

No. 777,405.

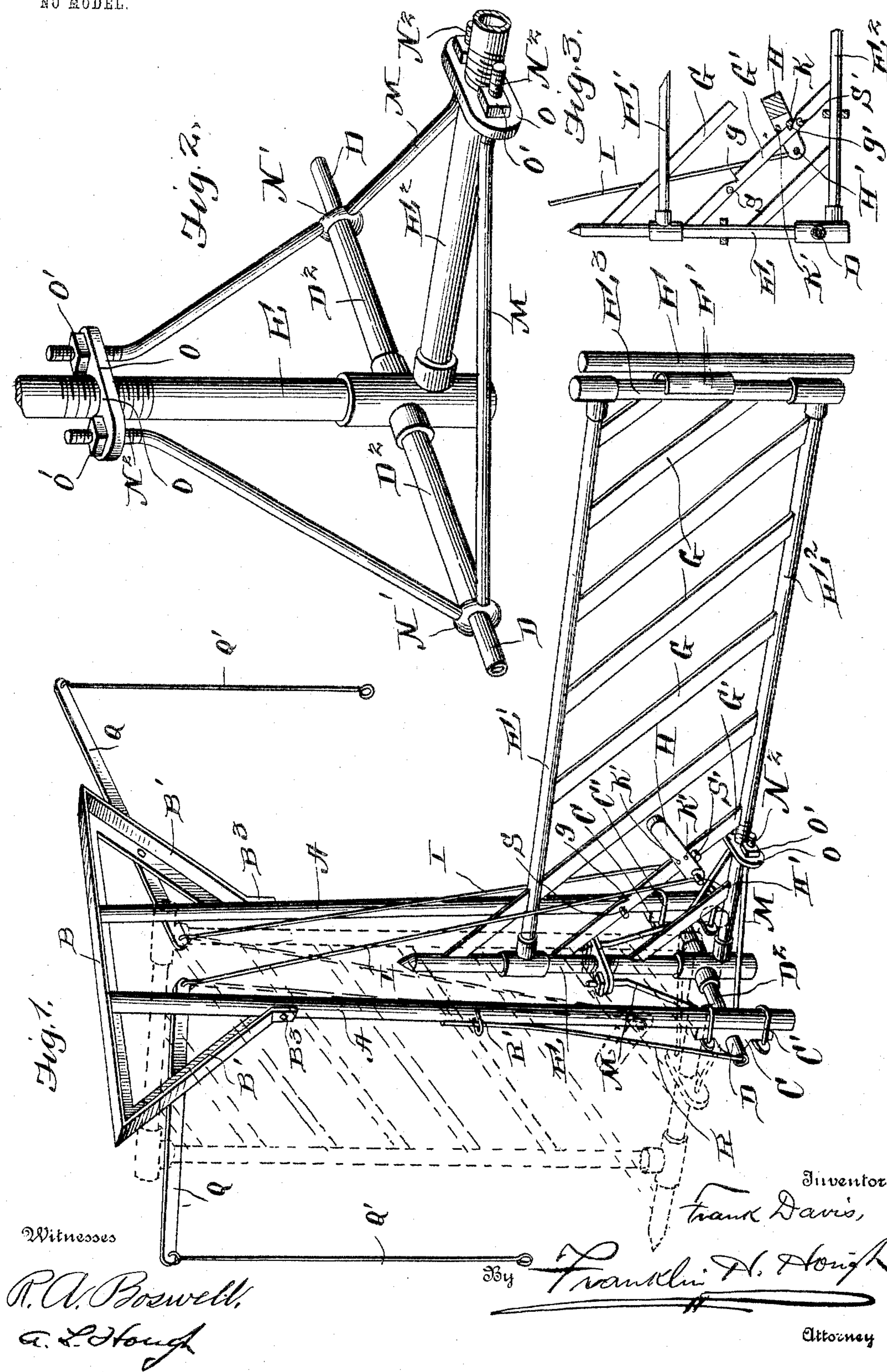
PATENTED DEC. 13, 1904.

F. DAVIS.

GATE.

APPLICATION FILED NOV. 1, 1904.

NO MODEL.



UNITED STATES PATENT OFFICE.

FRANK DAVIS, OF NORTH ADAMS, MASSACHUSETTS.

GATE.

SPECIFICATION forming part of Letters Patent No. 777,405, dated December 13, 1904.

Application filed November 1, 1904. Serial No. 230,989. (No model.)

To all whom it may concern:

Be it known that I, FRANK DAVIS, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Gates; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in swinging gates; and the object of the invention is to produce an apparatus of this nature in which the gate is mounted at its rear post upon a pintle and adapted to swing from a horizontal to an upright position and in the provision of gate-opening means, whereby the gate may be opened or closed by means of a sliding bar so arranged that a pin carried thereby will engage notches in one of the braces of the gate to open or close the same.

The invention consists, further, in various details of construction and combinations and arrangements of parts, as will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved gate shown closed in solid lines and open in dotted lines. Fig. 2 is an enlarged detail view illustrating the manner of bracing the gate, and Fig. 3 is a detail view showing the manner of opening and closing the gate.

Reference now being had to the details of the drawings by letter, A A designate two upright posts, which are connected together at their upper ends by means of a cross-piece B, the outer portions B' of which are bent at an acute angle and their ends fastened at B³ to the upright posts A.

C designates bearing-blocks, which are secured to said uprights by means of straps C', and D designates a hollow shaft or pintle mounted in said bearing-blocks C and upon which the gate is hung. The gate comprises

the rear post E, which may be of metal, wood, or any other suitable material, and a top longitudinal piece E' and a bottom strip E², which are connected together at the free end of the gate by means of a post E³.

F designates a post, which has a concaved guide member F' secured to the circumference thereof and adapted to guide the gate as it is opened and closed.

G designates diagonally-disposed braces connecting the top and bottom longitudinal strips of the gate. One of the diagonal braces of the gate (designated in the drawings by letter G') is utilized for engagement with the gate-opening member H. Said brace G' has two notches *g* and *g'*, and said notches are provided for the purpose of engagement, respectively, with the pins K and K', accordingly as the gate is to be opened or closed, said pins being carried in the slotted end of the member H, as shown clearly in Fig. 3 of the drawings. Said member H is slotted to receive the brace G', on which it slides, and the outer free end of the member H is weighted sufficiently to cause the same to tilt slightly when in the position illustrated by solid lines in Fig. 1, when it is adapted to engage the notch *g'* for opening the gate and in the notch *g*, as shown in dotted lines, when the gate is open and in position to close the gate when the rods I are raised while the gate is open. In order to limit the throw of the weighted member H in one direction, I have provided a pin S, while a pin S' is provided to limit the throw of said member in the opposite direction. Said gate-opening member H is retained in place upon the brace G' by means of pin H', and to the projecting ends of said pin *h*, extending through the bifurcated arms of said member, are connected the rods I, one on either side of the gate, the upper ends of said rods being connected to the pivotal arms Q, mounted upon the portions B. Suitable ropes or rods Q' are fastened to the outer ends of the arms Q, whereby the latter may be conveniently operated.

In order to break the force of the gate and cause the same to close or open without jar, I provide a flexible rod R, the end of which is fastened within the hollow shaft or spindle

D, and its outer end is held by means of an eye R' upon one of the uprights A and so arranged that it will be slightly under tension as the gate is swung open or closed.

5 In order to securely brace the gate, I provide brace-rods M, a detail view of said rods being clearly shown in Fig. 2 of the drawings, in which each brace at its angle is provided with an eye N', which fits over the shaft or
10 spindle D, and is held spaced apart from the post E by means of a sleeve D². The ends of said brace-rods M are threaded, as at N². Plates O are mounted upon the rear gate-post E and upon the bottom longitudinal strip E²,
15 and the threaded ends of said rods passing through apertures in said plates are held taut by means of the nuts O' upon the threaded ends of the rods. By this means it will be
20 observed that the gate will be securely braced against strain which will necessarily come upon the same in opening and closing the gate.

In operation when the gate is closed and it is desired to open it either one or the other of the rods Q' is pulled down, which through the
25 medium of a pivotal arm Q and rod I will cause the pin K, which engages the notch g', to raise the gate to an upright position. As the gate assumes the position shown in dotted lines in Fig. 1 of the drawings the flexible
30 bar R will be under tension in order to ease the momentum of the gate as the rear post comes in contact with the ground, and the member H will tilt to the position shown in dotted lines and will slide down the inclined edge of
35 the brace G, and the pin K', carried by said member, will engage the notch g', and said member H will be in readiness to close the gate whenever one or the other of the rods Q' is pulled down. The gate being held under a
40 slight tension when in the position shown in dotted lines, it will take but a small power to throw the same to the position shown in solid lines, the spring-bar R yielding as the gate turns to a horizontal position and being
45 slightly under tension as the gate swings closed.

While I have shown a particular form of apparatus illustrating my gate, it will be understood that I may vary the details of the
50 same, if desired, in various ways without in any way departing from the spirit of the invention.

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

1. A swinging gate comprising upright posts, a rock-shaft journaled in suitable bearings thereon, a gate secured to said shaft and provided with diagonal braces, one of said
60 braces having notches in the edge thereof, a weighted member sliding on said notched brace, pins carried by said member and adapted to engage said notches, means for limiting the throw of said member, rods secured to said

member, and means for raising said rods, as 65 set forth.

2. A swinging gate comprising upright posts, a rock-shaft mounted in suitable bearings upon said posts, a gate secured to said shaft and provided with diagonal braces, one 70 of said braces having notches upon its edge, a weighted member sliding on said notched brace, pins carried by said member and adapted to engage said notches, stops upon the side of said notched brace, rods secured to said 75 weighted member, tilting arms connected to said rods, and means for tilting said arms, as set forth.

3. A swinging gate comprising upright posts, a rock-shaft mounted in suitable bear- 80 ings upon said posts, a gate secured to said shaft and provided with diagonal braces, one of said braces having notches upon its edge, a weighted member sliding on said notched brace, pins carried by said member and adapted 85 to engage said notches, stops upon the side of said notched brace, rods secured to said weighted member, means for raising said rods, and tension mechanism for breaking the momentum of the gate as it approaches its limits 90 in opposite directions, as set forth.

4. A swinging gate comprising upright posts, a rock-shaft mounted in suitable bear- ings upon said posts, a gate secured to said shaft and provided with diagonal braces, one of said 95 braces having notches upon its edge, a weighted member sliding on said notched brace, pins carried by said member and adapted to engage said notches, stops upon the side of said notched brace, rods secured to said weighted 100 member, means for raising said rods, a flexible angle-bar secured to said rock-shaft and having one end fastened to one of said upright posts, as set forth.

5. A swinging gate comprising upright 105 posts, a cross-piece connecting the same, tilting arms mounted upon said uprights, a rock-shaft mounted in suitable bearings upon the upright posts, a gate having longitudinal top and bottom pieces with diagonal braces inter- 110 mediate the same, one of said braces having notches in its edge, a slotted member sliding upon said notched brace, pins carried by said member and adapted to engage said notches, rods connected to said member and means for 115 raising said rods, angled brace members having eyes engaging said shaft, plates fitted upon the rear post and bottom strip of the gate and through which post the slotted ends of said brace-rods pass, and nuts engaging said slot- 120 ted ends, as set forth.

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

FRANK DAVIS.

Witnesses:

A. F. CASWELL,
S. W. DILLARD.