No. 780,895. PATENTED JAN. 24, 1905.

C. MERCER.

GATE ACTUATING APPARATUS.

APPLICATION FILED SEPT. 19, 1904.

Fig. 1.

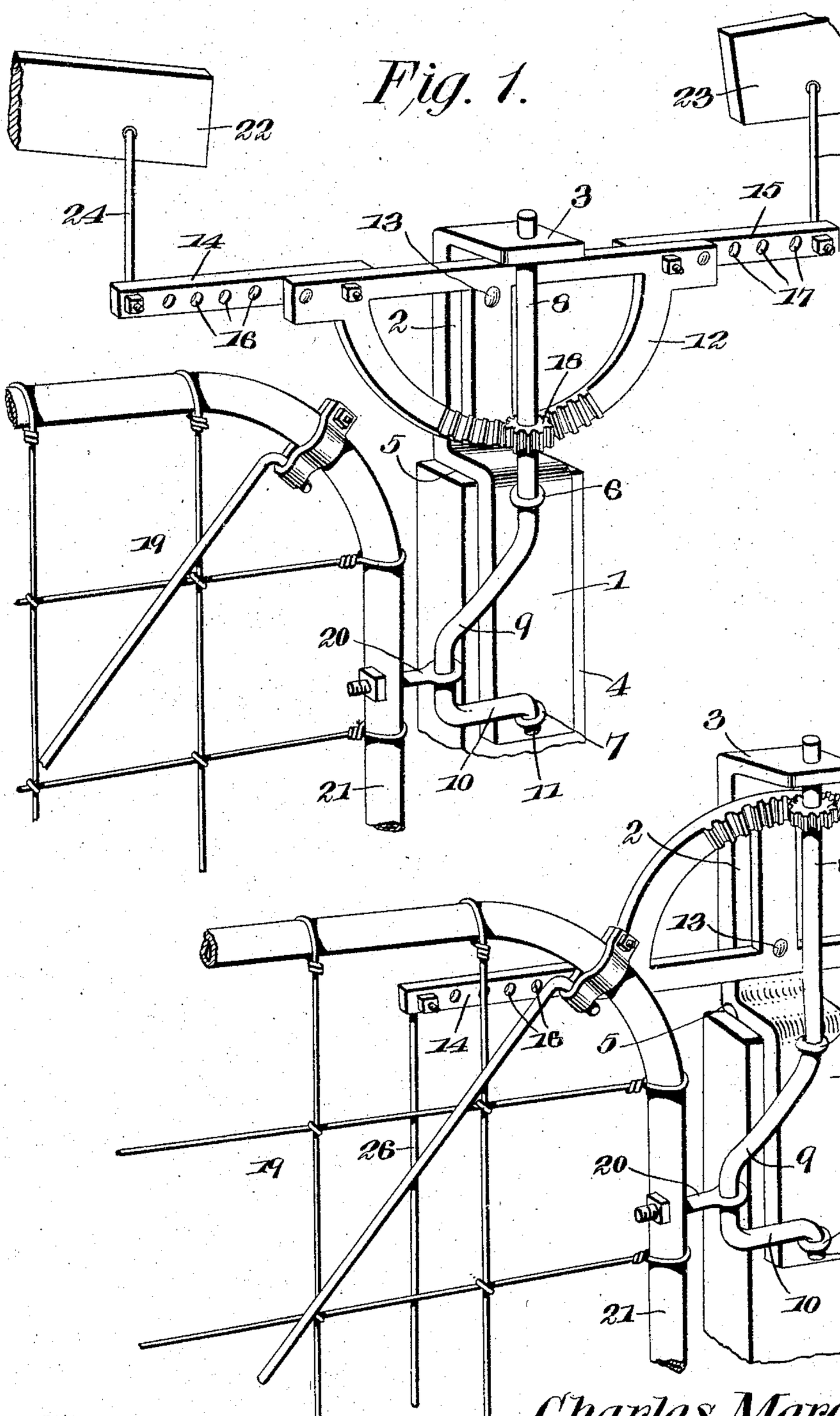

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES MERCER, OF KOKOMO, INDIANA.

GATE-ACTUATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 780,895, dated January 24, 1905.

Application filed September 19, 1904. Serial No. 225,013.

To all whom it may concern:

Be it known that I, CHARLES MERCER, a citizen of the United States, residing at Kokomo, in the county of Howard and State of Indiana, have invented a new and useful Gate-Actuating Apparatus, of which the following is a specification.

This invention relates to gates, and has for its object to provide novel means for actuating farm-gates and other large gates and to arrange for controlling the actuating means without requiring that the operator dismount. It is furthermore designed to always open the gate away from the traveler and also to assemble the elements of the actuating means in such a manner as to impart a positive movement to the gate and in this connection to dispense with cables and similar loose connections, which are liable to become frozen and otherwise rendered ineffectual by exposure to the effects of the weather.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of the gate-actuating apparatus of the present invention arranged to be controlled by overhead levers and showing a portion of the gate in open position. Fig. 2 is a similar view showing the apparatus arranged to be controlled by treadles.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

The apparatus of the present invention is complete in itself independently of the gate and includes a support in the nature of an upright metallic frame-bar 1, which has its upper portion offset rearwardly, as at 2, for a suitable distance and is provided at its upper extremity with a forwardly-directed transverse head or flange 3. This frame-bar is applied to the front of a hinge-post 4, so as to have the shoulder 5 at the bottom of the offset portion 2 rest upon the top of the post, there being eyebolts 6 and 7 piercing the lower portion of the frame-bar and the post, so as support the frame-bar in position, the eyes of the bolts lying at the front of the frame-bar. In front of the frame-bar is an upright rock-shaft 8, having its upper end piercing the head or flange 3 as an upper bearing, with its lower end portion offset laterally to form a lower crank-terminal 9. The straight portion of the shaft immediately above the crank portion 9 is received within the eyebolt 6 as a bearing, while the lower end of the shaft is provided with a bracket-arm 10, extending rearwardly therefrom and having a pendent pintle or projection 11 at the rear end of the arm, said pintle or projection being received in the eyebolt 7 as a step-bearing.

To rotate the shaft, there is a toothed segment 12, which is received between the offset portion 2 of the frame-bar and the rock-shaft and is pivotally supported upon the frame-bar, as at 13, so as to rock in a vertical plane. Arms 14 and 15 project in opposite directions from the segment and radiate from the pivotal support thereof, said arms being provided with longitudinal series of perforations 16 and 17. A pinion 18 is fixed upon the shaft and meshes with the segment, so as to rotate when the segment is rocked upon its pivotal support.

Connection is had between the gate 19 and the crank portion 9 of the rock-shaft by means of an eyebolt 20, which pierces the adjacent end bar 21 of the gate and receives the crank portion 9 of the shaft, so that when the latter is swung in either direction the gate will be carried therewith.

Thus far the description applies to both forms of the apparatus, and the differences between the two will now be set forth.

In Fig. 1 the apparatus has been arranged for actuation by overhead levers, and therefore the segment 12 is inverted or hung from its pivotal support, and suitable actuating-levers 22 and 23 are pivotally supported at opposite sides of the gate and connected to the

respective arms 14 and 15 by means of the links 24 and 25, which are capable of engagement with any of the perforations of the arms, whereupon by actuation of either of the levers the gate may be opened and closed. It will here be noted that when the gate is closed and the outer free end of either lever is pulled downwardly the adjacent end of the segment will be rocked upwardly, thereby actuating the rock-shaft 8 so as to swing the gate away from the traveler.

In the arrangement of the apparatus as shown in Fig. 2 the segment stands in an upright position, or, in other words, rises from its pivotal support, and links 26 and 27 depend from the arms for connection with suitable treadles (not shown) located at suitable distances remote from the gate, whereby upon driving a vehicle upon either of the treadles the actuating apparatus will be operated to open or close the gate.

From the foregoing description it will be apparent that the apparatus of the present invention is entirely complete in itself and may be set up and connected to any ordinary gate without altering or changing the latter in any manner whatsoever. Moreover, by dispensing with cables and similar loose connections manipulation of the levers or treadles always imparts a positive movement to the gate. By reason of such positive movement any accumulations of ice, rust, or the like may be quickly broken and the gate actuated in a very simple and expeditious manner.

Having fully described the invention, what is claimed is—

A gate-actuating apparatus comprising a bracket having an upper rearwardly-offset portion provided at its upper end with a laterally-directed head, eyebolts piercing the lower portion of the bracket for connection with a post, an upright rock-shaft having its upper portion piercing the head as a bearing and also rotatable within the upper eyebolt, the lower portion of the shaft being provided with a crank terminally supported in the lower eyebolt, a link engaged with the crank portion of the shaft for connection with a gate, a toothed segment pivotally supported upon the offset portion of the bracket between the latter and the shaft, and a pinion carried by the shaft and in mesh with the segment.

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

CHARLES MERCER.

Witnesses:
JOHN HEFLIN,
HUGH SHORT.