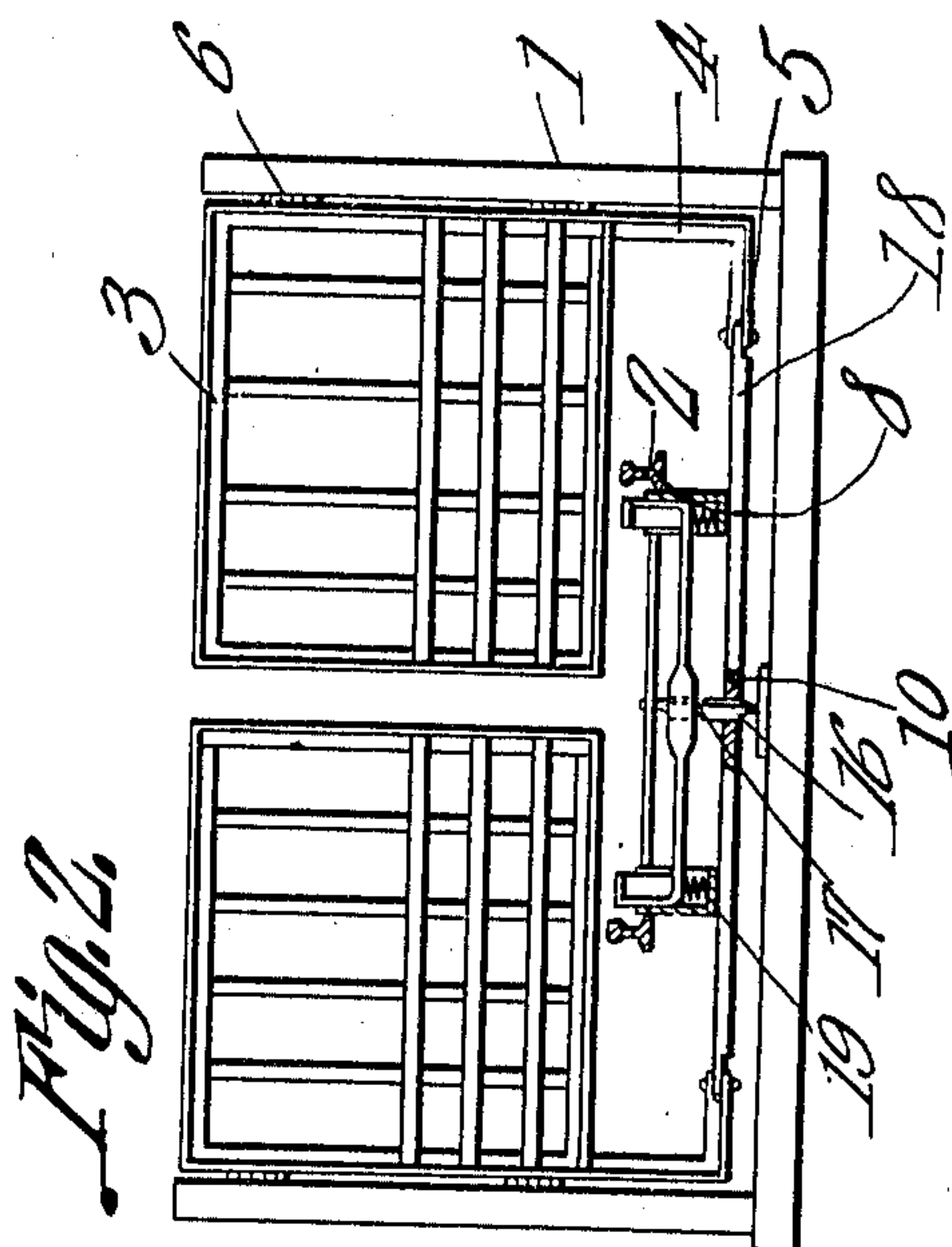
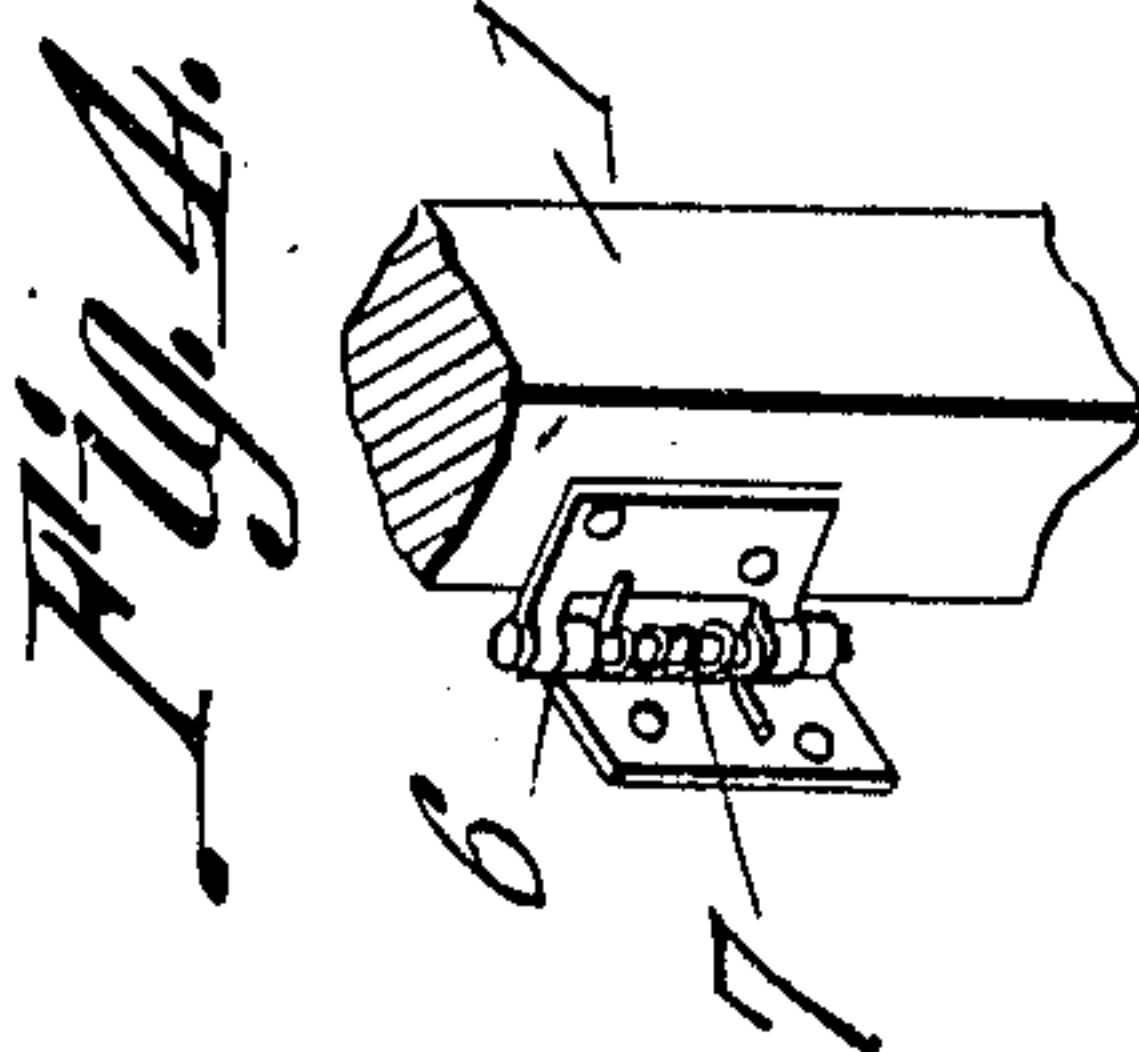
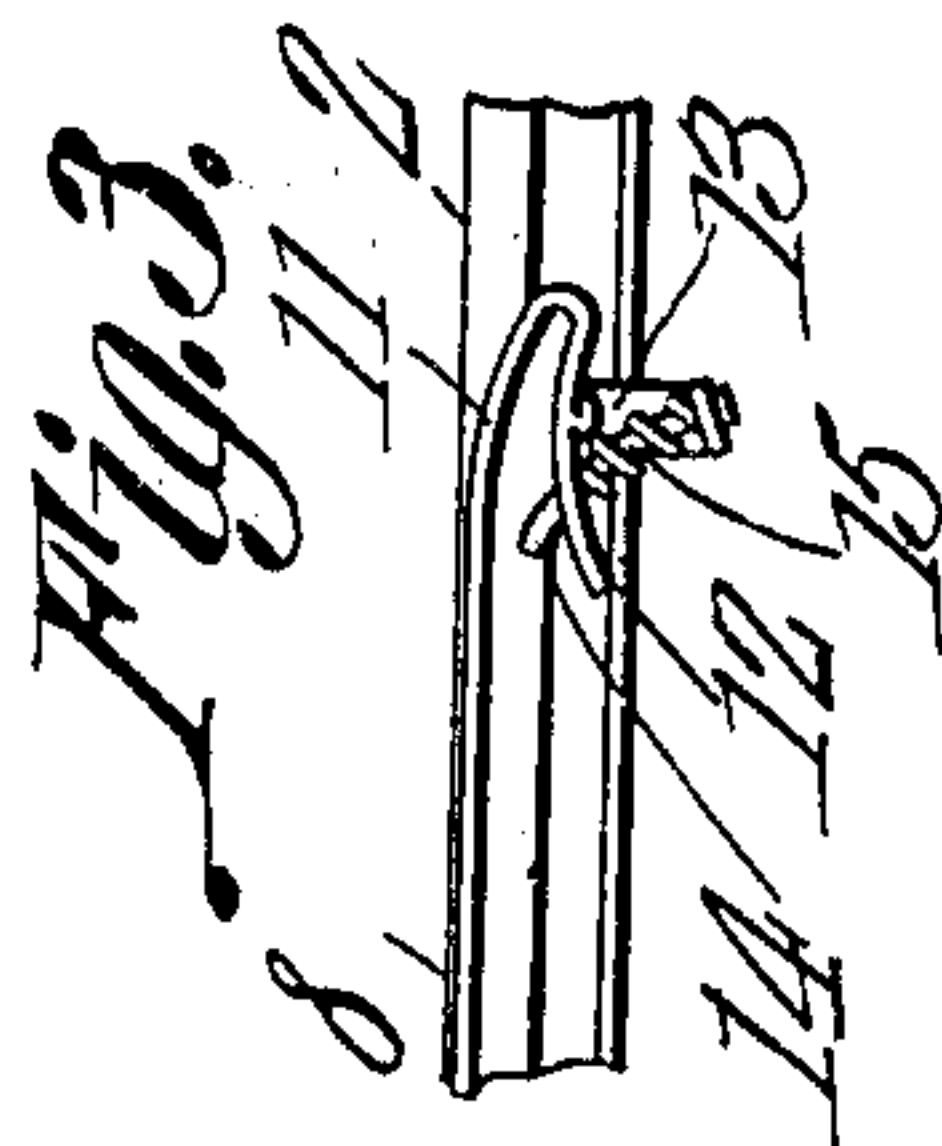
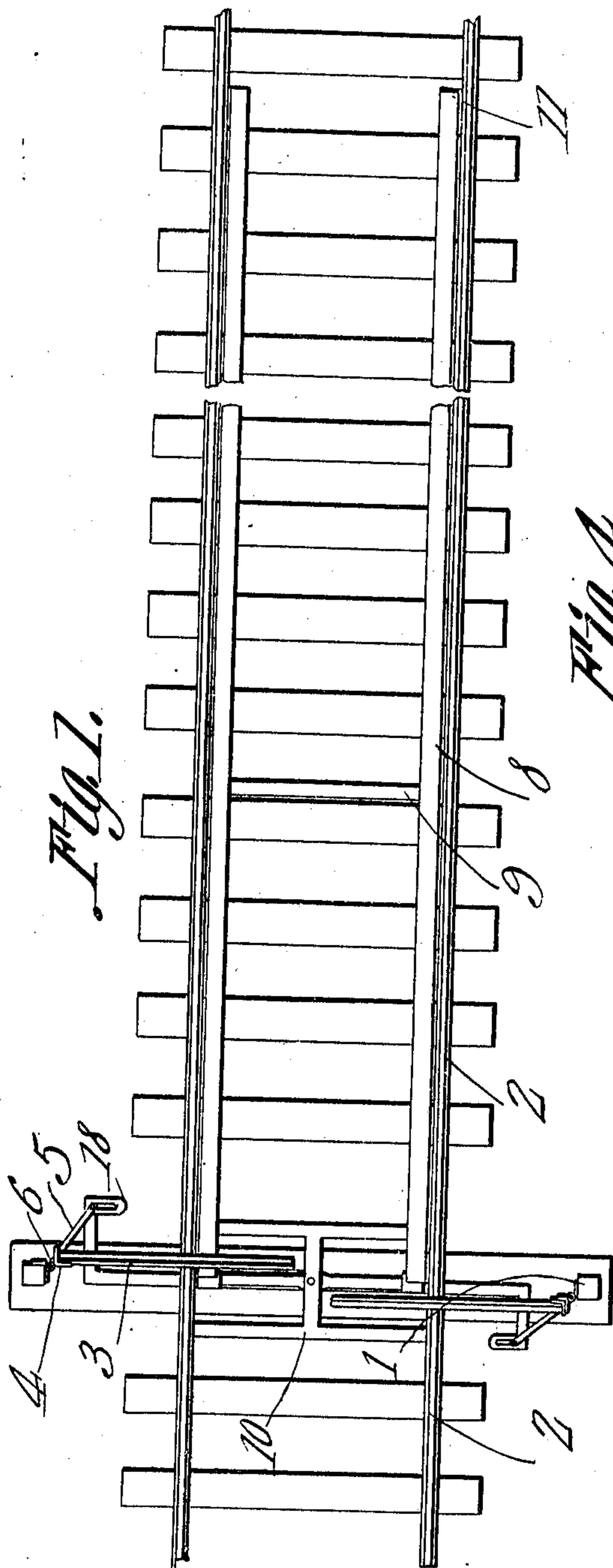


F. CLARK.
RAILWAY GATE.
APPLICATION FILED APR. 30, 1910.

970,305.

Patented Sept. 13, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK CLARK, OF COLONY, OKLAHOMA.

RAILWAY-GATE.

970,305.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed April 30, 1910. Serial No. 558,560.

To all whom it may concern:

Be it known that I, FRANK CLARK, a citizen of the United States, residing at Colony, in the county of Washita and State of Oklahoma, have invented a new and useful Railway-Gate, of which the following is a specification.

This invention relates to a railway gate and consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a structure adapted to be used in connection with railway tracks for providing a barrier or closure for the same under certain normal condition, and which is adapted to be automatically operated by an approaching train to open the gate to permit the said train to pass along the track in an unobstructed manner.

In the accompanying drawings:—Figure 1 is a top plan view of the gate. Fig. 2 is a side elevation of the same with parts thereof in section. Fig. 3 is a detail view of a portion of the gate operating mechanism. Fig. 4 is a perspective view of a hinge used in the gate structure.

The gate structure includes posts 1 erected at the sides of a track 2 and upon which are hingedly mounted gate panels 3. Bars 4 extend down from the inner edge portions of the panel 3 and at their lower ends merge into horizontally disposed arms 5. Hinges 6 are used for the purpose of attaching the panels 3 to the posts 1 and the said hinges are provided with coil springs 7 the ends of which are adapted to bear against the leaves of the hinge when the gate panels are being opened and thereby prevent the said panels from opening in a too sudden manner. Rails 8 extend along the inner sides of the rails forming the track 2 and are connected together at intermediate points by means of a yoke 9. A frame 10 is located between the rails of the track 2 under the gate panels 3 and connects the end portions of the rails 8 together. The ends of the rails 8 opposite the ends thereof which are joined with the frame 9 are downwardly inclined as at 11 and are continued into return portions 12 located under the said inclined portion 11. Brackets 13 are fixed to the inner sides of the rails forming the track 2 and each of said brackets is provided with a curved pin 14 which passes through the return portion 12 of the rail 8. A coiled spring 15 is in-

terposed between the brackets 13 and the return portion 12 of the rail 8 and surrounds the said pin 14 and is under tension with a tendency to hold the rail 8 in an elevated position with respect to the bracket 13.

A shaft 16 is journaled for rotation between the rails forming the track 2 and is located under the gate panels 3. The shaft 16 is provided in the vicinity of its upper end with a spirally disposed exterior surface 17 and the arms 18 are carried at the lower portion of the said shaft 16. The outer ends of the arms 18 engage the ends of the arms 5 in such manner that the arms 5 will be swung about the axes of the bars 4 when the arms 18 are swung about the axis of the shaft 16. The frame 10 is provided at a point between its ends with an opening which firmly receives the spiral portion of the shaft 16 and coiled springs 19 are interposed between the said frame 10 and fixed support and are under tension with a tendency to hold the frame 10 in an elevated position.

From the above description it will be seen that as a car or other rolling stock moves upon the track 2 toward the rails 8 that as soon as the flanges of the wheels engage the said rails 8 the said rails will be depressed and in their downward movement the frame 10 passing along the spiral portion 17 of the shaft 16 will partially rotate the said shaft, which movement through the arms 18 and 5 will swing the gate panels 3 upon their hinges to open position. After the car or other vehicle has passed between the open gate panels 3, the tension of the springs 15 and 19 will come into play and will elevate the rails 8 to their normal positions which will carry up with them the frame 10 and consequently the shaft 16 is partially rotated in the reverse direction and the gate panels 3 are swung to closed position.

By reference to Fig. 3 of the drawing it will be seen that the pins 14 are curved longitudinally with their lower ends nearer the vertical plane of the end of the rail 8 than the upper end. Such configuration or disposition of the pins 14 permits the rail 8 to swing down promptly as soon as it is engaged by the flange of a wheel, but the downward movement of the end of the rails 8 first encountered by the wheel flanges does not immediately open the gate as the panels 3 are not swung to the extent of their open position until the wheel flanges have ap-

proached in close proximity to the frame 10. Thus the panels are not opened suddenly, but in a gradual manner and during the opening movement the tension of the springs 7 carried by the hinges 6 must be overcome and this prevents the gate panels 3 from opening in a sudden manner and striking the post 1 with great force. After the wheel flanges have passed beyond those ends of the rails 8 under which the pins 14 are located, but while the said flanges are in contact with the rails 8 at or toward the frame 10, the said rails 8 may swing up along the curved pins 14 while their opposite end portions are held in depressed positions by means of the said wheel flanges. Therefore it will be seen that the depression and elevation of the rail 8 is accomplished by means of a rocking movement imparted to the said rails and not by a reciprocatory movement in which the rails 8 remain parallel with or at the same angle with relation to the grade of the tracks 2.

Having described the invention what I claim as new and desire to secure by Letters Patent is;

1. In combination with a track, a gate structure comprising panels hingedly mounted and arranged to swing over the track, a shaft journaled for rotation between the track rails and having a spiral portion,

a frame having an opening which snugly receives the spiral portion of the shaft, means operatively connecting the shaft with the gate panels, rails attached to said frame, brackets connected with the track rails and carrying pins, the first mentioned rails slidably engaging said pins, and means for resiliently holding the first mentioned rails in elevated positions along the track.

2. In combination with a track a gate structure comprising panels hingedly mounted and arranged to swing over the track, a shaft journaled for rotation between the track rails and having a spiral portion, a frame having an opening which snugly receives the spiral portion of said shaft, means operatively connecting the shaft with the gate panels, rails attached at one end to the frame, brackets attached to the track rails and having curved pins, the first named rails having return portions which receive said pins, and means for holding the first named rails in elevated position with respect to the track.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK CLARK.

Witnesses:

C. D. MATHEWS,
R. A. GOODWIN.