No. 847,932. PATENTED MAR. 19, 1907.

J. H. GAY.

GATE VALVE.

APPLICATION FILED JAN. 25, 1906.

2 SHEETS—SHEET 1.

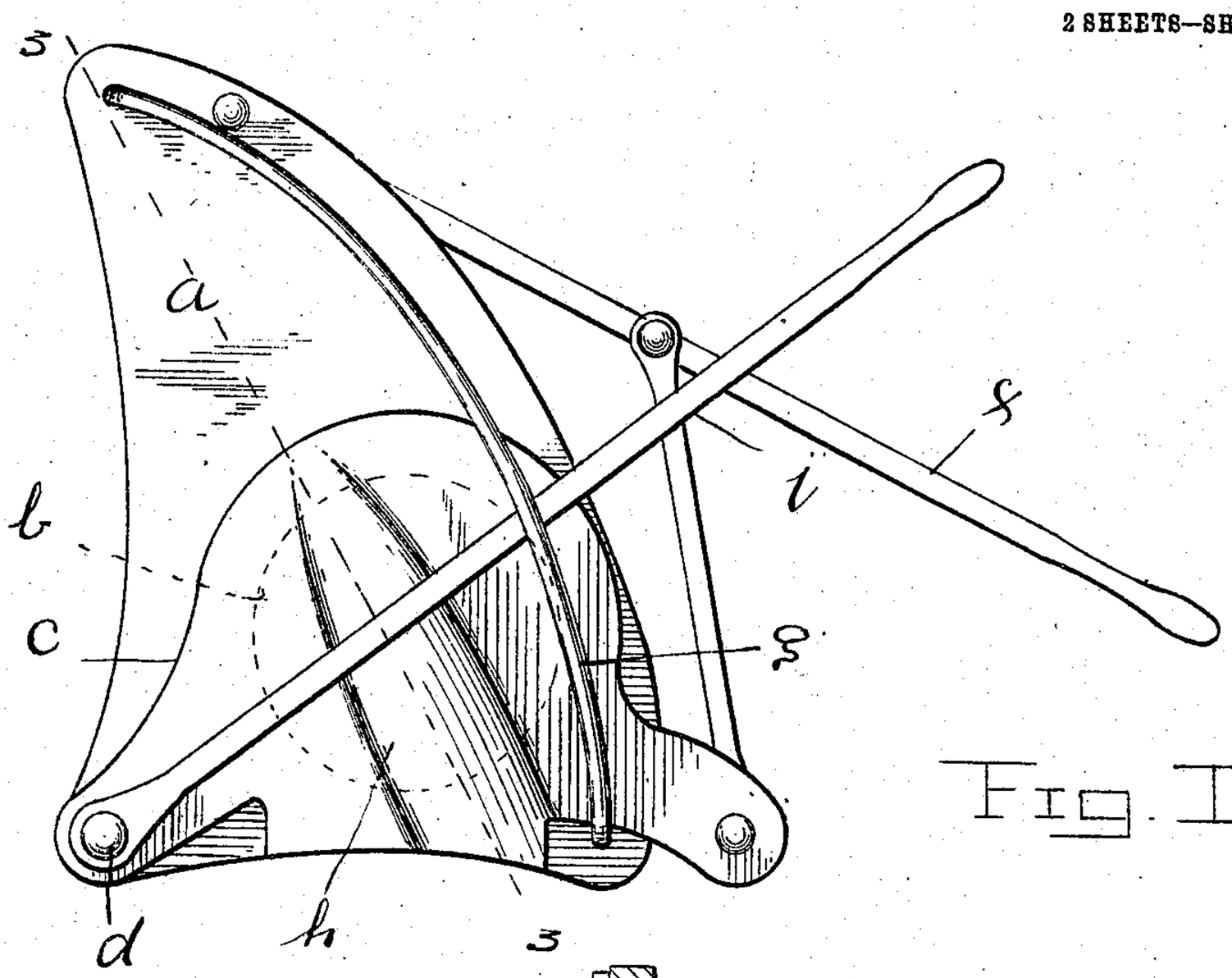

Fig. 1

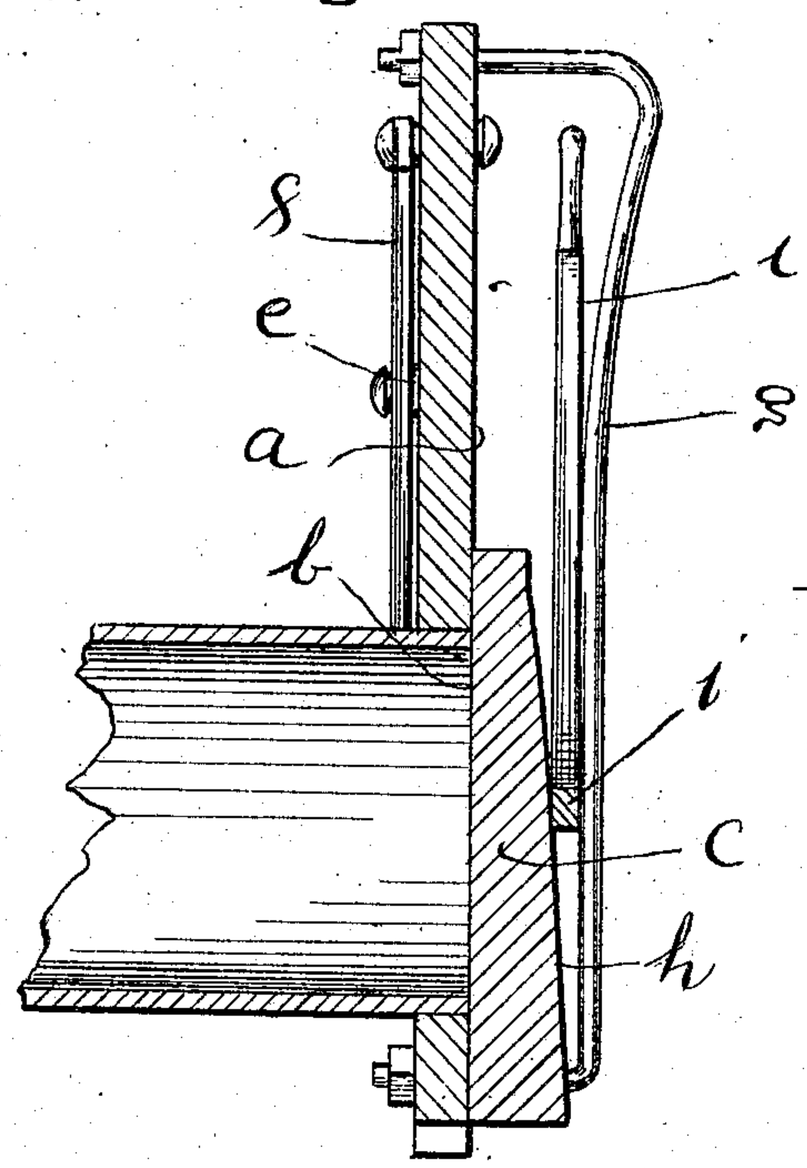

Fig. 2

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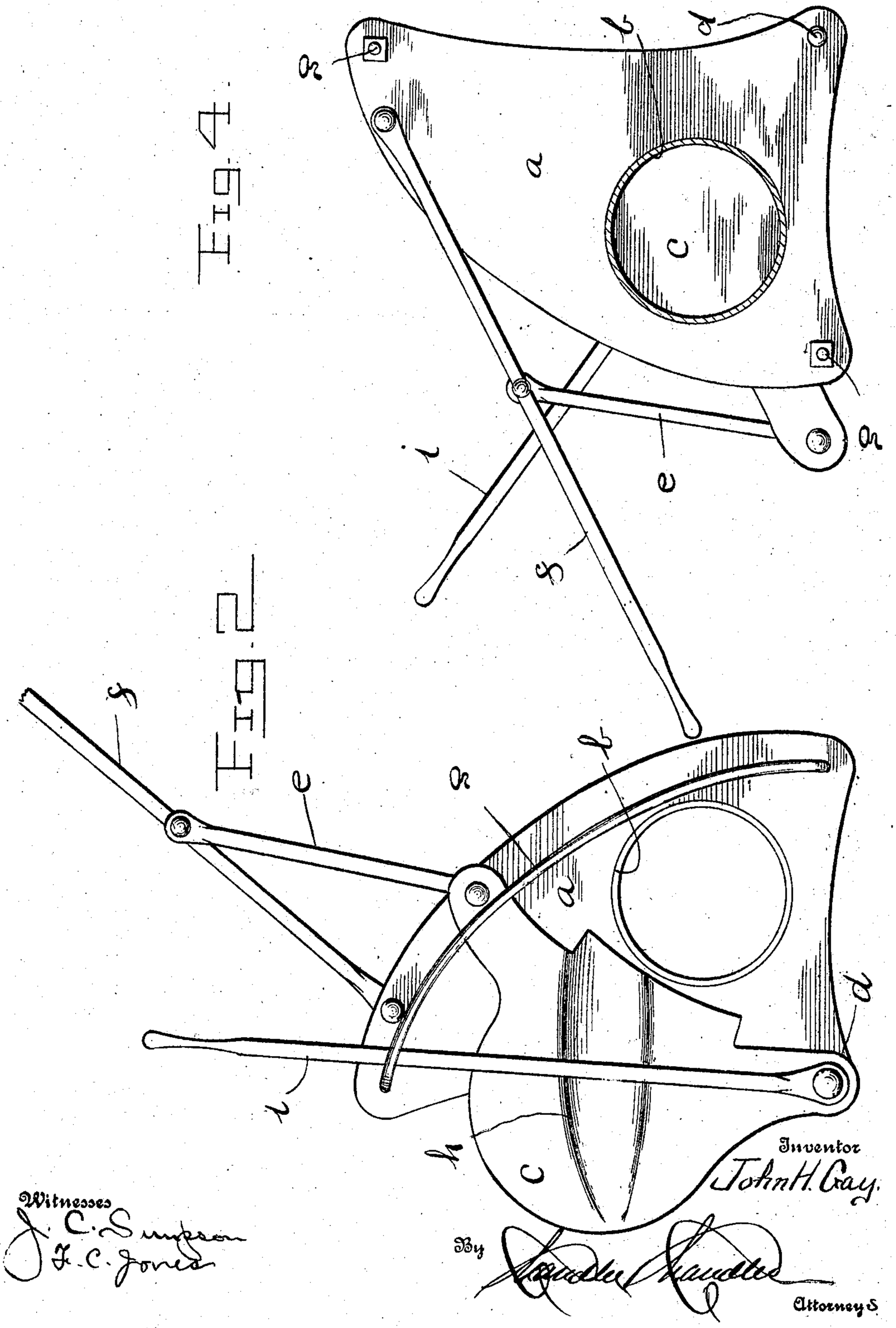
Fig. 4.



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JOHN H. GAY, OF ARGYLE, GEORGIA.

GATE-VALVE.

No. 847,932. Specification of Letters Patent. Patented March 19, 1907.

Application filed January 25, 1906. Serial No. 297,918.

To all whom it may concern:

Be it known that I, JOHN H. GAY, a citizen of the United States, residing at Argyle, in the county of Clinch, State of Georgia, have invented certain new and useful Improvements in Gate-Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to gate-valves generally, and in particular has respect to tail-gates for turpentine stills or retorts.

It is the object of the invention to provide a gate-valve for use as specified which may be operated with safety to the still-hand using it and not only without any strain upon the still or retort of such a nature as to endanger its integrity or impair its usefulness, but which may be employed with entire safety, ease, and effectiveness, relieving the retort and its connections of all needless strain, and absolutely avoiding the difficulties, perplexities, loss of time, and dangers heretofore attendant upon this class of means employed in the art of distilling turpentine.

Other objects of the invention embrace such improvements as enhance the efficiency of the device, its durability, and the entire readiness with which it may be employed.

The nature of the invention is herein shown and described as embodied in a tail-gate that has a slidable connection with the still to open and close the discharge-port, and is adapted to be operated by means of a lever and connecting-link, and has a secondary lever operative in connection with an incline or cam on the gate to compress the latter close to the gate against the face-plate after the gate has been closed.

The accompanying drawings form a part of this specification and are to be referred to as such, in which—

Figure 1 is a front view showing the gate as fully closed. Fig. 2 is a similar view showing the gate as fully opened. Fig 3 is a central sectional view taken through the incline or cam on the gate, the lever acting thereon and the yoke against which the lever operates to bind the gate against its face-plate or the surface against which it acts. Fig. 4 is a rear view of what is shown in Fig. 1.

Like letters of reference designate like parts or features, as the case may be, wherever they occur.

In the drawings, *a* designates the face of the part surrounding the port *b*, against which the gate operates. Anything contained in the still may be discharged through the said port, the most important substance being the rosin which remains after the spirits have been distilled over and the wood reduced. Heretofore for the purpose of effecting the said discharge of rosin a gate consisting of a plate covering the port and maintained in place by a screw having its free efficient end acting against it has generally been employed. The screw has been tapped through a yoke connected with fixed parts which has been provided with a hand-wheel or similar means on its outer end by which the screw has been turned against the gate to close it tight or operated in the opposite direction to open it. These acts were attended with the dangers, difficulties, and harmful strains upon the pipe connections hereinbefore mentioned and which attacked the integrity of the retort.

Proceeding further with a description of my improvements, *c* designates the gate pivoted, as at *d*, to one side of the port *b*, and pivotally connected at an opposite point through the medium of a link *e* with a lever *f*, whereby the gate may be raised to open the port, as indicated in Fig. 2, or lowered to close said port, as shown in Fig. 1, by the raising and lowering of the said lever.

A yoke or brace-bar *g*, suitably connected at its ends with fixed parts of the discharge pipe or retort, extends across the port *b* and serves as a bearing against which the tightening-lever operates, as will presently appear. On the outside of the gate *c* is an inclined piece or cam *h*, against which the tightening-lever *i* operates when it is lowered after the gate is closed to press the latter against its face, the lever bearing at its opposite side against the yoke or brace-bar *g*, all as has been hereinbefore indicated. The pivotal point of the lever *i* may be the same as that of the gate or otherwise, as may be most expedient.

When it is desired to open the gate, the lever *i* will first be raised to release the gate, and then by raising the lever *f* the gate will be raised and the discharge-port opened. To close the gate, the operations just recited will be reversed in order.

The construction and mode of operation of the parts are extremely simple, while the re-

sults are attended with obviating the dangers, difficulties, mischiefs, and losses attaching to the old form of things.

The outer face of the discharge-pipe or part surrounding the discharge-port will of course be milled or trued off, so that the gate can operate thereagainst in a proper manner, as described.

It is scarcely necessary to add that the invention is not limited to uses on turpentine-stills, but may be employed wherever found useful.

I claim—

In a tail-gate for turpentine-stills, the combination with the discharge-pipe having a trued outer surface surrounding the discharge-port in the same, of a pivoted gate arranged to be moved against the said surface to open and close the said port, a lever and link connected with the said gate to move the same, an incline cam on the face of the gate, a lever to act against the said cam, and a yoke or brace against which the latter lever may operate in opposition to the cam.

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

JOHN H. GAY.

Witnesses:
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