

No. 607,682.

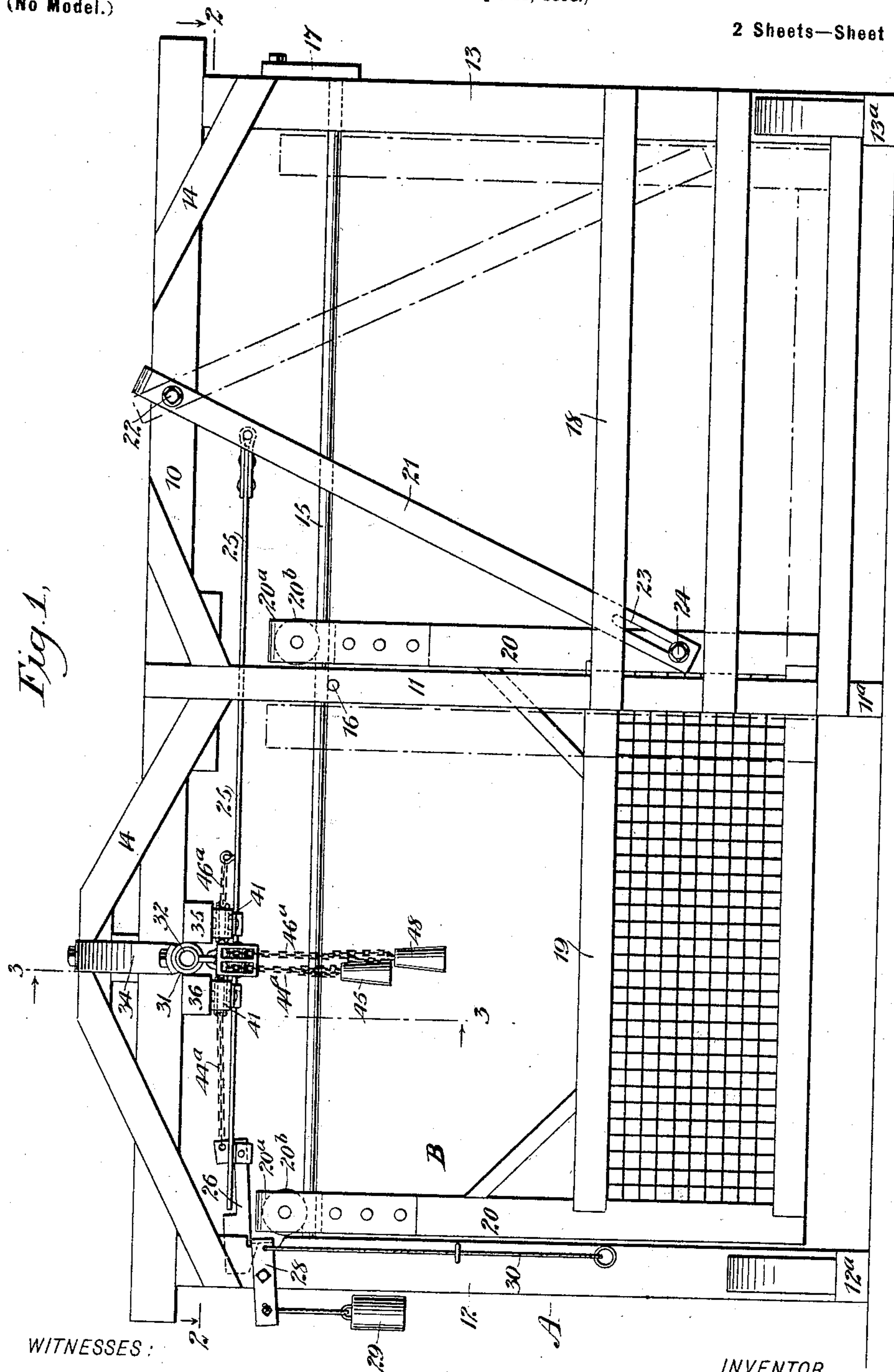
P. COUPAL.
GATE.

Patented July 19, 1898.

(Application filed Apr. 18, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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Fig. 2.

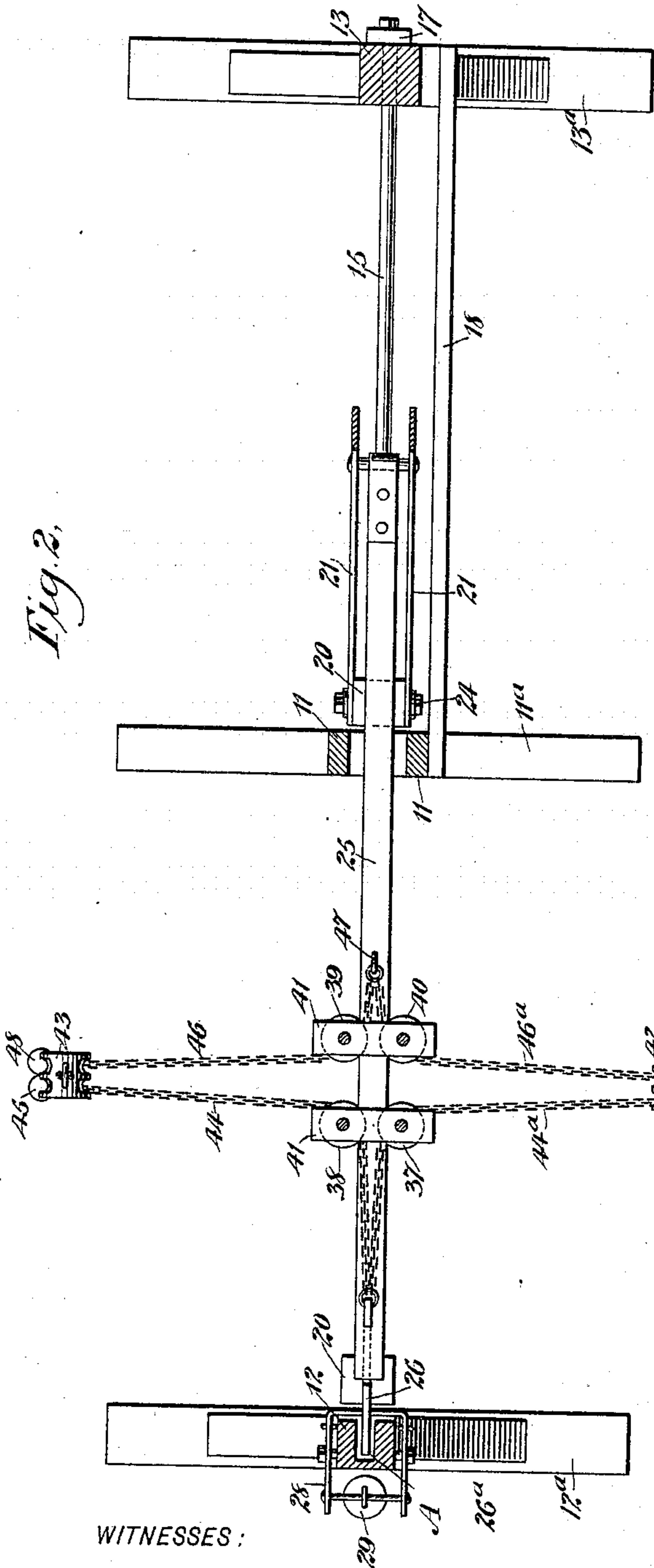
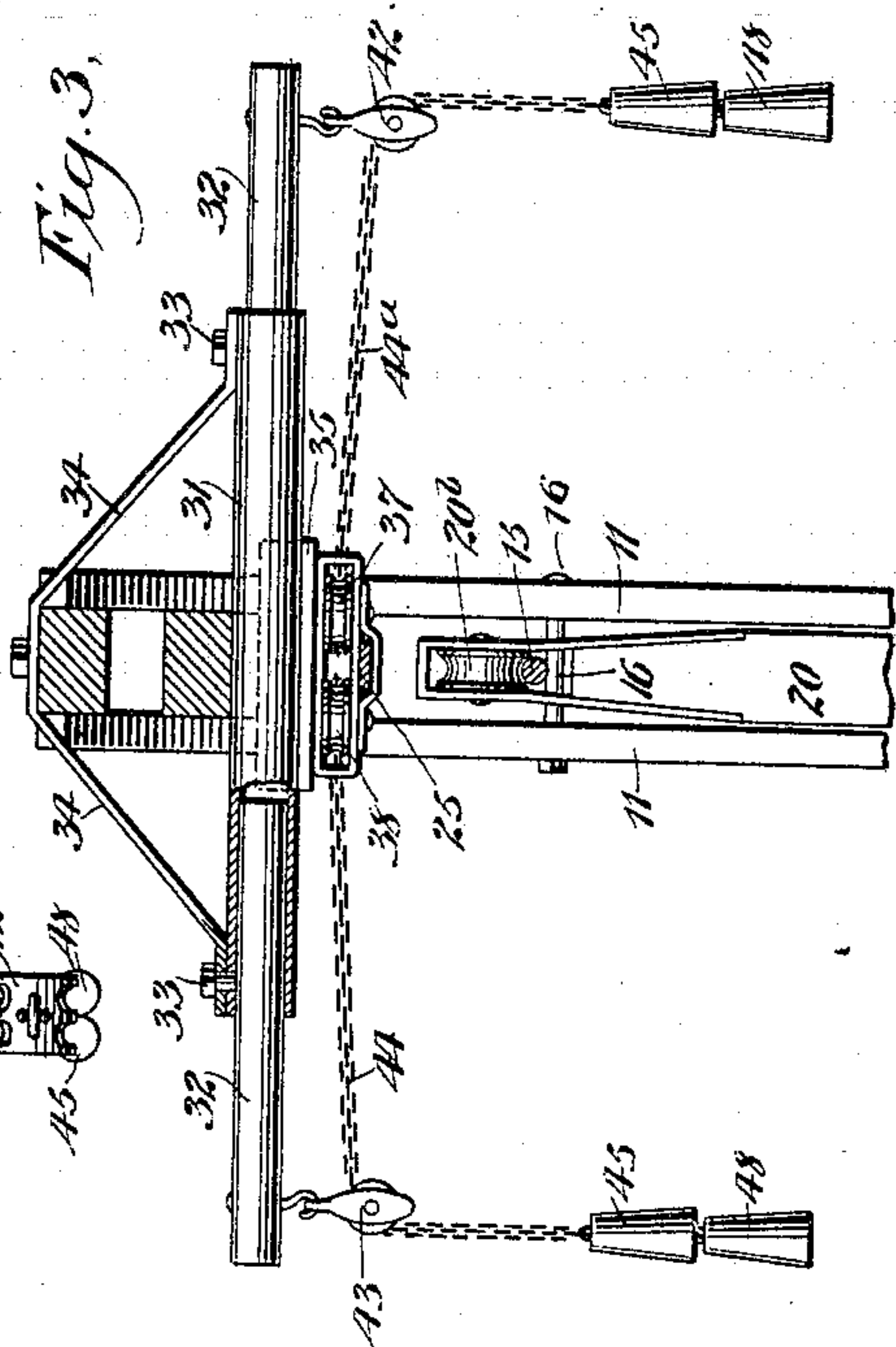


Fig. 3.



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UNITED STATES PATENT OFFICE.

PROSPER COUPAL, OF BOURBONNAIS, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOSEPH L. LECLAIRE AND PETER LEGRIS, OF SAME PLACE.

GATE.

SPECIFICATION forming part of Letters Patent No. 607,682, dated July 19, 1898.

Application filed April 18, 1898. Serial No. 678,008. (No model.)

To all whom it may concern:

Be it known that I, PROSPER COUPAL, of Bourbonnais, in the county of Kankakee and State of Illinois, have invented a new and
5 useful Improvement in Gates, of which the following is a full, clear, and exact description.

The object of the invention is to construct a gate, especially a farm-gate, of the sliding
10 type in an exceedingly simple, durable, and economic manner and to provide a means whereby the gate may be opened or closed from either side by persons on horseback or in vehicles and whereby the gate may also
15 be opened or closed from either side by pedestrians.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth,
20 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.

25 Figure 1 is a side elevation of the improved gate. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1. Fig. 3 is a transverse section on the line 3 3 of Fig. 1.

The frame A in which the gate is mounted
30 consists of two end posts 12 and 13 and parallel and spaced intermediate posts 11, the end posts and intermediate posts being connected by an upper cross-bar 10, and at the top of the structure suitable braces 14 are
35 located. A supporting-rod 15 is provided for the gate, which supporting-rod is readily removable from the frame. One end of the supporting-rod 15 enters a recess in the end post 12 of the frame, while the opposite end passes
40 through an aperture made in the end post 13. The rod 15 at its center rests upon a cross-bar 16, which extends through the central or intermediate uprights 11, and the rod 15 is prevented from slipping from its bearings by
45 means of a button 17 or its equivalent, pivoted on the upright 13 and covering the outer end of the opening in such upright through which the rod passes. A sill 12^a is provided for the end upright 12, and a like sill 13^a is furnished
50 the opposite end upright 13, while the intermediate uprights 11 rest upon a sill 11^a.

The gate B may be of any suitable or approved construction; but the thickness of the gate should be such that the gate may readily slide between the intermediate uprights 11. 55
The body portion 19 of the gate when opened is adapted to be located between the intermediate uprights 11 and the end uprights 13, and the end posts 20 of the gate are provided with bearings 20^a at their upper ends, while 60
in each bearing a grooved pulley or roller 20^b is journaled, adapted to rest and travel upon the rod 15, as is particularly shown in Figs. 1 and 3. Slats 18 are shown extending from the uprights 11 to the uprights 13 at one side 65
of the structure; but the slats may be duplicated at the other side of the structure, if desired.

A link 21, preferably of U construction, is pivoted at its curved end by a suitable bolt 70
22 upon the upper cross-bar 10 of the frame about centrally between the intermediate uprights and the rear upright 13. The lower extremities of the said link are carried one at each side of the rear end post 20, and the 75
lower ends of the pivoted link are provided with longitudinal slots 23, through which slots, bolts, or pins 24 are loosely passed and secured to the rear gate-post, as is especially shown in Figs. 1 and 2. 80

A latch-bar 25, which is also an operating-bar, is pivoted to the link 21 near its upper end. The latch or operating bar extends between the uprights 11 and a point near the forward end upright 12, preferably parallel 85
with the supporting-rod 15. At the free end of the latch or operating bar 25 a latch-head 26 is pivoted, one end whereof extends up beyond the upper face of the bar 25, as shown in Fig. 1, the latch-head being adapted to enter 90
a recess 26^a, made in the upright 12, as illustrated in Fig. 2. The latch 26, when the gate is closed, automatically engages with a keeper 28, which is fulcrumed upon the forward end upright 12 of the frame, the keeper 95
being usually of U shape, as shown in Fig. 2, the bow-section of the keeper facing the latch, while its extremities are connected with a weight 29, which will hold the keeper in position for engagement with the latch-head. 100
The keeper may be drawn downward and released from engagement with the latch-head

by a pedestrian through the medium of cords or chains 30, which are secured to the keeper near its return or curved section and extend downward within convenient reach from the ground.

At a central point between the intermediate uprights 11 and the forward upright 12 a tubular cross-bar 31 is secured in any suitable or approved manner. This tubular cross-bar extends beyond both sides of the frame, as shown in Fig. 3, and in each end of the tubular cross-bar a rod 32 is adjustably secured, usually through the medium of set-screws 33, which are also utilized to connect a supporting-bracket 34 with the tubular cross-bar. A block is located at each side of the tubular cross-bar, being secured to the upper beam 10 of the frame. These blocks are designated, respectively, as 35 and 36. Beneath the block 36 two pulleys 37 and 38 are journaled, and corresponding pulleys 39 and 40 are journaled beneath the block 35. Ordinarily the pivots of the said pulleys extend into the blocks and into stirrups 41, attached to the blocks, or the pulleys may be contained within the stirrups only, if desired.

A double block 42 is suspended from one of the rods 32, a corresponding pulley 43 being suspended from the opposite rod. Two chains 44 and 44^a are attached to the upwardly-extending portion of the latch-head 26 at a point above the latch-bar 25. The chain 44 is carried around the pulley 38 and down over the pulley in the block 43, while the chain 44^a is carried over the pulley 37 and in a reverse direction to the chain 44 over the pulley in the block 42, as shown in Fig. 2. Two other chains 46 and 46^a are attached to the latch-bar 25 at a point between the blocks 35 and the rear end of the latch-bar. The chain 46 is carried over the pulley 39 substantially parallel with the chain 44 and down over the pulley in the block 43, the chain 46^a being carried around the pulley 40 substantially parallel with the chain 44^a and downward over the pulley in the block 42. Each chain 44 and 44^a is provided with an adjustable handle at its lower end, the handles acting also in the capacity of weights, and similar handles 48 are provided for the lower extremities of the chains 46 and 46^a.

In operation when the gate is to be opened by a pedestrian, under the construction shown in Fig. 1, it is simply necessary to draw the ropes or chains 30 downward, releasing the latch-head from its keeper, whereupon the gate may be pushed open by hand and closed in like manner at the opposite side. When the gate is to be opened by a person on horseback or in a vehicle, the chain 44^a, for example, is drawn downward, which will disengage the latch-head 26 from the keeper 28 and by carrying the latch-bar rearward cause the gate to travel in the same direction and open. After the vehicle has passed through the gate-

opening the chain 46, for example, is drawn downward, which will cause the latch-bar to travel to its normal position, closing the gate, the latch-head when the gate is closed automatically engaging with its keeper.

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

1. The combination, with a frame, a track carried by the frame, and a gate suspended from and mounted to slide on the said track, of an arm pivotally connected with the rear end post of the gate and with the upper portion of the frame, a latch-bar pivoted to the said arm, a latch-head pivoted upon the latch-bar, a keeper for the latch-head carried by the frame, pulley-blocks located at opposite sides of the frame, and chains attached to the latch-head, being carried each through a pulley-block, and other chains attached to the latch-bar at the rear of the pulley-blocks, the latter chains being likewise carried in opposite directions through the pulley-blocks, for the purpose set forth.

2. In a gate, the combination, with a frame, a track carried by the said frame, a gate having a roller-support on the said track, and an arm pivoted to the frame at an upper point and to the rear portion of the said gate, of a latch-bar pivoted to the said arm, extending above the track, a latch-head pivoted in the latch-bar, a keeper for the latch-head carried by the frame, a supporting-bar located above the central portion of the gate when the gate is closed, the said supporting-bar being provided with pulley-blocks at its ends, chains attached to the latch-head, being adapted to raise the same from its keeper, which chains are carried in opposite directions through opposite pulley-blocks, and chains attached to the latch-bar at the rear of the supporting-arm, which chains are carried in opposite directions likewise through the said pulley-blocks, for the purpose set forth.

3. In a gate, the combination, with a frame, a weighted keeper pivoted to the said frame, means for operating the keeper against the action of the weight, a track carried by the frame, a gate suspended from the said track, having a roller bearing thereon, and a link pivoted to the upper portion of the frame at a point to the rear of the gate when the gate is closed, the lower ends of the said link being provided with slots, and pins passed through the slots into the rear post of the gate, of a latch-bar pivoted to the said link, extending parallel with the track and over the gate when in its closed position, a latch-head pivoted in the forward end portion of the latch-bar, being adapted for engagement with said keeper, adjustable supports extending beyond opposite sides of the frame at a point above the center of the gate when the gate is closed, and double pulley-blocks carried by the said supports near their outer ends,

guide-pulleys located at opposite sides of the
said supports, chains connected with the
latch-head and passed over adjacent guide-
pulleys, one chain being carried through each
5 of the pulley-blocks, and chains secured to
the latch-bar at a point to the rear of the sup-
porting-arms, the latter chains being passed

over adjacent guide-pulleys and through op-
posite pulley-blocks, for the purpose set forth.

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mark

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