A. Dietz,

Automatic Gate

No. 19,499. Patented Mar. 2, 1858.

Fig: 1

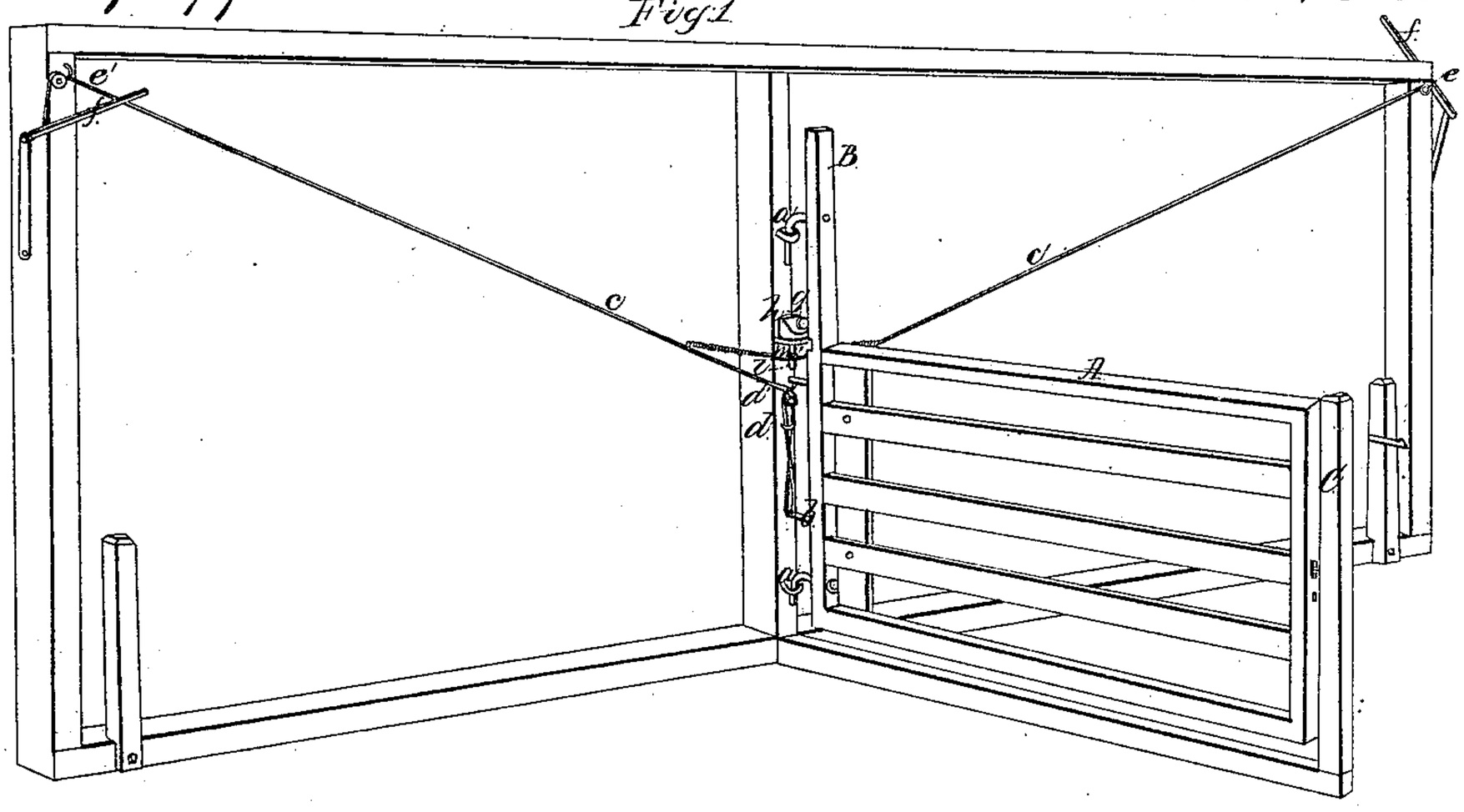


Fig: 2.

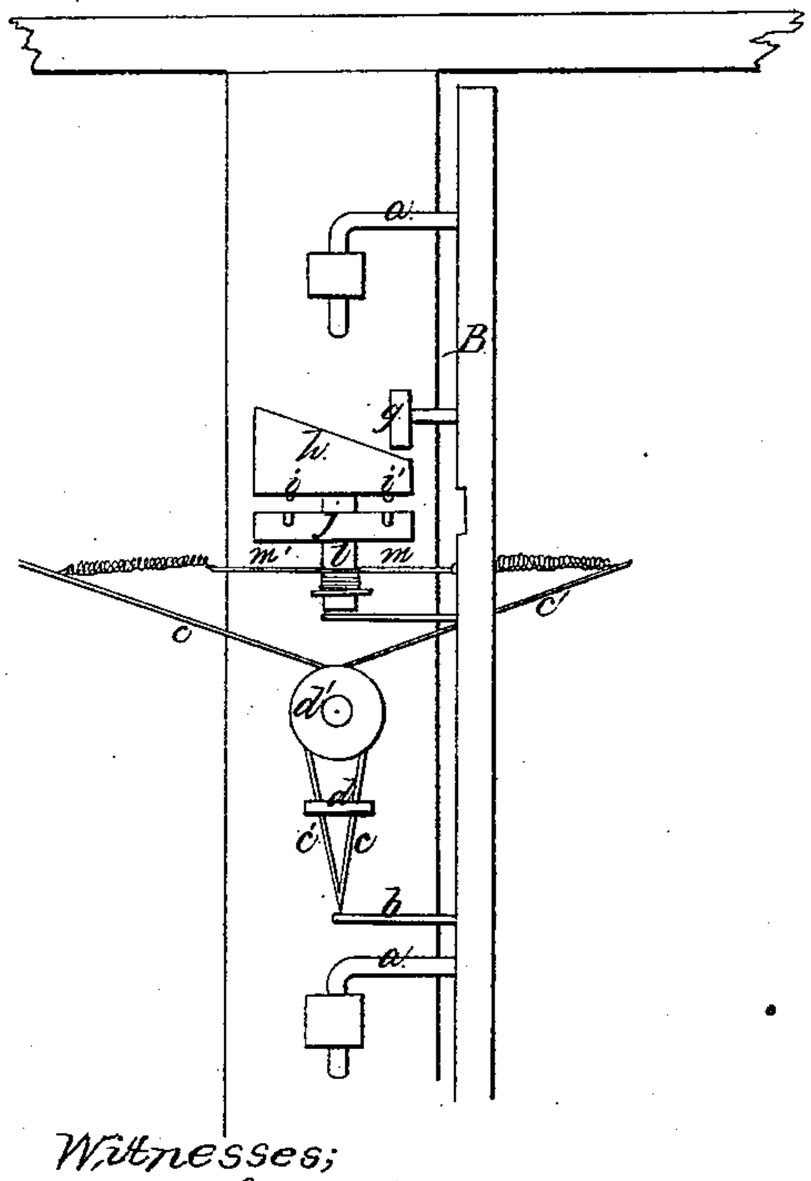
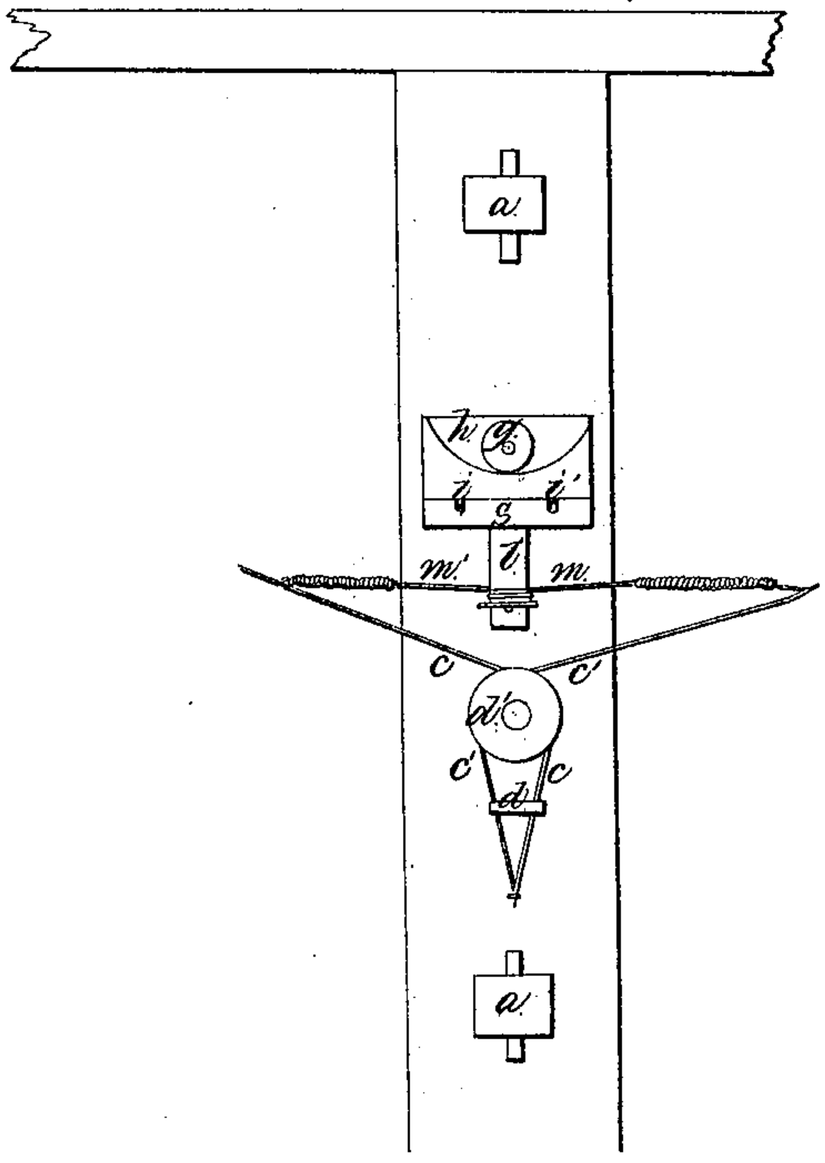


Fig: 3.



Witnesses;

S. A. Law

G. D. Law

Inventor;

Andrew Dietz

UNITED STATES PATENT OFFICE.

ANDREW DIETZ, OF RARITAN, NEW JERSEY.

FARM-GATE.

Specification of Letters Patent No. 19,499, dated March 2, 1858.

To all whom it may concern:

Be it known that I, ANDREW DIETZ, of Raritan, Somerset county, and State of New Jersey, have invented a new and Improved Self-Acting Gate, which can be easily opened and shut by those in carriages or on horseback and without requiring them to alight or dismount; and I do hereby declare that the following is a full, clear, and exact description thereof and of the manner of its operation, reference being had to the accompanying drawings, and the letters marked thereon, and making a part of this specification.

Figure 1, is a perspective view of the gate, in the position it takes, when shut. Fig. 2, shows the position of the parts when the gate is open, and Fig. 3 the position, when the gate is open, and on an enlarged scale.

The nature of my invention consists in so constructing and arranging the supporting or hanging parts of the gate, that the movement of a lever or cord will change the position of such supporting arrangement and cause the gate, by its own weight or action to open or shut without the application of any power directly to it, and without rendering it necessary for any person to alight or dismount.

The gate A, is suspended and turns upon hinges *a*, *a*, constructed in any manner so as to allow the gate to be raised and lowered for the purpose hereafter mentioned.

To the back post B, of the gate, and below the middle of the gate, is firmly fastened a stud or projection *b*, to which are attached the ropes or chains *c*, *c'*, which pass up and through a staple, or pulley *d*, about a pulley *d'* and thence over pulleys *e*, *e'*, in the gate frame or other firm place, so that they can be worked with the hands, directly, or through the levers *f*, *f'*. Such chains or ropes when thus worked, elevate the gate for the purposes to be mentioned. The hinges *a*, *a*, do not however support the gate, except in part, their more particular use being to guide it in its movements; but the gate is mainly sustained by the roller or wheel *g*, firmly fixed in the post B, and resting and rolling upon the inclined plane *h*, the weight of the gate causing the roller *g*, always to seek, and rest at the lowest point of such inclined plane. If therefore the position of such inclination is varied, that is, if at one time its lowest point is toward the opposite post C, as shown in Figs. 1 and 3, and at another time is turned at right angles with that position, and in either direction as shown in Fig. 2, the gate will of itself, and by its own weight, in the former case close or shut, and in the latter case, swing open.

The position of the inclined plane *h*, is changed in the following manner. From its under surface which is horizontal, and rests upon a support *j*, projects a shaft or bar *l*, to which are fastened, and wound in different directions, strong cords *m*, *m'*, and which are also fastened to the ropes or chains *c*, *c'*, and which are of such a length that as these ropes or chains are drawn back, the cords *m*, *m'*, will rotate the part *h*, to a position at right angles with that it may then have. After being so rotated, it is held and fastened in any such position, as soon as the ropes *c*, *c*, are released, by the pins *i*, *i'*, on the under surface of *h*, dropping into appropriate sockets in the support *j*. As soon as the ropes *c*, *c'*, are released, the gate also ceases to be supported by them, and the roller *g*, naturally seeks the lower point of the inclined plane, and causes the gate to be opened or shut as the case may be. To give better action to the cords *m m*, and cause them to impart a more instantaneous and certain movement to the inclined plane *h*, small wire or other springs may be attached to them, or they may be made of any elastic material. Suppose now the gate shut and a person in a carriage or on horseback approaching. He drives or rides so that he can reach the lever *f*, or rope *c*, and pulls this smartly. The gate is slightly raised, and by means of the cord *m*, the inclined plane *h*, is turned at right angles, and from the individual, and is held there by the pins *i*, *i*, entering, from the weight of the part *k*, the sockets in *j*. The lowest point of the inclined plane being thus in the direction of one of the side posts E, E, the gate, as soon as the hand lets go the rope *c*, naturally swings open, and permits free passage. Having passed the lever or rope, opposite to that before used, is pulled, and the inclined plane turned backward, at right angles, and the gate closes. The gate is thus selfacting, both opening and shutting from the natural action of its parts, and operated by the simple movement of working of the lever *f*, or rope *e*.

This gate can also be opened and swung by hand, without interfering with the arrangement of the parts above described.

I do not claim the construction of gates, so that they can be opened or shut without alighting or dismounting, but

What I claim as my invention and desire to secure by Letters Patent is—

The combination or arrangement of the rotating incline *h*, and friction roller *g*, substantially as described for the purpose of causing the gate to open or shut, of its own weight, according to the position of such incline *h;* and in connection therewith the arrangement of the cords *c*, *c'*, *m*, *m'*, and their springs, or their equivalent to raise the gate and turn the incline *h*, the whole substantially as and for the purposes set forth.

ANDREW DIETZ.

In presence of—
S. A. Law,
S. D. Law.