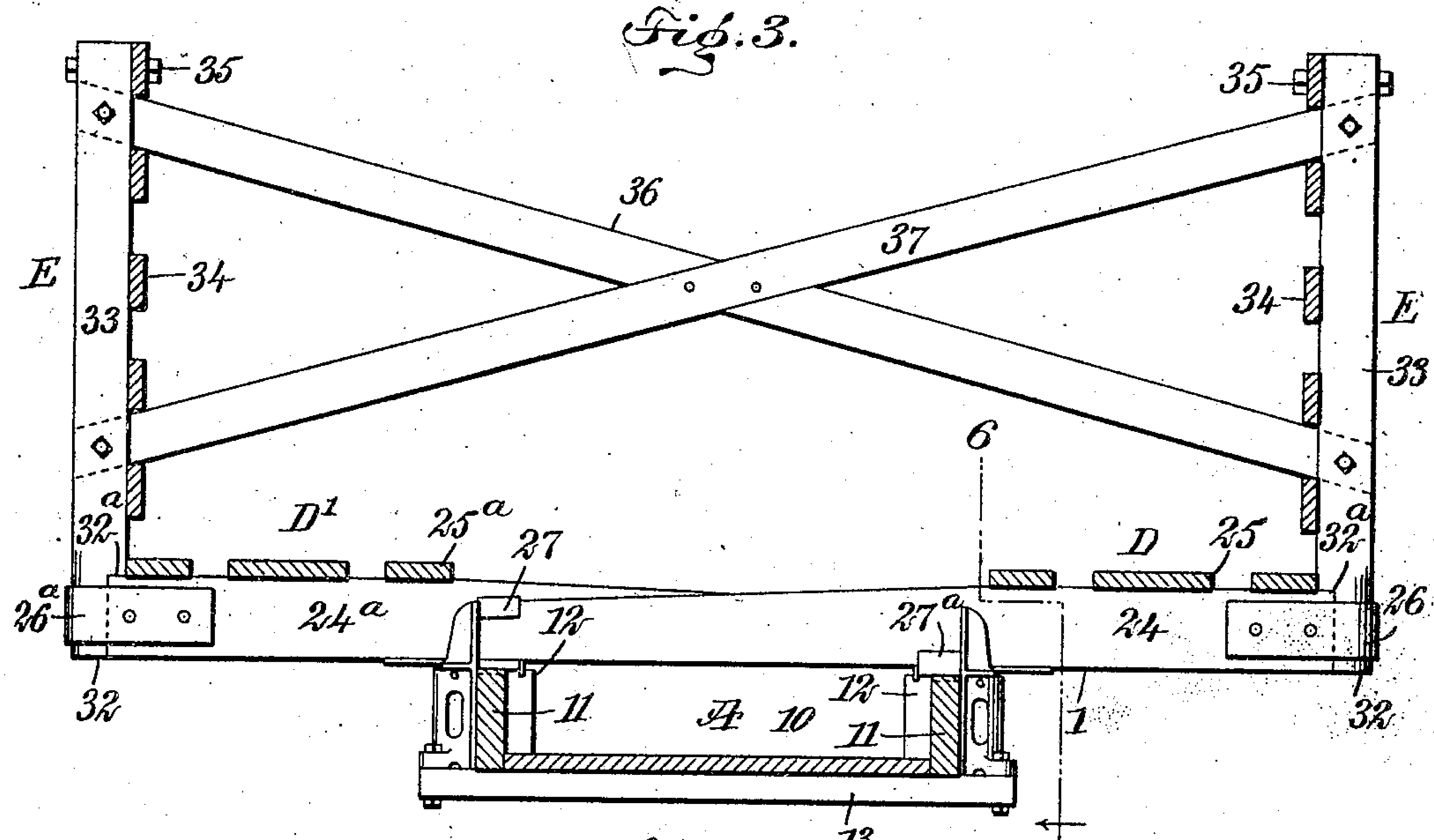
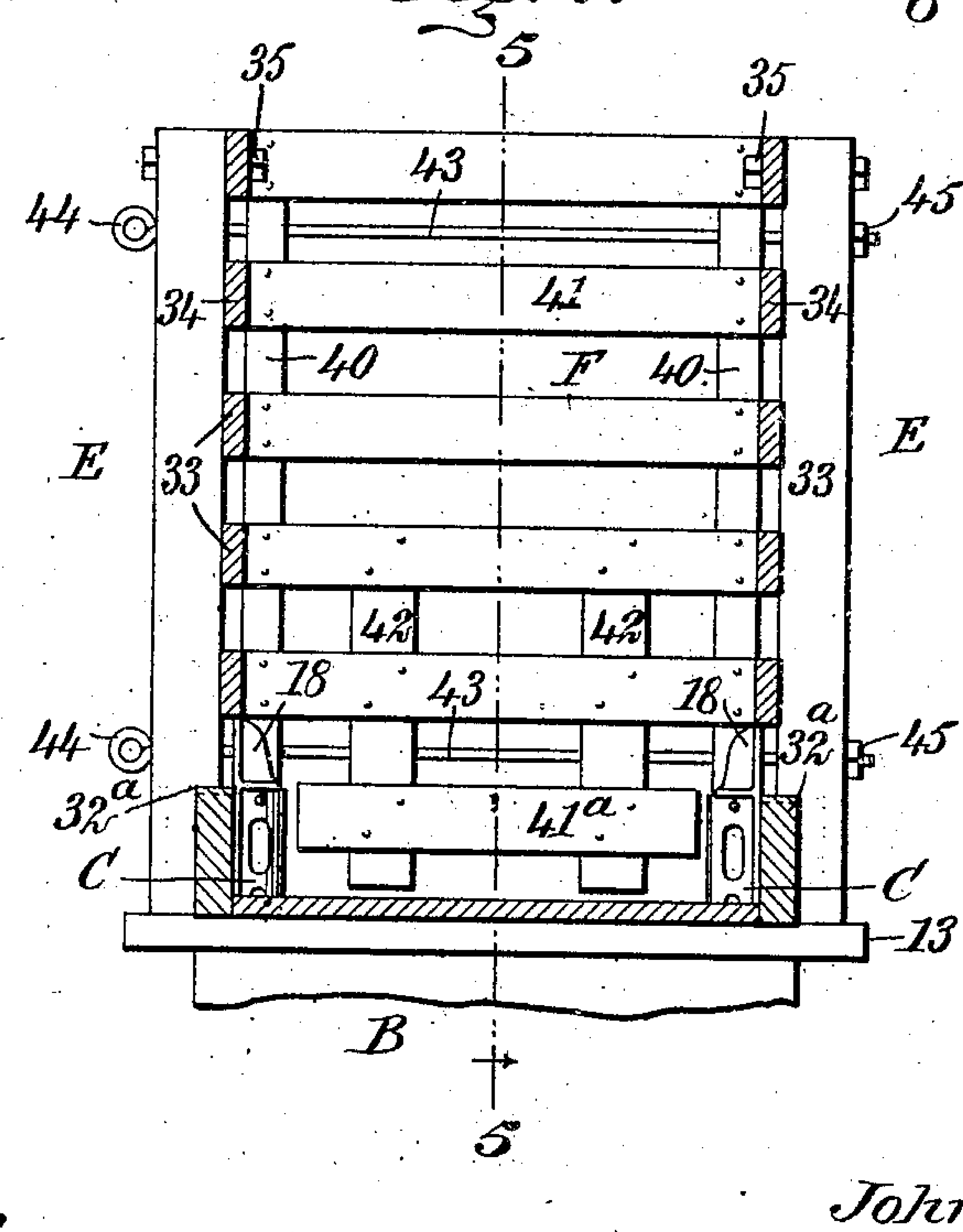


Fig. 4.



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A. C. Abbott

INVENTOR

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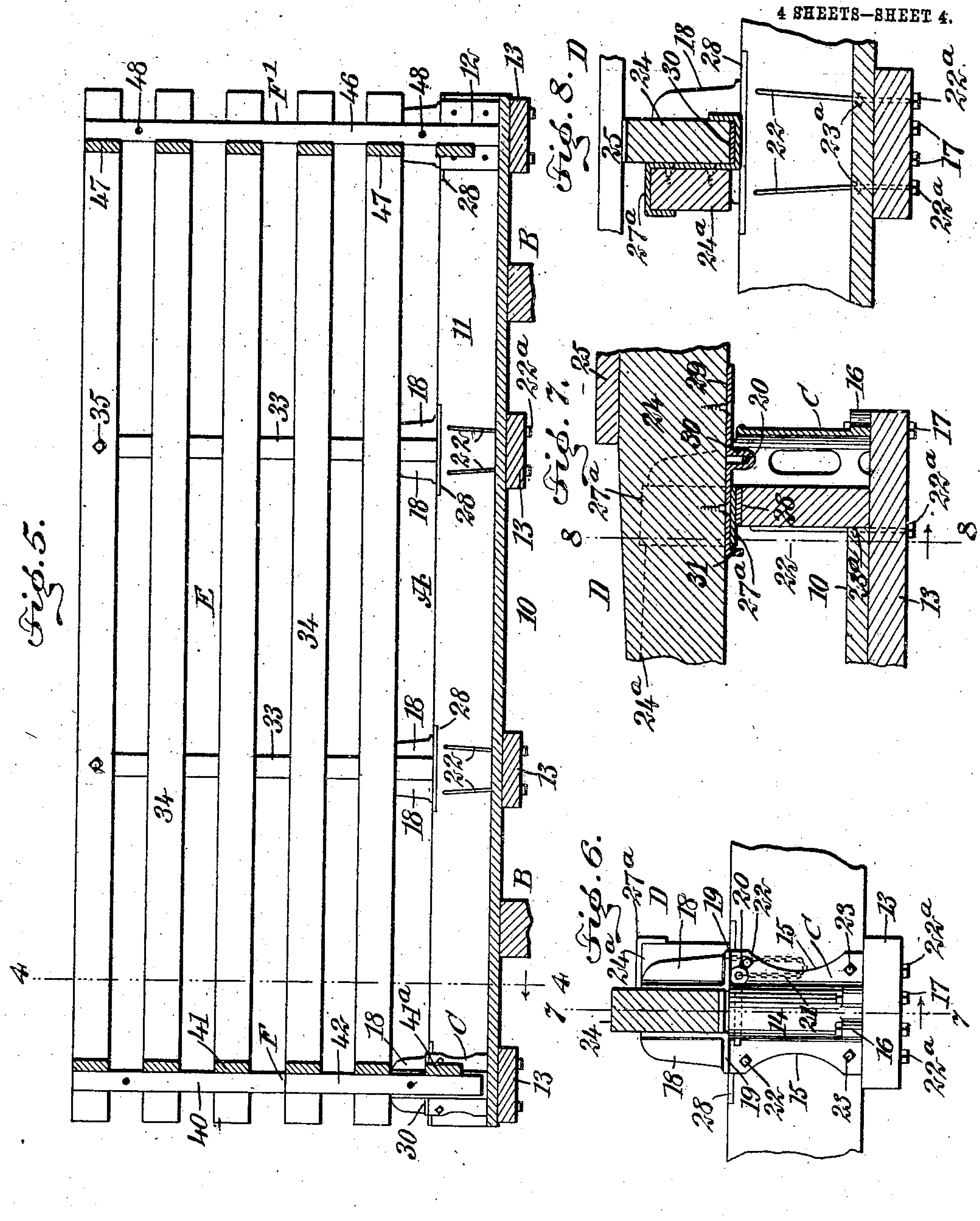

WITNESSES.

INVENTOR

John Ruppert

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN RUPPERT, OF GLENCOE, MINNESOTA.

WAGON.

No. 845,580. Specification of Letters Patent. Patented Feb. 26, 1907.

Application filed October 11, 1906. Serial No. 338,439.

To all whom it may concern:

Be it known that I, JOHN RUPPERT, a citizen of the United States, and a resident of Glencoe, in the county of McLeod and State of Minnesota, have invented a new and useful Improvement in Wagons, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide a very simple, light, durable, and economic type of farm-wagon capable of being quickly and conveniently converted into shape for use as an ordinary box farm-wagon, a hay-rack, a stock-rack, or a wood-wagon.

Another purpose of the invention is to so construct the body of the wagon that it need not be changed under any condition of adjustment of the necessary added parts and so that such added parts can be expeditiously and readily locked in position or removed, as required.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the vehicle, adapted for use as a hay-rack. Fig. 2 is a longitudinal section taken practically on the line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section taken substantially on the line 3 3 of Fig. 2. Fig. 4 is a transverse section taken practically on the line 4 4 of Fig. 5, the vehicle being shown adapted for use as a stock-rack. Fig. 5 is a longitudinal section taken practically on the line 5 5 of Fig. 4. Fig. 6 is a section through a portion of one of the horizontal extensions from the body of the vehicle, illustrating the adjacent portion of the body in side elevation, the section being taken substantially on the line 6 6 of Fig. 3. Fig. 7 is a section taken practically on the line 7 7 of Fig. 6, and Fig. 8 is a section taken substantially on the line 8 8 of Fig. 7.

The body A of the wagon consists of a bottom 10 and sides 11, the sides being provided at the rear with battens 12 to receive the end-gate or equivalent closure at such point. The bottom 10 and sides 11 rest upon cross-bars 13, that extend beyond the outer faces of the side pieces, as best shown in Fig. 3. These cross-bars comprise usually a rear cross-bar, a forward cross-bar, and two or more intermediate cross-bars, as best shown in Figs. 2 and 5; but the forward cross-bar is shorter than the others, so as not to interfere with the forward wheels when the forward axle is cramped. Any suitable form of running-gear B may be employed in connection with the aforesaid body A, as is shown in Fig. 2.

A socket-fixture C is secured to the body at each side wherever a cross-bar 13 is located. All of the socket-fixtures C are secured to the outside of the side pieces of the body and rest upon the outer end portions of the cross-bars 13, with the exception of the forward socket-fixtures, which are secured to the inner faces of the side pieces 11 of the body and rest upon the floor or bottom 10 of the wagon, as is shown also in Figs. 2 and 5. The socket-fixtures C are all of the same type, each consisting of a segmental vertical body 14 and side flanges 15, while at the bottom of the body 14 eyes 16 are formed, through which bolts 17 are passed and through the cross-bars 13 or the bottom 10 of the wagon-body, according to the location of the fixture. Each fixture is also provided with fixed triangular jaws 18, located one at each side of the top portion of the body, which portion of said body is open, as is shown in Figs. 6 and 7, and at the bottom of each jaw 18 an outwardly-extending horizontal partition 19 is provided, having an opening therein for the reception of a locking-pin 20 when not in use, which pin is adapted to be passed through the body of the fixture for a purpose to be hereinafter described. The locking-pins 20 are usually attached to the fixtures by means of chains 21 or their equivalents.

The sides and the bottom of the body A of the wagon are connected, and the bottom is held securely to the cross-bars 13 by means of bolts 22, which are passed from the outside of the body near its top at each side of a socket-fixture C into the said body and then down through the bottom 10 and through the cross-bars 13, as best shown in Fig. 8, said bolts being provided with nuts at both ends, the lower nuts being designated as 22^a to distinguish them from the bolts employed to secure the socket-fixtures in place. The stay-bolts 22 are drawn tight against the inner face of the side pieces 11 of the body of the wagon by means of transverse bolts 23, which are likewise passed from the outside through the side pieces and into the side edges of the bottom 10, terminating at their inner ends in hooks 23^a, which receive the

vertical sections of the stay-bolts 22, and these latter bolts 23 may be termed "locking-bolts." The bolts 22 and 23 are passed through the flanges 15 of the socket-fixtures, and therefore also serve to hold said fixtures in place.

When the vehicle is to be fitted up as a hay-rack, (shown in Figs. 1, 2, and 3,) the body of the wagon is provided with right and left hand extensions, the left-hand extension being designated as D and the right-hand extension as D′. These extensions are horizontally located with respect to the body and rest upon the upper edges of the side pieces 11 of the body, as is particularly shown in Fig. 3. The left-hand horizontal extension D consists of a series of beams 24, corresponding in number to the number of socket-fixtures at each side of the body. These beams are of sufficient length to rest upon a side piece at one side of the body and to pass through the jaws of a socket-fixture C at the opposite side of the body and out beyond said fixture a desired distance. Longitudinal slats 25 are secured to the upper surfaces of the beams 24 at that portion of the beams that extend beyond the left-hand side of the wagon-body. Each beam 24 terminates at its outer end in an eye 26 and at its inner end is provided with a stirrup 27, that extends from the top of the beam downward along one of its sides and outward horizontally and then upward from said side at its bottom portion, as is shown best in Fig. 8. The right-hand horizontal extension D′ is similarly constructed to the left-hand extension D, consisting of an equal number of horizontal beams 24ª. These beams 24ª pass through the jaws of the right-hand series of socket-fixtures and extend outward beyond said fixtures an equal distance to the overhanging portions of the beams 24. The inner ends of said beams 24ª rest upon the upper edges of the left-hand side piece of the body of the wagon, as is shown in Figs. 1 and 3. Longitudinal slats 25ª are secured to the upper surfaces of the overhanging portions of the beams 24ª, said slats 25ª corresponding to the slats 25. Each beam 24ª is provided with an eye 26ª corresponding to the eyes 26 of the beams 24. Each beam 24ª at its inner end portion is provided with a stirrup 27ª, that corresponds to the stirrups 27 on the beams 24; but the stirrups 27ª extend in an opposite direction from that of the stirrups 27. When the extension-sections D and D′ have been placed in position, corresponding beams 24 and 24ª will lie side by side, as is shown in Fig. 1, and the stirrup of a beam 24 will receive the bottom edge of a beam 24ª and the stirrup of a beam 24ª will receive the bottom edge of a beam 24. In this manner one beam practically supports the other. Where the beams 24 and 24ª engage with the upper edges of the side pieces 11 of the body, wear-plates 28 are provided, as shown in Figs. 6, 7, and 8. Also at such points on the beams 24 and 24ª a locking-plate 29 is secured to the bottom of each beam, the locking-plate being provided with a downwardly-extending loop or depression 30, which when the beams are in place on the body A enter the body portions 14 of the socket-fixtures C at their upper edges, and the pins 20 are then passed through the body portions of said fixtures C and through the said loop or depression 30, as is shown in Figs. 6 and 7, so as to prevent the side extensions D and D′ from slipping from the body.

In order to take off undue strain from the pins 20, owing to the load at the overhanging portions of said sections D and D′, each locking-plate 29 is provided at its inner end with a downwardly-extending flange or finger 31, that engages with the inner edge of the stirrup, which passes beneath the said beam, since the stirrup in so passing engages with the locking-plate, as is particularly shown in Fig. 7. Side sections E are provided for the extension-sections D and D′. These side sections E each consists of a series of uprights 33, the lower ends 32 whereof are reduced transversely to enter the eyes 26 and 26ª in the beams 24 and 24ª, and the shoulders 32ª, formed by said reductions, rest upon the upper faces of said beams, as shown in Fig. 3. Longitudinal slats 34 are secured to the uprights 33, preferably at their inner faces, and one or more of the uppermost slats of a side section may be and preferably are removable from the uprights, being secured thereto by bolts 35, enabling the height of the side sections E to be reduced at will.

At the front and at the rear of the vehicle the side sections E are strengthened and supported by cross-braces 36 and 37, secured to each other at their point of contact, and said braces are attached to the forward and rear uprights 33 by means of bolts or their equivalents, so that the braces may be quickly and readily removed when the vehicle is to be adapted for other use than for carrying hay.

The usual **A**-frame is pivotally attached to the forward portion of the vehicle when it is used as a hay-rake, as is illustrated in Figs. 1 and 2, by means of a pivot-bolt 39, passed through the diverging members of said frame and through the side pieces of the body A, as is especially shown in Fig. 1.

In Figs. 4 and 5 I have shown the vehicle adapted for use as a stock-rack. When so employed, the body of the wagon remains unchanged; but the braces 36 and 37 and the side extensions D and D′ are dispensed with, and the lower reduced ends 32 of the side sections E are made to enter the socket-fixtures C that are secured to the outer faces of the side pieces 11 of the body. The forward uprights 33 of said side sections E, however, rest upon the forward cross-bar 13; but the

shoulders 32ª of said forward uprights 33 bear upon the upper edges of the side pieces 11 of the body, as is shown in Fig. 4. In this latter adaptation a forward closing section F is used and likewise a rear tail-board section F′. These two sections F and F′ are of equal height to the height of the side sections E, as shown in Fig. 2. The front closing section F consists of side standards 40, the lower ends whereof are adapted to enter the forward socket-fixtures C, as is shown in Fig. 4, and series of horizontal slats 41 are secured to these standards 40, said slats 41 mating with the slats 34 of the side sections E, as is also shown in Fig. 4. The lowermost slat 41ª is of necessity shorter than the others, owing to the presence of the forward socket-fixtures C. Therefore this lower slat is supported by means of vertical slats 42, secured to said lower slat 41ª and to the adjacent full-length slats 41. The standards 40 of the front closing section F may be locked in the front socket-fixtures C by means of the pins 20 heretofore described; but in order to securely hold this front section in position tie-bolts 43 are passed through the uprights 33 of the side sections and the standards 40 of the front section, said tie-bolts being provided with heads 44 at one of their ends and with nuts 45 at their opposite ends, as shown in Fig. 4.

With reference to the end-gate section F′ it consists of uprights 46 and horizontal slats 47 secured thereto, which slats also mate with the side slats 34 and correspond in position to the position of the forward slats 41 and 41ª. The standards 47 are made to enter the spaces between the rear battens 12, and tie-bolts 48, corresponding to the forward tie-bolts 43, are passed through the rear uprights of the side sections E and the standards 46 of the said end-gate, as is indicated in Fig. 5. When the vehicle is to be adapted for hauling wood or like material, the side sections and the forward sections are dispensed with and stakes are entered in the forward and rear socket-fixtures or any of the socket-fixtures, if so desired. When the vehicle is to be used as an ordinary farm-wagon, plain extension side pieces are employed, having stakes attached adapted to enter the outer socket-fixtures. The ordinary tail-board is used, and likewise a front board reduced in width at its lower portion to fit in between the forward socket-fixtures C, and said front board is provided with downwardly-extending pins entering the forward socket-fixtures C for the purpose of holding the front board in its position on the body of the wagon.

The vehicle described can be made very light and yet be strong, it is very simple in its construction, and it can be readily and conveniently adapted for the many uses described in a short space of time and at any place where the necessary sections are at hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In wagons, a body-section, socket-fixtures secured to the outer side faces of its side pieces between their ends and at the rear and also at the front inner faces of the said side pieces, side extension-sections fitted to the outer socket-fixtures, a front section fitted to the inner forward socket-fixtures, and a tail-board section, all of said sections being removable.

2. In wagons, a body-section, socket-fixtures secured to the outer faces of the side pieces of said body-section between their ends and at the rear, and at the inner side portions of their forward ends, fastening devices adapted to be passed through the said socket-fixtures, and jaws extending upwardly at each side of the top of each socket-fixture, which top portions of said fixtures are open.

3. In a wagon, a body-section provided with socket-fixtures secured to its side pieces, each socket-fixture being provided with an upwardly-extending jaw at each side of its open top portion, horizontal extensions for the said body-section, adapted to overhang the sides thereof, each extension consisting of beams and said beams being adapted to enter the spaces between the jaws of said fixtures respectively from the right and the left hand sides and to extend beyond the outer faces of the side pieces of the body-section, slats secured to the overhanging portions of the beams, the said beams extending across the top portion of the body-section, eyes at the ends of the beams, means for locking corresponding beams of opposing extensions together, and side sections fitted in the eyes of the said horizontal extensions.

4. In a wagon, a body-section provided with socket-fixtures secured to its side pieces, each socket-fixture being provided with an upwardly-extending jaw at each side of its open top portion, horizontal extensions for the said body-section, adapted to overhang the sides thereof, each extension consisting of beams and the beams being adapted to enter the spaces between the jaws of said fixtures respectively from the right and the left hand sides and to extend beyond the outer faces of the side pieces of the body-section, slats secured to the overhanging portions of the beams, said beams extending across the top portion of the body-section, eyes at the ends of the beams, stirrups secured to the beams of the extensions from the body, the stirrups of one set of beams extending in an opposite direction to the direction of the stirrups of the opposing beams, the stirrups of the right-hand beams being adapted to receive the bottom portions of the left-hand beams, and the stirrups of the left-hand beams being adapted

to receive the bottom portions of the right-hand beams, means for locking the said beams to said socket-fixtures, and side sections removably fitted to the outer end portions of the extension-beams.

5. In wagons, the combination with the body thereof and socket-fixtures secured to the side pieces of said body, each socket-fixture being provided with an upwardly-extending jaw at each side of its open top, of a right and a left hand horizontal extension for the body, each extension consisting of transverse beams, the right-hand beams being adapted to enter the spaces between the right-hand jaws and the left-hand beams the spaces between the left-hand jaws, the beams extending across said body, eyes at the outer ends of the beams, connecting-slats for the right and the left hand beams, side sections removably fitted in the eyes of the said extension-beams, stirrups carried by said extension-beams at their inner ends, the stirrups of one set of beams extending in opposite directions to the stirrups of the opposing set of beams, the stirrups of one set of beams being adapted to receive the lower edge portions of the beams of the opposing set, and means for locking the beams between the said jaws.

6. In wagons, the combination with the body thereof and socket-fixtures secured to the side pieces of said body, each socket-fixture being provided with an upwardly-extending jaw at each side of its open top, of a right and a left hand horizontal extension for the body, each extension consisting of transverse beams, the right-hand beams being adapted to enter the spaces between the right-hand jaws and the left-hand beams the spaces between the left-hand jaws, the beams extending across the said body, eyes at the outer ends of the beams, connecting-slats for the right and the left hand beams, side sections removably fitted in the eyes of said extension-beams, stirrups carried by said extension-beams at their inner ends, the stirrups of one set of beams extending in opposite directions to the stirrups of the opposite set of beams, the stirrups of one set of beams being adapted to receive the lower edge portions of the beams of the opposing set, a locking-plate secured to the bottom edge portion of each beam where said beam enters between said jaws, each locking-plate being provided with a depression that extends into a socket-fixture and each locking-plate being provided at its outer end with a downwardly-extending flange for engagement with the inner edge of a stirrup, and locking-pins carried by said socket-fixtures, which pins are passed through said fixtures and through the depressed portions of the locking-plates.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN RUPPERT.

Witnesses:
H. EBELING,
L. W. GILBERT.