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PATENTED AUG. 6, 1907.

F. P. GUTELIUS.
GATE.

APPLICATION FILED MAR. 7, 1907.

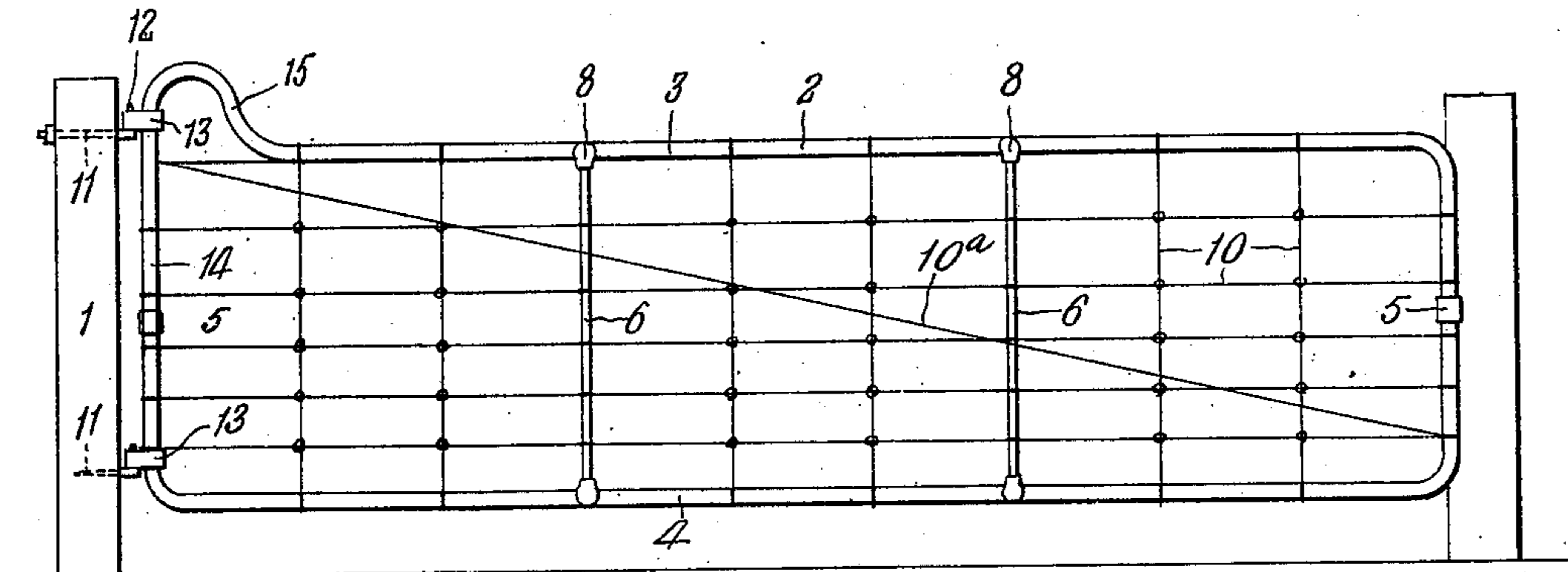


FIG. 1.

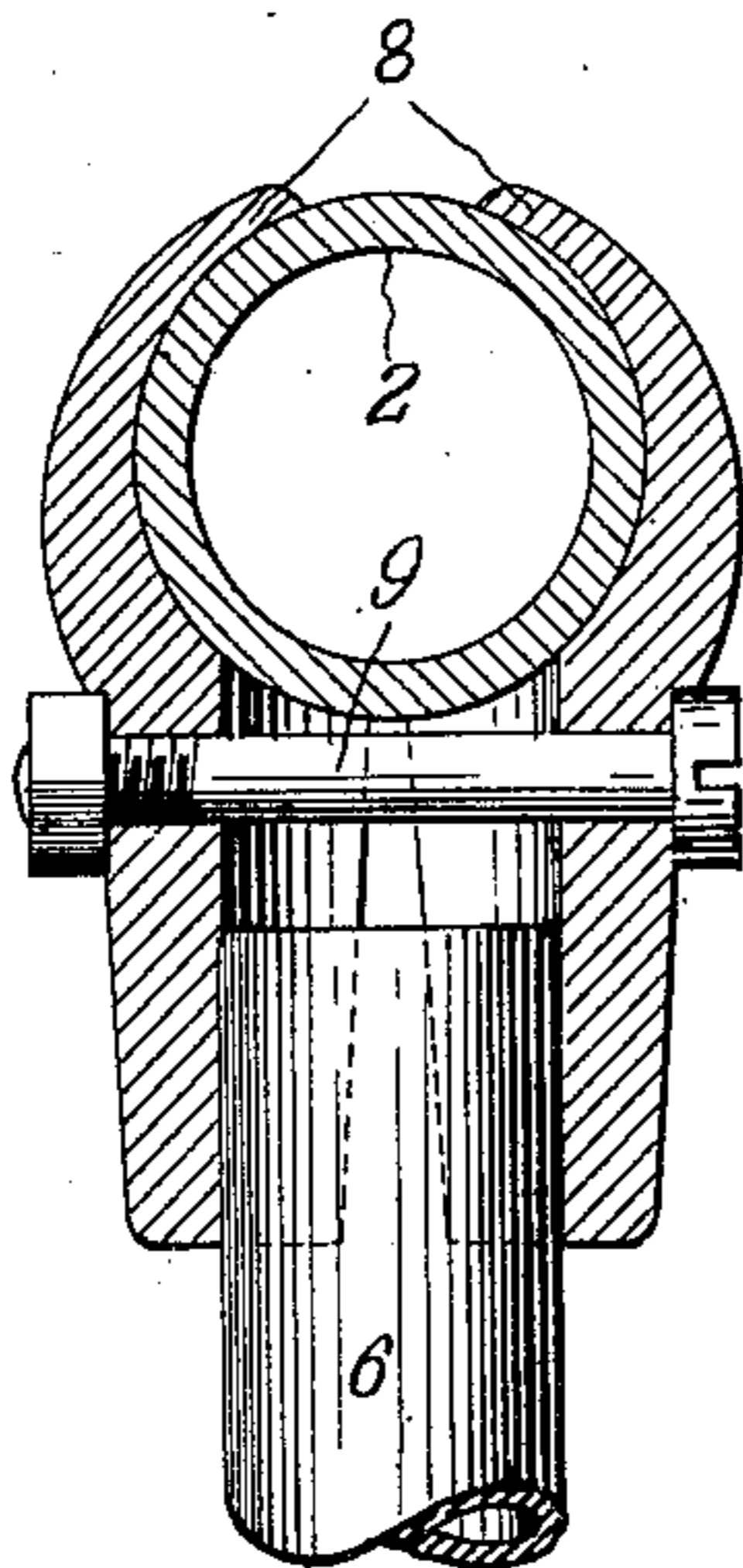


FIG. 2.

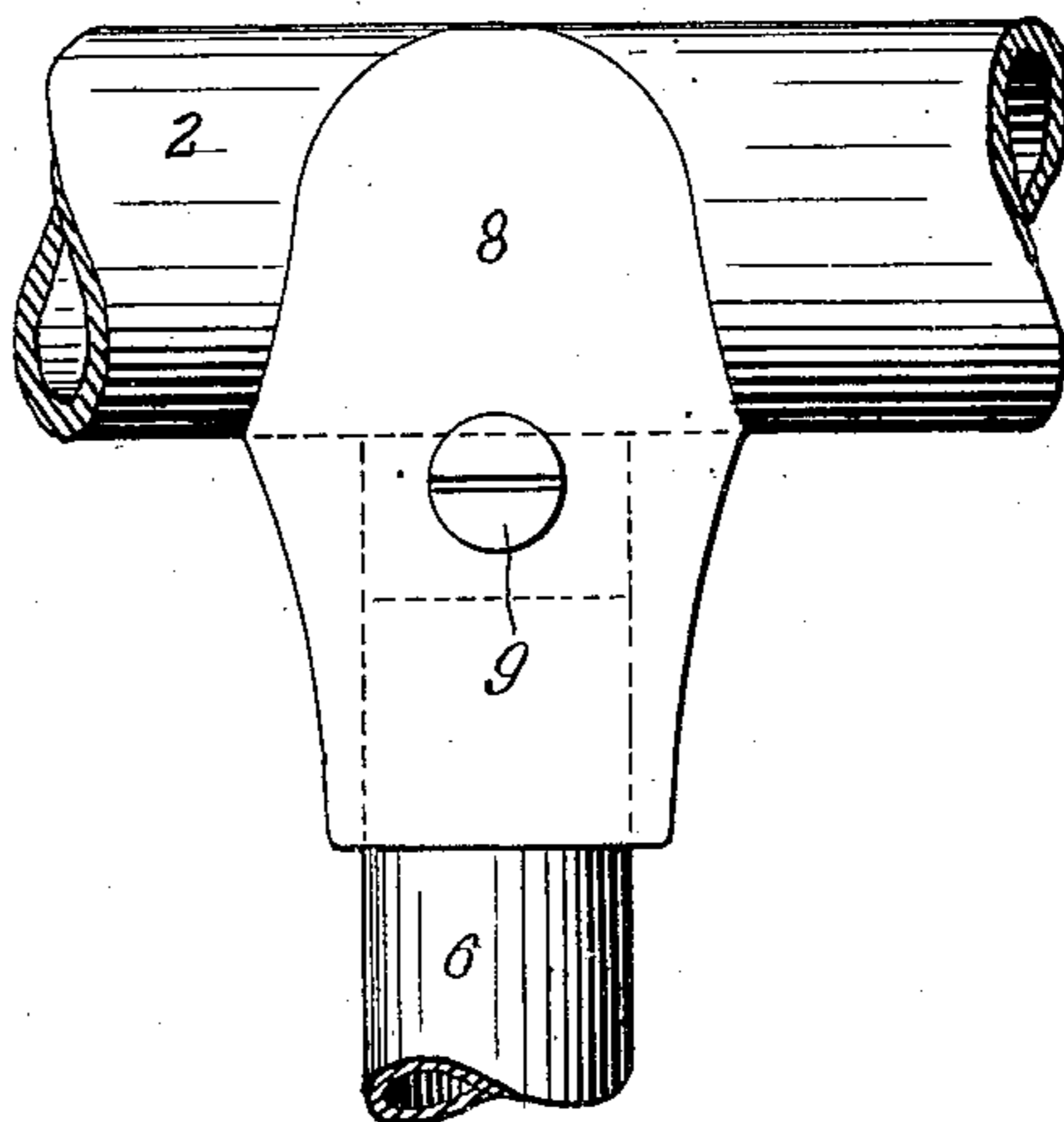


FIG. 3.

WITNESSES

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GATE.

No. 862,246.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK P. GUTELIUS, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Gates, of which the following is a full, clear, and exact description.

My invention relates to gates and is particularly designed to improve the construction of gates of the steel tubular type. These gates are attractive in appearance and inexpensive to manufacture but have not heretofore been found satisfactory for railway fencing and similar work owing to the tendency of the gate to sag at its outer end. The required length of gate for most purposes being from fourteen to sixteen feet, and the height from four to five feet, there is not sufficient distance between the hinges to support the permanent strain due to weight. Consequently, ordinary rectangular tubular gates have been discarded in many instances for the above reason.

The object of this invention is to so construct a gate that it will be considerably strengthened at the point of greatest strain, and further to increase the distance between its hinges without adding materially to its cost or detracting from its appearance.

In the drawings which illustrate my invention:— Figure 1 is a side elevation of a tubular gate showing my improved construction. Fig. 2 is a sectional view of the grips for attaching the strengthening ribs to the tubular frame. Fig. 3 is a side elevation of the device shown in Fig. 2.

Referring to the drawings, 1 designates a hinge post upon which the gate is pivotally mounted. The gate consists of a tubular frame 2, which is bent into approximately rectangular form, the upper and lower frame members 3 and 4 being connected rigidly by means of the ordinary threaded couplings 5, as shown in Fig. 1. The tubular frame is strengthened by means of the vertical ribs 6, preferably two in number, which are fastened to the frame 2 by means of the gripping members 8, as shown in Fig. 2. The grips 8 are curved at their upper ends to embrace the tubes 2, and are adapted at their lower ends to surround the strengthening ribs and are held rigidly in position by means of the bolt 9. The gate is further strengthened by means of the vertical and horizontal stay wires 10 and the diagonal wire 10^a, all of which are fastened in

the usual manner. The strengthening ribs 6 are preferably formed of steel tubing of smaller diameter than that of the gate frame.

The post 1 is provided with hinge bolts or pins 11 which are driven or screwed into, or otherwise secured, to the post. The hinge bolts 11 are provided at their outer extremities with upwardly turned portions 12 upon which the hinge straps 13, which are secured to the frame, are pivotally mounted or journaled in the usual manner. The height of the gate is made to correspond with the height of the fence adjacent and thus far the construction is not essentially different from that of other tubular gates.

The novel feature of my invention resides in the means for increasing the height of the vertical portion of the frame adjacent the hinge post in order that the distance between the hinge supports may be increased, and further in strengthening the frame adjacent the upper hinge where the strain is greatest. To this end the vertical portion of the frame adjacent the hinge post, designated 14, is extended upwardly a suitable distance above the top rail and is then bent outwardly and downwardly in a reverse curve, as designated by 15, before being continued horizontally to form the top rail of the gate. By this means the top hinge may be raised a considerable distance and its strain consequently diminished, while the strengthening portion 15 will assist materially in carrying the strain due to the weight of the gate.

The advantages of this construction will be apparent.

Having thus described my invention, what I claim is:—

1. In a gate, a tubular frame having the vertical portion of said frame adjacent the hinge post extended upwardly beyond the top rail and then bent downwardly in a reverse curve and continued horizontally to form the top rail, substantially as specified.

2. A gate comprising a substantially rectangular frame provided with vertical and horizontal stays, and having the vertical portion of said frame adjacent the hinge post extended upwardly beyond the top rail and then bent downwardly in a reverse curve and continued horizontally to form the top rail, substantially as specified.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FREDERICK P. GUTELIUS.

Witnesses:

C. W. TAYLOR,
C. GÖRMAN.