(No Model.)

W. P. ELLIOTT.

GATE.

No. 390,074. Patented Sept. 25, 1888.

FIG. 1.

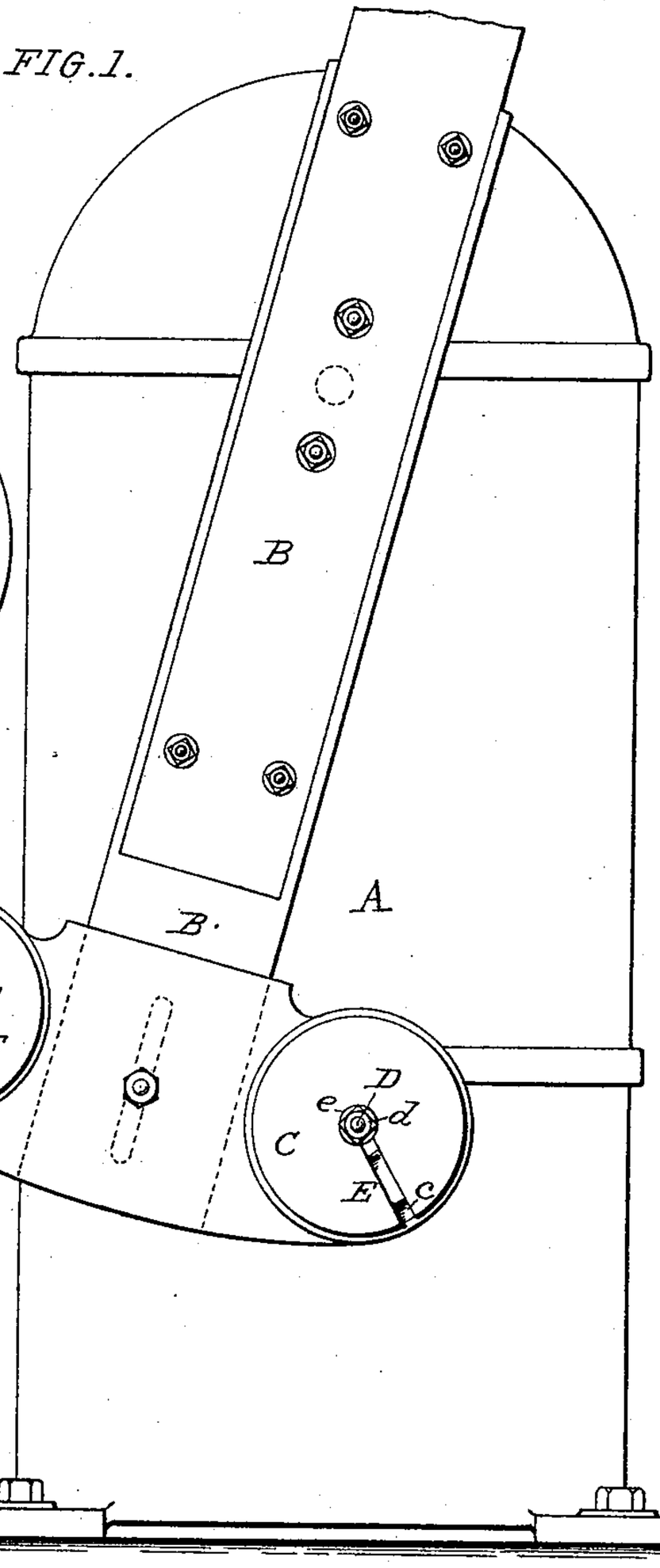


FIG. 2.

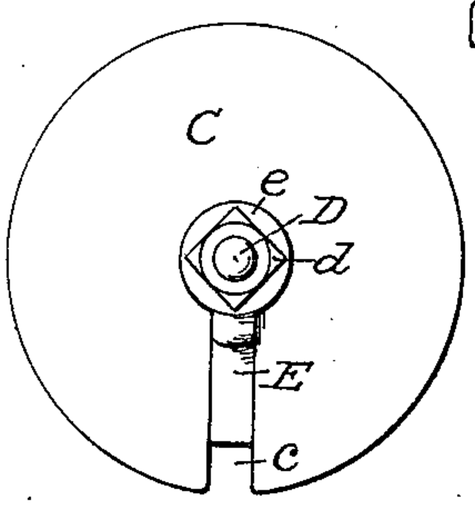
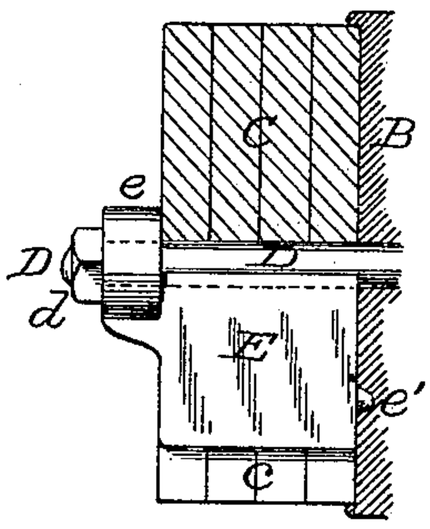


FIG. 3.



ATTEST:

C. Marchand

Geo. H. Arthur

INVENTOR:

William P. Elliott

by Robert Burns

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM P. ELLIOTT, OF CHICAGO, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 390,074, dated September 25, 1888.

Application filed July 2, 1888. Serial No. 278,838. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. ELLIOTT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Gates; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates more particularly to the class of swinging gates for railway-crossings forming the subject-matter of Letters Patent No. 368,522, issued to me August 16, 1887; and the present improvement has for its object to provide a simple and effective means for the attachment of the counterpoise-weights to the shorter end of the swinging gate-arm, embodying the features of ease and simplicity in the application of the weights in attaining a proper counter-balance, as well as a strong and inflexible support for such weights. I attain such object by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a gate embodying my present improvement; Fig. 2, an enlarged detail side view of the counterpoise-weight and its supporting means; and Fig. 3, a view at right angles to Fig. 2, the weights being shown in section.

Similar letters of reference indicate like parts in the several views.

Referring to the drawings, A represents the post or standard, to which is pivoted the swinging gate-arm B, having attached at its rear or inferior end the counterpoise-weights C, to counterbalance the weight of the front or superior end of such arm. These weights are usually arranged in duplicate, as shown, and made in the form of a series of disks, so that a greater or less number may be employed in accordance with the amount of weight required to counterbalance the weight of the superior end of the gate-arm B. Heretofore these weights have been formed with an axial orifice, so that they could be strung upon a stud-bolt projecting from the side of the arm B, and were held in place by a confining-nut screwed upon the outer screw-threaded end of such bolt. The objections to such a construction are that the operation of placing additional weights in place or the removal of the same is slow and laborious, the use of a wrench being required in removing and applying the confining-nut. At the same time the stud-bolts are liable to sag down from the excessive weight that they carry.

To obviate such defective construction is the purpose of the present improvement, which consists in constructing the laterally-projecting weight-supporting rod or bar D with a supporting web or bracket, E, and in forming the weights C with radial slots *c*, that extend from their margin to the center, so that the weights can be readily placed over the rod or bar D, with the slotted portion *c* straddling the web E, as shown. With this construction the web E prevents in a very perfect manner any tendency of the bar D to sagging in use.

The rod or bar D and the web or bracket E may be formed in one piece; but it is preferred to form them separate, as shown, with the rod D passing through an eye in the head *e* at the outer end of the web or bracket, and a nut, *d*, for securing the parts in position at the side of the swinging arm B. In either case the head *e* acts as a stop to prevent the lateral disengagement of the weights from their position on the supporting rod or bar D.

e' is a lug or teat on the inner side of the bracket or web E, adapted to enter a properly-positioned recess in the face of the gate-arm, to insure the proper angular position of the bracket E upon such arm.

An essential feature in the present invention consists in placing the bracket D E in a plane oblique to the center line of the gate-arm, so that in the quadrant movement of such arm the bracket will not reach a plane in which the weights will be liable to drop off by gravity or be jarred off by the starting and stopping of the gate-arm.

The preferred angle or obliquity of the bracket D E will be forty-five degrees from the center line of the swinging gate-arm, as represented in Fig. 1 of the drawings. However, any other angle or obliquity between a plane parallel with the center line of the gate-arm and a plane at right angles thereto that the judgment of the constructor may suggest can be employed without departing from the spirit of my invention.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the post A and swinging gate-arm B, of a laterally-projecting bracket, D E, arranged obliquely to the center line of the gate-arm, and counterpoise-weight C, having radial slot *c*, substantially as set forth.

2. The combination, with the post A, swinging gate-arm B, and counterpoise-weight C, having radial slot *c*, of the laterally-projecting bracket D E, arranged obliquely to the center line of the gate-arm and having a confining head or eye, *e*, at its outer end, substantially as set forth.

3. The combination, with the post A, swinging gate-arm B, and counterpoise-weight C, having radial slot *c*, of the laterally-projecting bracket D E, arranged obliquely to the center line of the gate-arm and having a confining head or eye, *e*, at its outer end, and a teat, *e'*, at its inner end, substantially as set forth.

In testimony whereof witness my hand this 28th day of June, 1888.

WILLIAM P. ELLIOTT.

In presence of—
CHAS. T. MASON,
ROBERT BURNS.