

No. 681,492.

Patented Aug. 27, 1901.

C. BONAGENTE.
MOUNTING FOR ORDNANCE.

(Application filed Dec. 11, 1900.)

(No Model.)

3 Sheets—Sheet 1.

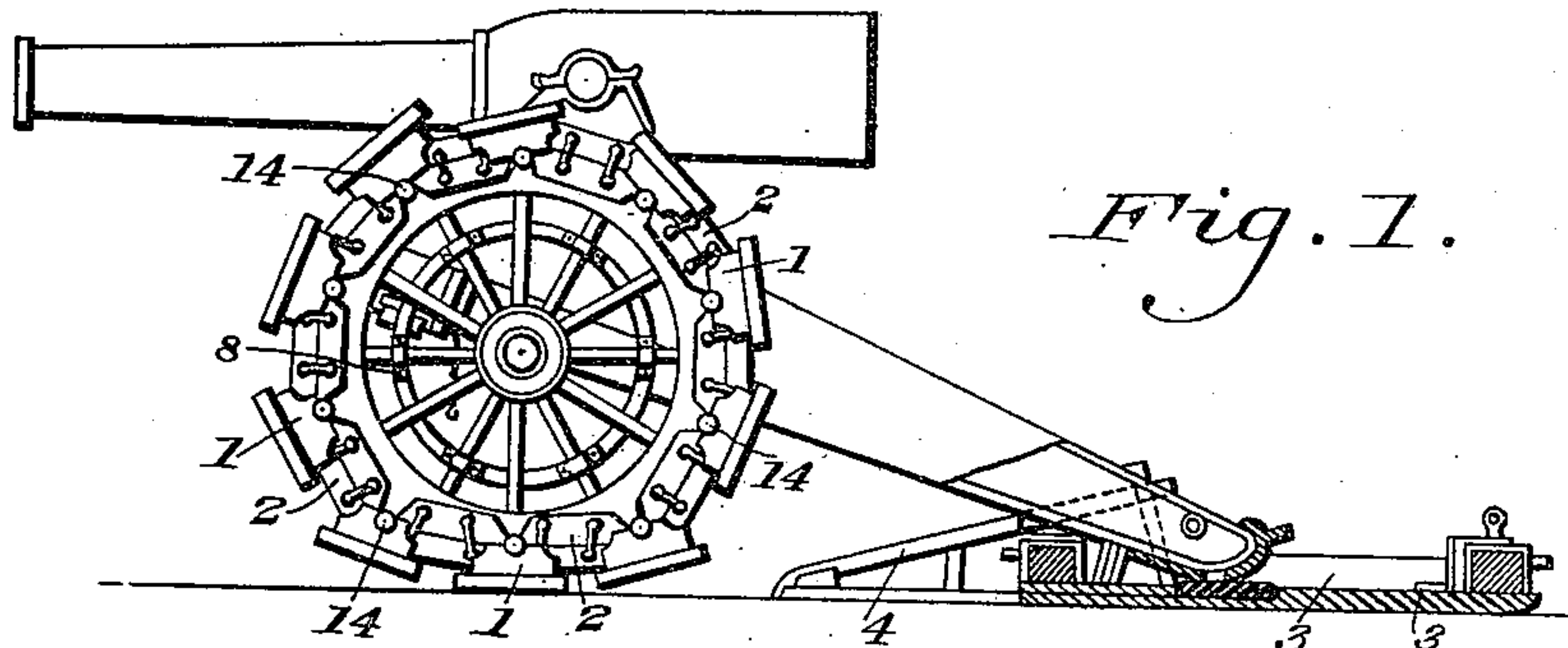


Fig. 1.

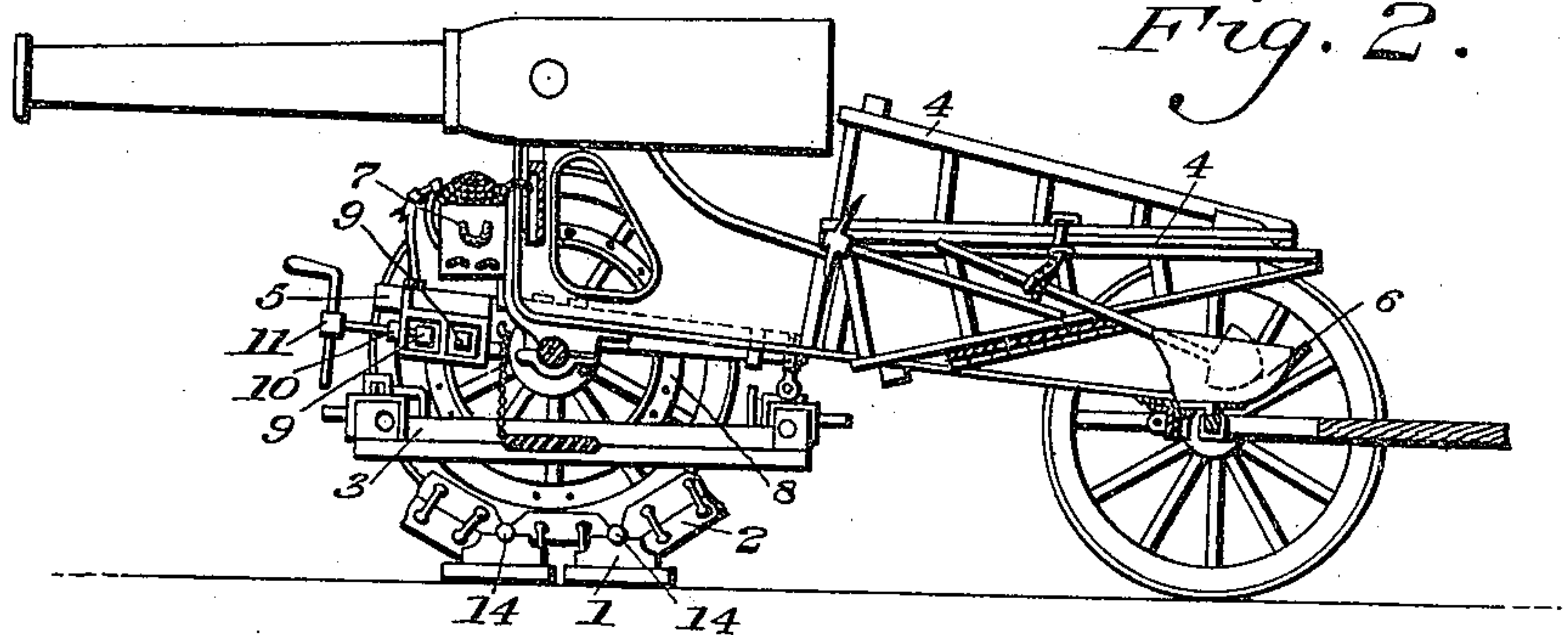


Fig. 2.

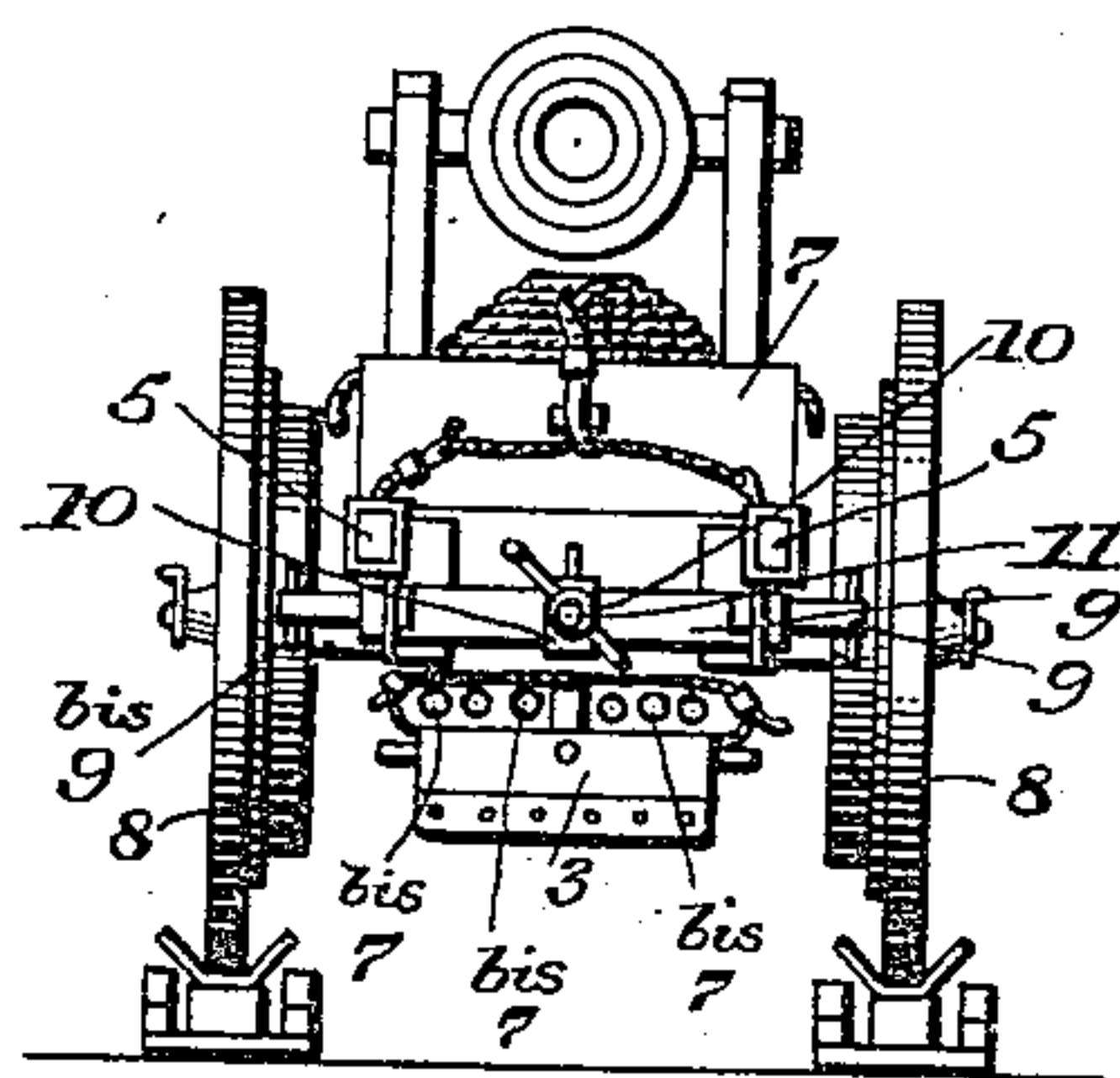


Fig. 3.

Witnesses

P. F. Tagle.
L. Houville.

Inventor
Crispino Bonagente.
By *Hedersheim Fairbanks* Attorneys

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Fig. 4.

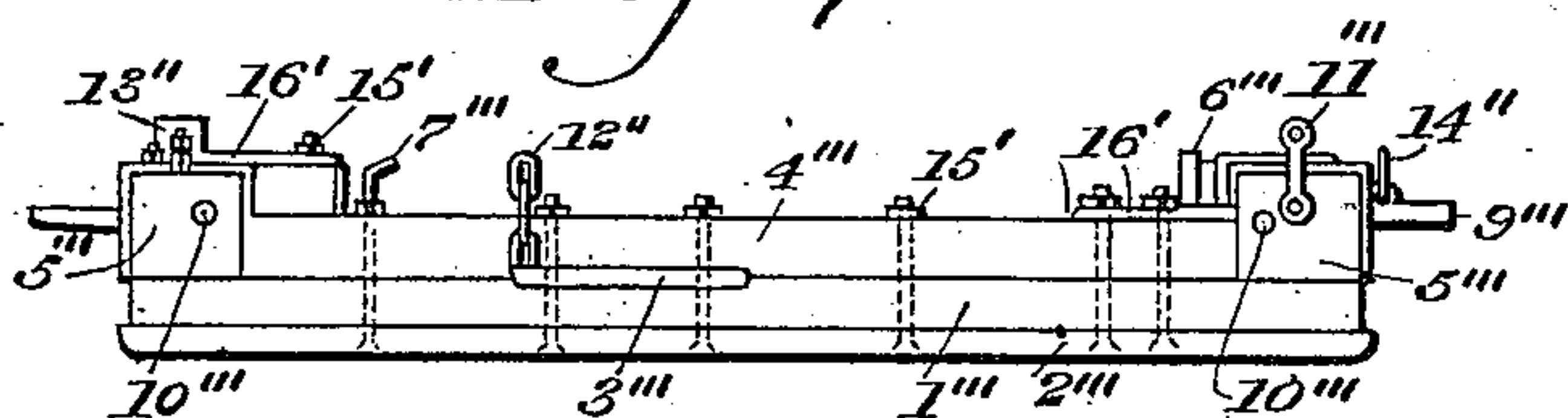


Fig. 7.

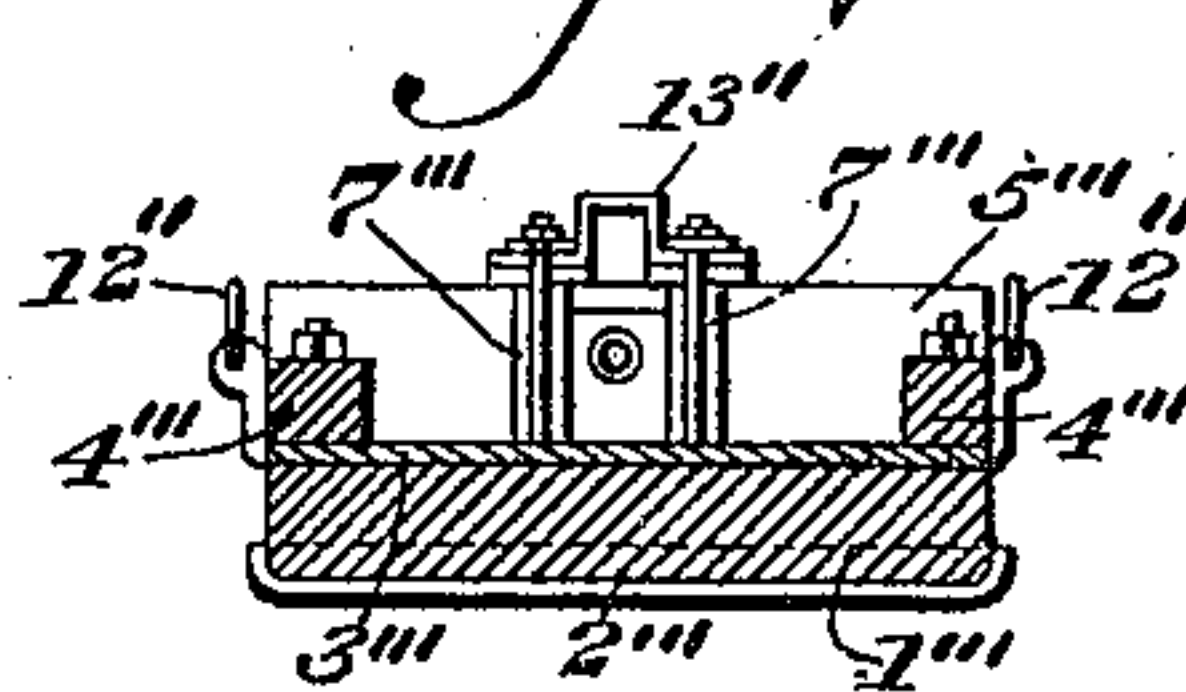


Fig. 5.

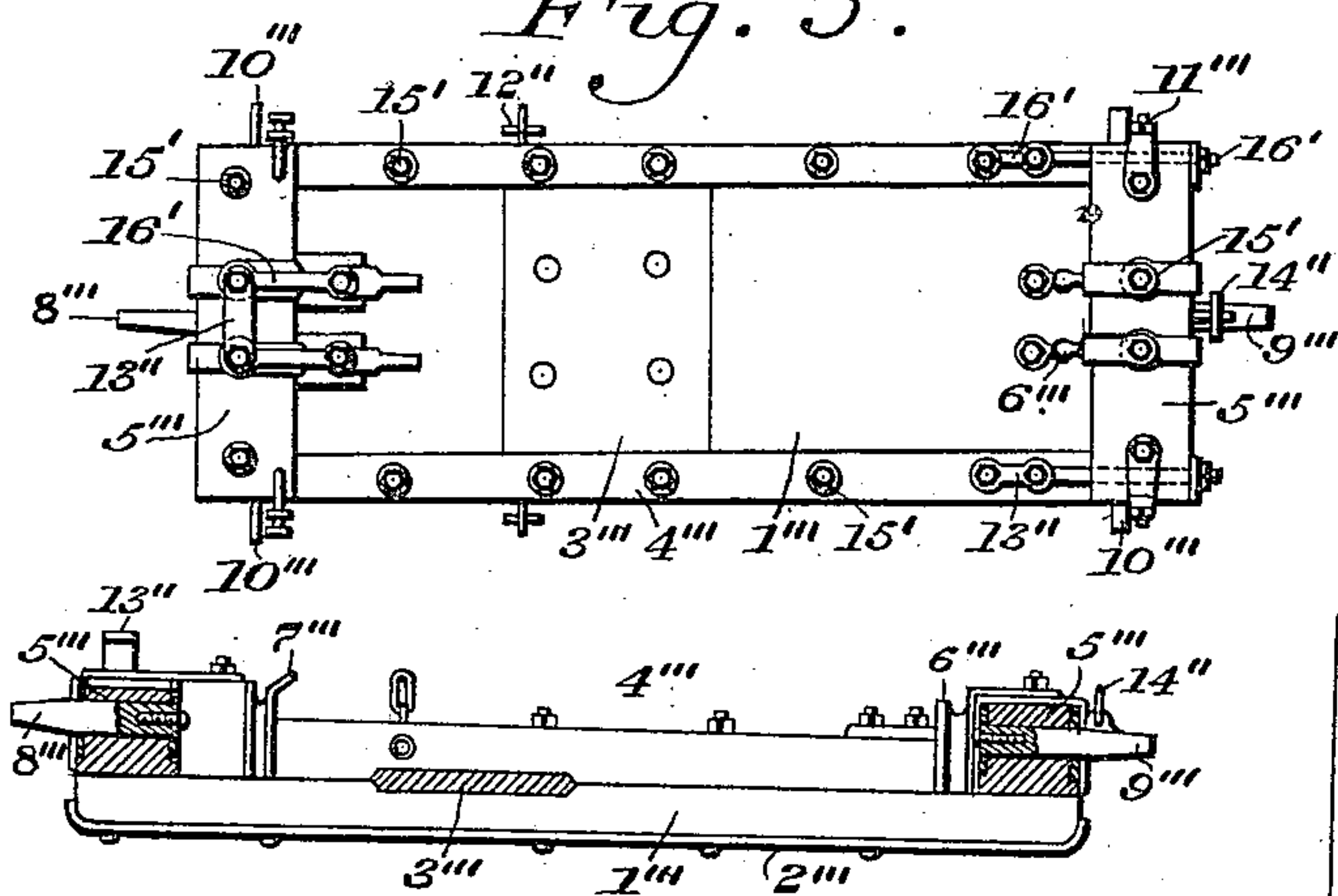


Fig. 8.

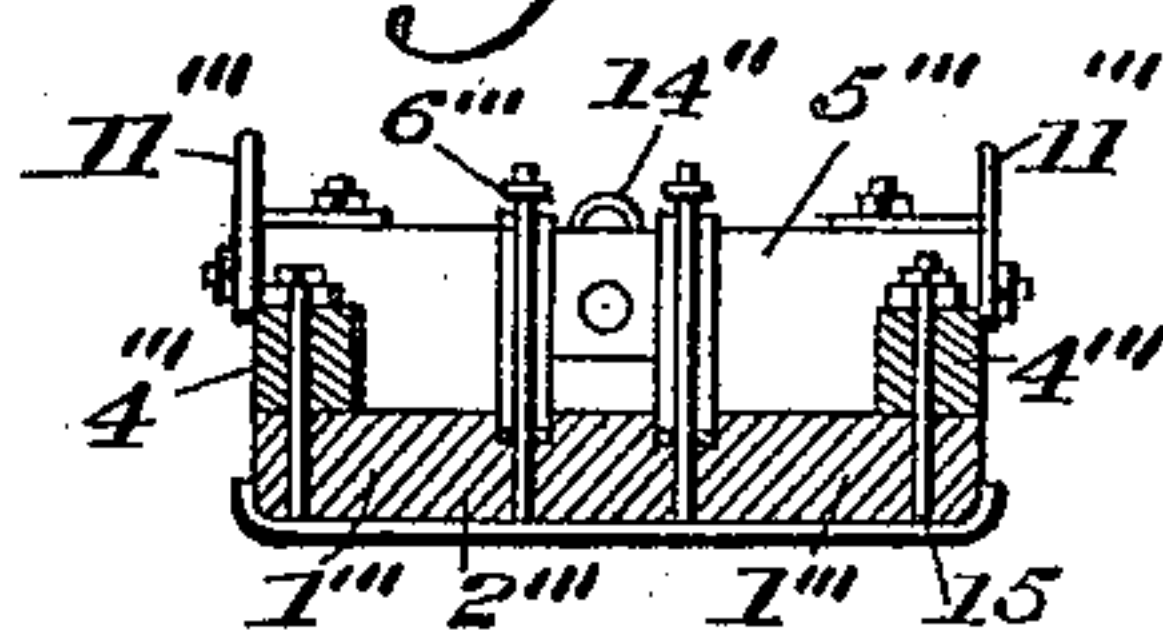


Fig. 6.

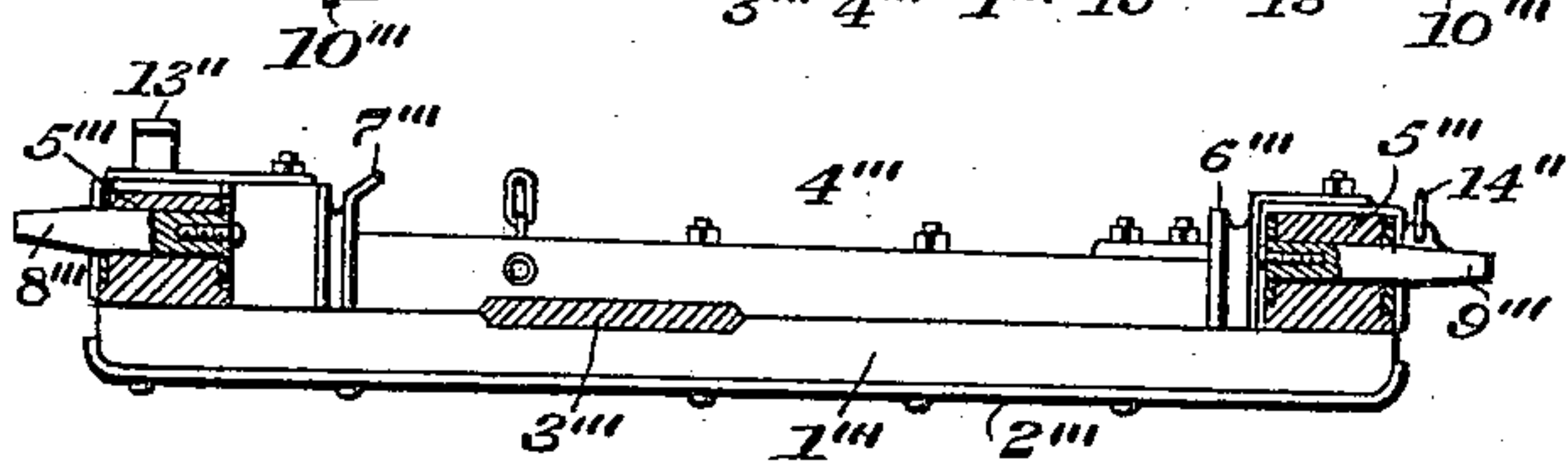
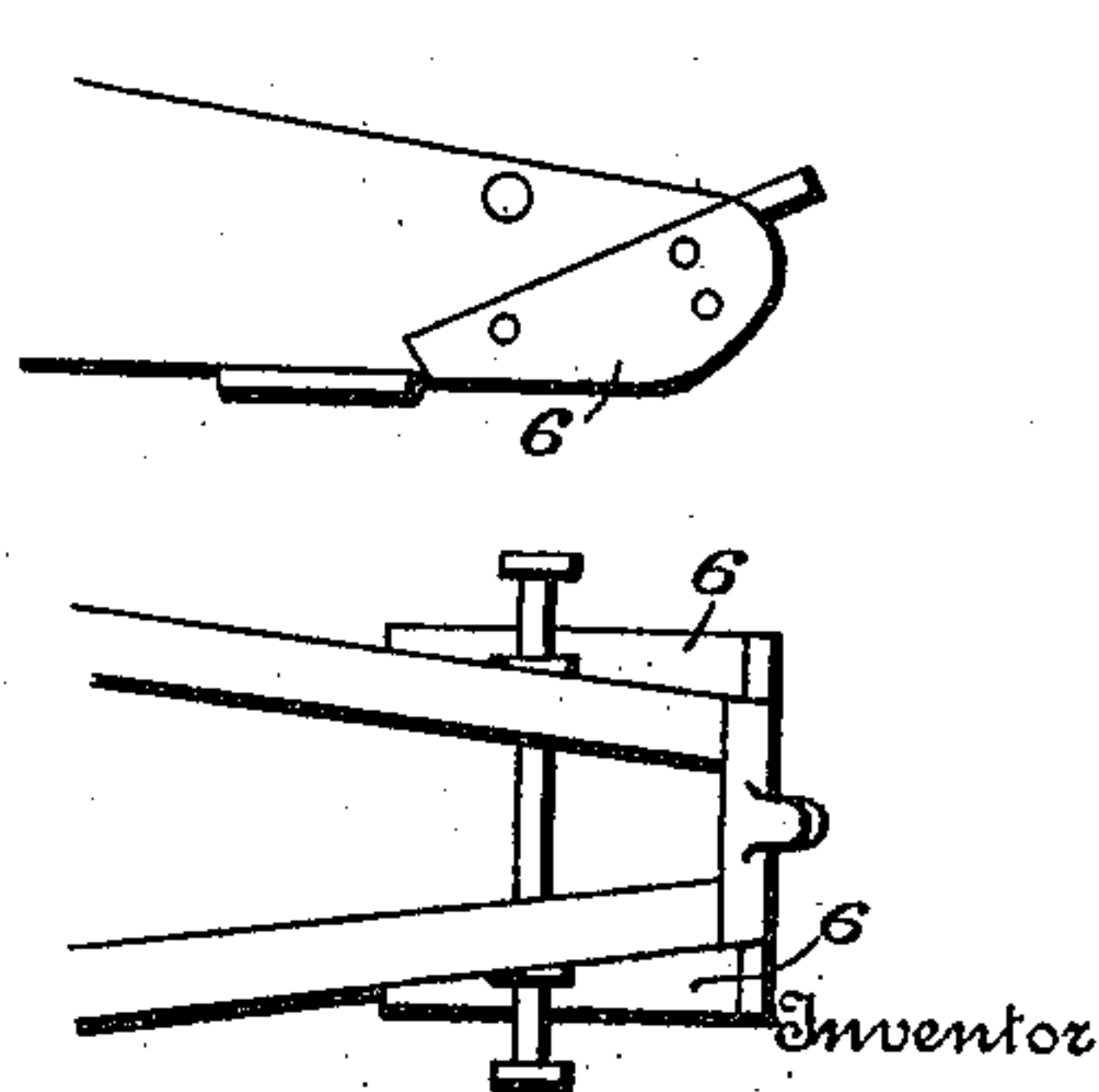


Fig. 9.



Witnesses

P. H. Chagles,
L. Howville.

Crispino Bonagente,
Hiedersheim & Fairbanks,
Attorneys

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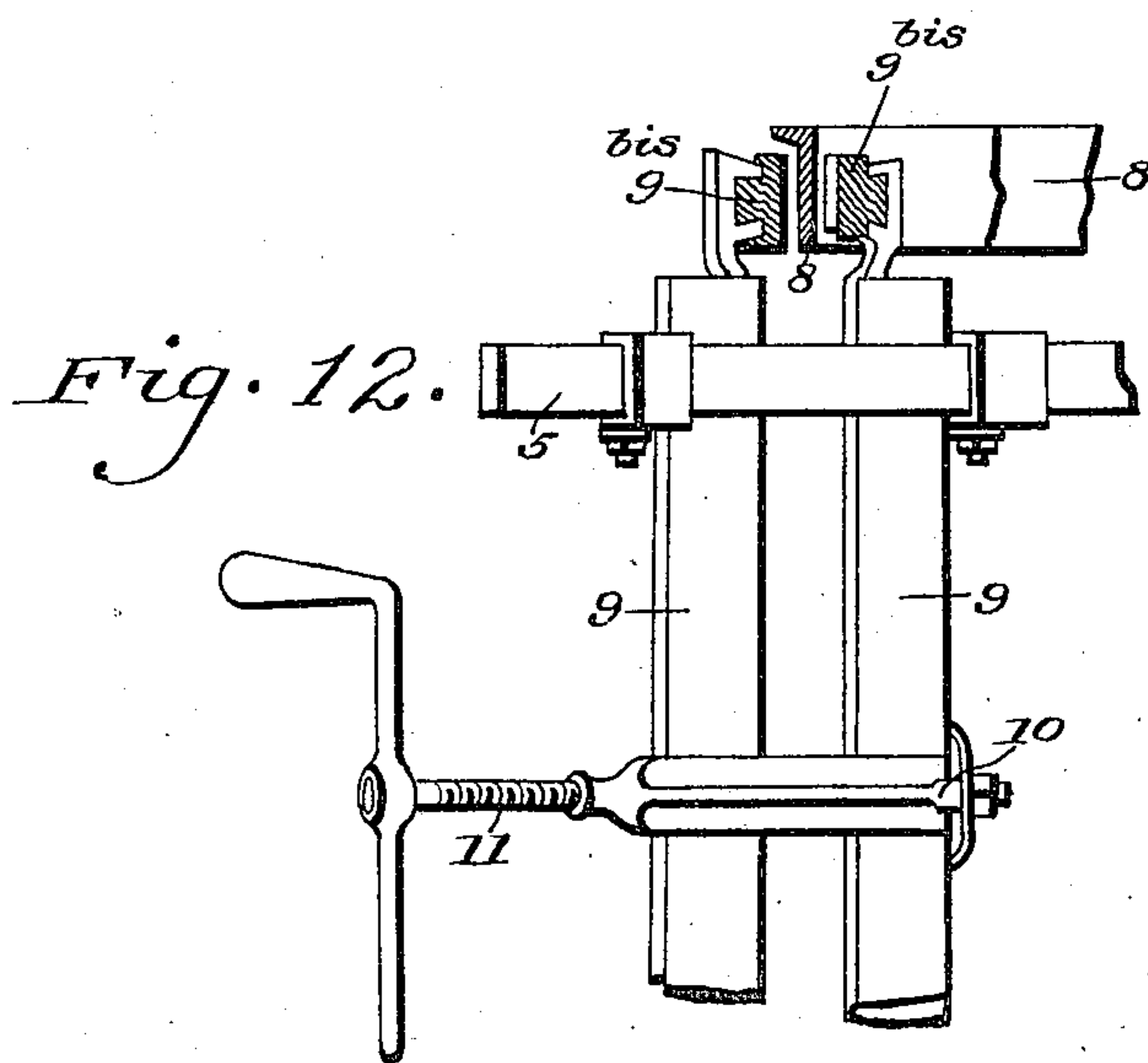
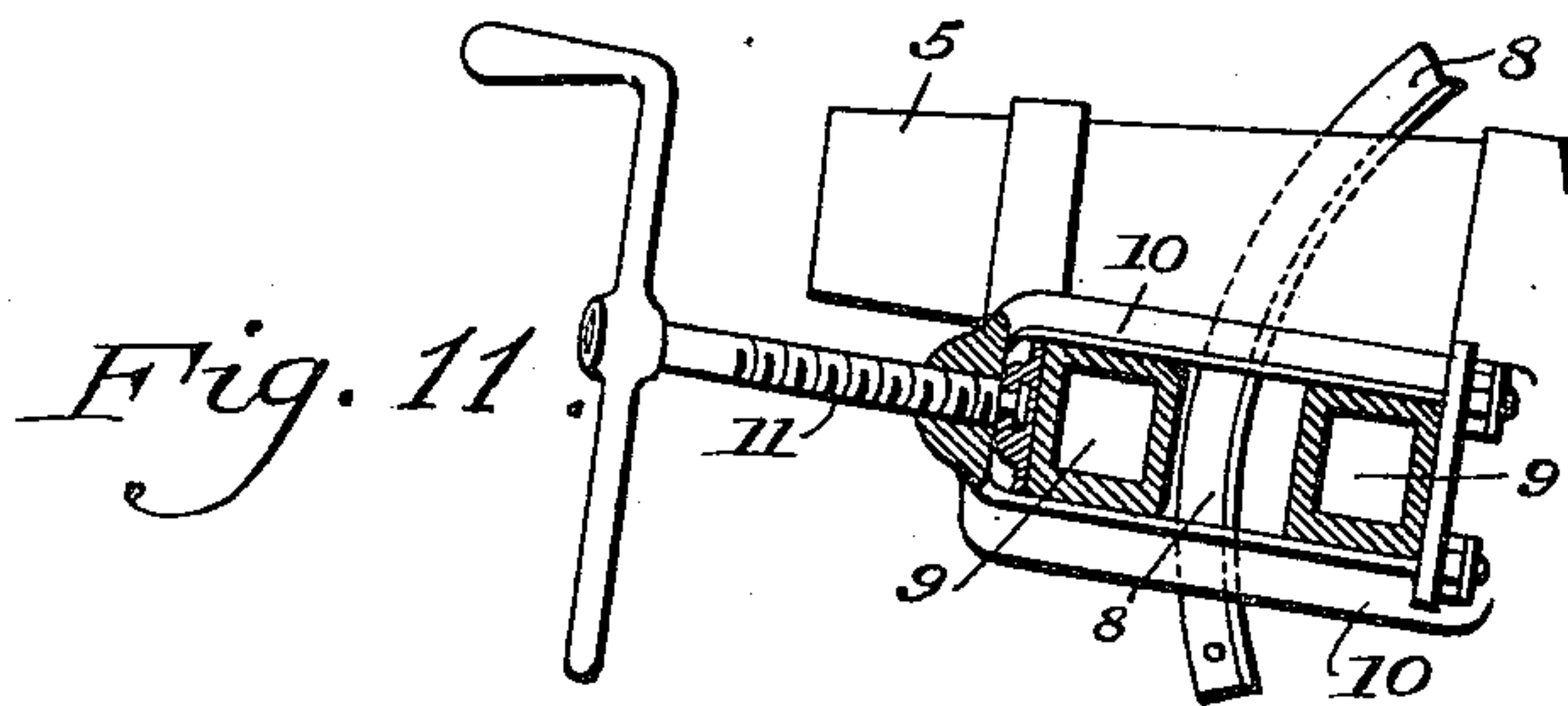
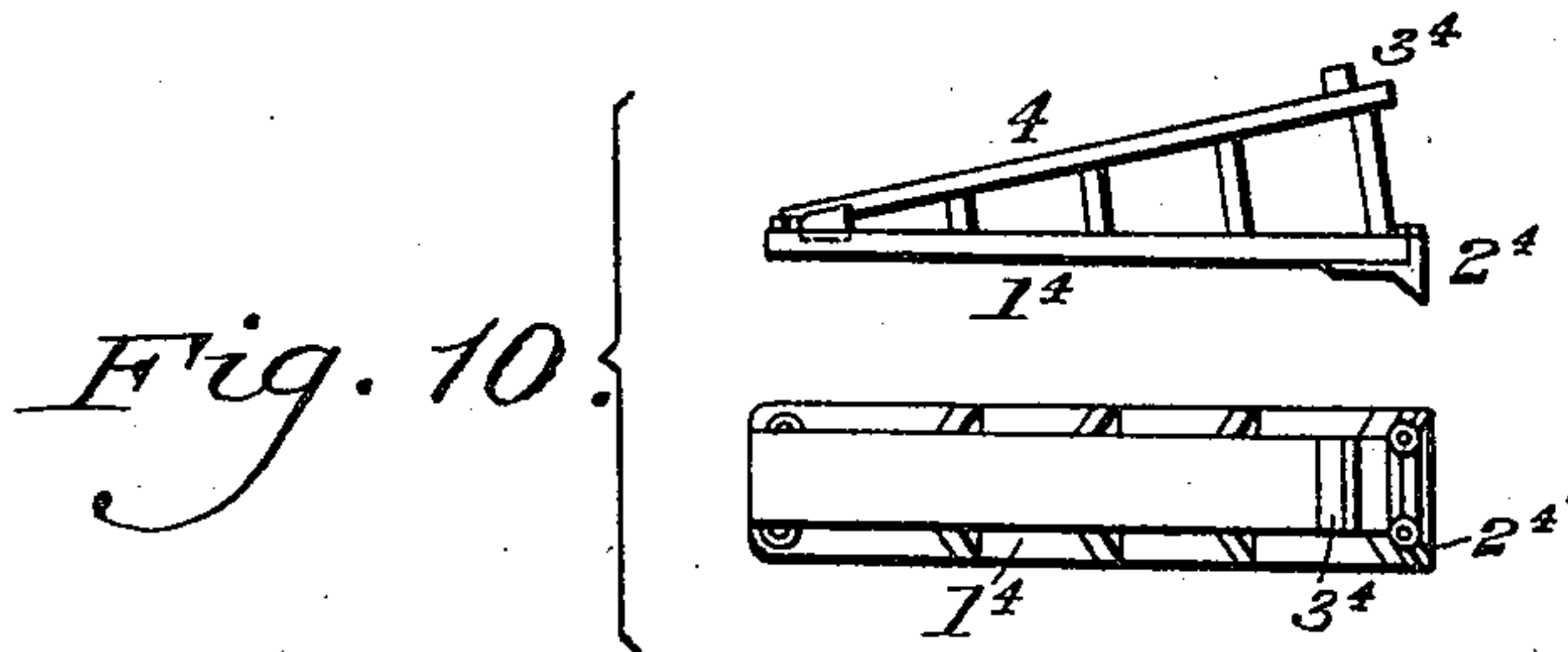
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3 Sheets—Sheet 3.



Inventor

Crispino Bonagente.

Kiedersheim Fairbanks.
Attorneys

Witnesses

P. H. Eagle
L. Howill.

UNITED STATES PATENT OFFICE.

CRISPINO BONAGENTE, OF TURIN, ITALY.

MOUNTING FOR ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 681,492, dated August 27, 1901.

Application filed December 11, 1900. Serial No. 39,544. (No model.)

To all whom it may concern:

Be it known that I, CRISPINO BONAGENTE, a subject of the King of Italy, residing at Turin, in the Kingdom of Italy, have invented a new and useful Improvement in Mountings for Ordnance, which improvement is fully set forth in the following specification and accompanying drawings.

The mounting for siege-guns which forms the subject of this invention consists of a number of arrangements which when applied to the ordinary carriages of siege-guns enables these latter to travel over uneven soft roads while being in proper position for firing, so that on arriving near a fortress the ordnance can open fire immediately, such as is the case with field-guns.

My improved mounting consists of a recoil-track for supporting the trail of the gun-carriage during firing, in addition to which the following subordinate parts are provided—viz., first, two brake-wedges for counteracting the recoil due to the firing and for effecting the immediate return of the gun; second, two longitudinal beams serving for supporting the recoil-plank and the brake-beam during traveling and also as a fulcrum to the lever-bar when it is required to insert the same in the wheel-spokes; third, two cheeks or shoe-plates applied to the trail of the gun-carriage to render this part parallel, and, fourth, a carriage-brake in place of the ordinary wheel-brake, which had to be abandoned through the adoption of the endless rail on the wheels.

The improved gun-mounting is particularly intended for use in connection with siege-guns; but it may also be used for lighter ordnance.

Although this improved transportable mounting renders the ordinary stationary mounting for heavy guns unnecessary, yet it may, if desired, be used in conjunction with a stationary mounting, which latter then may be of lighter construction than in ordinary cases.

I will now proceed to describe my invention by referring to the accompanying drawings, in which—

Figure 1 represents a side elevation, partly in section, of a gun provided with my improvements and in position for firing. Figs. 2 and 3 are a sectional side elevation and an

end view, respectively, showing the gun ready for traveling on the road. Figs. 4 to 12 are details.

In the drawings the numerals 1 and 2 denote the sections of the endless rail and the contact-blocks attached thereto, which together form the main parts of my traveling rail.

3 denotes the plank or track on which the trail of the gun-carriage slides, and 4 denotes the wedge-brake for checking the recoil.

In Figs. 2 and 3 the numeral 5 shows the longitudinal beams, and 6 are the cheeks or shoe-plates provided at the trail of the carriage. 7 is an ammunition-box, and 7^{bis} (only shown in Fig. 3) denotes the handles of a sponge-staff, of a rammer, and of an iron mallet, which are kept in position by a strap passing in front of them. The numerals 8, 9, 10, and 11 relate to parts of the carriage-brake.

Any well-known form of endless rail may be employed in connection with the present invention, but that preferred by me is substantially that shown, described, and claimed in my copending application, Serial No. 724,957, filed July 24, 1899, and consists of a rail mounted upon the periphery of the carriage-wheel and composed of hinged sections in form of a polygon 22, Figs. 1 and 2. To each pivot-pin 14 of the sections there is connected a block 1, and such blocks project beyond or surround the endless rail and are intended to come in contact with the ground.

The plank or track for the trail of the gun-carriage is shown in Figs. 4 to 8, in which 1''' denotes the bottom plank, protected at its under side by a steel plate 2''' and furnished at its upper side with a steel plate 3'', which takes the trail of the gun-carriage during firing. 4''' are the side cheeks, and 5''' the ends of this track. 6''' are buffers at the rear end to brake the recoil, while 7''' are buffers at the front end, which come into action on the return of the gun. 8''' and 9''' are bolts or studs at front and rear of the plank for the levers to act upon when training the gun. 10''' are similar bolts or studs for use in adjusting the plank toward the front or rear. 11''' and 12''' are eye-links and rings, respectively, for suspending the plank or track below the gun-carriage for traveling. 13'' and 14''

area bent piece and a ring, respectively, serving to manipulate the track. 15' designates connecting-bolts, and 16' strengthening-clasps.

When firing the gun with unusually-heavy charges, the trail of the gun-carriage slides on the track until it strikes against the rear buffers, whereupon the track is caused to participate in the rearward movement of the gun. At the return movement of the gun the carriage slides forward upon the track until it strikes against the front buffers and then takes the track along with it to its initial position. The relative movement of the trail of the carriage upon the track can be variously adjusted, as may be desired, by placing the trail more or less toward the front of the track or to the rear thereof, as the case may be. The relative movement may also, if desired, be so that the plank participates in the entire carriage movement.

As already stated, the longitudinal beams 5 of the gun-carriage during traveling support the carriage-track, as shown at Figs. 2 and 3, and when it is desired to shift the gun in a forward direction by the aid of levers such levers may be applied against the beams and between the wheel-spokes.

For the purpose of guiding the gun-carriage end between the sides of the track during recoil it is necessary for the end of the gun-carriage to have parallel sides, and this may be effected by wooden or iron cheeks 6, Fig. 2, which are fixed to the trail end of the carriage in the manner shown.

The wedge-shaped recoil-brakes 4, Figs. 1 and 2, are made with a broader base 1⁴ than usual, and at the rear end are provided with double spurs 2⁴, to prevent the brake moving. At the upper end they are formed with a projection 3⁴, which stops the carriage-wheels in their upward motion.

The special arrangement for traveling replacing the ordinary wheel-brake, rendered useless by the endless rail, is shown in Figs. 2, 3, 11, and 12. To each of the carriage-wheels is secured a ring 8, the flange of which is adapted to be acted upon by brake-blocks 9^{bis}, fixed to hollow cross-beams 9 9, one of which is fast in the guide 10, while the other is adapted to slide therein by turning a brake-screw 11 so as to either apply or to loosen the brake. The brake is suspended from the beams 5 of the gun-carriage.

In a contemporaneous pending application filed by me July 24, 1899, Serial No. 724,957, I have shown certain devices, including the endless rail hereinbefore described, which are also illustrated in this application, to which I herein make no claim.

It will be apparent that changes may be made in the construction without departing from the spirit of my invention, and I do not, therefore, desire to be limited in every instance to the exact construction I have herein described.

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

1. An improved mounting for ordnance, by the use of which ordinary wheel-carriages are enabled to travel over uneven loose roads and take up any firing position without preliminary preparations, said mounting comprising jointed endless rails mounted on the carriage-wheels and a plank for supporting the trail of the gun-carriage during firing, said plank adapted to be suspended by means of eyes, rings and the like, from the front of the gun-carriage when the gun is limbered.

2. In a mounting for ordnance, a sliding track for the trail of the gun-carriage during firing, studs on said track for adjusting its position, and buffers on said track for cushioning the recoil of the gun-carriage, said track being adapted for suspension during traveling below the fore end of said gun-carriage.

3. In a mounting for ordnance, a gun-carriage, longitudinal beams incorporated in said gun-carriage, and a sliding track for receiving the trail of the gun during firing and adapted to be supported on said beams during traveling.

4. A gun-carriage having parallel cheeks on the trail thereof, in combination with a guide-track, said cheeks being adapted to cause the trail to be properly guided in the sliding track.

5. In a mounting for ordnance, wedge-shaped blocks having spurs at the rear to grip the ground and projecting pieces or stops at the top, for increasing the effect of braking.

6. In the mounting for ordnance having endless rail on the wheels, a wheel-brake for traveling, comprising flanges secured to the carriage-wheel, brake-shoes for engaging said flanges, and means for adjusting said brake-shoes.

7. A gun-carriage having a sliding track for its trail during firing, and buffers located upon the front and rear portion of said track, engaging said trail on recoil and counter-recoil.

8. A gun-carriage having longitudinal beams the rear extremities of which constitute a trail, and cheeks or shoe-plates located at the tail ends of the said beams and a track in which said trail is adapted to slide.

9. A gun-carriage having wheels thereon, having endless rails, flanges extending inwardly from said wheels, hollow cross-beams suitably supported, brake-blocks attached to one of said cross-beams, and means for actuating one of the latter, the other of said cross-beams being fixed.

CRISPINO BONAGENTE.

Witnesses:

LEONE GIOVANNI,
PIECOTTI CARLO.