

W. J. McCOY.

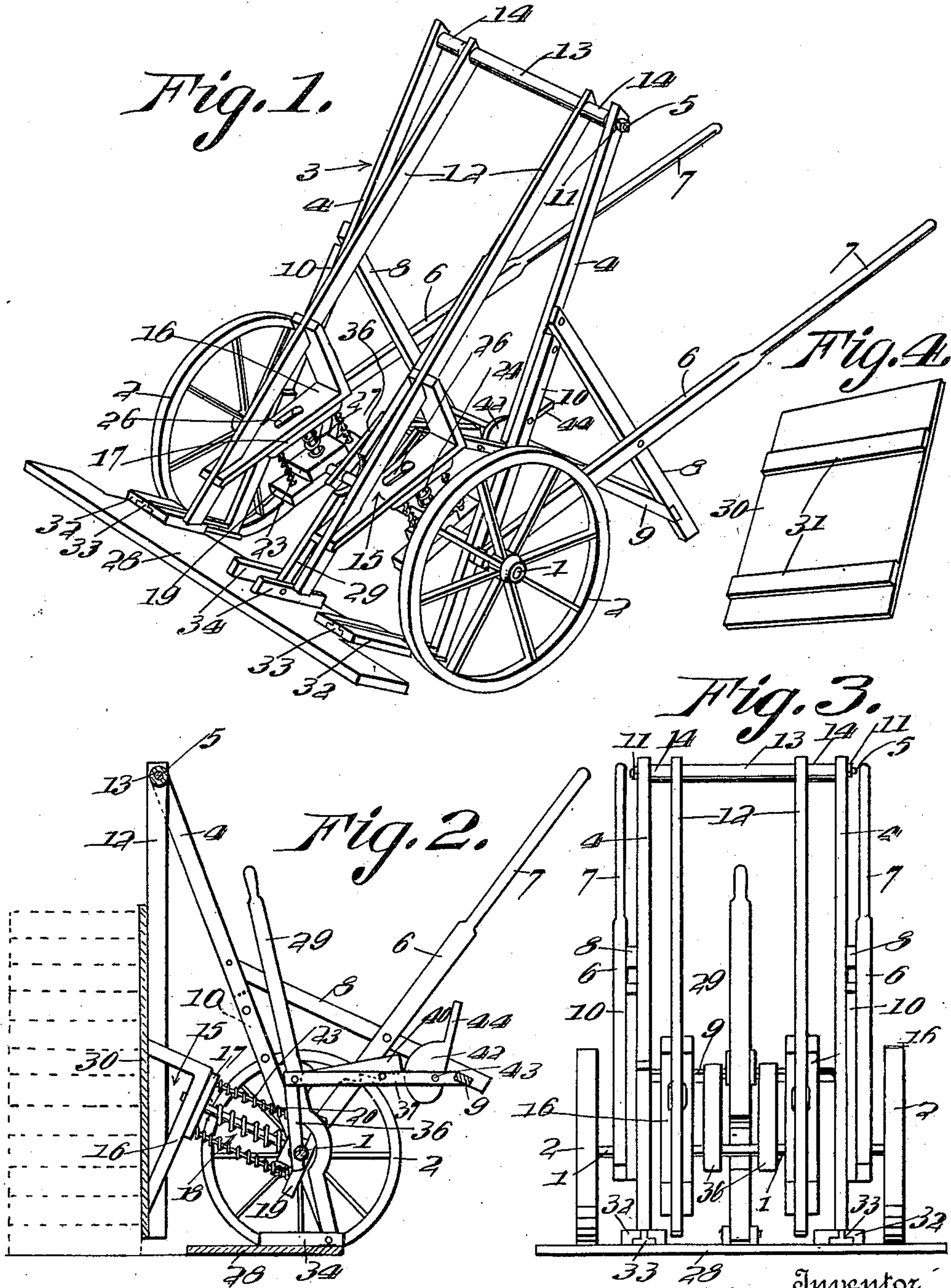
TRUCK.

APPLICATION FILED SEPT. 3, 1910.

993,265.

Patented May 23, 1911.

5 SHEETS-SHEET 1.



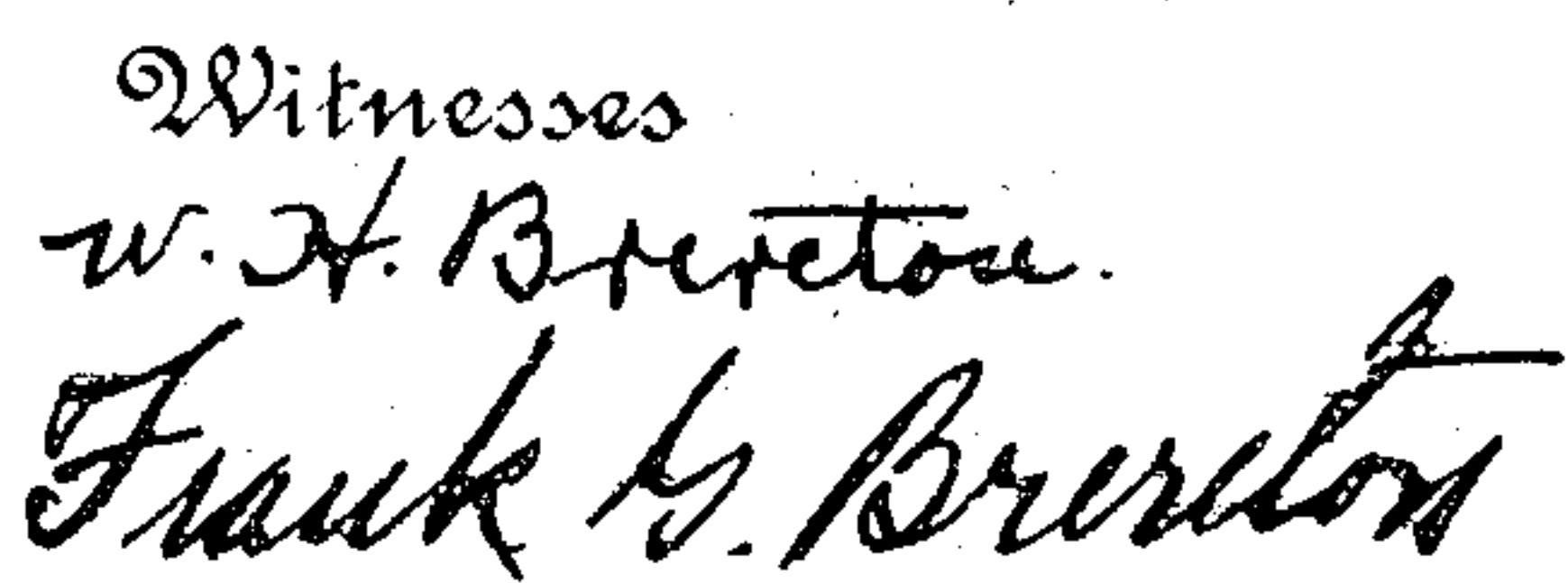
Witnesses
H. H. Breerton
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TRUCK.

993,265.

5 SHEETS--SHEET 2.



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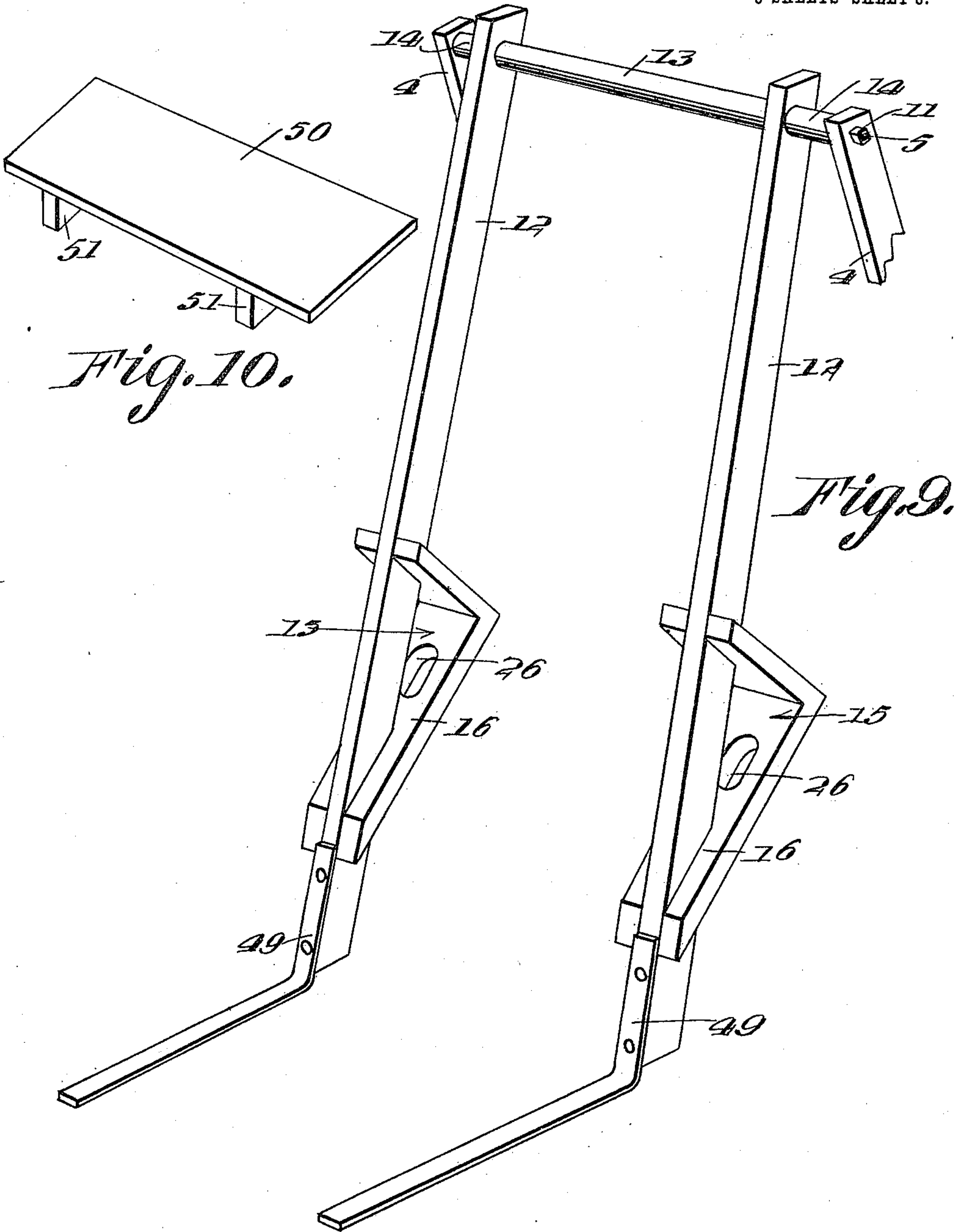
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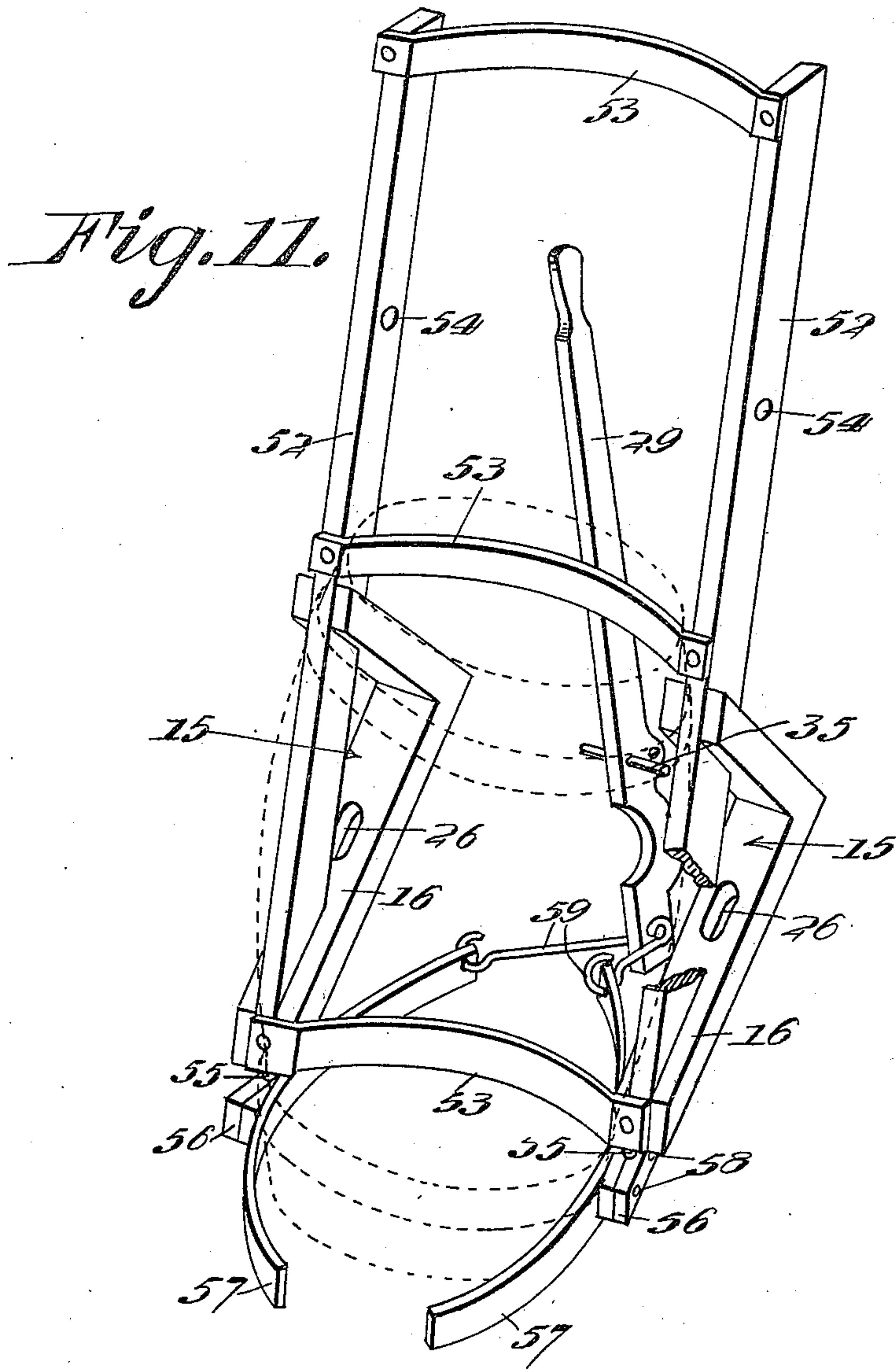
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5 SHEETS—SHEET 4.



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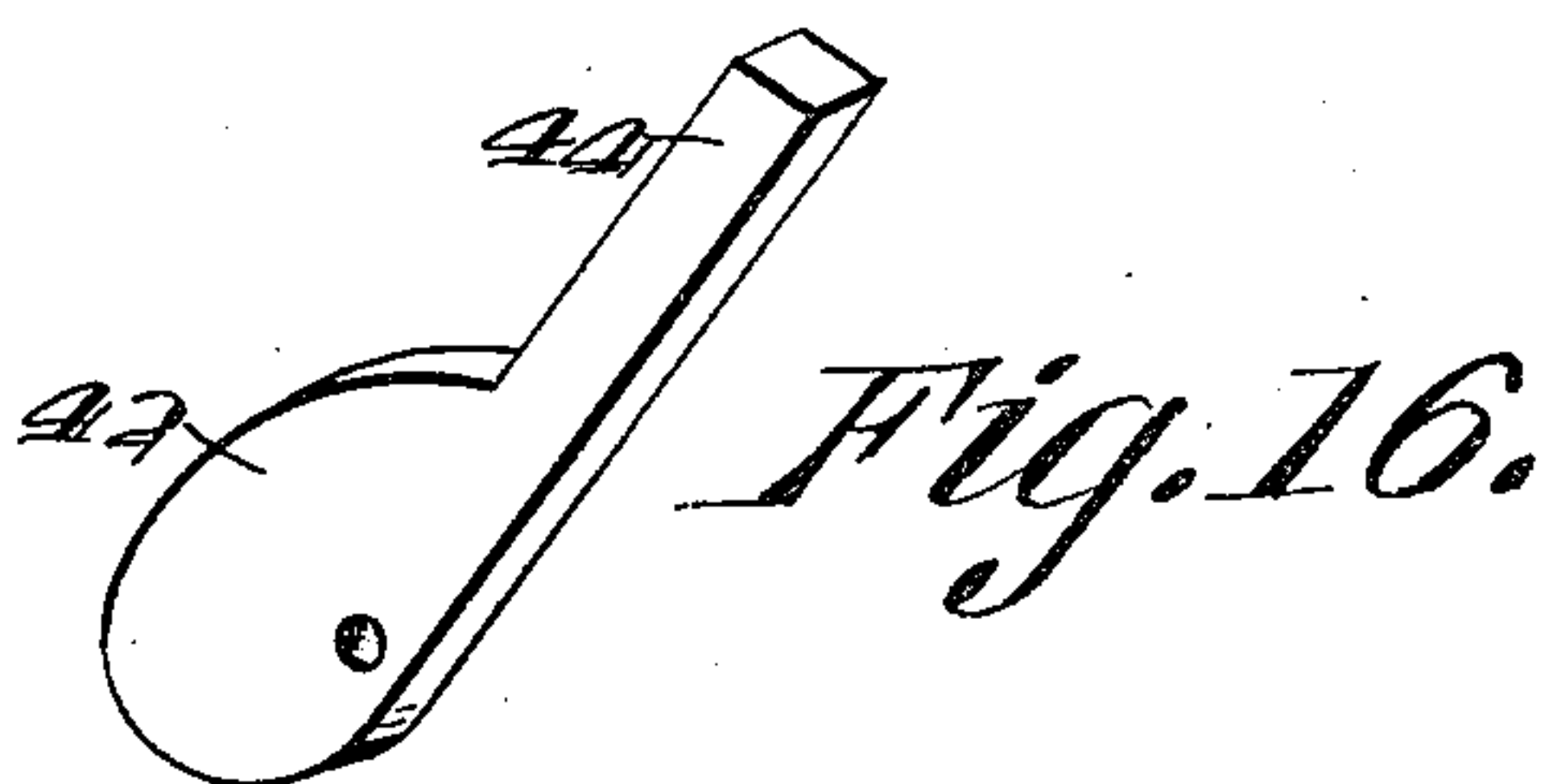
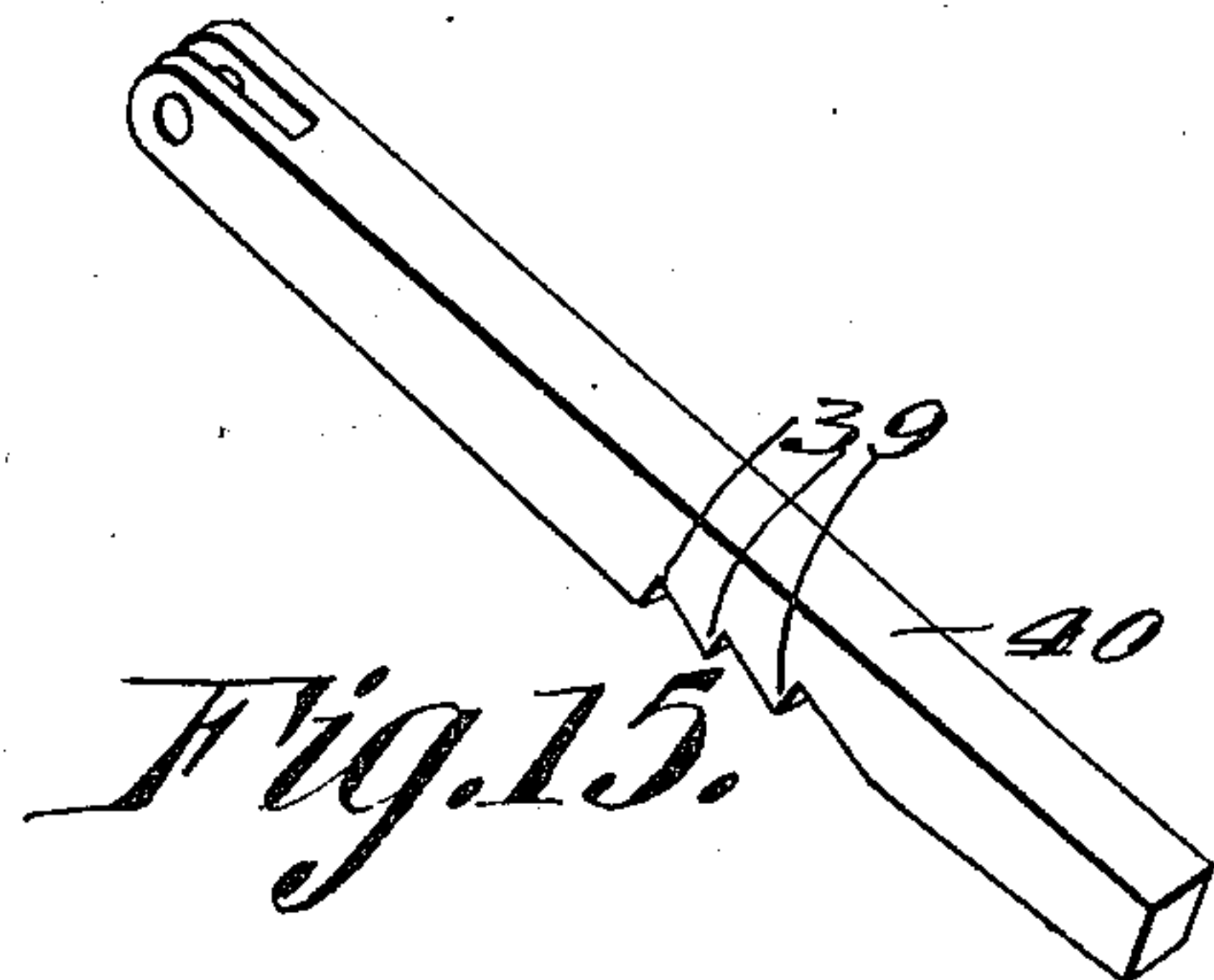
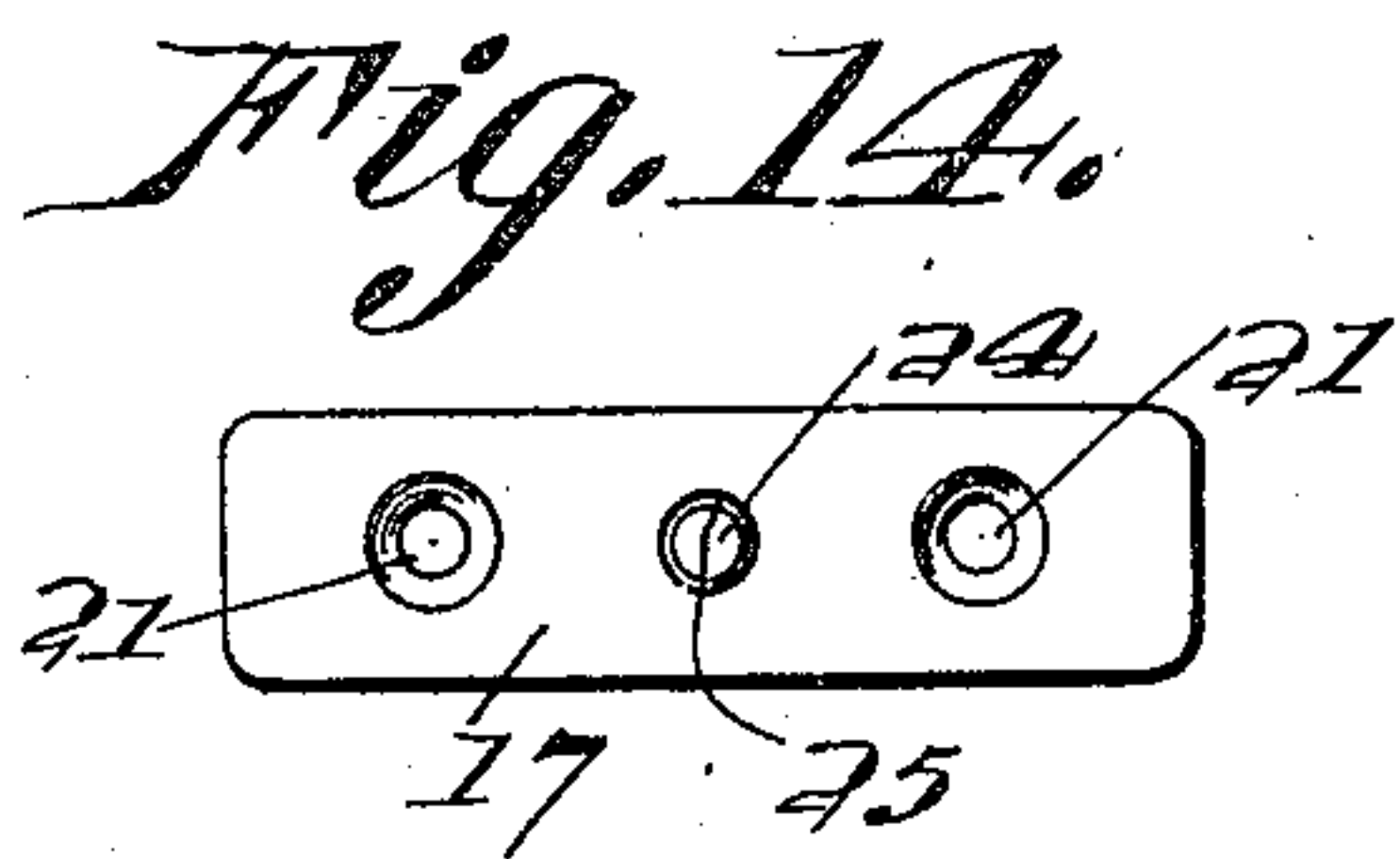
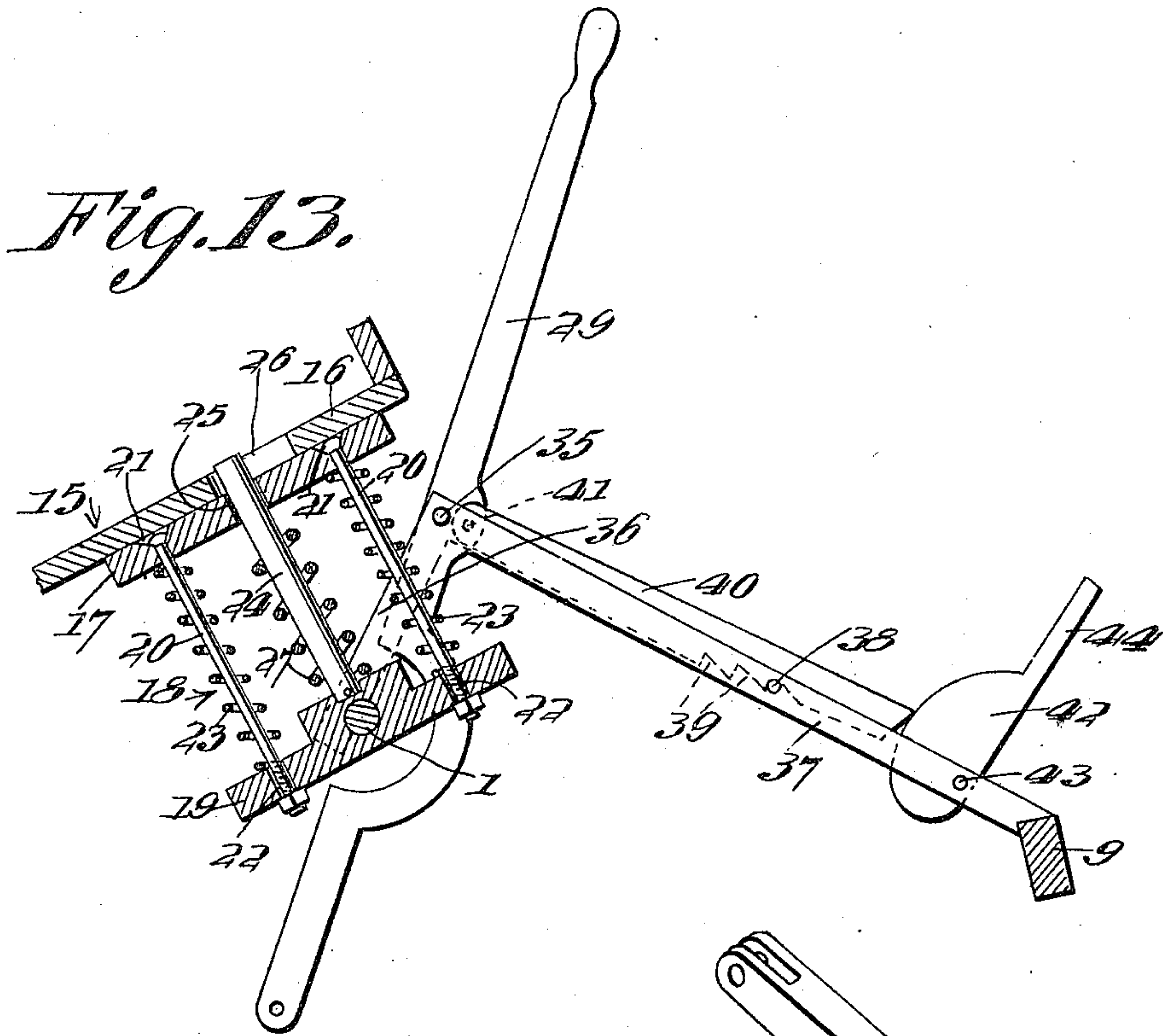
W. J. McCOY,
TRUCK.

APPLICATION FILED SEPT. 8, 1910.

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Patented May 23, 1911.

5 SHEETS-SHEET 5.



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UNITED STATES PATENT OFFICE.

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TRUCK.

993,265.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed September 3, 1910. Serial No. 580,362.

To all whom it may concern:

Be it known that I, WALTER J. MCCOY, a citizen of the United States, residing at South Omaha, in the county of Douglas and State of Nebraska, have invented new and useful Improvements in Trucks, of which the following is a specification.

The present invention has reference to improvements in trucks, and it comprehends generally, the production of an implement of the type specified which, with certain necessary changes, may be readily and effectively used for handling either burned or green brick, boxes, and barrels.

Briefly described, the improved truck comprises a wheeled frame to which is pivotally connected a pair of load-supporting arms, these arms varying somewhat in their construction to conform to the character of the load with which they are to be used, and having associated therewith a cushioning device composed of main and auxiliary springs. There is also pivoted to the truck frame a lever designed to operate either a slide or a clamp, according as one form of arm or another is to be employed. With this lever, there is associated a trip-controlled latch, by means whereof it is retained in adjusted position.

A structural embodiment of the invention is illustrated in the accompanying drawings, wherein,

Figure 1 is a perspective view of the improved truck when used for handling burned brick, Fig. 2 is a longitudinal sectional view showing the truck in unloading position, Fig. 3 is a front elevation of Fig. 1, Fig. 4 is a detail view of the pallet carried by the load-supporting arms, Fig. 5 is a longitudinal sectional view of the form of truck employed for handling boxes, Fig. 6 is a front elevation of the truck shown in Fig. 5, Fig. 7 is a perspective view of the lever operated slide, Fig. 8 is a fragmental view of the lower end of one of the load-supporting arms, showing the lifting plate attached thereto, Fig. 9 is a perspective view illustrating the arms employed for handling green brick, Fig. 10 is a detail view of the pallet utilized in connection with the arms shown in Fig. 9, Fig. 11 is a perspective view showing the drums employed for handling barrels, and showing also the clamping device used in this form of the inven-

tion, Fig. 12 is a fragmental detail view of Fig. 11, Fig. 13 is a detail view of the cushioning device, and the operating lever associated therewith, said device being shown partly in vertical section, and said lever being illustrated in connection with its latch and trip, Fig. 14 is a plan view of the upper plate of the cushioning device, and Figs. 15 and 16 are detail views respectively, of the latch and trip.

Referring to said drawings, 1 designates the axle, 2 the wheels, mounted on the ends thereof, and 3 the truck frame. Said frame comprises a pair of inclined side beams 4, connected at their upper or rear ends by a cross-bar 5, and adjacent their lower or front ends to the axle, a pair of horizontal beams 6 likewise connected at their front ends to said axle, and terminating at their rear ends in handles 7 and a pair of vertical supports or legs 8, said legs being connected at their upper ends to the inclined beams and intermediate their ends to the horizontal beams. The lower ends of the legs are connected by a cross-beam 9. If desired, the beams 4 may be strengthened by means of reinforcing strips 10 suitably fastened to the sides thereof.

The cross bar 5 has its ends projecting through openings formed in the inclined beams 4, accidental displacement of said beam ends being prevented by means of nuts 11 threaded upon the bar ends. To this bar there is also pivoted a pair of load-supporting arms 12 which are arranged between the beams 4 and are maintained in proper position with reference thereto and to each other by tubular spacers. These spacers are loosely fitted upon bar 5, the central spacer 13 located between the two arms 12 being considerably longer than the two end spacers 14 between said arms and the adjacent beams. To the lower portion of each supporting arm there is secured an L-shaped bracket 15 which has its longer arm 16 resting upon the upper plate 17 of the adjacent cushioning device 18. These cushioning devices, two of which are employed, each include, in addition to the upper plate 17, a lower plate 19 pivotally mounted on the axle 1, said plates being connected by a series of bolts and yieldingly forced apart from each other by means of expansible coil springs encircling said bolts.

In the construction illustrated three bolts are made use of, the two end bolts 20 having their headed upper ends received in seats 21 formed in plate 17, and their lower ends 5 extending loosely through openings 22 formed in plate 19, the last-mentioned ends of said bolts carrying nuts or the like which are held against the under face of plate 19 by the tension of springs 23. The central or 10 main bolt 24 of each device is secured at its lower end to plate 19 and projects at its upper end through an opening 25 in plate 17 and a slot 26 formed in bracket-arm 16. This bolt is encircled by a spring 27 which 15 terminates at its upper end short of plate 17, and hence is acted upon only after the springs 23 have been compressed to a predetermined extent.

When the truck is to be used for handling 20 burned brick, as in the case in the constructions shown in Figs. 1 to 4, a sliding pallet 28 is employed. This pallet is operated by a lever 29, hereinafter more fully described, and is designed to support the bricks, which 25 are initially piled thereon and against a supplemental pallet 30, (Fig. 4) adapted to be carried by the supporting arms 12, said pallet 30 being provided with spaced ribs 31 whereby it is enabled to be positioned 30 with respect to said arms. The main pallet 28 is provided with a pair of grooved guides 32 in which are received tongues 33 secured to the lower ends of the beams 4. Pallet 28 is also provided with a centrally located pair 35 of ears 34 between which the lower end of lever 29 is pivoted, said lever being fulcrumed upon a pin 35 that connects the apices of a pair of angular brackets arranged in spaced parallel relation. The 40 free ends of the front or shorter arms 36 of said brackets are attached to the axle 1, and those of the rear or longer arms 37 to the cross-beam 9, the latter arms being further connected by a cross-pin 38 located 45 intermediate the ends thereof. This pin is designed for interchangeable engagement with the teeth 39 formed in the lower face of a catch 40 pivoted at its front end, as at 4 to lever 29 directly adjacent the fulcrum 50 pin 35. To release the catch from such engagement, there is provided a cam-shaped trip 42 pivoted at 43 between the lower ends of the bracket arms 37 and provided with an operating portion 44. The rear end of 55 catch 40 rests upon the edge of this trip, and in consequence thereof a rotary movement of said trip in a counter-clockwise direction will result in raising said end and, thus, in disengaging the trip tooth from pin 38, the 60 movement of the trip being effected by the pressure of the operator's foot forwardly against the projecting portion 44.

In operating the structure above described, the pallet 28 is moved forwardly 65 into position to receive the bricks, which are

then fitted thereupon and against the pallet 30 in the usual manner, the last mentioned pallet having been positioned upon the supporting arms 12 prior to the commencement of the loading, as will be apparent. At the 70 conclusion of the loading operation, downward pressure is applied to the handles so as to swing the supporting arms into horizontal position, during which time the load will be taken up first by the springs 23 and 75 then by the main springs 27 of the cushioning devices, the action of the latter springs commencing after the auxiliary or light springs have been compressed to a predetermined degree. On reaching a horizontal 80 position, the load will be supported directly by the main springs and held in a state of balance by the auxiliary springs, which latter are arranged at opposite sides of the main springs, as shown. The loaded truck 85 may then be readily wheeled to the point where the bricks are to be dumped, since the weight of the load is entirely removed from the handles. When the unloading point is reached, the truck is again tilted to 90 bring the supporting arms into vertical position, after which the trip 42 is operated to release the lever catch, and the lever pushed forward to withdraw the sliding pallet. The bricks will then be deposited upon the 95 ground in a regular uniform pile.

Practically the same structure is employed when boxes are to be handled, the pallet 28 being replaced by the sliding fork 45 shown in Fig. 7. The guides 46 and ears 100 47 on said fork are substantially identical with the corresponding elements provided upon pallet 28 and no additional description is therefore necessary. The lower ends of the supporting arms, are, however, provided 105 with L-shaped lifting plates 48, the feet of which have beveled front edges. In operating this form of truck, it is wheeled close enough to the box to enable the sharpened feet of the lifting plates to be inserted be- 110 neath the bottom of the box, the truck having previously been shifted to bring the supporting arms into vertical position. (See Fig. 5). The handles are then swung 115 slightly backward, to raise up the end of the box engaged by the lifting feet, whereupon the lever 29 may be operated to force the fork beneath the box, the supporting arms being then lowered into horizontal 120 position.

When green brick are to be handled, the lifting plates are replaced by angular bars 49, the elongated forwardly extending arms of which are designed to project beneath 125 an elevated pallet 50, (Fig. 10) supported upon feet 51.

The pallet 30 is likewise employed in this form of truck in the same manner and for the same purpose as shown and described 130 in connection with the form of truck used

for handling burned brick, (Figs. 1 to 4,) in view of which fact further illustration of said pallet 30 is considered unnecessary.

With reference to the supporting arms 5 shown in the first three forms of the invention, it may be stated that two constructions are possible. That is to say, a single pair of arms will answer all purposes by providing for the detachable connection of the lifting plates 48 and bars 49 thereto, so that said arms may be used without lifting devices of any character as is the case when burned brick are to be handled. This form also presupposes a detachable connection 10 for the fork 45 and pallet 28 to the operating lever. On the other hand, it may be considered desirable for some purposes to provide a separate pair of arms for each separate use for which the truck is intended. 15 In such case, it becomes necessary to completely withdraw the cross bar 5 and then attach thereto the particular pair of arms to be employed.

When the truck is to be used for handling 25 barrels, the supporting arms above referred to are replaced by the pair of arms 52 shown in Fig. 11, said arms being connected by a series of spaced arcuate supporting hoops 53 and being provided with transverse perforations 54 for the cross bar 5. To the 30 lower end of each arm 52 is fastened a bolt or pin 55 upon which is pivoted a block 56, these blocks being designed to carry the arcuate barrel clamps 57 that are secured thereto by bolts 58. The rear ends of clamps 35 57 are connected by links 59 to the lower end of the operating lever 29. In operating the truck, the supporting arms are raised into vertical position, after which the truck is 40 wheeled sufficiently close to the barrel to permit the latter to enter between the clamps 57 which are in open position at that time. The operating lever is then pushed forward, whereupon the clamps will be moved in- 45 wardly and tightened against the barrel.

I claim:

1. In a truck, the combination of a wheeled frame including an axle, a pair of load-supporting arms pivoted to the frame, a pair of 50 cushioning devices connected to said axle and located directly beneath said arms, each device comprising upper and lower plates, and main and auxiliary yielding connections between said plates, and a member secured to each arm and arranged to rest upon 55 the upper plate of the adjacent device.

2. In a truck, the combination of a wheeled frame including an axle, a pair of load-supporting arms pivoted to the frame, a pair of 60 cushioning devices connected to said axle and located directly beneath said arms, each device comprising upper and lower plates formed with openings, a main bolt carried by the lower plate and projecting through 65 an opening in the upper plate, a pair of sup-

plemental bolts carried by the upper plate and projecting through openings in the lower plate, and springs encircling said bolts, and a member secured to each arm and arranged to rest upon the upper plate of the 70 adjacent device, said member being provided with a slot through which the main bolt of said device extends.

3. In a truck, the combination of a wheeled frame including an axle, a pair of 75 load-supporting arms pivoted thereto; and a pair of cushioning devices against which said arms normally bear, said devices being secured to said axle and comprising, each a pair of spaced plates, a load-sustaining 80 spring arranged therebetween directly in line with the axle, and a pair of balancing springs arranged between said plates and at opposite sides of the first named spring.

4. In a tiltable truck, the combination of 85 a wheeled frame, a pair of load-supporting arms pivoted thereto, a movable device co-operating with said arms for raising the load when the truck is tilted, a lever pivoted to said frame for operating said device, a 90 catch pivoted to said lever for retaining the same in adjusted position, and a rotatably mounted trip upon which one end of said catch rests, for raising said catch when rotated in one direction. 95

5. In a tiltable truck, the combination of a wheeled frame, a pair of load-supporting arms pivoted thereto, a cushioning device against which each arm bears, a movable device coöperating with said arms in raising 100 the load when the truck is tilted, and a lever for operating the second-named device.

6. In a tiltable truck, the combination of a wheeled frame, a pair of load-supporting arms pivoted thereto for swinging move- 105 ment, a pair of cushioning devices against which said arms normally bear, a movable device coöperating with said arms for raising the load when the truck is tilted, and a lever pivoted to said frame for operating 110 said device.

7. In a tiltable truck, the combination of a wheeled frame including a pair of inclined beams, a pair of load-supporting arms pivoted to the frame, a movable pallet 115 coöperating with said arms for raising the load when the truck is tilted, said pallet and beams constituting companion elements, guides secured to one of said elements, tongues secured to the other element and en- 120 gaged with said guides, and means for shifting said pallet into and out of operative position.

8. In a tiltable truck, the combination of a wheeled frame including a pair of inclined 125 beams, a pair of load-supporting arms pivoted to the frame, a movable pallet coöperating with said arms for raising the load when the truck is tilted, a pair of grooved guides secured to said pallet, a pair of 130

tongues secured to the lower ends of said beams and engaged with said guides, and a lever connected to said pallet for bodily moving the same into and out of operative position. 5

9. In a tiltable truck, the combination of a wheeled frame including a pair of inclined beams, a pair of load-supporting arms pivoted to said frame, a movable device coöperating with said arms for raising the load when the truck is tilted, said device being provided with a pair of guides, a pair of tongues secured to the lower ends of said beams and engaged with said guides, and a lever pivotally connected at its lower end to said device for moving the same into and out of operative position. 10 15

10. In a tiltable truck, the combination of a wheeled frame including a pair of inclined beams, a pair of load-supporting arms pivoted to said frame, a pair of cushioning devices upon which said arms normally rest, a movable device coöperating with said arms for raising the load when the truck is tilted, said device being provided with a pair of 20 25

guides, a pair of tongues secured to the lower ends of said beams and engaged with said guides, and a lever pivotally connected at its lower end to said device for moving the same into and out of operative position. 30

11. In a truck, the combination, with a wheeled frame including a pair of inclined side beams, a cross-bar connecting the upper ends thereof, a pair of horizontal side beams terminating at their rear ends in handles, and a pair of vertical supports connected at their upper ends to said inclined beams and intermediate their ends to said horizontal beams, of a pair of load-supporting arms pivoted at their upper ends to said cross-bar for swinging movement, and a pair of cushioning devices against which said arms normally bear. 35 40

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 45

WALTER J. McCOY.

Witnesses:

FRANK J. LICHWOSKY,
RAYMOND COTTENIER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
