

No. 696,164.

Patented Mar. 25, 1902.

P. DROESHOUT & J. M. CLARK.

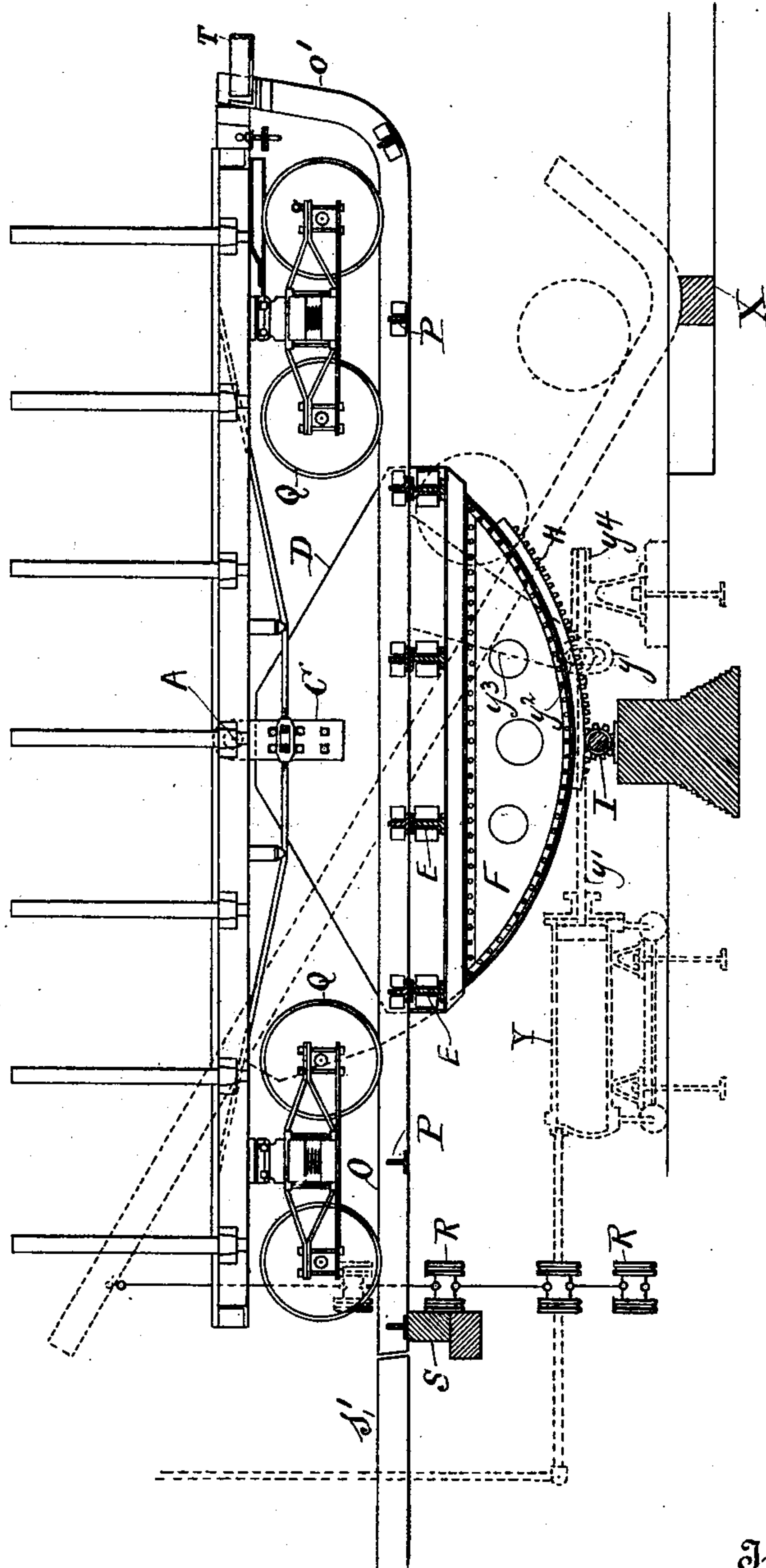
TIPPING TABLE.

(Application filed Oct. 9, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig 1



Witnesses

*John A. ...*

*Charles ...*

Inventors

*Pedro. Droeshout*

*John. M. Clark*

*By A. A. de Borneville - Atty*

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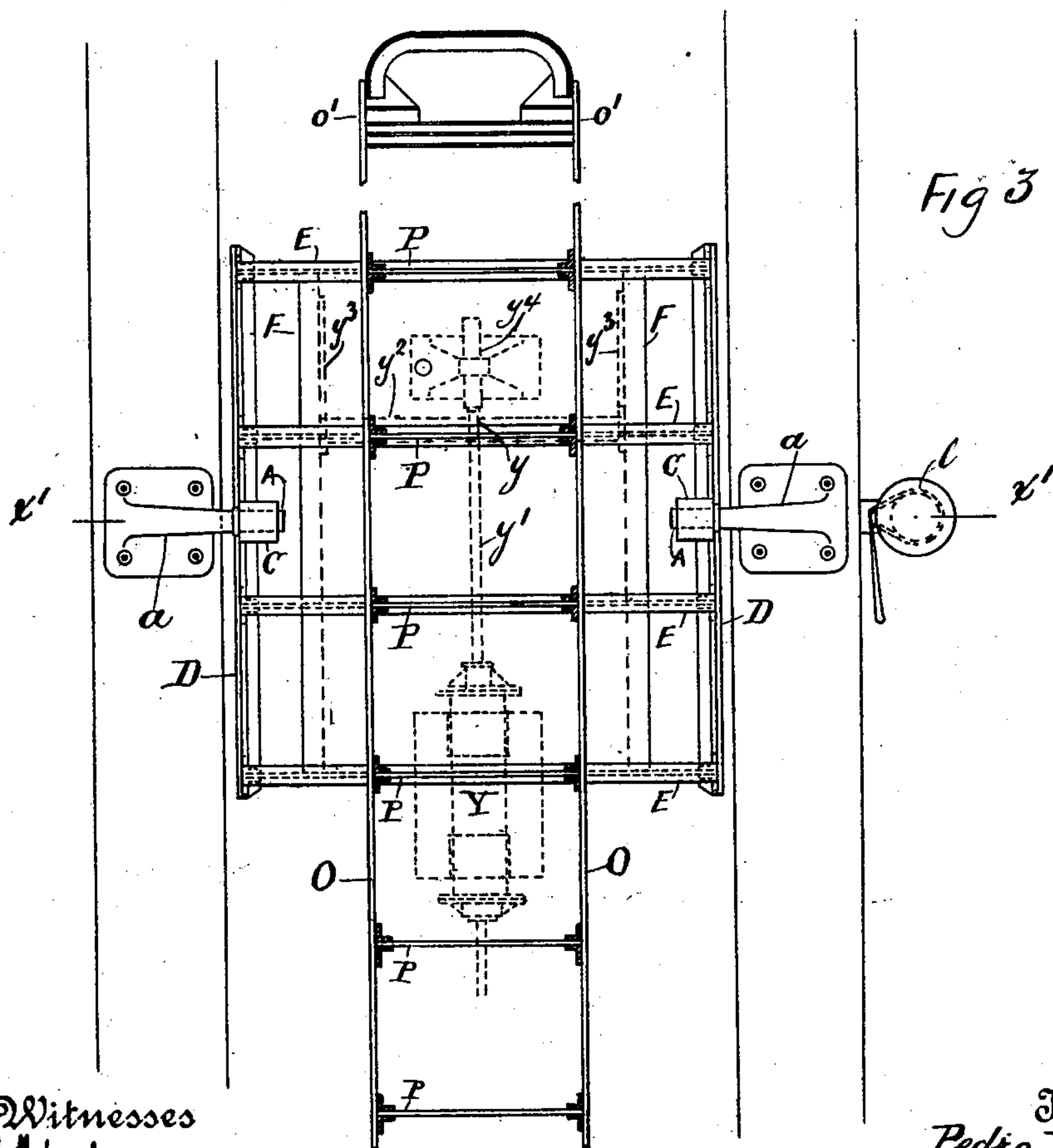
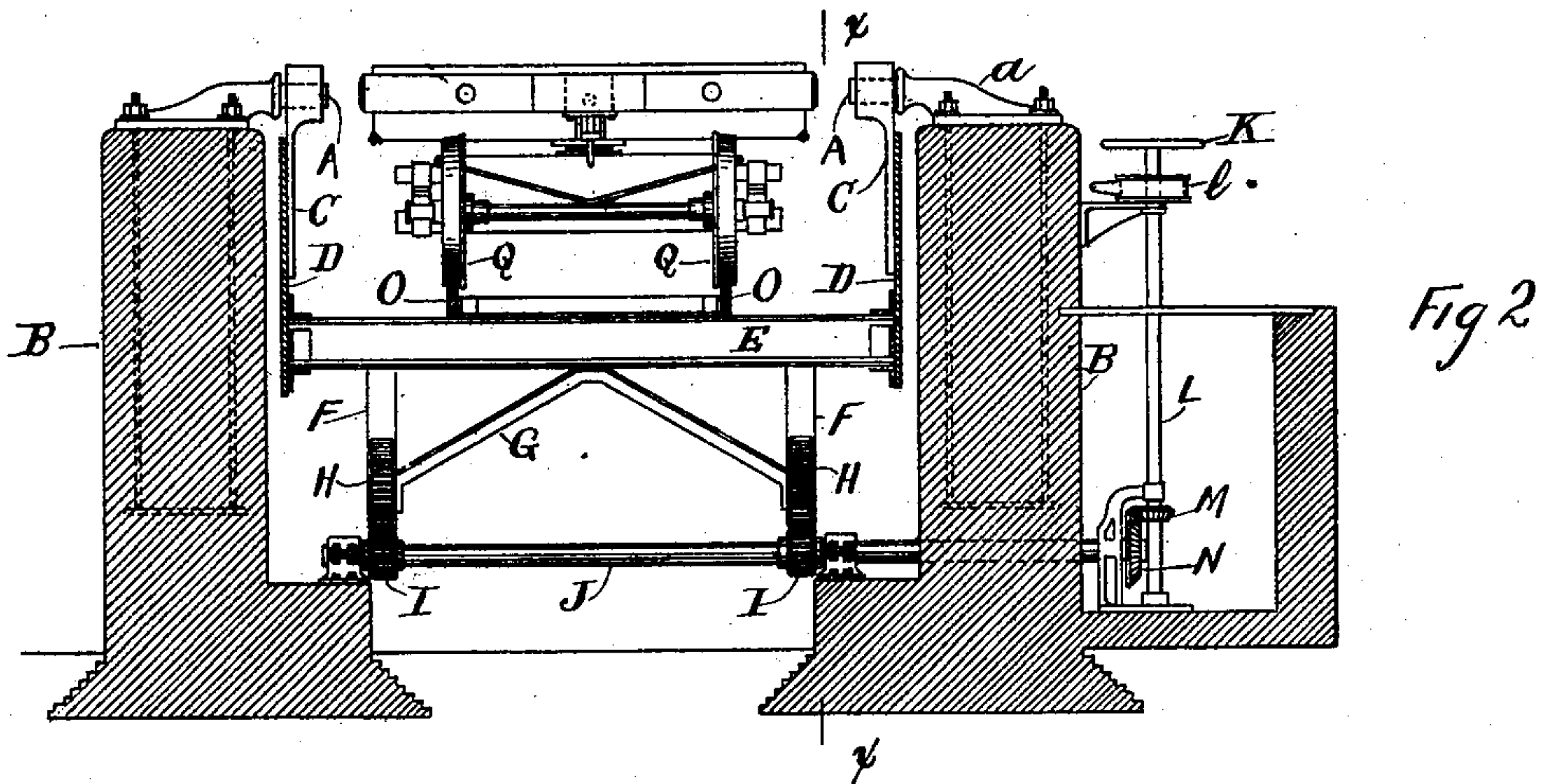
**P. DROESHOUT & J. M. CLARK.**

## TIPPING TABLE.

(Application filed Oct. 9, 1901.)

(No Model.)

**3 Sheets—Sheet 2.**



Witnesses  
J. H. [unclear]  
Charles Greig

Inventors  
Pedro. Droeshout  
John. M. Clark  
4e-att4.

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TIPPING TABLE.

(Application filed Oct. 9, 1901.)

(No Model.)

3 Sheets—Sheet 3.

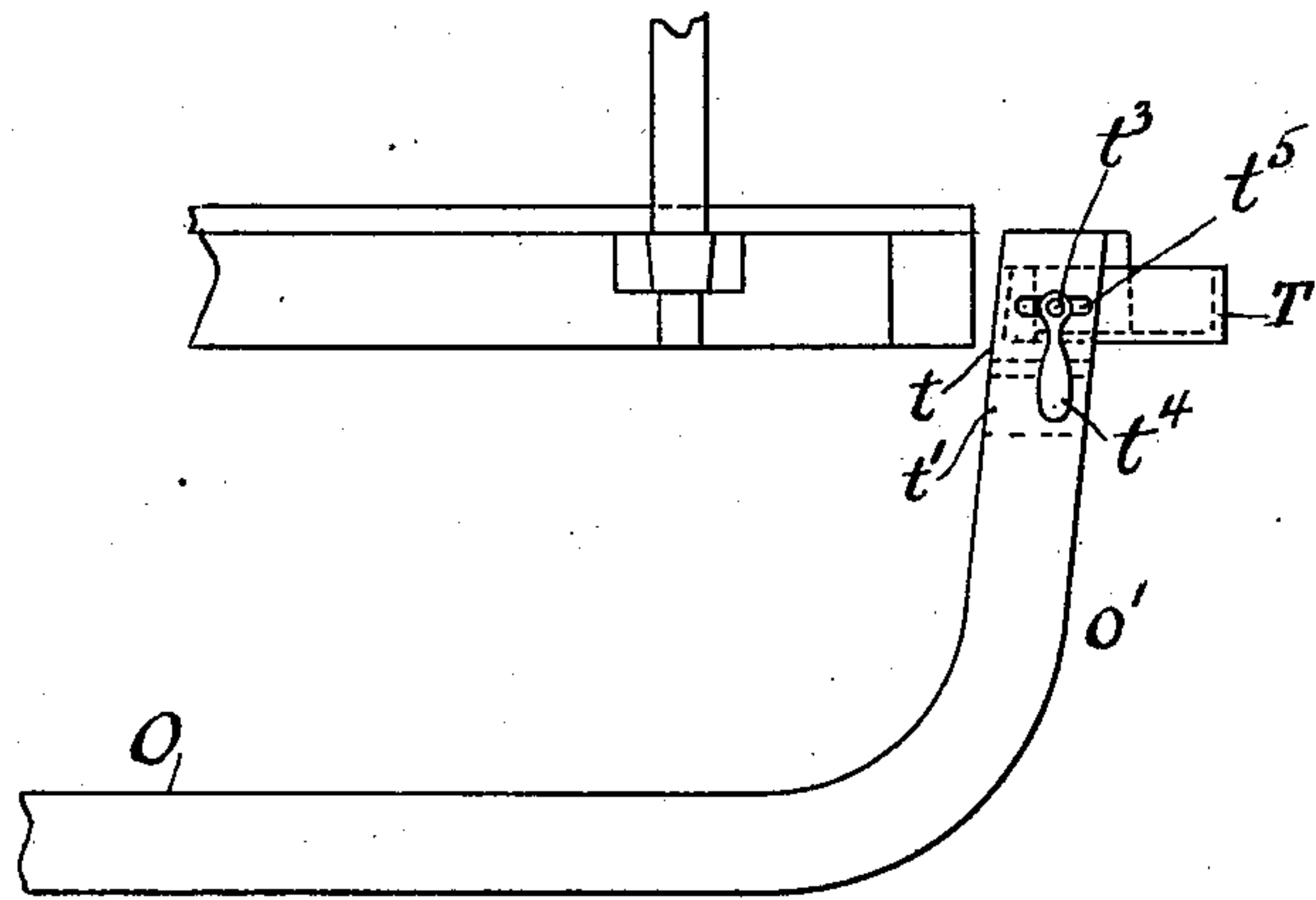


Fig. 4

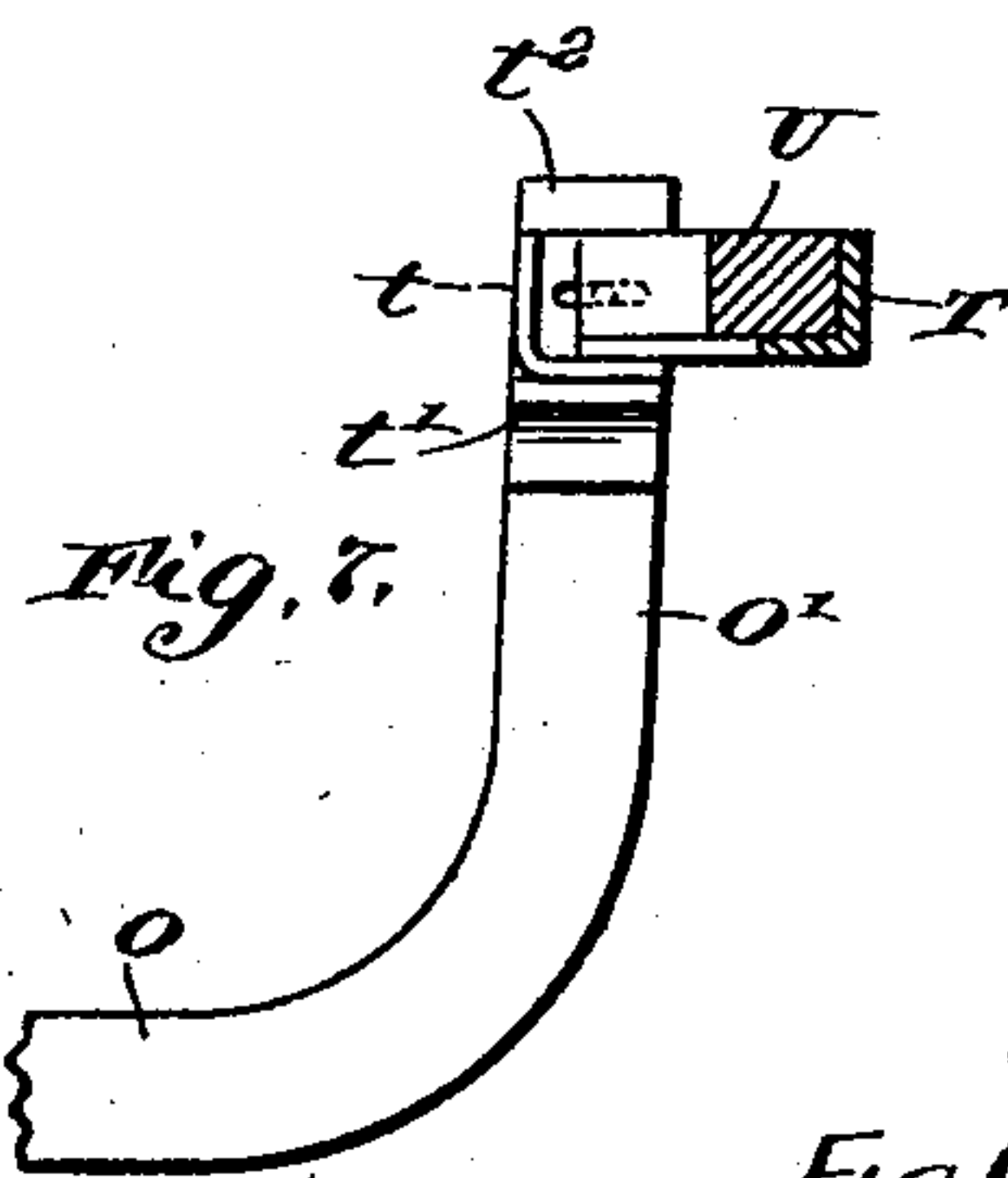


Fig. 7

Fig. 5

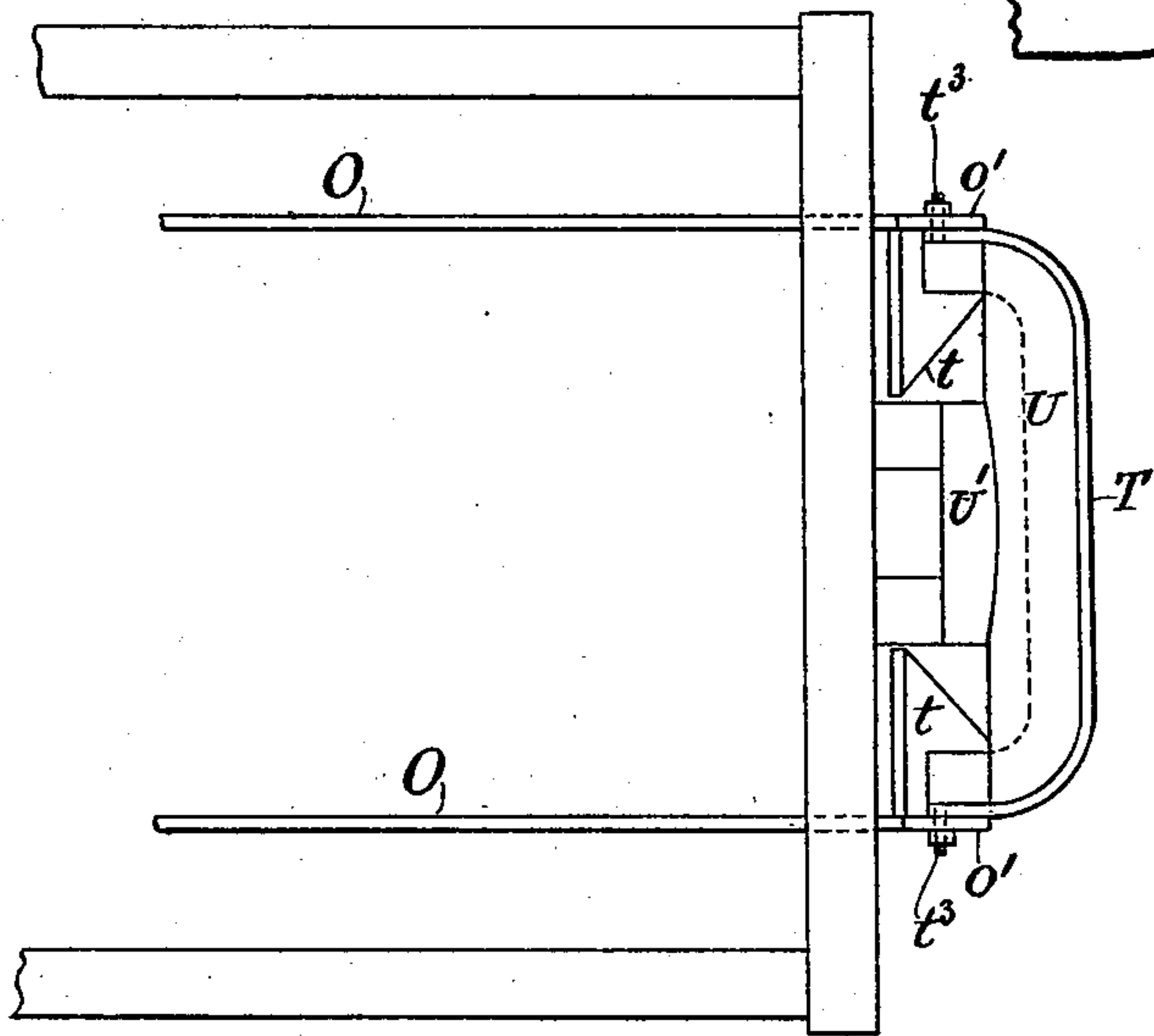
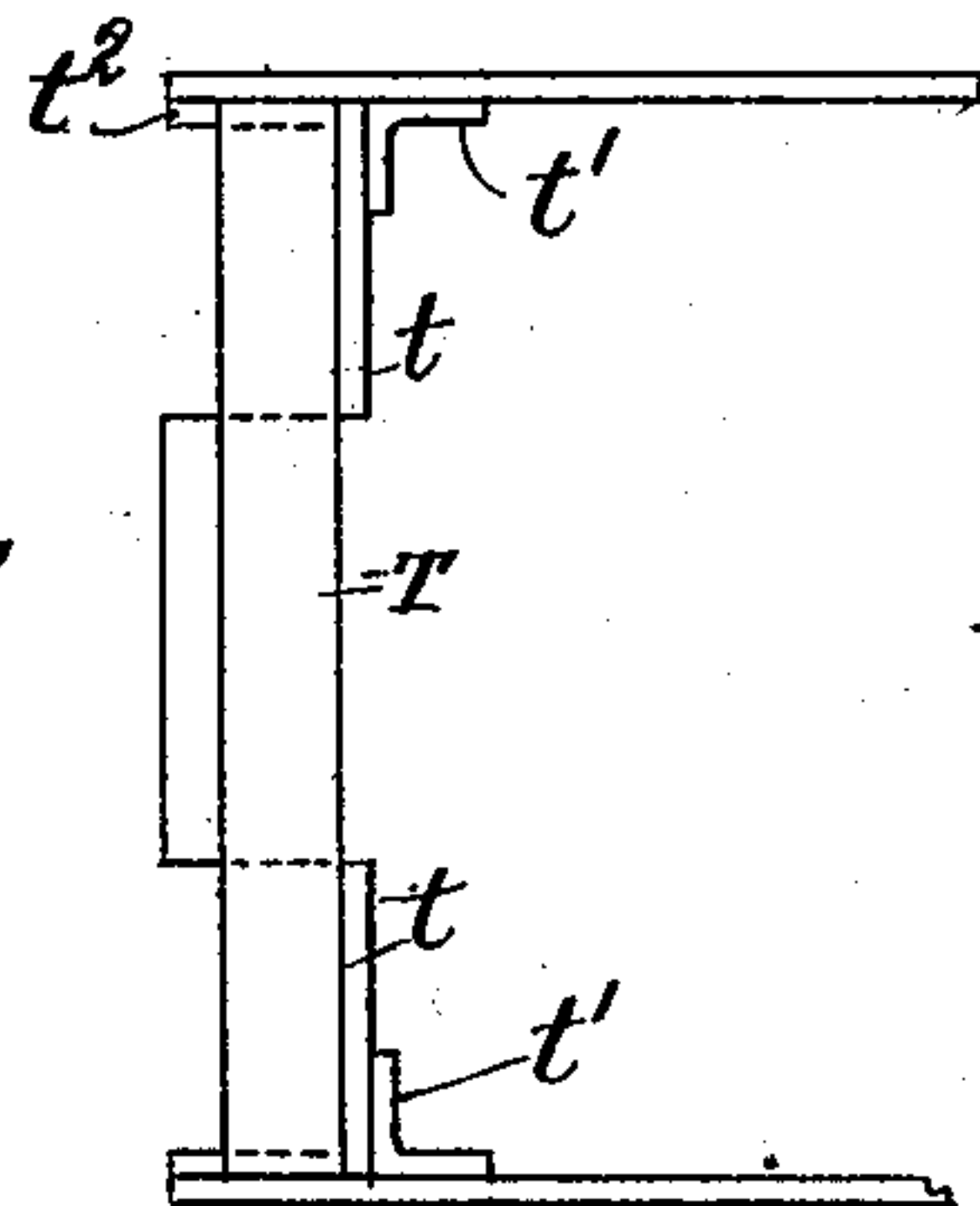


Fig. 6



Witnesses  
*J. A. [Signature]*  
*Charles Greig*

Inventors  
*Pedro Droeshout*  
*John M. Clark*  
by *A. A. de Borneville - Atty.*



# UNITED STATES PATENT OFFICE.

PEDRO DROESHOUT AND JOHN M. CLARK, OF HAVANA, CUBA.

## TIPPING-TABLE.

SPECIFICATION forming part of Letters Patent No. 696,164, dated March 25, 1902.

Application filed October 9, 1901. Serial No. 78,091. (No model.)

*To all whom it may concern:*

Be it known that we, PEDRO DROESHOUT, a subject of the King of Belgium, and JOHN M. CLARK, a citizen of the United States of America, and both residents of Havana, Province of Havana, Island of Cuba, have invented certain new and useful Improvements in Tipping-Tables, of which the following is a specification.

This invention relates to means for dumping cars and other vehicles of their contents, and has for its object the production of tipping-tables by means of which cars or other vehicles can be easily and quickly dumped, the construction of the tables being such that cars or vehicles of various gages, lengths, and weights can be efficiently handled with the same table.

Figure 1 shows a car with an elevation of my tipping-table, partly in section, on the line  $x-x$  of Fig. 2. Fig. 2 represents an end view of the table with appurtenances and a partial section on the line  $x'-x'$  of Fig. 3. Fig. 3 is a top view of the table with its trunnions and track. Fig. 4 shows an elevation of one end of the cradle with its adjustable bearing. Fig. 5 is a top view of Fig. 4. Fig. 6 is a partial end view of Fig. 5. Fig. 7 represents a section through buffer-beam on the line  $x^2$  of Fig. 5.

The organization of the invention comprises a pair of trunnions from which oscillate two arms, to which are secured side plates which carry a platform that terminates in a segmental base. Tracks are supported on the platform, which are turned up at one end at approximately right angles and counter-weighted at the other end, thereby forming a cradle for supporting a vehicle. An adjustable end beam attached to the cradle secures the cars or other vehicles in proper operative positions. Racks are secured to the segmental base, which are geared to pinions, or the piston of an hydraulic cylinder or other motor is geared with the said base.

Referring to the drawings, trunnions A extend from brackets  $a$ , which are mounted on the walls B. Hangers C swing from the said trunnions, and they are fastened to sides D, to which are secured the cross-beams E, the latter carrying the segmental projections F, that are tied by the brace G. On the bottom

of the segmental projections are fastened the curved racks H, into which mesh the pinions I, carried on the shaft J, journaled in the walls B, and which is actuated by means of the hand-wheel K on the vertical spindle L, the said spindle carrying the bevel-pinion M, that meshes with the bevel-wheel N on the shaft J. On the spindle L there is attached a strap-brake  $l$ , for which a ratchet and pawl may be substituted.

The cross-beams E support the tracks O, which are bent approximately at right angles at  $o'$  and are connected by the cross-ties P, thereby constituting a cradle. The wheels Q of the car to be tipped and dumped run on the said tracks. It is evident that flooring could be substituted for the tracks or that other tracks could be added for various vehicles and cars of different gages.

Weights R are suspended at the rear of the cradle, and a stop S supports the end of the tracks when the car is in its normal horizontal position, and a stop X supports the other end when the table is inclined. A line or lines of track  $s'$  extends to the track on the table.

At the forward end  $o'$  of the track or cradle an adjusted buffer-bearing is provided, which comprises the end beam T, that is supported on the angles  $t$ , the latter being carried on angles  $t'$ , fastened to the upper ends  $o'$  of tracks O. Guides  $t^2$  are also fastened to the tracks to keep the beam T in proper horizontal position. Slotted holes  $t^5$  in the tracks allow threaded pins or studs  $t^3$ , with the nuts  $t^4$ , to secure the end beam T in different positions.

The beam T carries a wooden bearing or filling-piece U, which butts against the buffer-head  $U'$  of the car.

In Figs. 1 and 3 there is indicated in dotted lines an hydraulic cylinder Y, with its piston-rod  $y'$ , guide  $y^4$ , and yoked cross-head  $y$ . A shaft  $y^2$  extends from brackets  $y^3$ , fastened to the segmental bottom of the tipping-table.

To operate our invention, the table, with its cradle, is brought to its normal position, (indicated by the full lines in Fig. 1,) and the operator then adds or subtracts from the counterweights R to balance the car or other vehicle when it is on the table, after which the adjustable end beam T is secured to the ends



of the tracks to suit the length of the car. Then the table is tipped by means of the hand-wheel K and the curved racks H, with its pinions I or by the hydraulic cylinder or equivalent means. When the table inclines, the car necessarily is tipped and its charge of material is dumped therefrom. When the car has been emptied, the tipping mechanism is propelled to raise the cradle with its car into its normally horizontal position, and the counterweights greatly assist the raising of the car, as the end of the table with the said counterweights overbalance the other end of the same.

Having described our invention, we desire to secure by United States Letters Patent and claim—

1. A tipping-table, tracks on the table bent up at one end, an adjustable buffer-bearing at the said raised end of the tracks, adjustable counterweights at the other end of the table, segmental projections under the tracks, trunnions supporting the table, all in combination with means applied to the segmental projections to tip the table.

2. A tipping-table, tracks on the table raised at one end, an adjustable buffer-bearing at the said raised end, adjustable counterweights at the other end of the table, sides extending from the table, brackets secured to the sides and supported in a pair of trunnions, segmental projections extending from the bottom of the table, racks secured to the said projections, pinions meshing with the racks, all in combination with means to turn the pinions and tilt the table.

3. A tipping-table, a cradle secured on the table, an adjustable buffer-bearing at the upper end of the cradle, variable counterweights at the other end of the cradle, a stop under the cradle adjacent to the counterweights, a stop located to hold the other end of cradle when tipped, trunnions supporting the table, all in combination with means to tip the table.

4. The combination of a counterbalanced tipping-table, trunnions supporting the table, means to tip the table, a buffer-bearing supported on the table and comprising, an end beam supported on the frame of the table, slotted holes in the frame, studs extending through the holes and secured into the end beam, nuts on the studs adjustably clamping the end beam and the frame of the table.

5. The combination of a counterbalanced tipping-table, means to swing and tip the table, a cradle on the table with raised ends to support a car, angle-irons fastened to the raised ends of the cradle, an end beam supported on the said angles, guides over the end beam and fastened to the cradle, slotted holes in the raised ends of the cradle, studs extending through the slotted holes and secured in the end beam, a filler in the end beam, and nuts adjustably clamping the end beam to the cradle.

6. The combination of a counterbalanced tipping-table, a cradle on the table supporting a vehicle, a buffer adjustably supported on the cradle, segmental projections extending below the table, racks fastened to the said projections, pinions meshing with the racks, a shaft connecting the pinions, a spindle geared to the shaft, a brake-wheel on the spindle, and a hand-wheel on the said spindle.

Signed at Havana, Province of Havana, Island of Cuba, this 1st day of October, A. D. 1901.

PEDRO DROESHOUT. [L. S.]

Witnesses:

LOUIS DEDROT,  
ERNESTO PAEJ.

Signed at New York, in the county of New York and State of New York, this 18th day of September, A. D. 1901.

JOHN M. CLARK. [L. S.]

Witnesses:

J. APESON,  
CHAS. GREIG.