3 Sheets—Sheet 1.

W. J. HUTCHINS.

Automatic-Gate.

No. 216,959. Patented July 1, 1879.

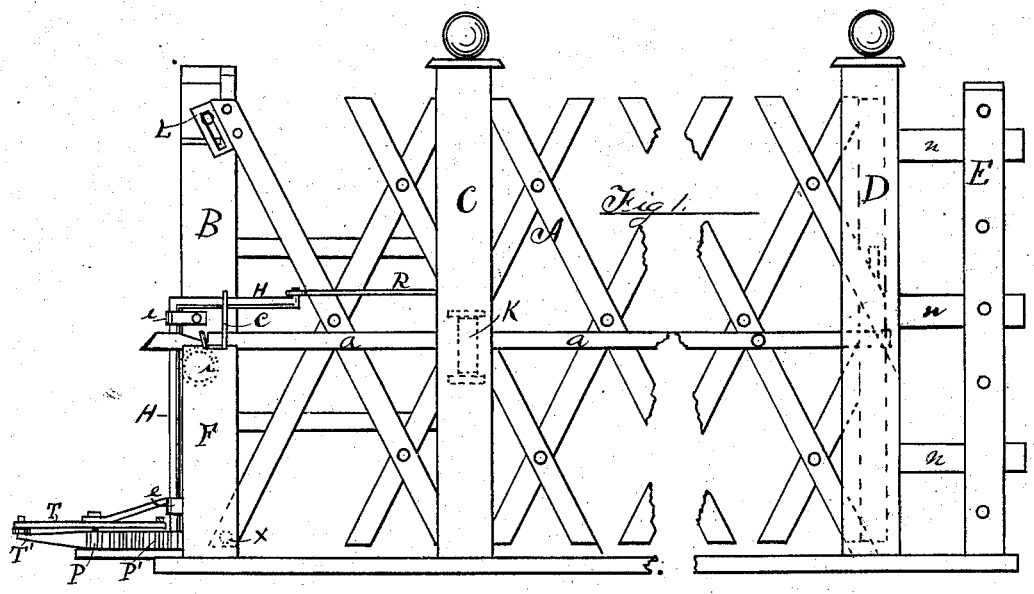

Fig 1.

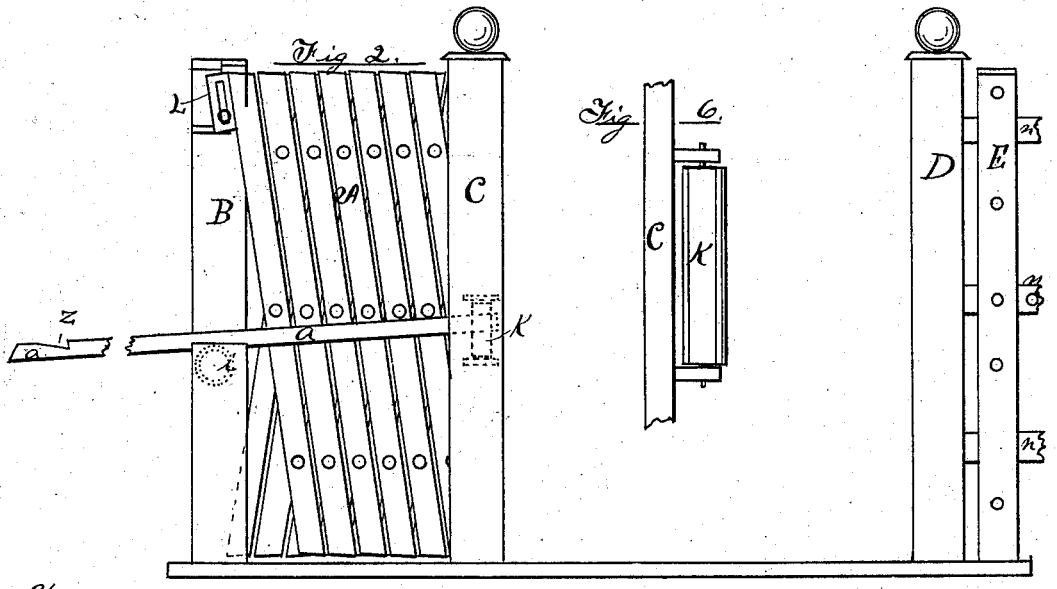

Fig 2.

Fig 6.

Witnesses

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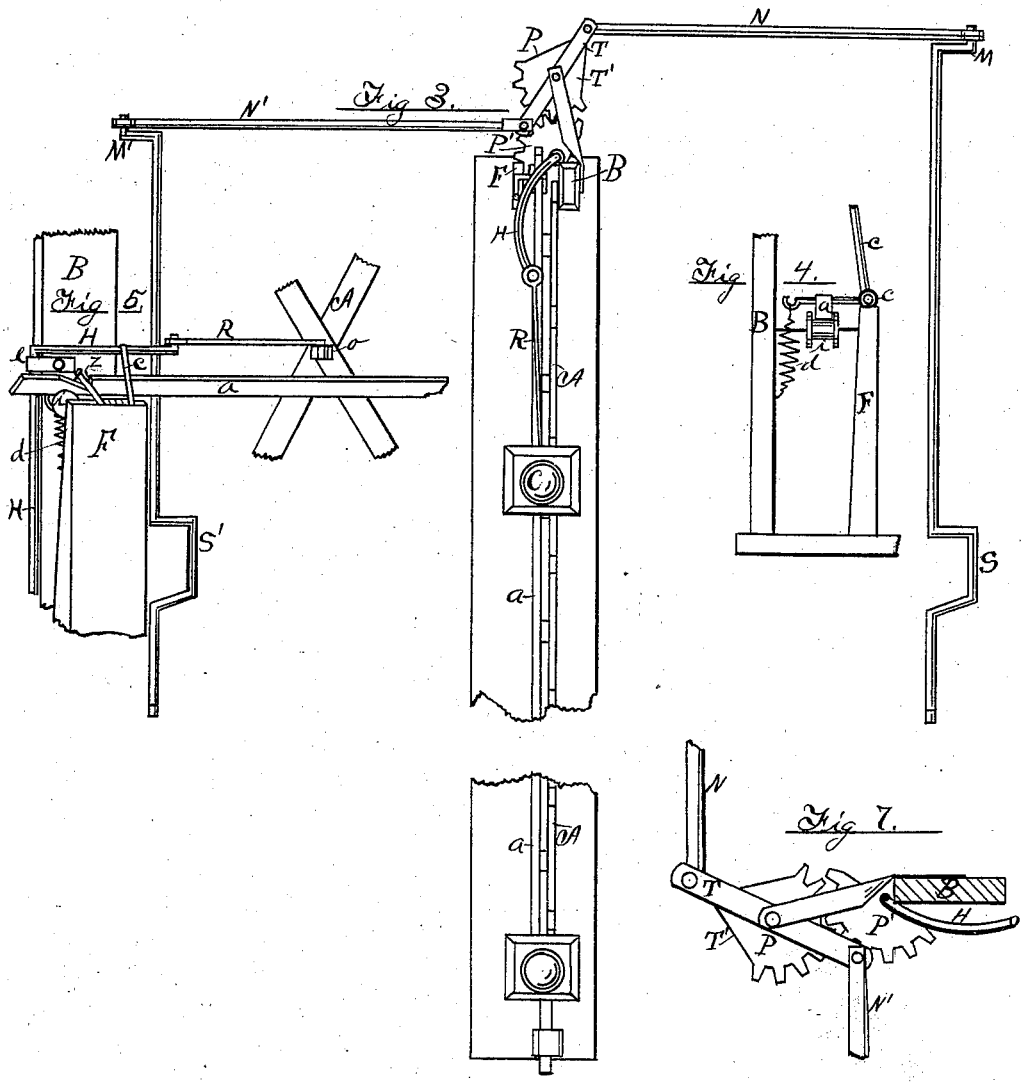
Fig 3.



Witnesses

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3 Sheets—Sheet 3.

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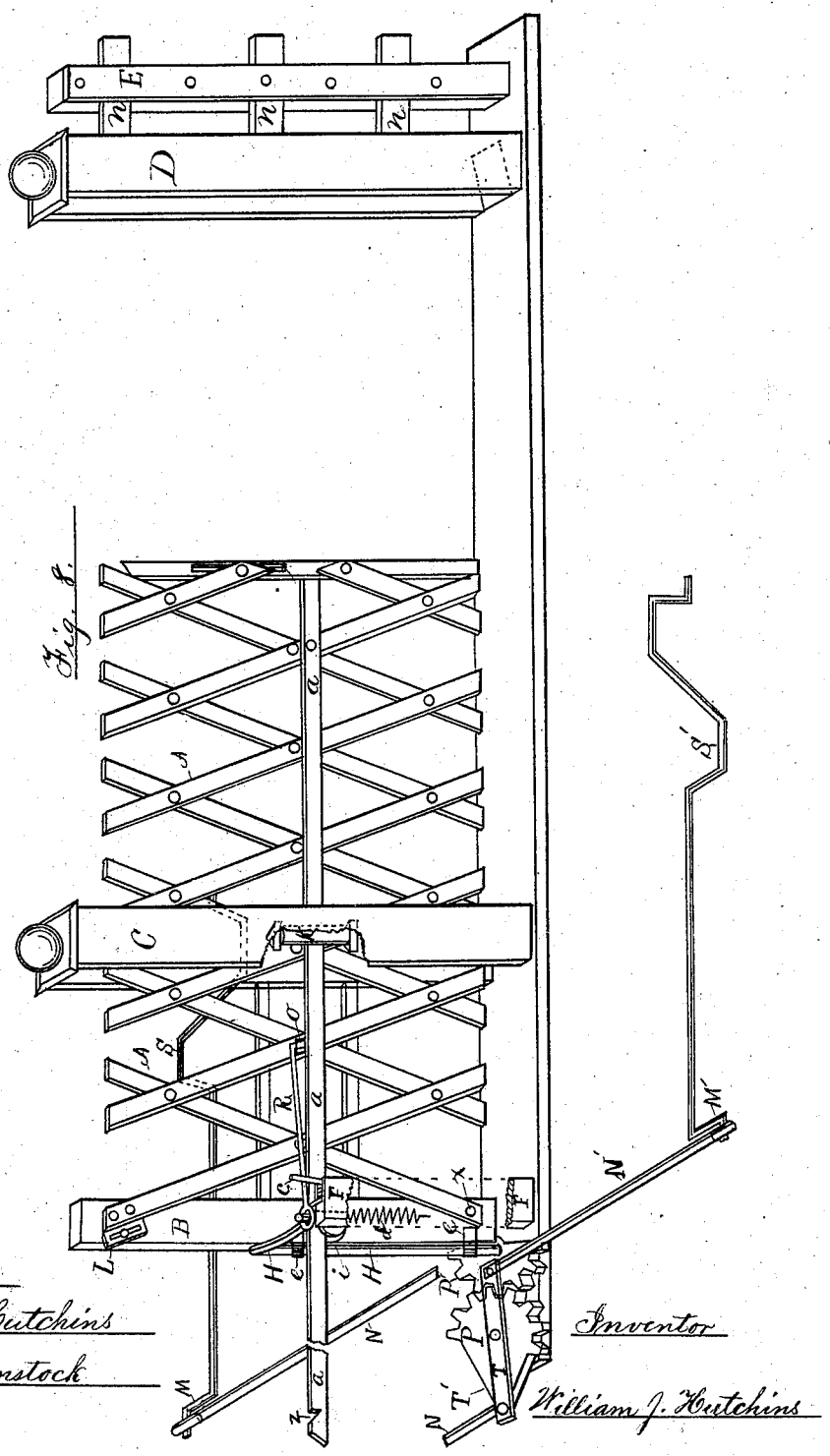

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM J. HUTCHINS, OF JOLIET, ILLINOIS.

IMPROVEMENT IN AUTOMATIC GATES.

Specification forming part of Letters Patent No. **216,959**, dated July 1, 1879; application filed April 16, 1879.

To all whom it may concern:

Be it known that I, WILLIAM J. HUTCHINS, of the city of Joliet, Will county, and State of Illinois, have invented certain Improvements in Automatic Gates, the construction and operation of which I will proceed to explain, reference being had to the annexed drawings, making a part of this specification, in which—

Figures 1 and 2 are side elevations. Figs. 3 and 7 are plan views on the top. Fig. 4 is an end view. Figs. 5 and 6 are perspective views; and Fig. 8, a general perspective view, showing the gate partially open.

The object of my invention consists in so constructing a gate that it may be operated by means of the wheel of a vehicle without alighting. The working parts of the gate are above ground, and the gate will fold back out of the way from obstacles.

In the drawings, A represents the folding gate; B, the supporting-post; C, the case-post for the gate A to fold back into; and D represents the movable case-post for the outer end of the gate A to rest in when closed, as shown in Fig. 1.

L represents a sliding plate fastened to the upper end of the bar of the first joint of the gate A, and held in place by means of a bolt in the slot of said plate, and the lower end of the bar of the first joint of the gate A is held in place by means of the bolt *x*, as shown in Figs. 1 and 2.

a represents the locking slide-bar, one end of which is attached near the last central joint of the gate A, while the other end rests and slides on the friction-roller *i*, as represented in Figs. 1, 2, and 5.

H represents the crank attached upright to the post B, and held in place by the clasps *e*.

R represents an arm attached at one end to the upper end of the crank H, while the other end of which is attached to the second central joint of the gate A by means of the journal *o*, as shown in Figs. 1 and 5.

P′ represents a segmental cog attached to the lower end of the crank H, and P a similar cog, placed so as its cogs will mesh into the cogs of P′, as shown in Figs. 3 and 7.

T′ represents a lever attached to the cog P, as shown in Figs. 1 and 7.

c represents the lock attached to the post F, the outer and lower part of said lock resting on the sliding bar *a* when the gate A is open, and when the gate A is closed said portion rests in the notch *z* of the locking slide-bar *a*, and is held in place by means of the spring *d*, to prevent the gate from opening, as shown in Figs. 4 and 5.

K represents a friction-roller attached to the inner side of the case-post C, for the slide B or *a* to slide against, as shown in Fig. 6 and by the dotted lines in Figs. 1 and 2.

S represents a double crank supplied with the lever M, and connected with the lever T′ by means of the rod N; and S′ represents a second double crank provided with the lever M′, and connected to the reverse lever T by means of the rod N′, as shown in Figs. 3 and 7.

n represents the sliding bars, one end of which is attached to the case-post D, while the other end may slide back through the mortises in the post E, thus giving a wider passage, when desired, as shown in Fig. 2.

The gate A may be made from wood or iron. Each bar is provided with holes, and either bolted or riveted together.

Fig. 1 represents the gate A when closed, and Fig. 2 represents said gate when open, folded back into the case-post C.

It will be observed that when the cranks S and S′ are operated the levers M and M′ are also operated, thus operating the rods N and N′, which operate the cogs P and P′, by means of the levers T and T′. By this means the crank and arm R are operated, thus opening and closing the gate A at pleasure.

It will also be observed that when the arm R draws on the gate A the outer end of said gate is slightly elevated, and as it moves back it is gradually elevated until open, and when the gate A is closed the sliding bar *a* is level; but as the gate A opens the outer end, which is attached to the gate A, is elevated with the gate; and when the bar *a* slides past its center over the roller *i* the weight of its outer end causes it to support the outer end of the gate A, and assists in opening it as it runs downhill over the roller *i*. The principal use of the bar *a*, however, is to give the gate strength laterally, guide it to shut straight, and to lock it shut by means of the notch *z* and spring-lock *c*, as before stated.

Fig. 8 shows a general perspective view, which shows the gate partially open, the post F broken away to show the spring *d* behind it, which is for the purpose of holding down the lock *c* into the notch *z* when the gate A is closed.

The lock *c* is raised out of the notch *z* by the crank H and arm R, as they swing around against the upper end of the lock *c* as the gate opens, as is shown more particularly in Fig. 8.

By this arrangement the gate opens when the wheel of a vehicle strikes the levers S and S′, opening as you enter, and closing as you pass out, all without alighting.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows, to wit:

1. The combination of the segmental cogs P and P′, reverse lever T, lever T′, crank H, arm R, journal *o*, and folding gate A, arranged to operate substantially as and for the purpose set forth.

2. The combination of the lock *c*, spring *d*, crank H, arm R, and locking slide-bar *a*, provided with notch *z*, arranged to operate in the manner and for the purpose set forth.

3. The combination of the movable post D, slide-bars *n*, and post E, for the purpose set forth.

4. The combination of the folding gate A, slide-bar *a*, and the lock *c*, for the purpose set forth.

5. The combination of the folding gate A, sliding plate L, bolt *x*, locking slide-bar *a*, provided with notch *z*, friction-roller *i*, friction-roller K, lock *c*, spring *d*, arm R, crank H, segmental cogs P and P′, lever T′, rods N and N′, levers M and M′, double cranks S and S′, post D, and slide-bars *n*, and post E, arranged to operate in the manner and for the purpose set forth.

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Witnesses:
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W. E. COMSTOCK.