

J. W. CRATES & F. LONGBRAKE.

GATE.

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958,695.

Patented May 17, 1910.

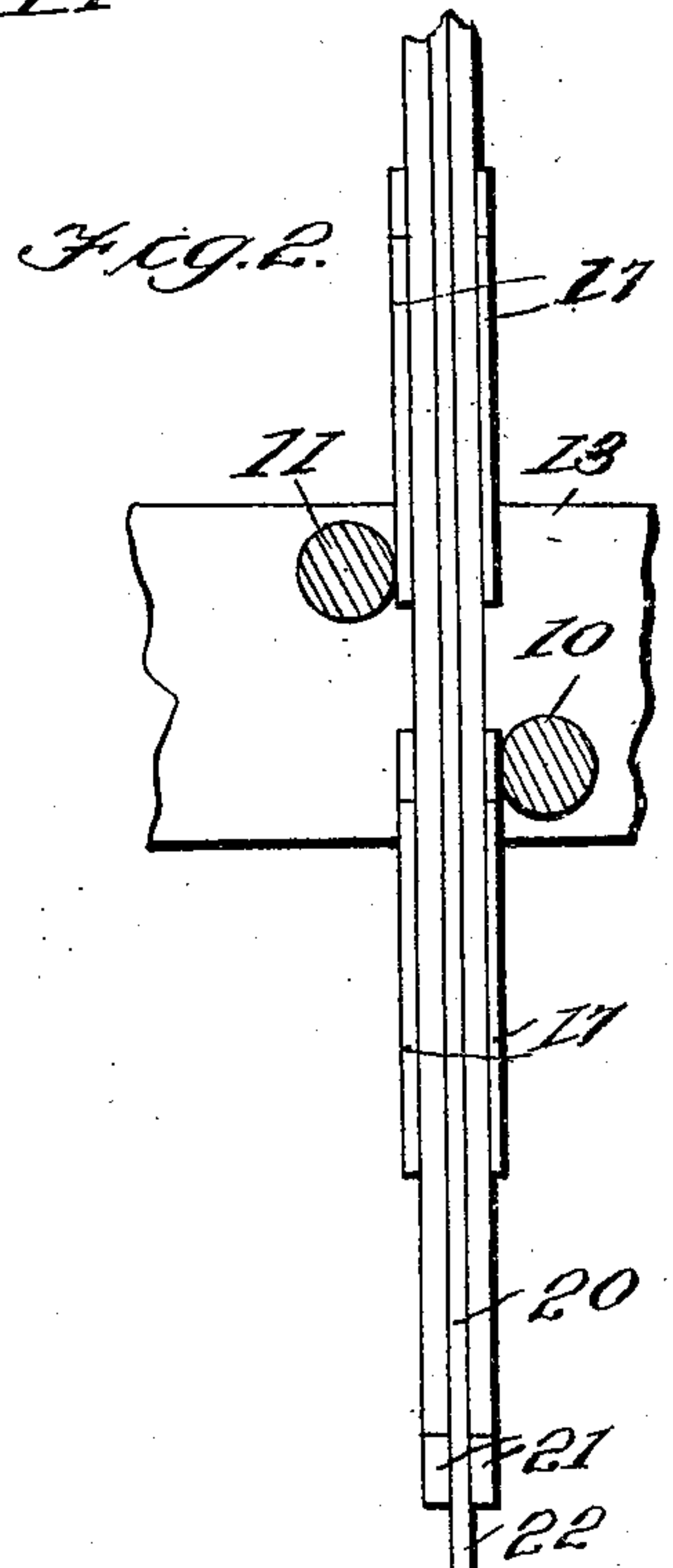
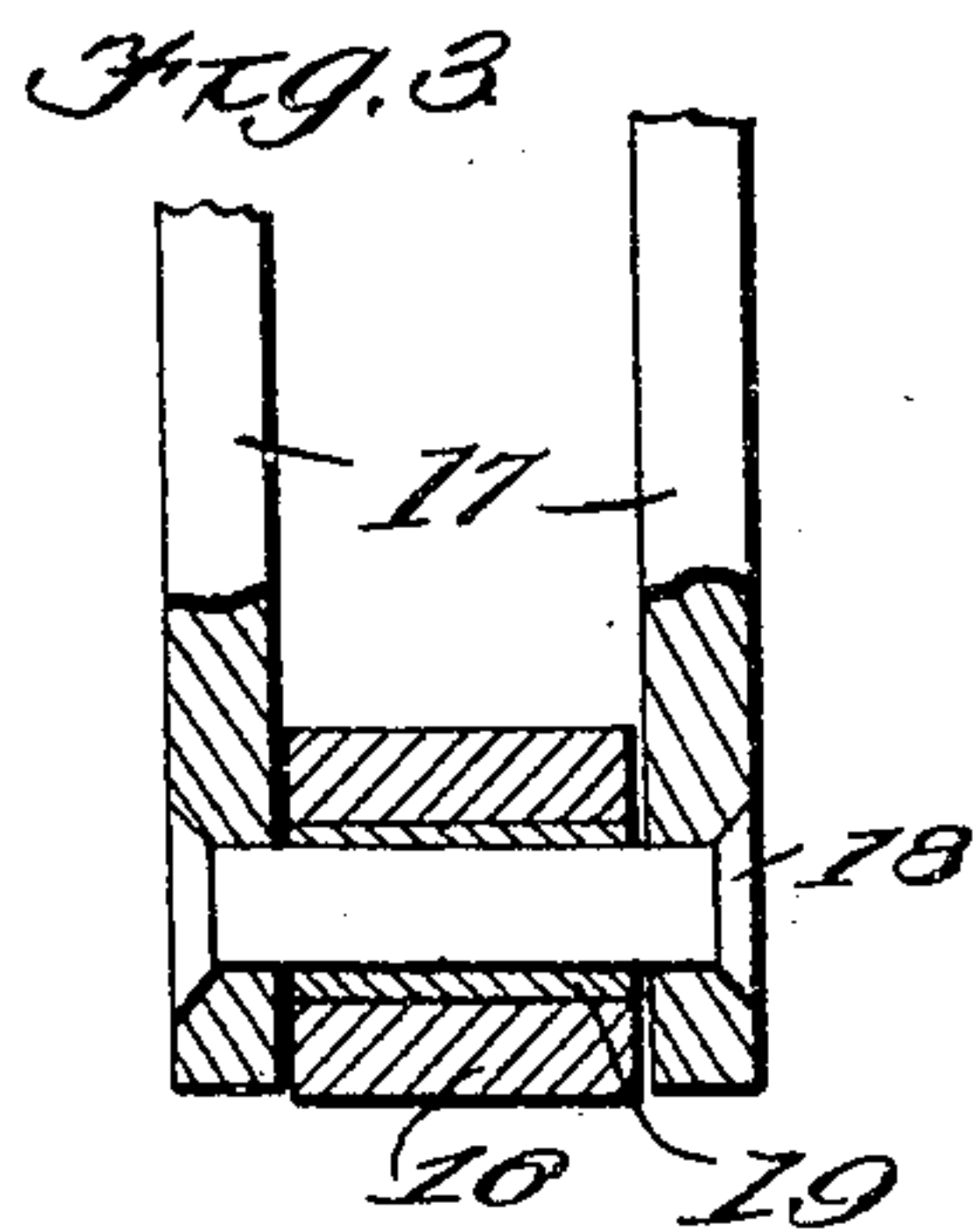
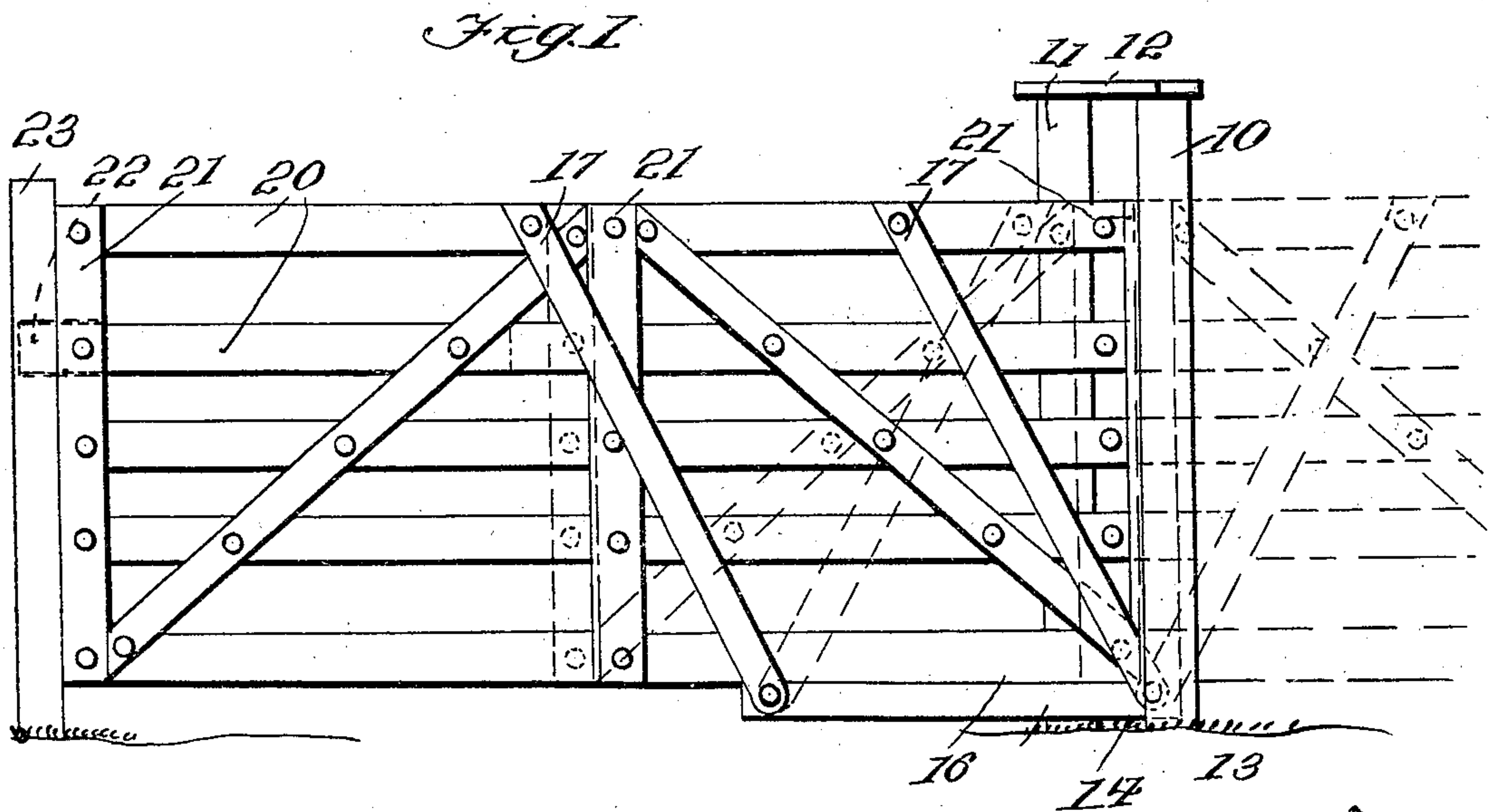


Fig. 4

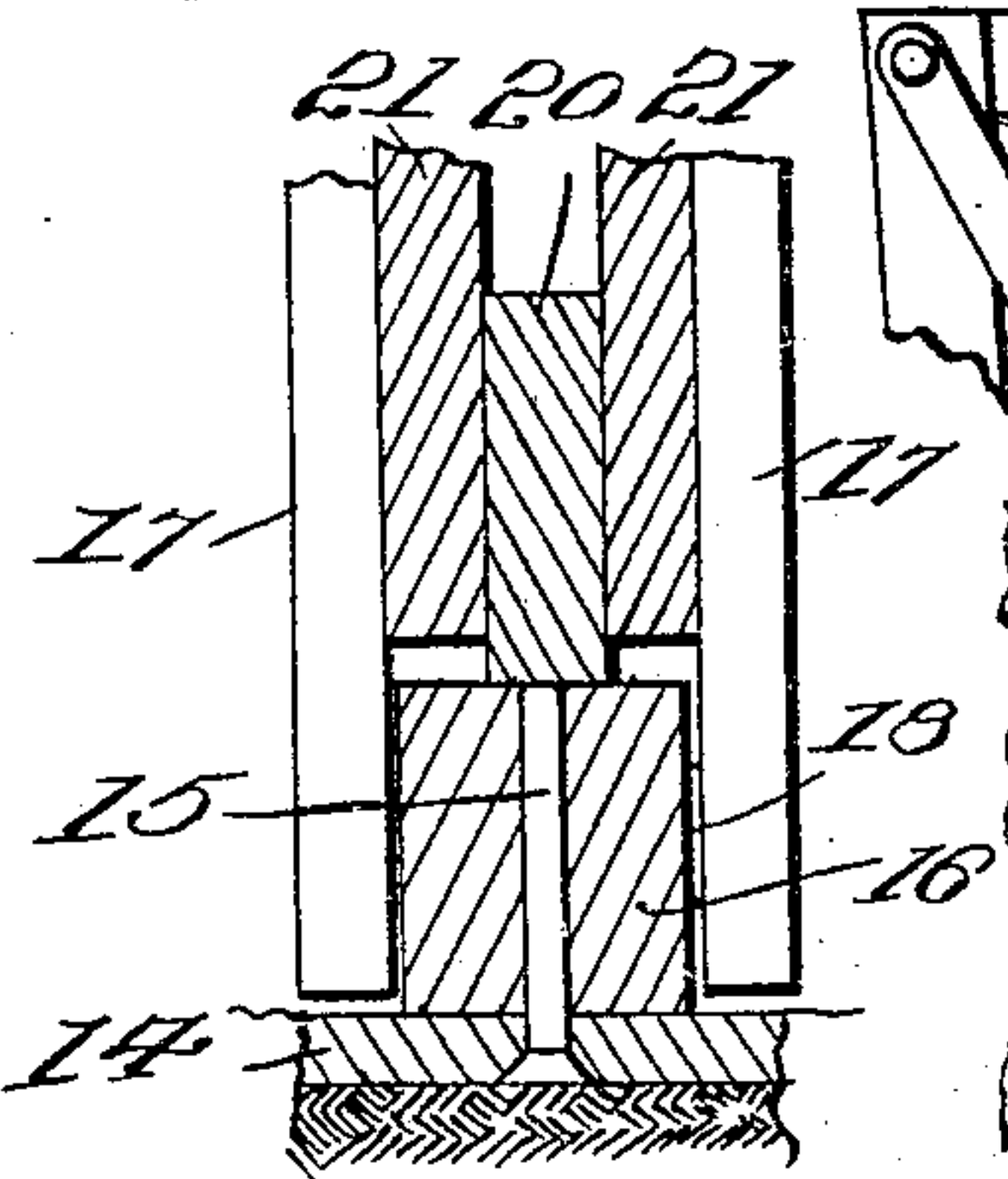
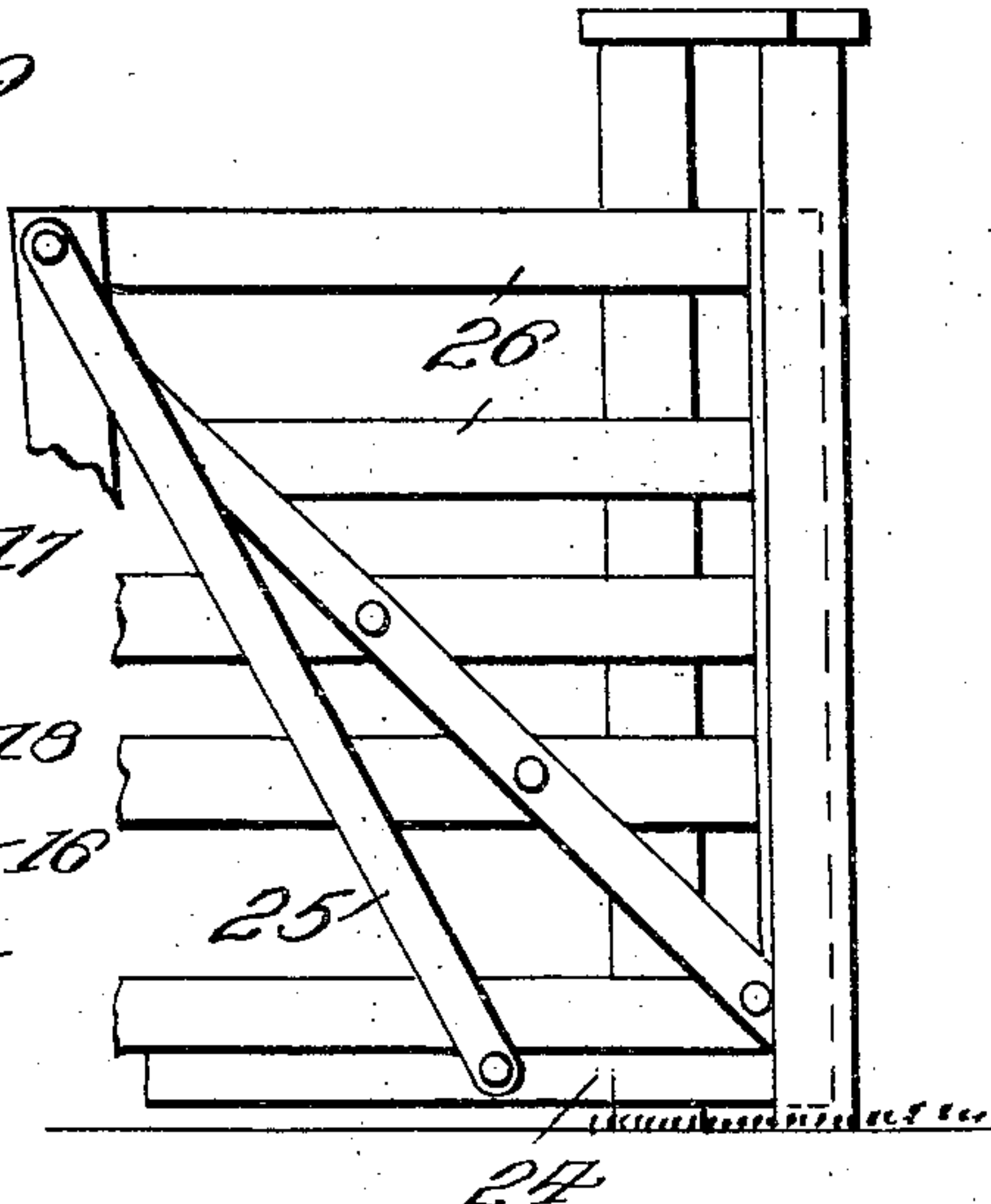


Fig. 5



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UNITED STATES PATENT OFFICE.

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GATE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN W. CRATES and FRANK LONGBRAKE, citizens of the United States, residing at Marion and Arlington, respectively, in the counties of Grant and Hancock, respectively, and States of Indiana and Ohio, respectively, have invented certain new and useful Improvements in Gates, of which the following is a specification.

This invention relates to gates, and has particular reference to a specific construction of a combined sliding and swinging gate.

An object of the invention is to provide a gate which is adapted to swing laterally and at the same time to dispose all of the weight of the same upon a central pivot pin, and not upon hinges or like supports which are liable to sag out of alinement under the weight of the gate.

The invention has for another object the provision of means whereby the gate may be locked by its own weight and released by the act of opening the same.

The invention further provides a gate of this character which may be detachably mounted in position and which comprises a structure which admits of economical manufacture, and the employment of but few operative parts, the operative parts of the gate being so disposed in relation to one another as to decrease the frictional wear upon the same.

For a full understanding of the invention and the merits thereof, and also to acquire a knowledge of the details of construction, and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which;

Figure 1 is a side elevation of a gate in a closed position, the same being disclosed in an open position in dotted lines; Fig. 2 is a longitudinal section through the gate, disclosing a fragmentary view thereof, and in an open position; Fig. 3 is a detail view of one of the journal bearings employed for supporting the gate; Fig. 4 is a vertical fragmentary sectional view through the gate disclosing the means for pivotally mounting the same, and Fig. 5 discloses a gate which is provided with one pair of supporting arms.

Corresponding and like parts are referred to in the following description and indicated

in all the views of the drawings by the same reference characters.

Referring to the drawings, the numerals 10 and 11 designate a pair of guide posts which are vertically disposed in spaced and off-set relation for the purpose of supporting the improved gate therebetween. The guide posts 10 and 11 are braced at their upper extremities by the provision of a cross arm 12 which is secured across their upper ends. The posts 10 and 11 are preferably mounted upon a substantial base 13 made from a beam of wood or the like and which is provided with a plate 14 disposed between the posts 10 and 11 and carrying a pivot pin 15. The pivot pin 15 supports a head 16 which comprises an elongated beam apertured near its inner extremity for the reception of the pin 15 and upon which the gate is mounted.

The head 16 is adapted to swing laterally between the posts 10 and 11 so as to dispose the gate at right angles to the roadway. At the opposite ends of the head 16 arms 17 are mounted in pairs from the opposite sides of the head 16 and are pivotally secured at their lower extremities through the medium of bolts 18 which are passed through the lower ends of the arms 17 and through the head 16. For the purpose of reducing the frictional wear within the head 16 incident to the swinging of the gate, metallic bushings 19 are employed. The arms 17 extend upwardly and engage against the opposite sides of the gate which is employed. The gate which is employed may be of any adaptable construction but is preferably formed as is disclosed in the drawings, of a plurality of longitudinal bars 20, which are supported in parallel through the medium of vertical cleats 21 disposed at intervals throughout the lengths of the bars 20, and forming the extremities of the gate.

The locking means employed for securing the gate from a lateral swinging movement when closed, comprises preferably the extension of one of the upper beams or bars 20, as is disclosed at 22 which engages in a recess formed in a post 23 forming the termination of the end of the fence. As the gate is swung inwardly against the post 23 in a vertical plane the extension 22 is mounted rigidly upon the gate and thereby forms a rigid locking means which cannot be released by the engagement of cattle or the like thereagainst.

In the operation of the gate when it is desired to swing the same to an open position the gate is raised and pushed toward the guide posts 10 and 11 whereby the arms 17 are caused to swing backwardly and to raise the gate and carry the same therewith, at the same time disengaging the extension 22 from the post 23. It will be found that when the gate is in this position that the same is half open and for many purposes to a sufficient extent.

The head 16 is formed of a length approximate to one half the length of the gate whereby the center of gravity of the gate is disposed over the rear end of the head 16, and above the pivot pin 15 thereby equalizing the weight of the gate upon the opposite sides of the pivot pin 16 to enable the swinging of the same to open the passage-way. With this construction it is readily observed that the gate can be easily detached from the base 13 and can be conveyed to any portion of the fence as is desired should it be advantageous to form various closures.

In Fig. 5 of the drawings is disclosed a very slight modification of the invention, in which the head 24 is provided with one pair of arms 25 which extend upwardly upon the opposite sides of the gate 26 from an intermediate point from the head 24 and engaged with the central portion of the gate 26 at its upper end. This arrangement causes the equal raising of the gate when the arms 25 are swung upwardly and disposing the central portion of the gate directly over the pivot. This construction is especially adapted to gates where one pair of arms are sufficient for rigidly supporting the same.

Having thus described the invention, what is claimed as new is:

1. A device as specified, including a pair of guide posts disposed in spaced and off-set relation, a base mounted between said guide posts, a pivot pin upwardly extended from said base intermediately of said guide posts, a head mounted upon said pivot pin, pairs of arms upwardly extended from said head and pivotally mounted thereon, a gate pivotally mounted in the upper ends of said pairs of arms, a recessed post disposed in spaced relation from said guide posts, and an extension formed upon said gate for engagement with said recessed post upon the closing of the same.

2. A device as specified, including a pair of spaced posts, a base disposed between said posts, a pivot pin mounted on said base, a head disposed on said pivot pin, arms pivotally mounted on said head and upwardly extended from the same in pairs, a gate pivot-

ally mounted between said arms, a retaining post spaced from said guide posts and means disposed between said gate and said retaining post to lock said gate in a closed position.

3. A device as specified including a pair of spaced posts, a head pivotally located between said posts, a gate mounted on said head, arms disposed between said head and said gate for supporting said gate, an extension formed on said gate, and a recessed post disposed in spaced relation to said first-named posts for cooperation with said extensions to lock said gate.

4. A device as specified, including a pair of spaced posts, a head pivotally mounted between said posts, bushings located in the opposite ends of said head, arms mounted against the opposite sides of said head, bolts engaged through said arms and said bushings to support said arms, and a gate pivotally mounted in the upper ends of said arms.

5. A gate mechanism including a pair of guide posts, a base disposed between said guide posts and at the lower end thereof, a pivot pin upwardly projected from said base, a head detachably mounted upon said pin, bushings located at the opposite ends of said head, arms engaged against the opposite edge of said head in registration with the bushings and upwardly extended therefrom, bolts engaged through said arms and said bushings, a gate hingedly supported between the upper ends of said arms, an extension formed on said gate and a recessed post located at the outer end of said gate for holding the same in a closed position.

6. A gate mechanism including guide posts, a base positioned between said guide posts, a pivot pin upwardly extended from said base, a head mounted on said pivot pin, a gate pivotally mounted upon said head and arms disposed between said head and said gate for supporting the same, said arms adapted to swing the central portion of said gate directly over said pivot pin.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN W. CRATES. [L. S.]
FRANK LONGBRAKE. [L. S.]

Witnesses as to signature of John W. Crates:

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