

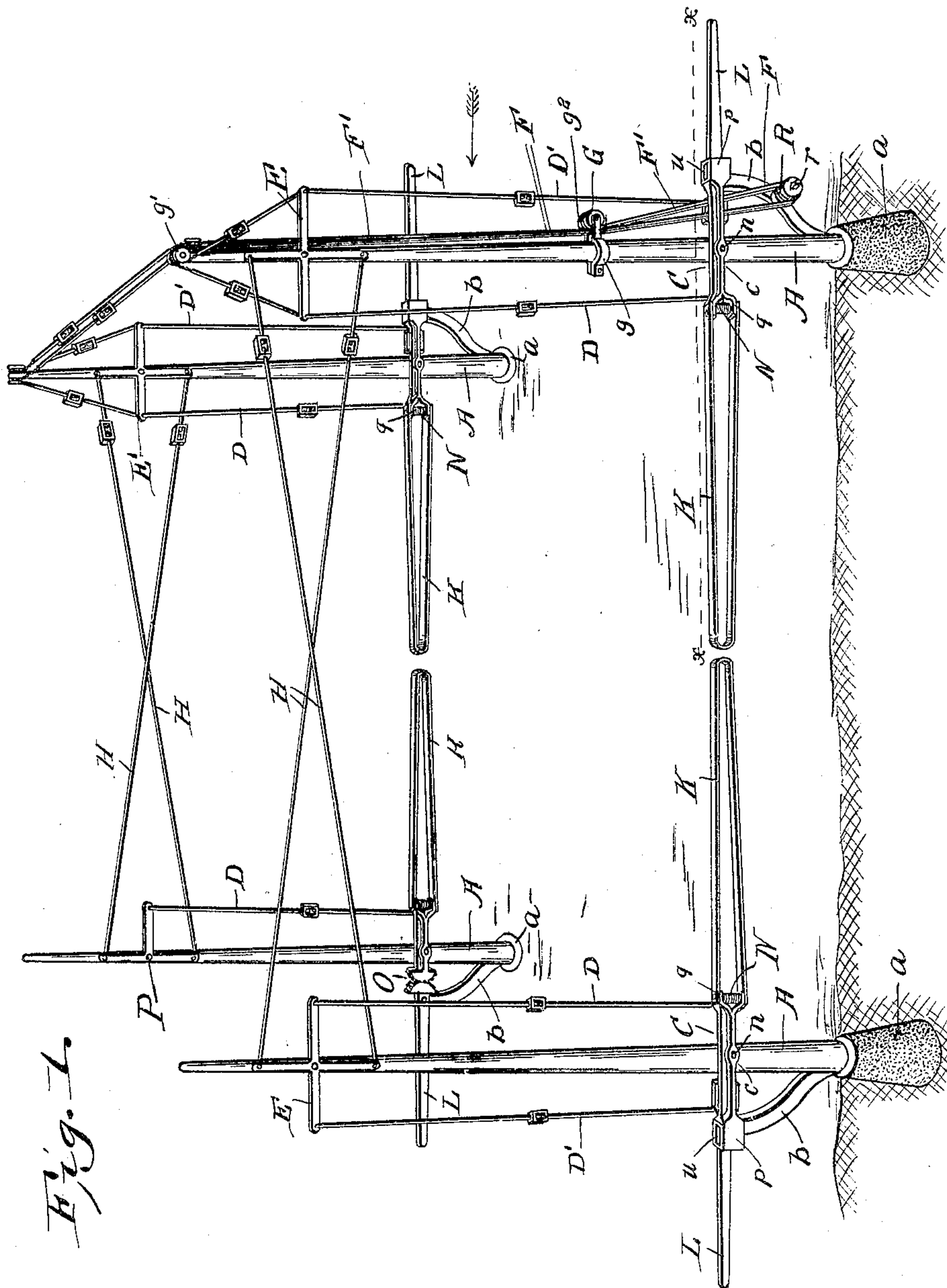
No. 822,065.

PATENTED MAY 29, 1906.

W. W. MOORE.
RAILROAD GATE.

APPLICATION FILED JUNE 1, 1905.

2 SHEETS--SHEET 1.



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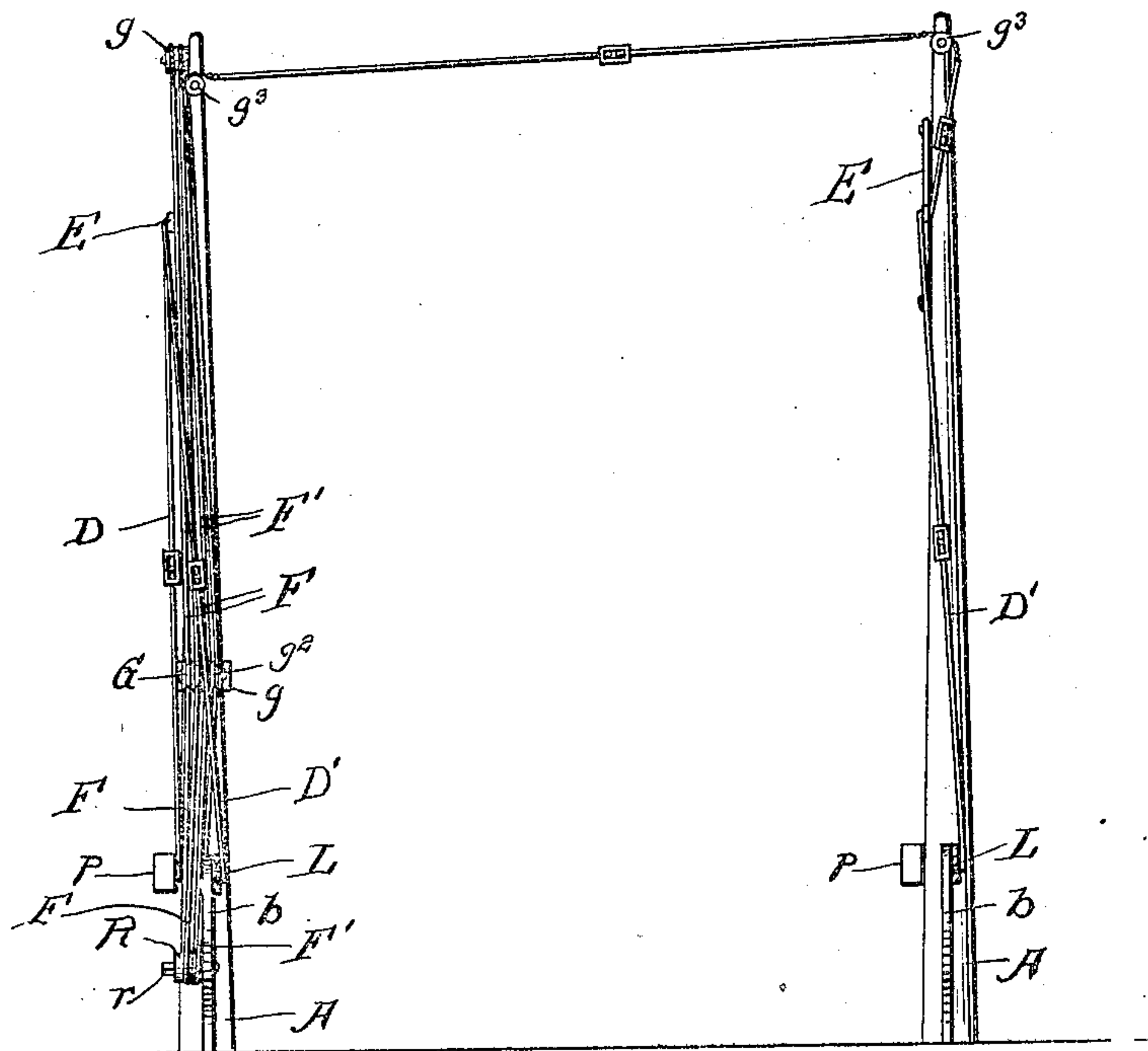
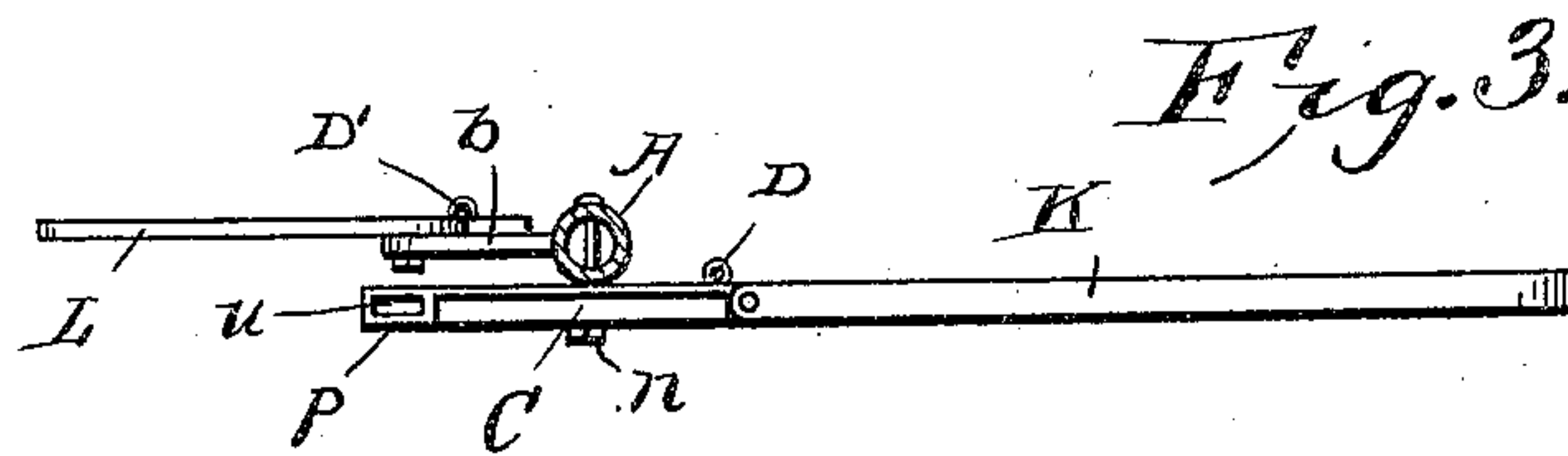
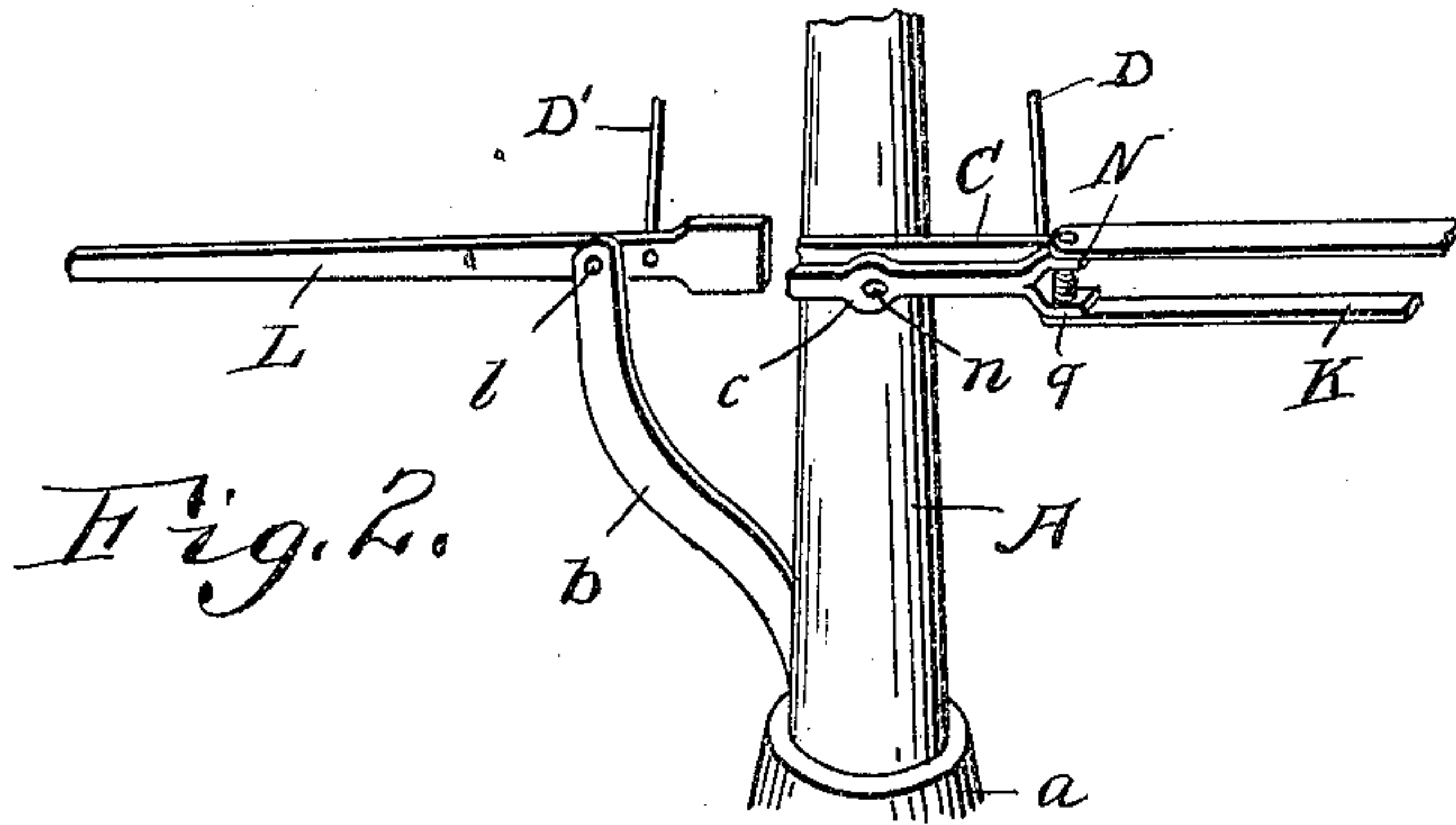


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM WALTER MOORE, OF LANSING, MICHIGAN.

RAILROAD-GATE.

No. 822,065.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed June 1, 1905. Serial No. 263,317.

To all whom it may concern:

Be it known that I, WILLIAM WALTER MOORE, a citizen of the United States, residing and having my post-office address at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Railroad-Gates, of which the following is a specification.

This invention relates to improvements in gates to be employed at the intersection of roads or streets, and more particularly at such points where one or both of the intersecting roads or streets are utilized by a railway.

The improvements reside in the provision of operating instrumentalities for the gates arranged above the surface of the ground, whereby they are constantly observable and readily adjusted and repaired should occasion therefor arise, thereby overcoming the disadvantages and relative unreliability of such structures as employ underground mechanisms.

The invention also embraces a series of supports for swinging gate members, operating means therefor and means operatively associated therewith, whereby the gate members are mutually balanced; and it further comprehends means for mounting the gate members, whereby under normal conditions they will occupy the position of and serve as a barrier crosswise of the roadway, but when subjected to abnormal force will yield sufficiently to preserve the parts against breakage or disarrangement.

The foregoing, as well as other novel details in the construction and arrangement of the several parts of the invention, will be apparent from the detailed description hereinafter when read in connection with the accompanying drawings, forming part hereof, and wherein a convenient embodiment of the invention is illustrated.

In the drawings, Figure 1 is a perspective of two pairs of gates and the operating means therefor, arranged at the intersection of roadways, the view being taken from a position above it and looking downwardly thereupon. Fig. 2 is a somewhat enlarged perspective of the lower portion of one of the columns or masts, parts being broken away. Fig. 3 is a view on line xx of Fig. 1; and Fig. 4 is an elevation looking in the direction of the arrow, Fig. 1.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views,

A represents towers or masts, which are preferably hollow castings or piping; mounted with their lower ends extending below the ground surface and each embedded in a concrete foundation a . The towers are arranged in pairs on opposite sides of the roadway, as clearly shown in Fig. 1, and have laterally-projecting relatively short arms b , which serve as supports for the gate members C , now to be defined. Each gate is composed of two parts, the inner being shown at c , pivoted intermediate its ends, as at n , to the masts A , and having at its outer end p a cavity u for the reception of balancing material or weights, said cavity being indicated at u . The inner end of this member c is forked, as at q , to constitute superposed ears for the reception of the inner extremity of the member K or gate proper, the two members being connected through the medium of a pintle-and-spring connection N , which normally acts to maintain the member K in a position of substantially true alinement with the member c , but which when abnormal force is applied to the member K , as may arise in the case of runaway animals and vehicles, will yield against the tension of the spring, and thereby preserve the parts against breakage or disarrangement, as is obvious.

Near the tops of the towers are pivotally mounted four-armed levers E , the horizontal arms of which are connected by links D to the gate members c , and by links D' to gates L , adapted to extend across the sidewalk or the like. The alternate extremities of the four-armed levers are also connected by links H , the effect of crossing these links being to reverse the direction of motion of the four-armed levers when revolved on a pivot. A winch R , to which motion is given by its crank r or other means, has cords F passing around it and around a pulley G , carried by a removable and adjustable band or bracket g , mounted on the tower A located nearest thereto, and thence over pulleys g' , similarly mounted at a higher point on the tower, whence the extremities are carried down and connected to the horizontal extremities of the cross-arms E on said tower. When four gates are used, a second system of cords F' passes around the same winch, thence around other pulleys g^2 on the same tower A , thence to the top of the tower over pulleys g^3 , from whence they cross the roadway to corresponding pulleys g^4 at the top of the opposite tower at the opposite side of the track or roadway, the terminals in

this instance being connected to the horizontal four-armed levers E on said last-mentioned tower. Those operating portions of the cords between the various pulleys may be
5 metal links or rods, as shown, the ends of which are united by flexible chains running around said pulleys.

The gates L are pivoted intermediate their ends, as at *l*, to the ends of the arms *b*, and in
10 some instances may have operative connection with the adjoining gates through the medium of segments O, so as to be dependent on each other in their movements, which arrangement also enables me to dispense with
15 one of the connecting-links D, as indicated at P.

All of the link connections have turn-buckles to facilitate their adjustment.

When the winch R is caused to revolve, it
20 draws upon the cord on one side of the barrel and correspondingly relaxes those on the opposite side. The cords, passing over their respective pulleys, draw upon the corresponding extremities of the four-armed levers E
25 and raise those extremities and by means of the links *d* raise the gates. When the direction of motion of the winch is reversed, the opposite cords are drawn upon and the gates are lowered.

30 Although it is unnecessary to illustrate the same, I may add that the winch may be mounted in any ordinary switch tower or station or other housing, or it may be mounted directly upon the base of one of the towers, as
35 shown.

Changes in the construction and arrangement of the several parts may be made without departing from the spirit of the invention, and it is also to be understood that the
40 invention is susceptible of still other embodiments than those disclosed herein.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

45 1. In combination, vertical towers, gates pivotally mounted on said towers and near the base thereof, rotatable members pivotally mounted on said towers and near the top thereof, links connecting opposite extremi-
50 ties of said rotatable members with said gates, and means for revolving said members on their mountings.

2. In combination with towers, gates pivotally mounted near the base of said towers,
55 four-armed levers pivotally mounted near the top of said towers, links connecting two opposite arms of said levers with said gates and

the other arms of said levers with the corresponding arms of the levers on the opposite towers, pulleys at the top of one or more of
60 said towers, chains passing over said pulleys and connecting with the opposite arms of one of the before-mentioned four-armed levers and means for producing a tractional tension in said cords.

3. In combination with towers, gates pivotally mounted near the base of said towers, rotatable members pivotally mounted near the top of said towers, links connecting two
70 opposite extremities of said members with said gates and means for revolving said members on their pivoted mountings.

4. In combination with a pair of oppositely-disposed gates, rotatable members, connection between said gates and opposite ex-
75 tremities of said rotatable members and means for actuating said rotatable members for operating the gates equally and simultaneously.

5. In combination with towers, gates pivotally mounted near the base of said towers,
80 four-armed levers pivotally mounted near the top of said towers, links connecting two opposite arms of said levers with said gates, cross connections between the other arms of said
85 levers and means for revolving said four-armed levers

6. In combination with towers, gates pivotally mounted near the base of said towers, levers pivotally mounted near the top of
90 said towers, pulleys at the top of said towers, flexible instrumentalities passing over said pulleys and connecting with the horizontal extremities of said levers, links connecting said extremities with said gates, and means
95 for producing tractional tension in said flexible instrumentalities.

7. In combination with towers, gates pivotally mounted near the base of said towers, guides mounted near the top of one or more
100 of said towers, rotatable members pivotally mounted below said guides, flexible connections passing over said guides and connecting with two opposite extremities of said rotatable members and levers connecting the other
105 two extremities of said rotatable members with the corresponding extremities of the rotatable member of the opposite tower.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM WALTER MOORE.

Witnesses:

HARRIET L. LAWRENCE,
BERTHA I. CHASE.