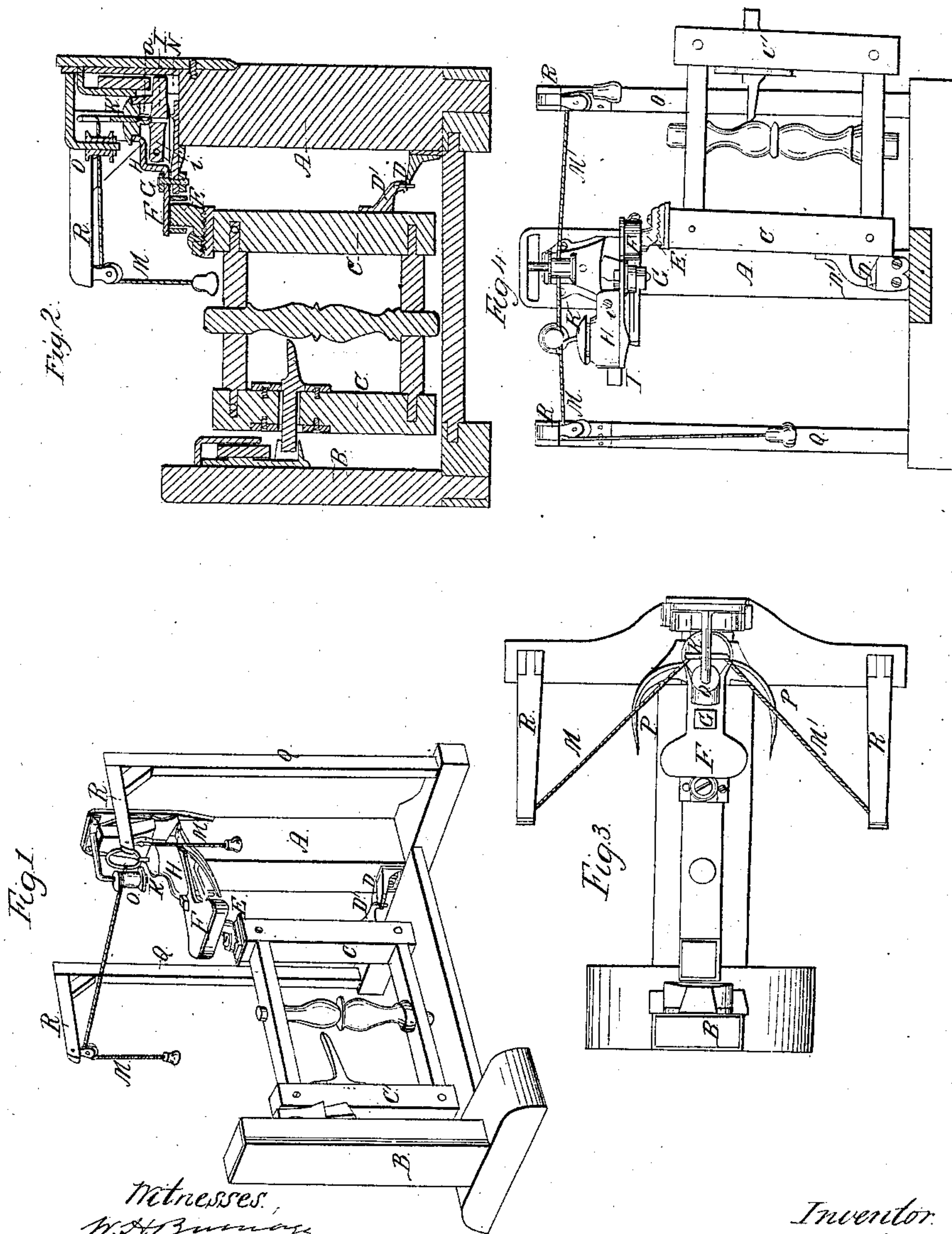


J. Ellis,
Automatic Gate,

N^o 34,247.

Patented Jan. 28, 1862.



Witnesses,
W. H. Burnage,
W. McCalland

Inventor,
John Ellis

UNITED STATES PATENT OFFICE.

JOHN ELLIS, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CARRIAGE-GATES.

Specification forming part of Letters Patent No. 34,217, dated January 28, 1862.

To all whom it may concern:

Be it known that I, JOHN ELLIS, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Carriage-Gates; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section. Fig. 3 is a top view, and Fig. 4 is an end view with the gate thrown open.

Like letters refer to like parts in the several views.

A is the post, which supports the gate.

B is the post, against which the gate shuts.

C C' are the upright bars of the gate.

The lower hinge D D' consists of a step D, attached to the lower part of the post A, and a spur D', attached to the lower end of the gate-bar C.

The upper end of the gate-bar C is secured by a stationary pinion on the top of the bar C (seen at E) and a movable rack, (seen at F,) which, by operating as hereinafter described, serves to throw the gate C C' out of equilibrium, so that the force of gravity will serve to open and shut the gate.

G is a bolt or pin upon which the rack F turns, either to the right or left, and being secured to a projection from the post A forms a stationary post or fulcrum.

H shows an extension of the rack F backward from the fulcrum G toward the post A, and which is provided with a latch I, pivoted to H at the inner end, as seen at i, Fig. 2. A link *a* is attached to the middle part of the latch, and which connects through the cap K and ring L to the pull-ropes M M'. The outer end of the latch I falls into the catch N when the gate is shut. The cap K serves as a protection against rain and snow and also as a weight to pull back the ropes M M'.

O is a pulley to ease the action of the ropes M M' when they are brought into action in opening and shutting the gate.

The arms P P, Fig. 3, are supports for the extension H when the gate is open.

Q Q are posts set some eight or ten feet on either side of the post A, and are provided with horizontal arms R R, which extend over the carriage-path for the support of the free ends of the pull-ropes M M'.

Operation: In approaching the gate from either direction, (the gate being shut,) by pulling upon the rope M or M', as the case may be, the latch I is raised from its catch N and the rack F and extension H swung around upon the fulcrum G, which movement, by the action of the rack F upon the pinion E, raises the forward end of the gate sufficiently to raise its latch out of its catch in the front post B, the line of gravity being at the same time changed, so that the gate by its own weight swings away from the rope that is pulled, as seen in Fig. 4, and in passing through, by pulling upon the other rope, the piece F H is brought back to its former position and the latch I falls into the catch N, the line of gravity being again changed in the gate by the action of the rack F. The gate is shut by its own gravity, and the operation is the same from whichever direction the gate is approached.

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

The extension H, cap K, latch I, and connecting-link *a*, in combination with the ropes M M', when these several parts are constructed, arranged, and operated as and for the purposes herein set forth.

JOHN ELLIS.

Witnesses:

F. A. DURKEE,
ASAHEL MAYNARD.