

No. 777,157.

PATENTED DEC. 13, 1904.

G. W. THORN.  
RAILWAY GATE.

APPLICATION FILED SEPT. 12, 1904.

NO MODEL.

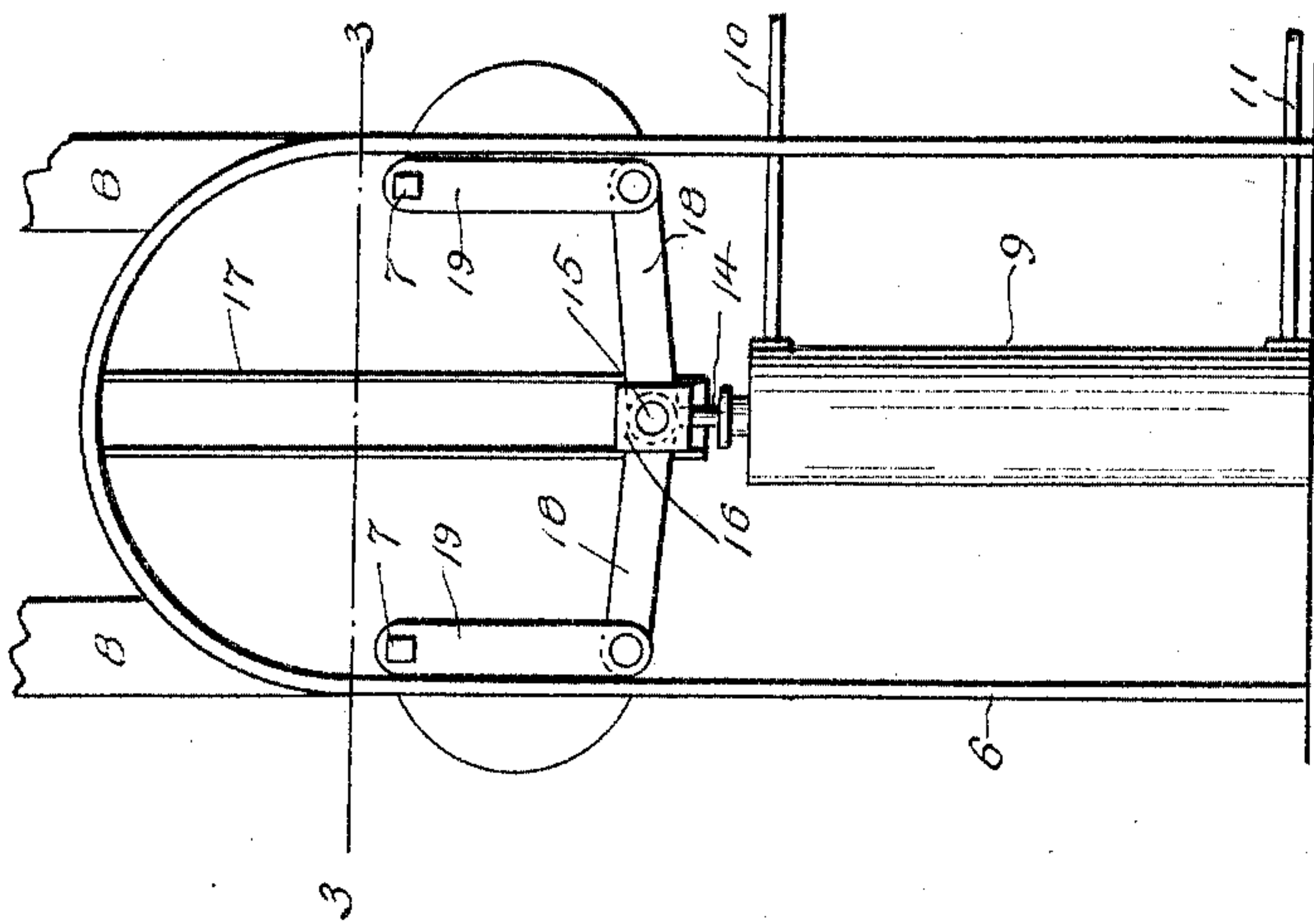


Fig. 2.

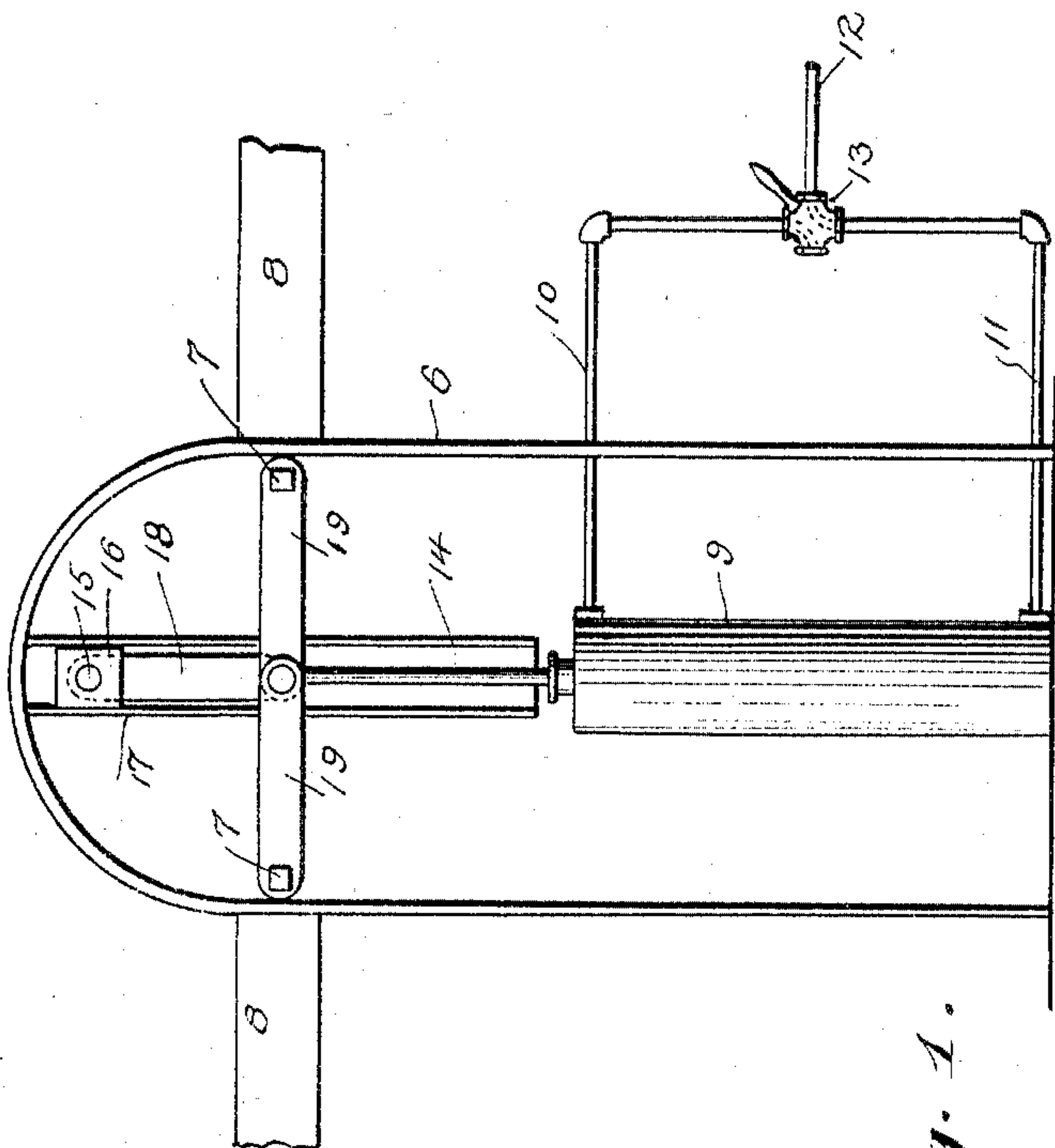


Fig. 1.

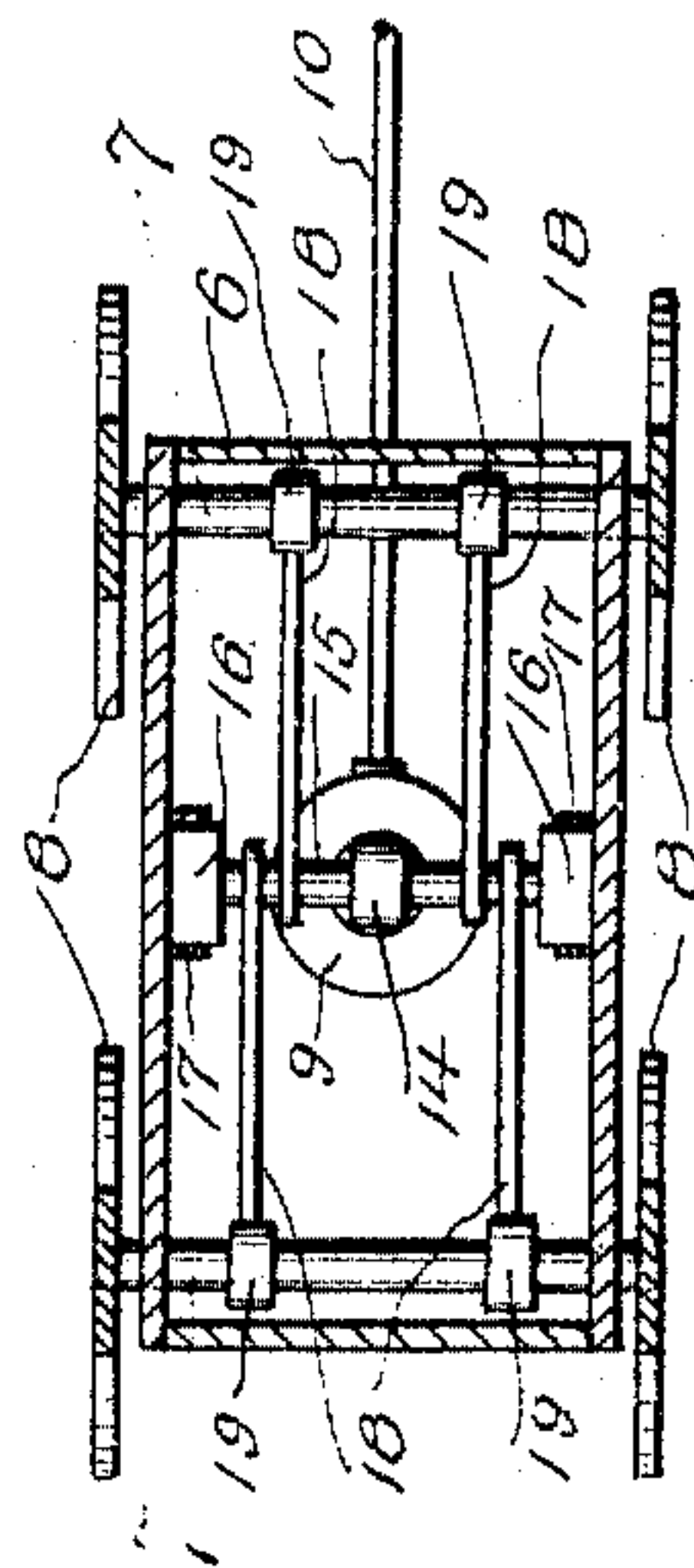


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## RAILWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 777,157, dated December 13, 1904.

Application filed September 12, 1904. Serial No. 224,155. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. THORN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Railway-Gates, of which the following is a specification.

This invention is an improved railway-gate intended to be operated by compressed air from a pump or any other suitable source.

It has for its object the provision of means for transmitting the motion of the pump-piston to the rock-shafts on which the gates are mounted, the connections being such that the gates cannot be pulled or blown down accidentally or unintentionally.

Broadly speaking, the invention comprises a cylinder and a piston therein operated by air-pressure and jointed links or levers connecting the piston with the shafts of the gates, as more fully pointed out hereinafter.

In the accompanying drawings, Figures 1 and 2 are side elevations, the near side of the box or gate-post casing being removed to show the working parts, these parts being in different positions in the respective views. Fig. 3 is a section on the line 3 3 looking down.

Referring specifically to the drawings, the gate-post box or casing is indicated at 6, of suitable size and shape to inclose the working parts. The rock-shafts of the gates are indicated at 7, mounted in suitable bearings in the frame or casing and projecting beyond the same to receive the gates 8 upon the ends thereof.

9 indicates a cylinder with piston therein, and the cylinder 9 receives air at the top and bottom through pipes 10 and 11, respectively, which pipes connect with the supply-pipe 12, leading from any suitable pump or source of compressed-air supply. A three-way valve is indicated 13, where the pipes join, and this valve is so constructed that the air-pressure may be supplied to either end of the cylinder and exhausted from the other. Any suitable form of three-way valve having an outlet to the atmosphere will do for the purpose. The piston-rod 14 is connected to a cross-bar 15,

which carries at the ends blocks 16, slidable in guides 17, secured to opposite side walls of the casing. These guides confine the cross-bar and piston-rod to direct vertical motion.

The cross-bar 15 is connected by links 18 to cranks or levers 19, fixed to the rock-shafts 7. Preferably two levers are used for each rock-shaft, as shown in Fig 3; but the number is immaterial. The links and levers 18 and 19 are of such length that when the gates are up the joint or pivotal connection between the links and the levers is a little above the pivotal connection 15 or beyond the dead-center, as indicated in Fig. 1. Consequently the gates cannot be pulled or blown down without first lifting the piston to some extent by means of the compressed air.

The gates are lowered by admitting air at the bottom of the cylinder, which lifts the piston and flexes the links and levers at their pivotal connections until they are brought to the position shown in Fig. 1. To lift the gates, air is admitted at the top of the cylinder, and the piston is forced down, with the obvious result.

The simplicity of the construction is obvious, and being much cheaper than more complicated or intricate structures it is consequently more advantageous.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a gate-post casing, of a pair of rock-shafts extending across the same and carrying gates, a lever on each shaft, a cylinder below the shafts having a piston and its rod which works between said shafts, and oppositely-extending links pivotally connected to the piston-rod and the levers, the pivotal connection between the piston-rod and the links, when the piston is lowered and gates raised, being slightly below the center line between the pivotal connections of the links and levers, whereby the parts are locked until the piston is raised.

2. The combination with a gate-post casing, horizontal rock-shafts extending across the same and carrying gates, and guides extending vertically between the shafts, of a hori-

zontal cross-bar reciprocable in the guides,  
levers projecting from the shafts, links ex-  
tending oppositely from the cross-bar and con-  
nected to the levers, and a cylinder and its  
5 piston connected to the cross-bar and adapted  
to operate the same.

In testimony whereof I have signed my name

to this specification in the presence of two sub-  
scribing witnesses.

GEORGE W. THORN.

Witnesses:

HARRY T. DILLON,

WM. J. ROBINSON.