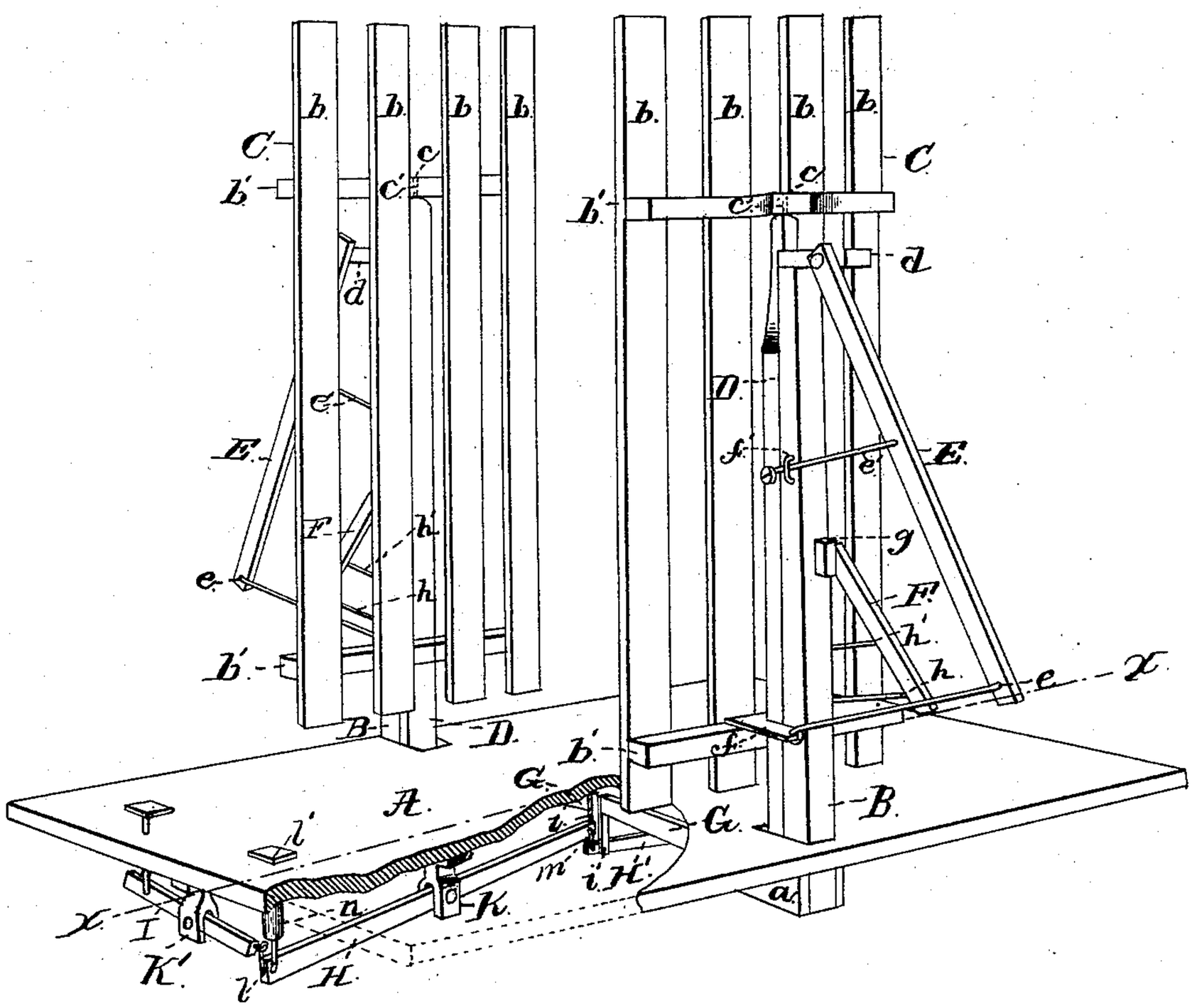
(No Model.) 2 Sheets—Sheet 1.

L. C. SCHRODT.

AUTOMATIC GATE.

No. 302,288. Patented July 22, 1884.

Fig. 1.



Witnesses
H. A. Clark
Jno. C. Schroder.

Inventor
Louis C. Schrodt
by Wm. H. Smith.
Atty

(No Model.)

2 Sheets—Sheet 2.

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Fig 2.

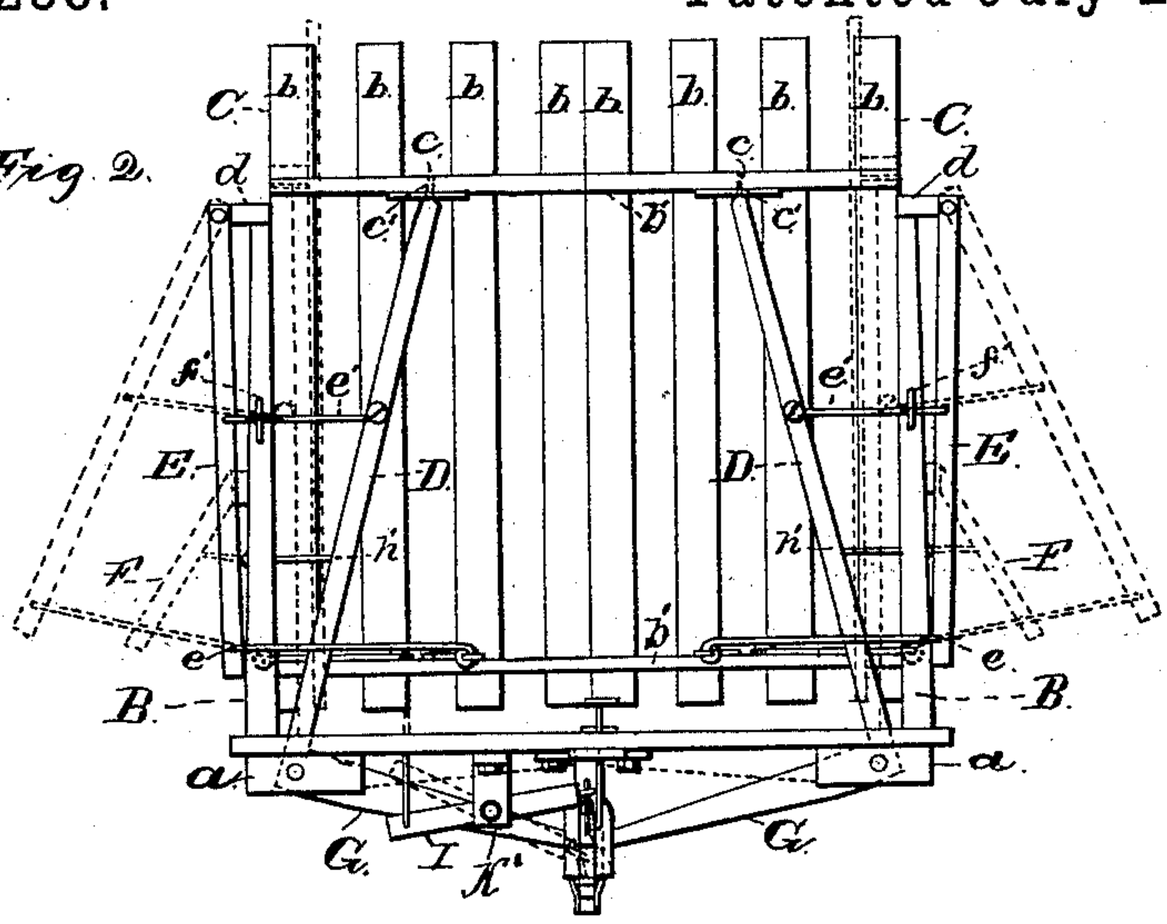


Fig. 3.

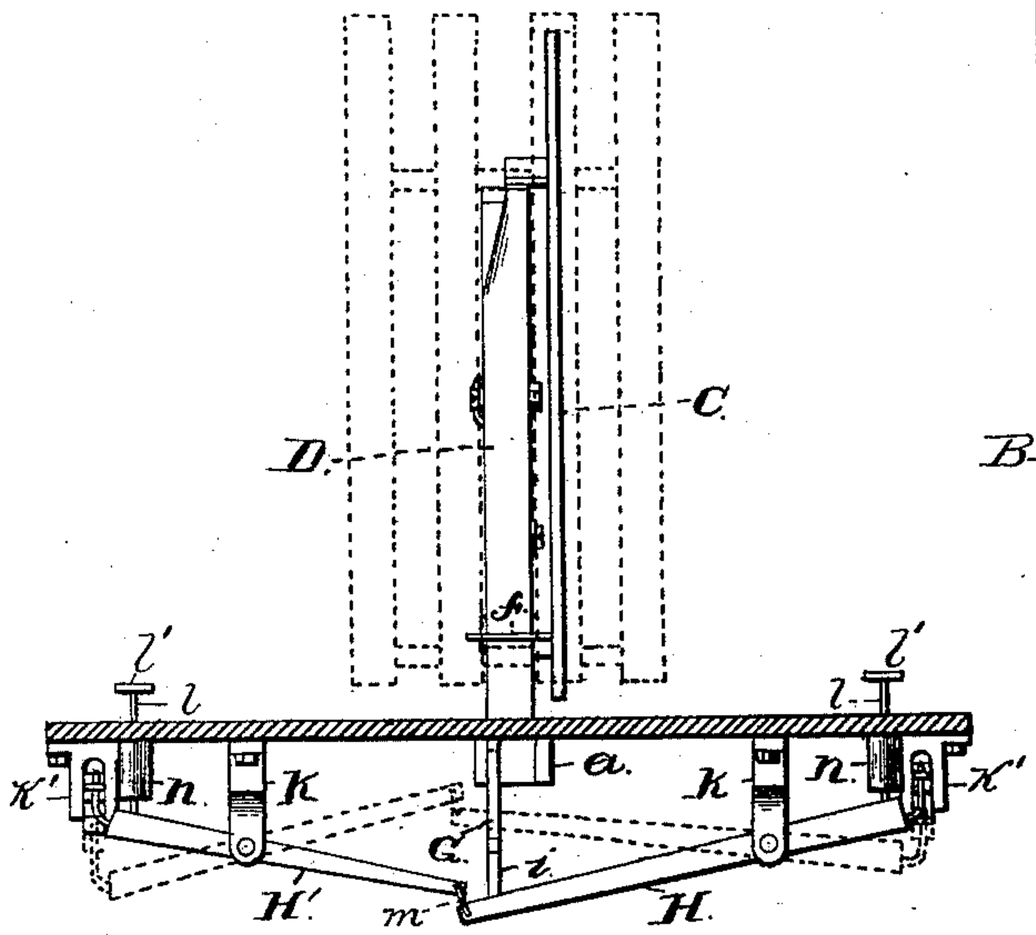
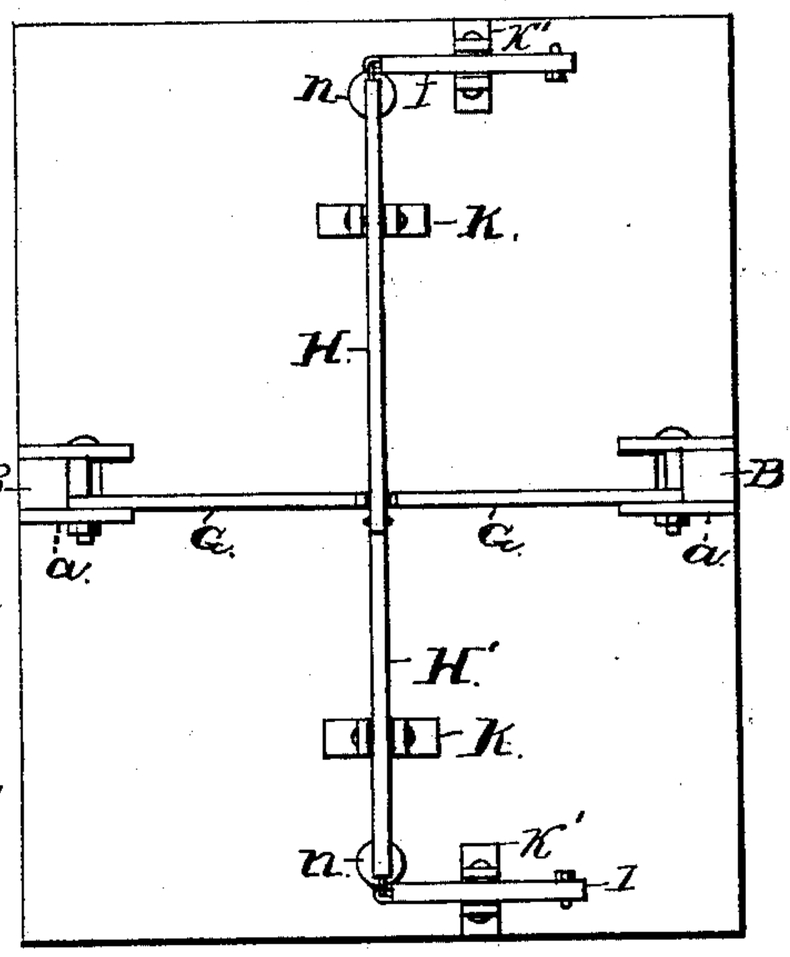


Fig. 4



Witnesses;
H. A. Clark
Jno. C. Schroeder.

Inventor
Louis C. Schrodt.
by Wm. H. Smith
Atty

UNITED STATES PATENT OFFICE.

LOUIS CONRAD SCHRODT, OF COUNCIL BLUFFS, IOWA.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 302,288, dated July 22, 1884.

Application filed November 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, LOUIS C. SCHRODT, a citizen of the United States, residing at Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Automatic Gates, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in what are commonly known as "automatic gates."

The object I have in view is to provide a gate which shall be simple and cheap in its construction, which shall dispense with the ordinary latch and hinges, and shall occupy the least possible space in opening and closing.

The object, further, of my improvement is to enable foot-passengers, without using their hands, to open the gate as they approach and to close the same after passing through by simply pressing upon foot-treadles located upon each side of the gate, and also to enable persons approaching the gate in a vehicle or upon horseback to open and close the same without dismounting.

For the accomplishment of the above objects my invention consists in the construction and arrangement of the component parts of the mechanism for opening the same, as hereinafter described with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a gate constructed in accordance with my invention as the same appears when open; Fig. 2, a rear elevation of the gate closed, representing in dotted lines the position of the parts when open; Fig. 3, a longitudinal section of the platform on the line *x x* of Fig. 1 in front of the treadles, showing in solid lines the position of parts when the gates are closed, and in dotted lines their position when the gates are open; and Fig. 4 is a bottom plan of the operating mechanism.

In the drawings like letters of reference represent corresponding parts.

A represents the platform or other suitable support for the component parts of the gate and for the mechanism for operating said parts.

B B represent the gate-posts, which pass through said platform at points diametrically opposite, and are provided with brackets *a a*, for a purpose to be hereinafter described.

C C represent the sections of the gate, composed each of the upright slats *b b b b* and of the upper and lower cross-rails, *b' b'*. The upper cross-rails are provided with, preferably, metal bushed sockets *c c*, which receive the pivots *c' c'*, secured to the upper ends of the beams D D. These beams D D are inclined when the gates are closed and vertical when the same are open, and are pivoted at their lower ends, by bolts or other suitable means, in the brackets *a a*, hereinbefore mentioned as being secured to the posts B B.

To the upper ends of the posts B B are secured the outwardly-extending arms *d d*, to the outer ends of which are pivoted the upper ends of the pendent arms E E, the lower ends of which receive the bent ends of the metal rods *e e*, secured therein by a nut or any suitable means. These rods *e e* extend horizontally inward, and are attached at their inner ends to the L-shaped metal strips *f f*, which are secured to the lower cross-rails *b' b'* of the gates.

To the arms E E, at a point about midway between their upper and lower ends, are pivotally secured the outer bent ends of the short metal rods *e' e'*. These rods extend horizontally inward through the staples *f' f'*, secured to the posts B B, and are pivoted at their inner ends to the beams D D.

To the posts B B are secured the blocks *g g*, to which are pivoted the upper ends of the short pendent arms F F. These arms, at their lower ends, receive the outer bent ends of the metal rods *h h*, which extend inwardly parallel with the rods *e e*, (hereinbefore described,) and are pivotally secured to the lower cross-rails, *b' b'*. The arms F F, at a point about midway between their upper and lower ends, receive the outer bent ends of the short metal rods *h' h'*, which extend inwardly parallel with the other metal rods before described, and are pivotally connected with the beams D D.

To the lower ends of the beams D D are secured the outer ends of the arms G G, which extend about half-way across the gate from the posts B B, and terminate within a short distance of each other, and by means of the couplings *i i* these arms are connected with the inner end of a lever, H, which is located

at a right angle to the arms G G, and is fulcrumed at or near its center between the forks of a bifurcated bracket, K, which is secured to the under side of the platform A, as illustrated in Fig. 4. The outer end of the lever H is coupled with one end of a lever, I, running at right angles to said lever H, and fulcrumed near its center in a bracket, *k'*, which is constructed in a manner similar to bracket *k*, hereinbefore described. To the outer end of the lever H is also pivotally secured the lower end of an upright rod, *l*, provided on its upper end with a plate, *l'*, said rod and plate constituting the treadle for opening the gates. The opposite end of the lever I connects with a treadle for closing the gate, said treadle being of a construction similar to the one hereinbefore described. By means of a link, *m*, the inner end of lever H is connected with the inner end of a lever, H', which runs in an opposite direction to the lever H, and in the same straight line therewith. This lever H' is fulcrumed, and connected with the opening and closing treadles upon the opposite side of the gate by means corresponding with those hereinbefore described with reference to lever H.

Between the platform and the lower end of each opening-treadle the upright rod *l* may be provided with a heavy bumper, *n*, the weight of which will render easy the depression of said treadles.

From the foregoing description it will be apparent that the operation of this gate is as follows: By depressing the opening-treadles the inner ends of levers H H' are elevated, and thereupon a corresponding action is given to the inner ends of the arms G G. This action of the arms G G moves the ends connected with the beams D D, and said beams are thereby thrown outward to an upright position and adjacent to the gate-posts. By this movement of the beams the two sections of the gate are opened and their supporting devices thrown to the position illustrated by Fig. 1—that is to say, when the beams D D are pressed outward the gates are slightly elevated, and at the same time commence to turn, which movement, together with that of the beams, forces the connecting-rods *e e'* and *h h'* outwardly and parallel with the plane in which the beams move, and these rods in turn carry with them the free ends of the arms E E and F F, which, when the gates arrive at their opening limit, are on an incline to the posts B B, as clearly shown in Figs. 1 and 2. In this position the sections of the gate are adjacent and at right angles to the facing sides of the gate-posts, with their centers in the same line therewith and diametrically opposite each other. The advantage of constructing a gate to swing into this position is that little space is taken up in its revolution, and it can be opened and closed more quickly and with more ease. By depressing the closing-treadles a reverse action is transmitted along the several parts, and the sections close together, as shown in Fig. 2.

The gate, as described and illustrated, is adapted only for the use of pedestrians; but it will be manifest that the only change required to fit it for the accommodation of mounted passengers would be such a modification in the treadles as to permit of their depression by vehicle-wheels or by the weight of a horse, and it is obvious that such change may be made without the exercise of invention. It will also be manifest that this gate may be constructed of one section and one set of supporting and operating devices, and of wood or any other suitable material, and therefore I do not restrict myself to a gate made in two sections or to a particular kind of material.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent, is—

1. The combination of a swinging gate and a beam, D, on the upper end of which said gate, near its top, is centrally pivoted, with a lever, G, intermediate connections, and treadles, whereby said beam is adapted to be brought to an upright position against the gate-post, and the gate thereby opened and held in such position, substantially as set forth.

2. The combination, with a swinging gate made in two sections, of the beams D D, for pivotally supporting said sections centrally near their upper ends, and means for supporting said sections near their lower ends, consisting of the metal strips *f f*, arms E E, and intermediate connecting-rods, *e e'*, substantially as set forth.

3. The combination, with a swinging gate made in two sections, and means, substantially as described, for supporting the upper and lower ends thereof, of intermediate supporting devices, consisting of the rods *h h' e'* and arms E F, suspended from the gate-posts, whereby the sections maintain a true upright position in opening and closing, substantially as and for the purpose set forth.

4. In a swinging gate, and in combination with the beams for supporting the two sections thereof, means for operating said gate from either side, consisting of the arms G G, levers H H', running in opposite directions at right angles to said arms, and treadles operating on the outer ends of said levers, substantially as set forth.

5. In a swinging gate, and in combination with the beams D D, arms G G, and levers H H', the levers I I, connecting with and arranged at right angles to said levers, and provided each with a treadle, whereby the gate may be closed from either side, substantially as set forth.

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

LOUIS CONRAD SCHRODT.

Witnesses:

R. S. RYAN,

J. LYMAN.