

G. R. CLARKE.
FARM GATE.

(Application filed Oct. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

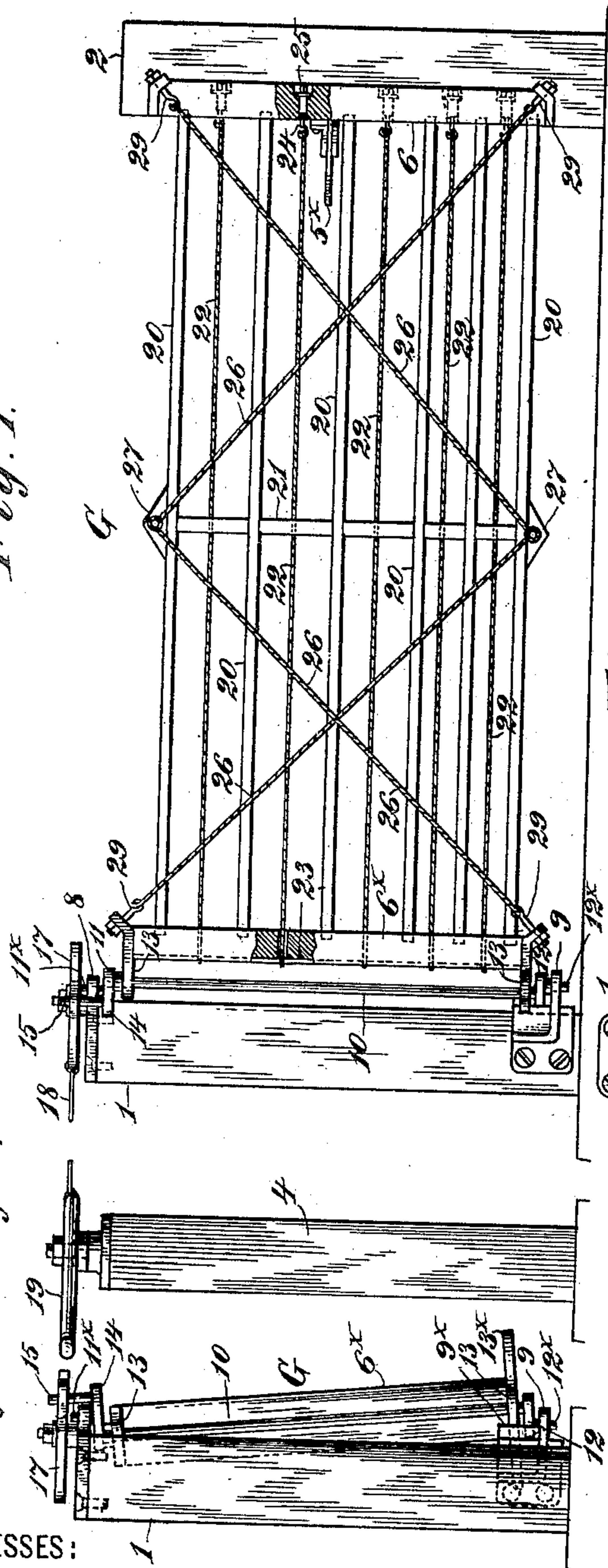
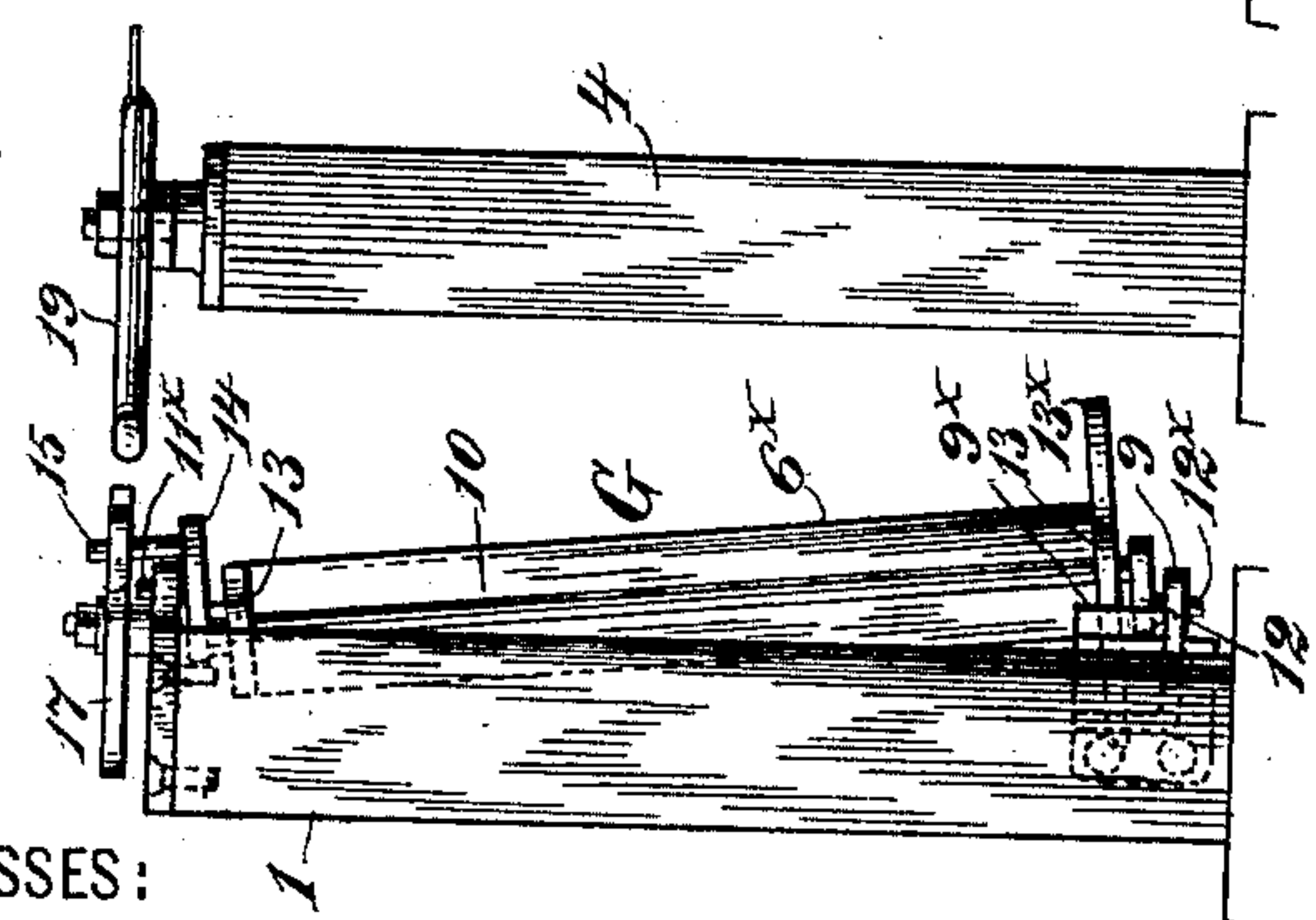


Fig. 3.



WITNESSES:

J. H. Liman
H. Alan Connett

Fig. 2.

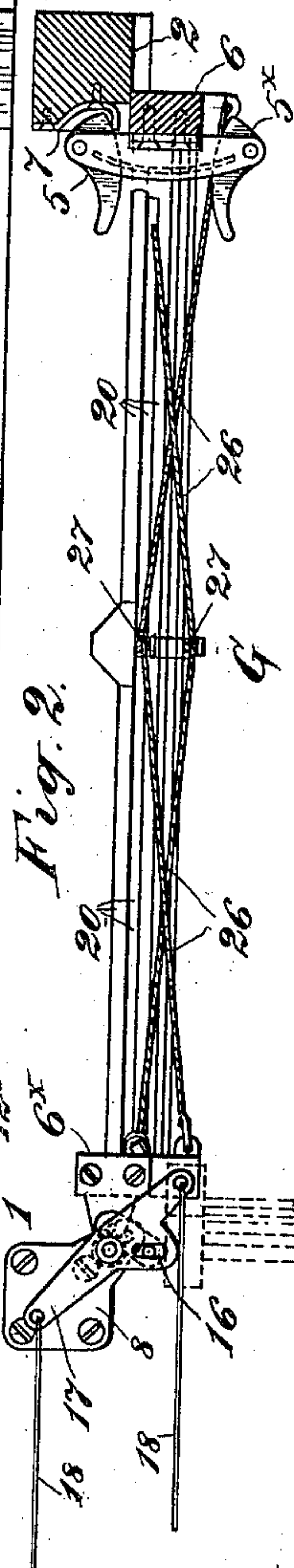
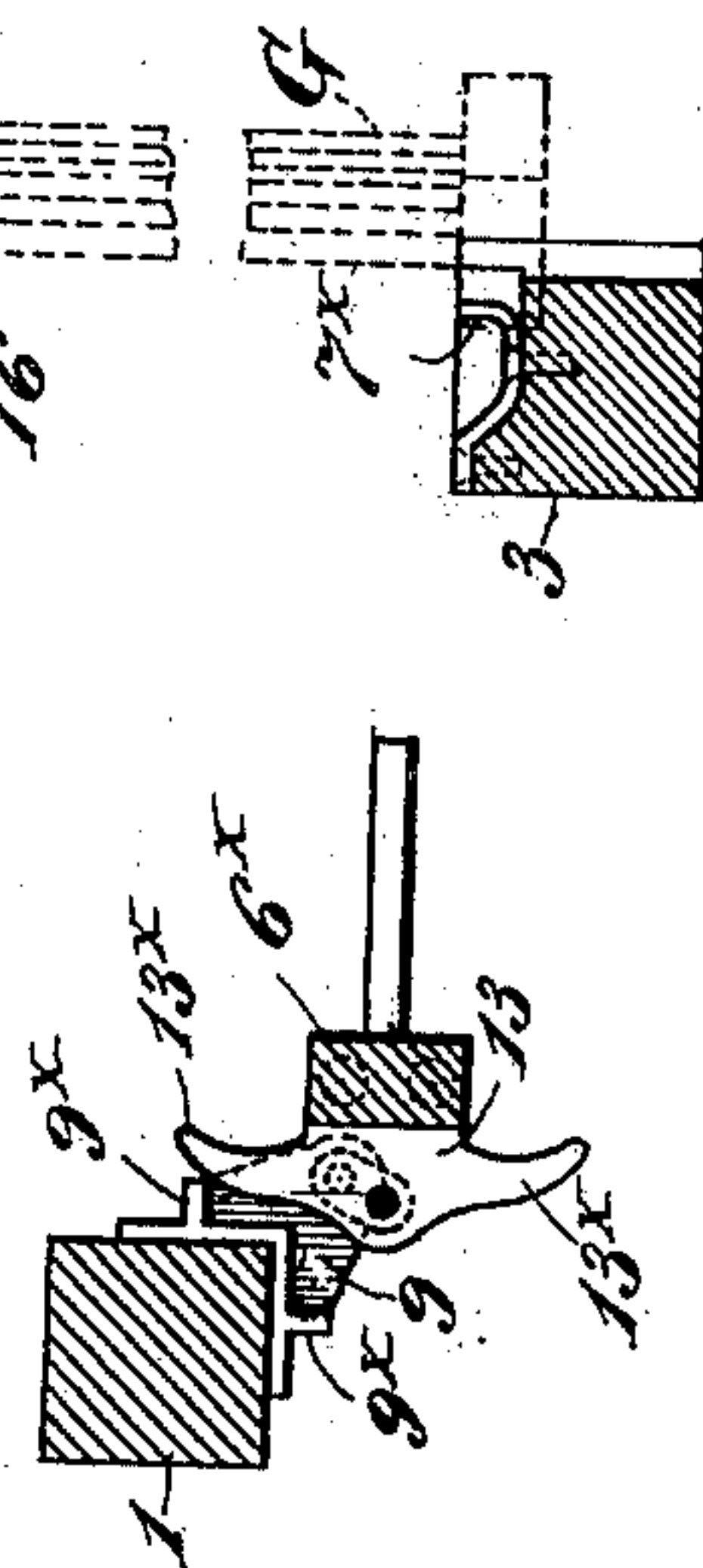


Fig. 4.



INVENTOR

George R. Clarke

BY

Harry Connett
ATTORNEY

No. 697,198.

G. R. CLARKE.
FARM GATE.

Patented Apr. 8, 1902.

(No Model.)

(Application filed Oct. 22, 1901.)

2 Sheets—Sheet 2.

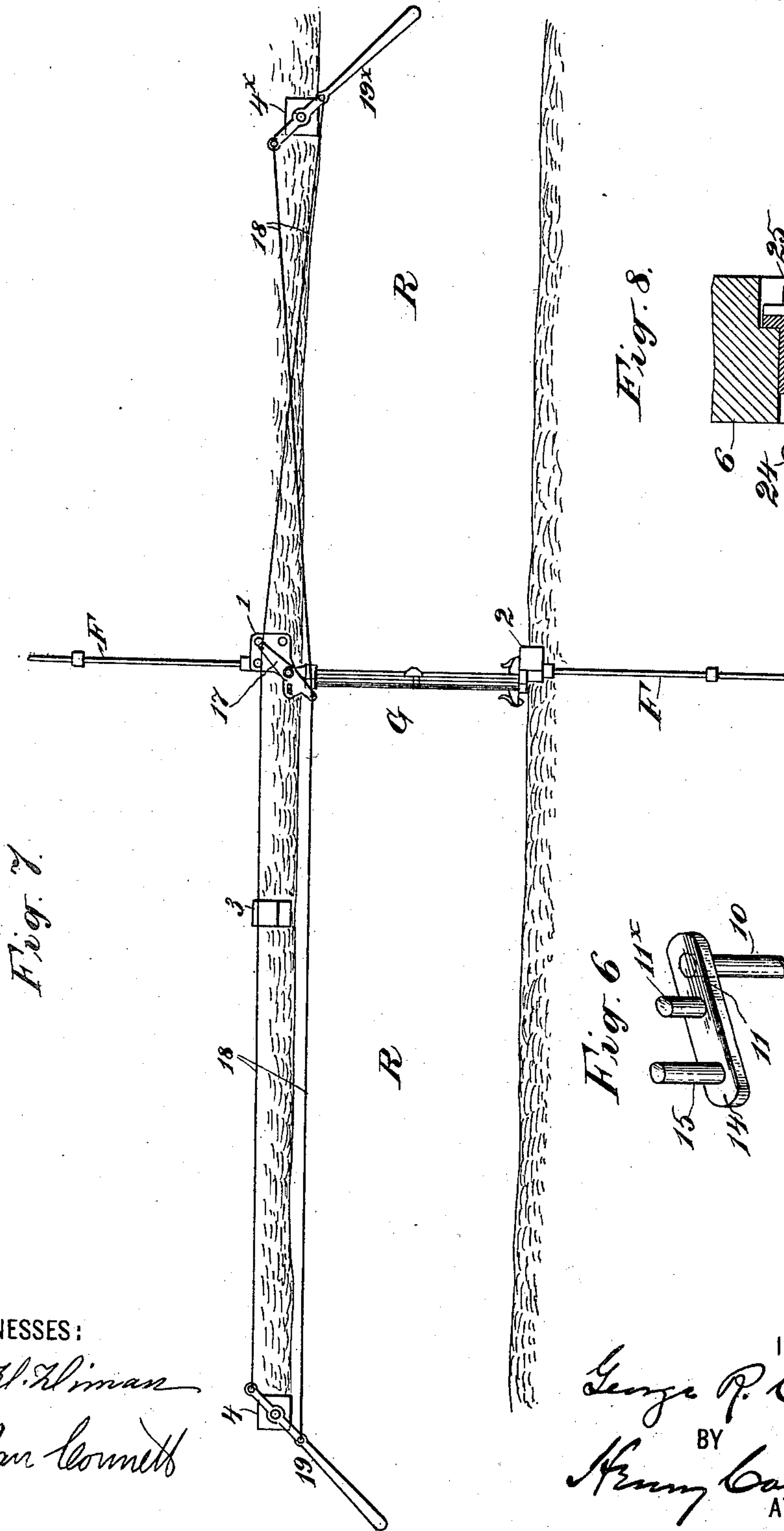


Fig. 7.

Fig. 8.

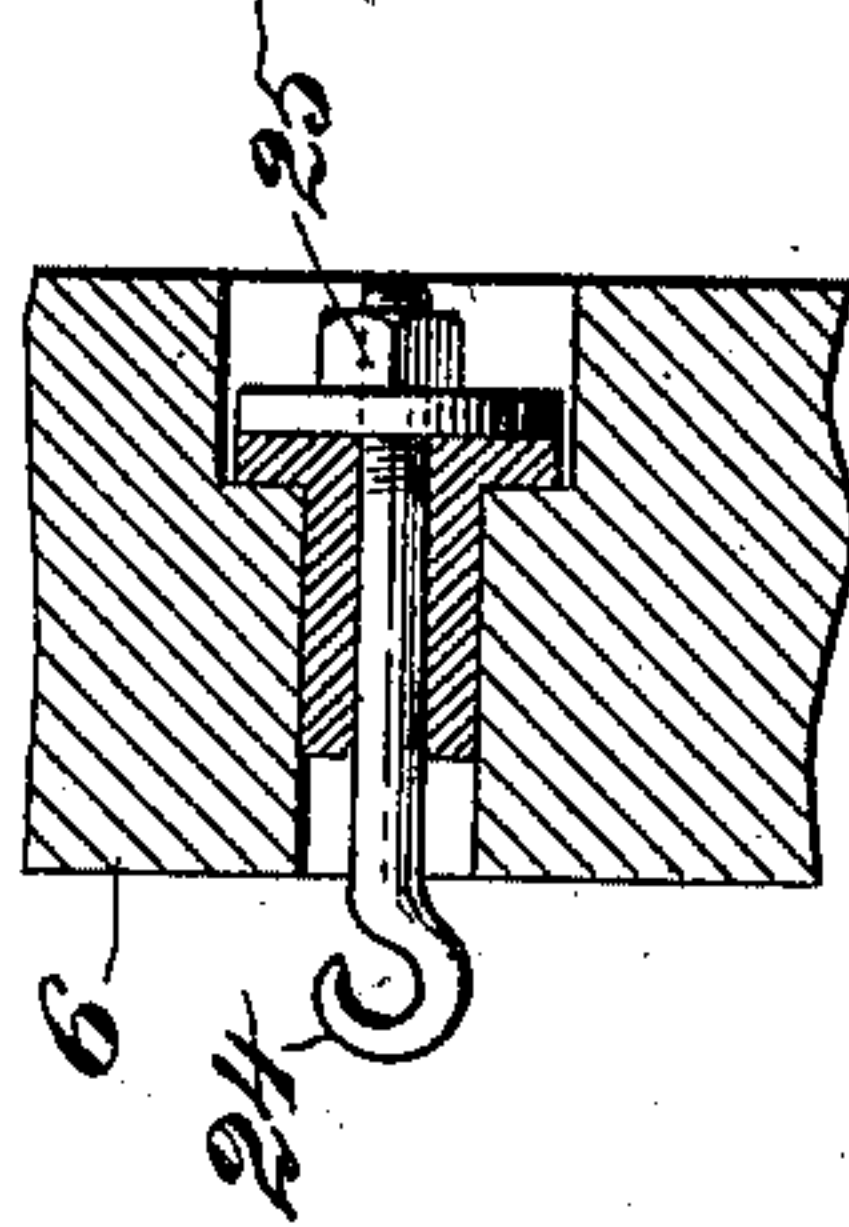
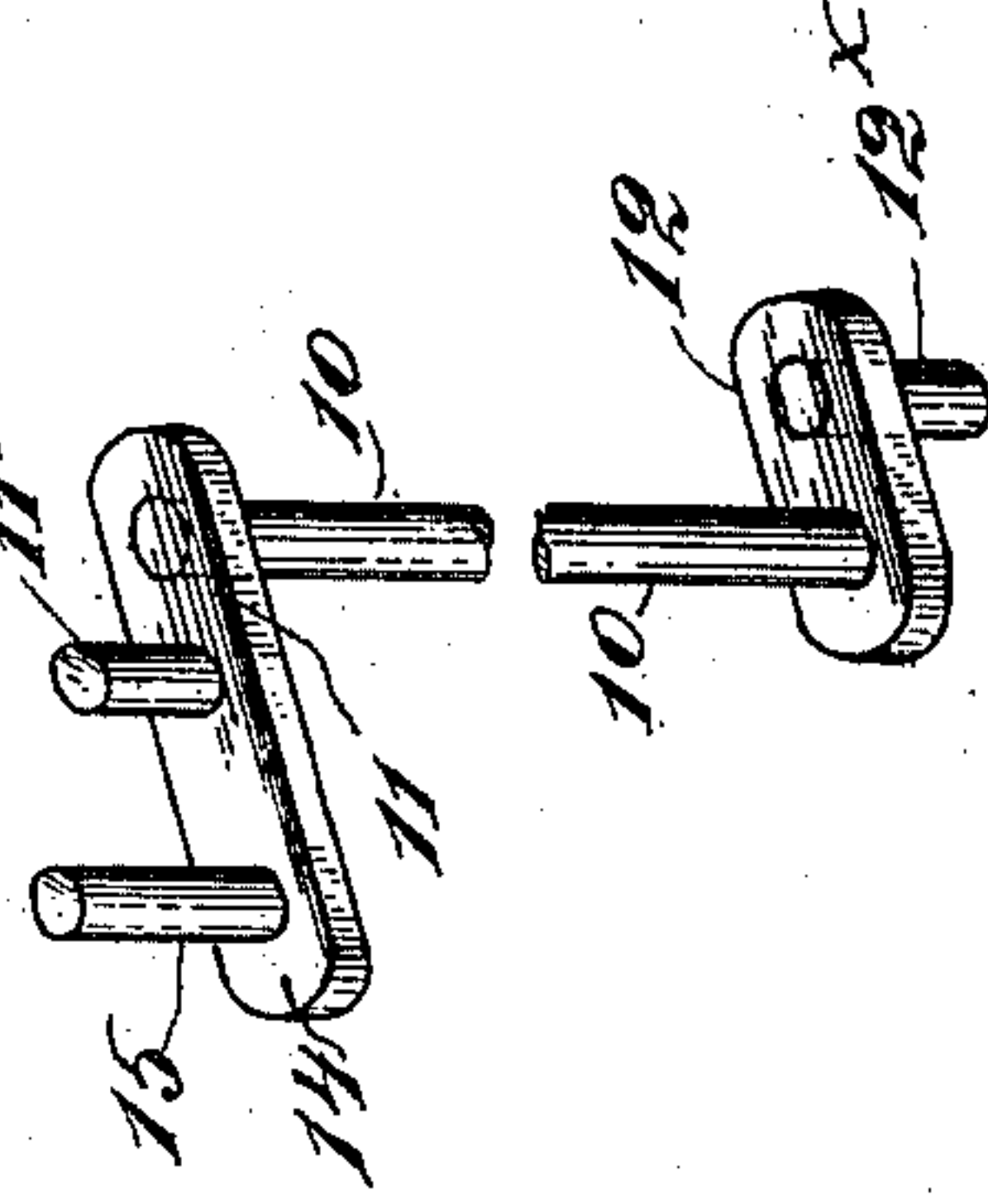


Fig. 6.



WITNESSES:

J. H. H. H. H.
H. Alan Cornett

INVENTOR

George P. Clarke
BY
Henry Cornett
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE R. CLARKE, OF MONTEL, TEXAS.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 697,198, dated April 8, 1902.

Application filed October 22, 1901. Serial No. 79,504. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. CLARKE, a citizen of the United States, residing at Montel, Uvalde county, Texas, have invented certain Improvements in Farm-Gates, of which the following is a specification.

This invention relates in the main to the class of gates commonly used on farm and stock ranches through which roads pass and which gates must be opened and closed by any one riding or driving along the road closed by the gates. It belongs particularly to that species of such gates which are adapted to be opened and closed without dismounting. Ordinarily gates of this class are so hung that when the rider approaches he pulls an operating-lever placed on a post alongside the roadway, and this pull serves to raise the free or latching end of the gate, to unlatch it, and to throw it out of balance or stable equilibrium, when it will swing open by gravity until it stands parallel with the roadway, or substantially so. After passing through the gateway the rider pulls another lever farther along the road, which serves to throw the gate again off its balance and allow it to swing shut and latch. These gates have been commonly, but not always, adapted to swing through one hundred and eighty degrees, or a half-circle, and to swing open away from the rider, from whichever direction he might approach it, and as the latching end of the gate must be lifted considerable difficulty has been experienced in constructing a gate which should be sufficiently light, strong, rigid, and inexpensive, and one which has little tendency to sag.

The object of the present invention is to provide a light, strong, and inexpensive and easily-operated gate, capable of being strained up, and one that is mounted in a simple and comparatively inexpensive manner, so that it will always swing through one and the same quadrant, being operated from a distance, as with other gates of this class.

The novel features of the invention are illustrated in the accompanying drawings, which show an embodiment of the invention.

Figure 1 is an elevation showing the gate closed, and Fig. 2 is a plan of the same. In this view the latching-stile of the gate and

the latching-posts are in horizontal section at the latch to illustrate the latter. Fig. 3 is an elevation of the hinging-post, as seen from the left in Fig. 1, showing the hinging devices as they appear when the gate is closed. Fig. 4 is a horizontal section of the hinging-post and hinging-stile of the gate, showing the lower hinging devices in plan. Fig. 5 is an elevation of one of the posts bearing an operating-lever. Fig. 6 is a detached detail view of the hinging-cranks and crank-rod on a larger scale than the principal views. Fig. 7 is a general plan view on a relatively small scale, showing the gate and its appurtenances installed on a roadway. Fig. 8 is a detail of the gate, showing the draw-bolt.

1 is the hinging-post of the gate.

2 is the closing latching-post opposite across the roadway or gateway from the hinging-post.

On the same side of the roadway with the hinging-post and at the same distance therefrom as the post 2 is the open latching-post 3, and on the same side of the roadway with the two posts 2 and 3 are two like posts 4 and 4^x at suitable distances from the hinging-post, as seen in Fig. 7, to support the respective operating-levers for opening and closing the gate.

G indicates as a whole the gate hinged to the post 1. When closed, a spring-latch 5 on the latching-stile 6 of the gate engages a suitable keeper 7 on the latching-post 2, and when open a latch 5^x on said stile engages a keeper 7^x, Fig. 2, on the open latching-post 3.

The hinging device by which the gate is thrown off its balance or put in unstable equilibrium, so that it will swing by gravity, will now be described.

At the top of the hinging-post 1 is a bearing-bracket 8, and down near the bottom of the said post is secured a bearing-bracket 9.

10 is a hinging crank-rod, at the upper end of which is secured a crank or crank-lever 11, and at the lower end a crank 12. These cranks project laterally from the rod 10 in opposite directions, and the wrist-pins 11^x and 12^x, Fig. 6, thereof turn loosely in bearings in the respective upper and lower brackets 8 and 9 on the hinging-post. The rod 10 turns in bearings in upper and lower gate-

brackets 13 on the hinging-stile 6^x of the gate. Obviously by partially rotating the upper crank 11, the obliquity of the rod 10 will be shifted, the gate will first be unlatched by lifting its latching end until the latch is disengaged from its keeper, and the hinging-rod will then be so turned as to cause the gate to swing either open or shut, as the case may be. To turn the upper crank 11, it is prolonged to provide an arm 14, extending oppositely to the arm of the crank itself from the wrist-bearing in the bracket, and this arm 14 has in it a pin or stud 15, which engages loosely an aperture or slot 16, Fig. 2, in a lever 17, fulcrumed on the top of the hinging-post 1. This lever, when it turns about its fulcrum, swings the crank 11 about the pin 11^x as a center. Wires or cords 18 connect the ends of the lever 17 with operating-levers 19 and 19^x on the respective distant posts 4 and 4^x. Preferably one pair of these wires will be crossed, as seen in Fig. 7, so that at this side the rider or driver approaching the gate may carry the lever with him as he moves toward the gate in order to open the latter. On the lower gate-bracket (see Fig. 4) are cam-like arms 13^x, which when the gate swings full open or shut impinge on shoulders 9^x on the lower hinge-bracket 9 and limit the movement of the gate at this point, preventing it from turning through more than the proper distance.

The gate itself is constructed as will now be described.

The two end stiles 6 and 6^x are connected by horizontal wooden struts 20, which are gained into an intermediate stile 21, and between these struts 20 and parallel therewith are twisted straining-wires 22. Each of these strainers consists of a doubled wire, the bight of which engages a rod 23 in a groove in one of the end stiles and which at the other is secured to a screw-threaded hook-bolt 24, set in the other stile and provided with a nut 25 to draw the bolt and strain the twisted wire. This construction is shown in Fig. 8 and also where the stiles are broken away in Fig. 1. Diagonal braces 26, of twisted wires, are also employed, these extending from attaching-points 27 at the respective extremities of the intermediate stile 21 to the respective corners of the gate, where they are coupled to hook-bolts and nuts 28, as clearly shown in Figs. 1 and 2. This construction provides a light, strong, and stiff gate, and means for taking up slack should the gate sag.

It may be stated, by way of explanation, that in Fig. 7, F designates a fence crossing the roadway R, and the gate G provides a passage-way at the fence. It may also be observed that the hinging-rod 10 is always oblique to the perpendicular.

Any convenient fastening for the ends of the twisted wires in lieu of the rod 23, for example, may be employed. The cam-like arms 13^x may be at either the upper or lower hinge, and they serve to start the gate when

the operating-lever is pulled. They are an important feature of the invention.

It will be noted that the gate does not stand in a vertical plane either when opened or closed, but leans toward the post 2 or 3, as the case may be, and these posts will be set so as to incline from the perpendicular, so that the gate may lie evenly against them.

Having thus described my invention, I claim—

1. In a farm-gate adapted to swing open when its hinging end is lifted, the combination with the gate having apertured hinging-brackets, and the hinging-post having apertured hinging-brackets, of the upper and lower cranks mounted in the respective upper and lower brackets on the hinging-post, the oblique hinging-rod 10 fixed in said cranks at its respective ends, and means for operating the upper crank to open and close the gate.

2. In a farm-gate, the combination with the gate having apertured hinging-brackets on its hinging-stile, the hinging-post 1, the latching-posts 2 and 3, and the hinge-brackets 8 and 9 on the hinging-post, of the upper crank 11, having a bearing in the bracket 8, the lower crank 12, having a bearing in the bracket 9, the oblique rod 10, which extends loosely through the hinging-brackets on the gate and is fixed at its respective ends in the cranks 11 and 12, the arm 14, on the crank 11 and provided with stud 15, and the lever 17 on the post 1 and provided with an aperture 16 engaged by the stud 15.

3. In a farm-gate adapted to swing open when its hinging end is lifted, the combination with the gate having apertured hinging-brackets and cam-like arms 13^x, and the hinging-post, having apertured hinging-brackets and shoulders for the arms 13^x to impinge upon, of the upper and lower cranks mounted in the respective upper and lower brackets on the post, the oblique hinging-rod fixed in said cranks at its respective ends, and means for operating the upper crank to open and close the gate.

4. In a farm-gate adapted to swing open when its hinged end is lifted, the combination with the gate having apertured hinging-brackets, one of which is provided with oppositely-projecting cam-like arms 13^x, and the hinging-post having apertured hinging-brackets, one of which has shoulders 9^x for the arms 13^x to impinge upon, of the upper and lower cranks mounted on the hinging-brackets on the post, the oblique hinging-rod 10, fixed in said cranks at its respective ends, and means for operating the upper crank to open the gate.

In witness whereof I have hereunto signed my name, this 18th day of October, 1901, in the presence of two subscribing witnesses.

GEORGE R. CLARKE.

Witnesses:

WM. A. H. MILLER,
S. TUTTLE.