(No Model.) 2 Sheets—Sheet 1.

W. LEBO.

SELF CLOSING GATE.

No. 413,193. Patented Oct. 22, 1889.

Fig. 1.

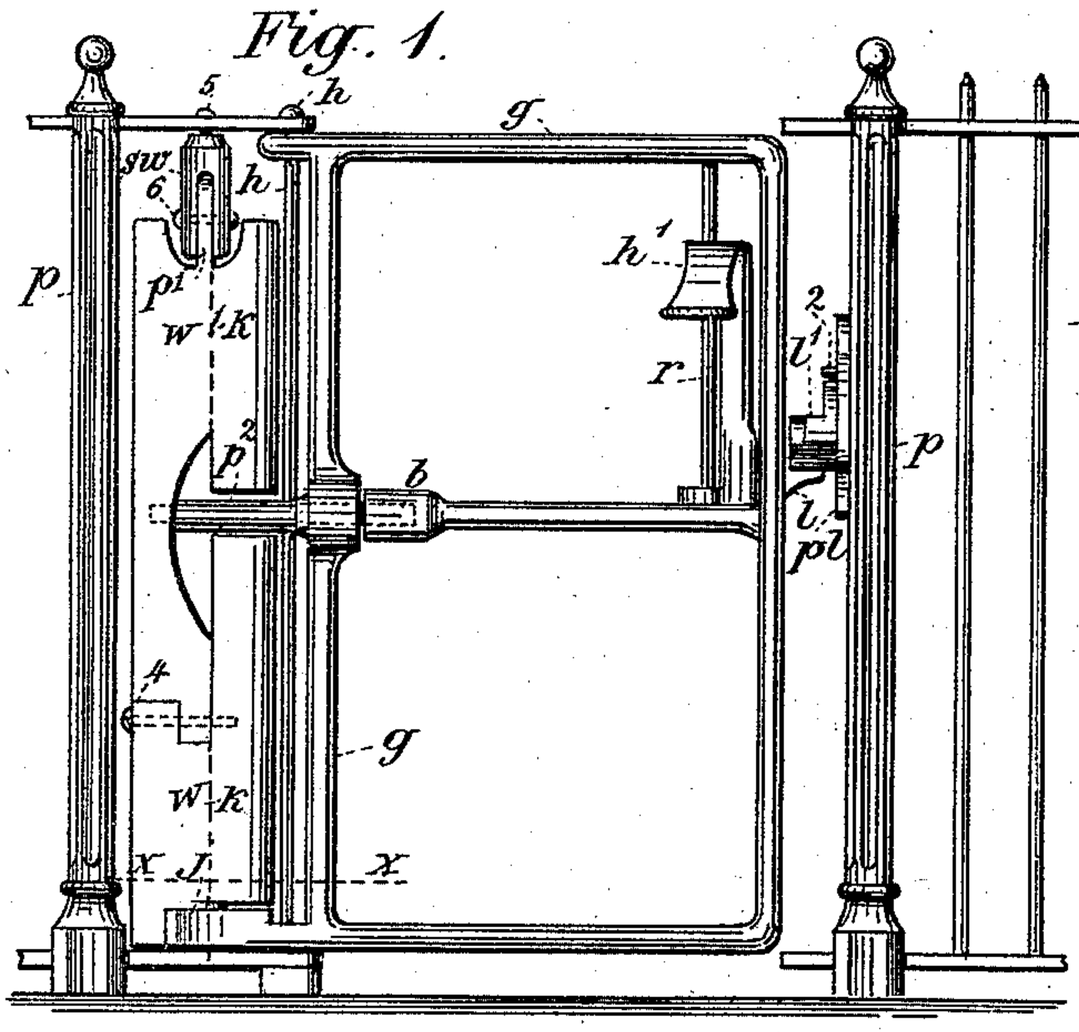


Fig. 2.

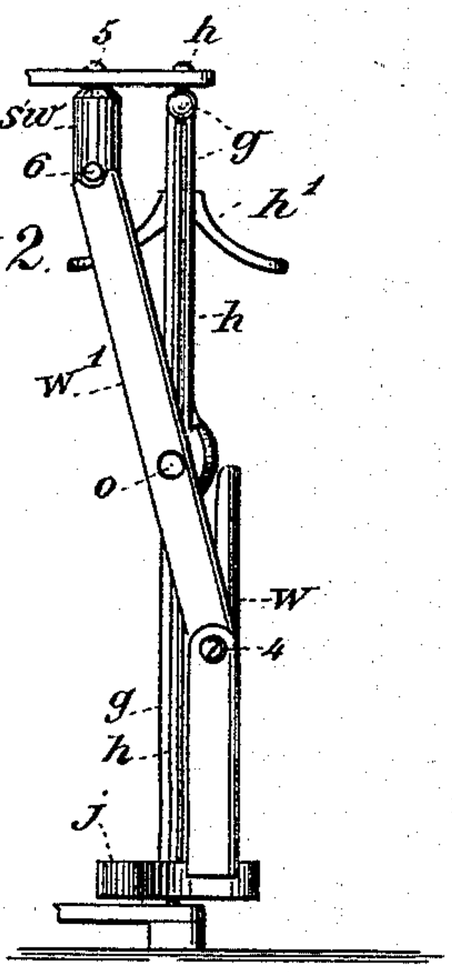


Fig. 3.

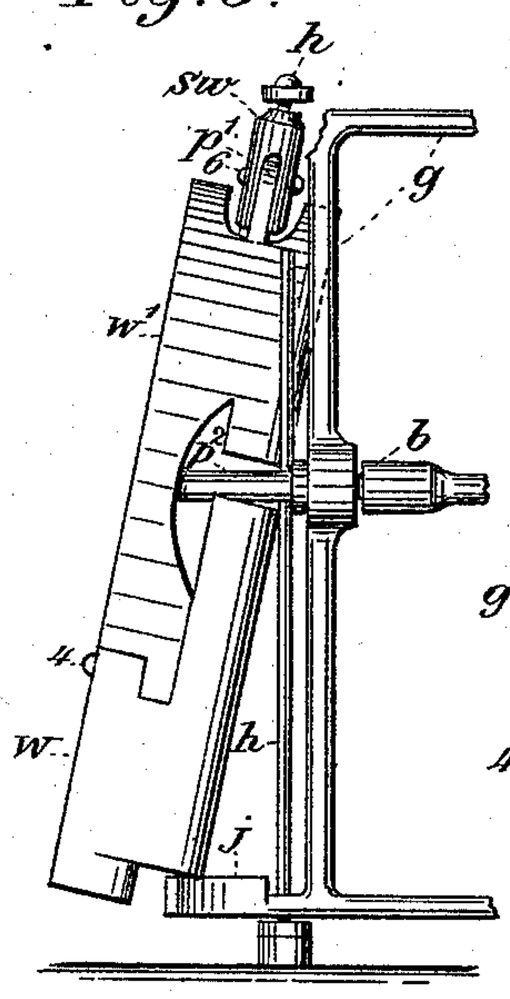


Fig. 4.

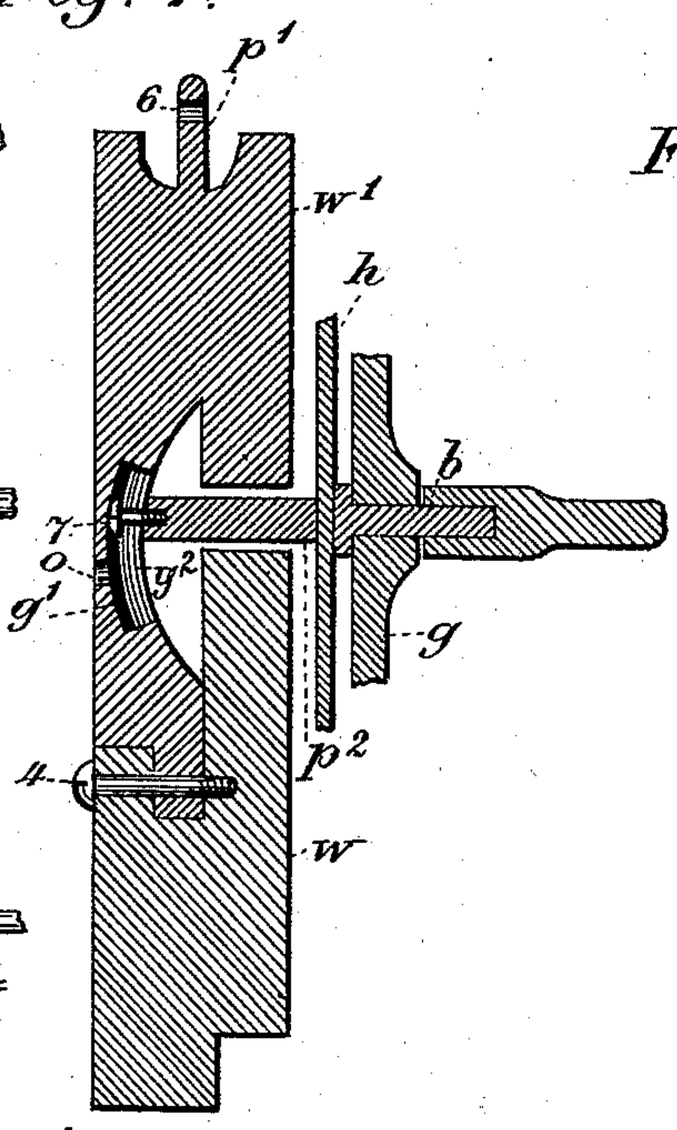


Fig. 5.

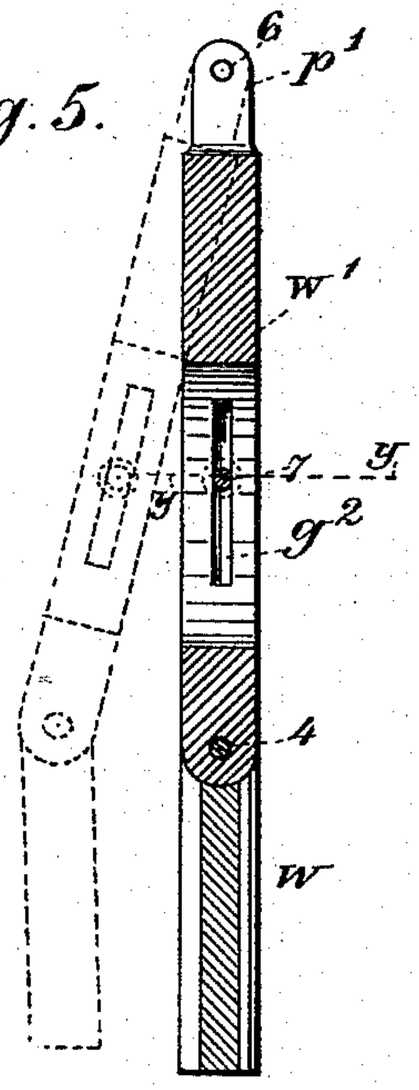
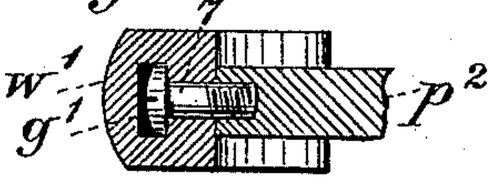


Fig. 6.



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(No Model.) 2 Sheets—Sheet 2.

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SELF CLOSING GATE.

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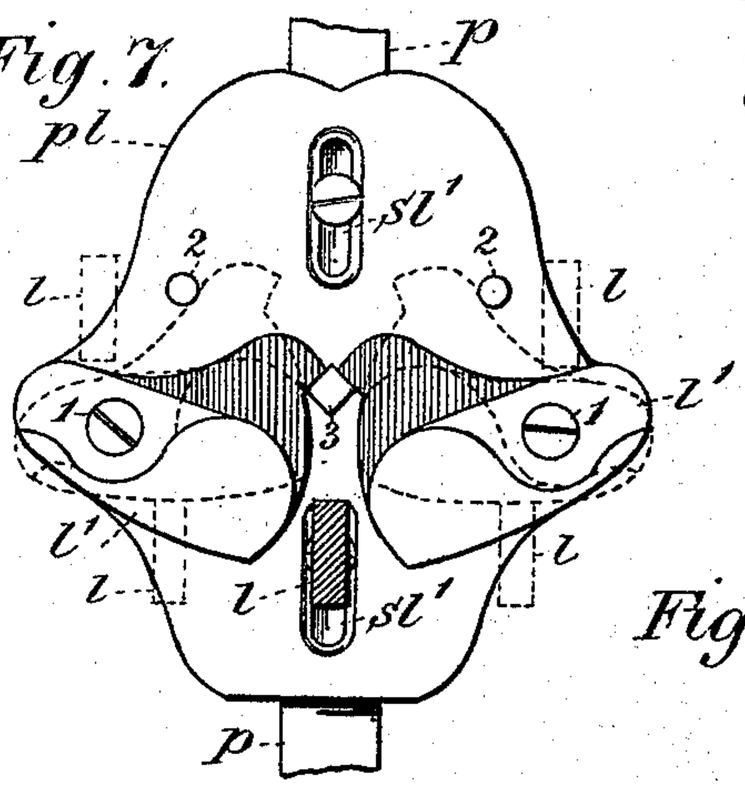
Fig. 7.



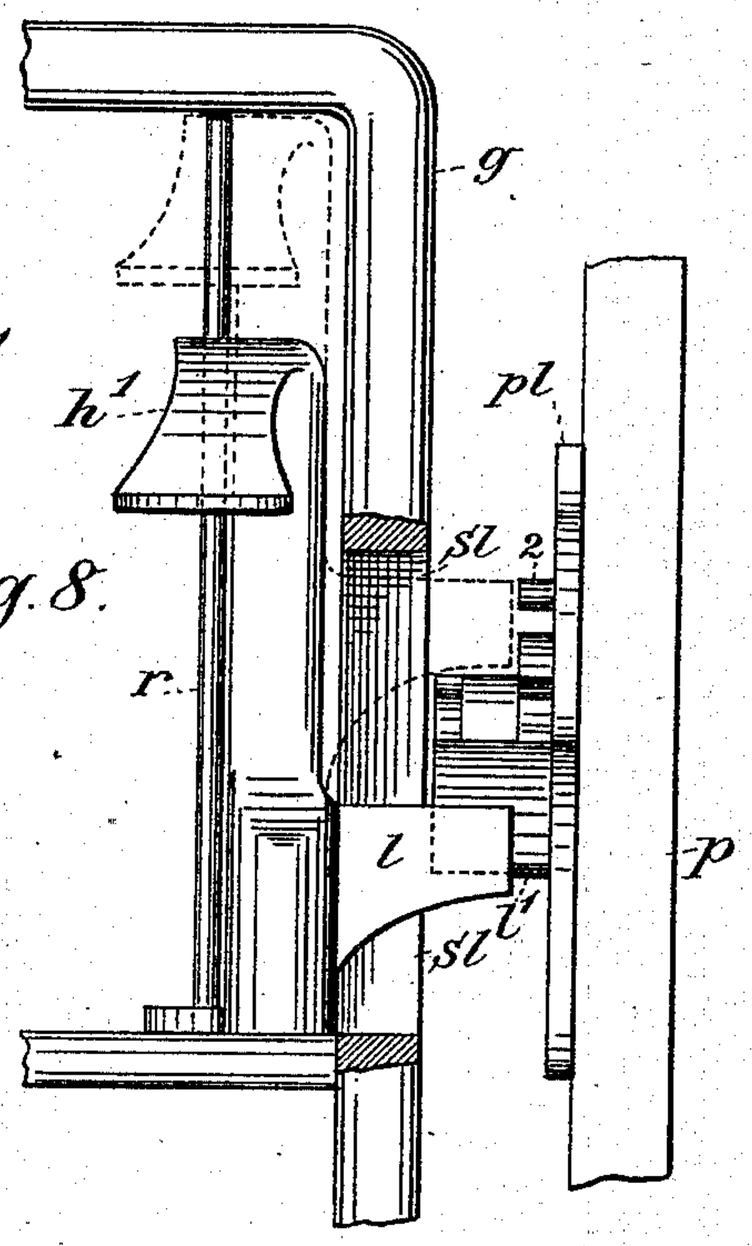


Fig. 8.

Fig. 9.

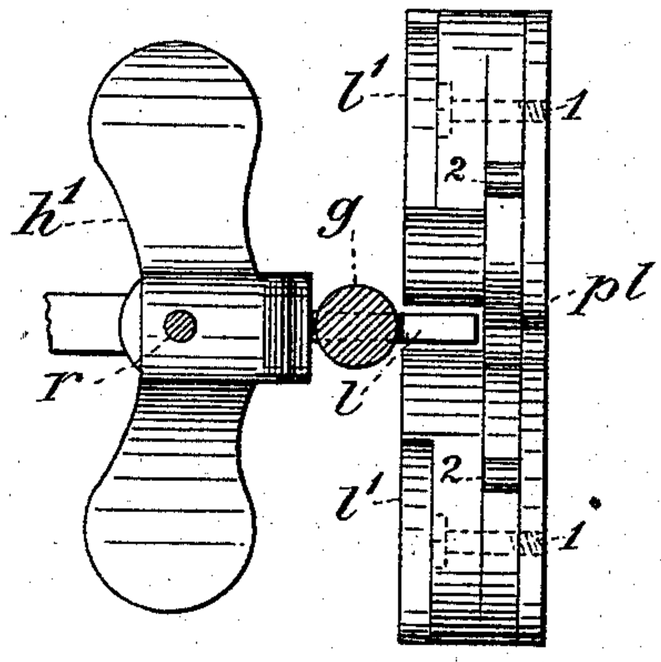
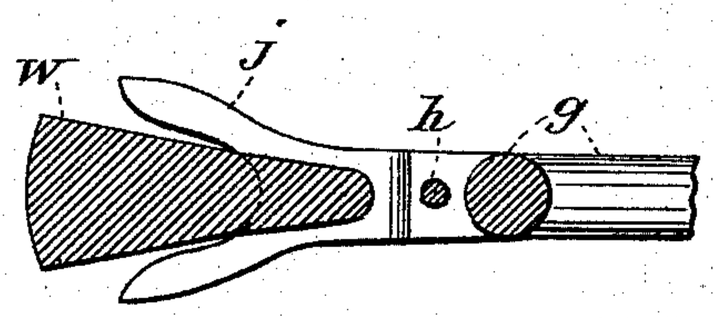


Fig. 10.



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UNITED STATES PATENT OFFICE.

WILLIAM LEBO, OF TIPTON, INDIANA.

SELF-CLOSING GATE.

SPECIFICATION forming part of Letters Patent No. 413,193, dated October 22, 1889.

Application filed July 24, 1889. Serial No. 318,582. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LEBO, of Tipton, county of Tipton, and State of Indiana, have invented certain new and useful Improvements in Self-Closing Gates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

My invention relates to the construction of self-closing gates, and will be understood from the following description.

In the drawings, Figure 1 is a side view of my device, showing the gate closed. Fig. 2 is a rear edge view of my device when the gate is open. Fig. 3 is a side view of the rear part of the gate and the attached weight when the gate is open. Fig. 4 is a longitudinal section of the self-closing device, showing its manner of connection to the gate. Fig. 5 is a view on the line *k k*, Fig. 1. Fig. 6 is a cross-section on the line *y y*, Fig. 5. Fig. 7 is an inside face view of the plate to which the gravity-catches are pivoted. Fig. 8 is a detail view of the latch and its catches, with the handle of the latch and the rod on which it moves. Fig. 9 is a top view of the same. Fig. 10 is a section on the line *x x*, Fig. 1. Figs. 1, 2, and 3 are drawn upon a smaller scale than the others.

In detail, *g* is a gate, whose frame-work is conveniently made of metal pipe or rods, the ends of the upper and lower bars being extended and having openings through which passes the hinging-rod *h*, its ends having bearings in the plate above and sill below the gate. Near the front side of the gate is a vertical rod *r*, upon which is mounted the handle *h* of the latch *l*, the latch proper passing through a mortise *sl* in the front bar of the gate, as shown in Fig. 8. This latch is lifted by the handle *h'*, which has two arms, as shown in Fig. 9, so that it may be operated from either side, and when it is lifted on the rod the latch of the gate will pass between and above the gravity-catches *l'*, pivoted at 1 on each side of the plate *pl*, which is fastened to the post *p* by screws passing through slots *sl'*. These gravity-catches have lugs at the top, which strike against the squared central stop 3, placed between them to prevent their downward movement, and above the catches are pins 2 2, forming stops to limit their upward movement. If one of these catches *l'* is lifted by hand from either side, the latch will pass beneath it, and the gate may be opened without lifting the gate-latch; but since the gate swings either way it is more convenient to push the gate from you, and the latch is to be lifted above the gravity-catch before the gate opens.

The fence-post at the right hand in Fig. 1 supports the latch-plate *pl*, and at the rear of the gate is an automatic closing device, consisting of a weight *w*, which is pivoted at 4 to an upper piece *w'*, this latter being in turn pivoted at 6 to the swivel *sw*, which is pivoted at 5 through the top plate of the fence.

The central cross-bar of the gate is conveniently formed of two parts, the forward end *b* having a socket which incloses a pin formed on the rear end p^2, as shown in Figs. 3 and 4. This pin passes through an open space between the two parts *w w'* of the closing device, and a headed screw 7 is driven into the outer end, the screw passing into a groove g^2 and its head into a wider groove *g'*, formed in the back of the upper section *w'*. This groove is made curved, as shown in Fig. 4, so that as the weight *w* oscillates in a twisting curve on the pin 4 the screw 7 will move up and down in the grooves *g' g²*, this groove serving practically as a guide, and also for connecting the closing device to the rear part of the central cross-bar while the gate is swinging. Upon lifting the latch *l* by means of its handle and opening the gate at right angles to its bearings in the position shown in Fig. 2 it will be noticed that while the weight *w* is practically parallel with the hinge-bar and gate, moving upon its pivot 4, the upper section *w* takes an angle thereto, swinging on the pivot 6, and the swivel *sw* moves upon its pivoted pin 5, while the screw 7 moves down in its grooves. This position of the parts, through the lifting of the lower weight, utilizes the gravity of the weight to close the gate, and as soon as the pressure of the hand is released therefrom its force will bring the weight *w* down to its normal position, and all the parts are again in line with each other and the gate will be shut, the latch passing beneath the gravity-catches *l'*. In order to keep the weight in position, a jaw *j* is formed upon or connected to the exten-

sion of the lower cross-bar of the gate, as shown in Fig. 10, and in this rests the rounded forward edge of the lower end of the weight, which is cut out, as shown in Fig. 3, in order that the narrower portion may enter the jaw, while the wider part of the end hangs directly above the same. As the gate is opened, the weight is lifted and its lower end, which hangs in the jaw *j*, bears against that side of the jaw opposite to the direction in which the gate is being opened and tips the weight over at an angle to the upper section, to which it is pivoted, until, as the gate is opened at a full right angle, the lower end of the weight will clear the jaw and the weight will hang substantially parallel with the line of the gate. The weighted parts thus pivoted together and connected as they are in relation to the gate will at all times exert a direct force to close the same, and it will be noticed that there are no springs used, but the force of gravity alone is relied upon for operating the self-closing mechanism, and its action is direct at all times.

What I claim as my invention, and desire to secure by Letters Patent, is the following, viz:

1. A self-closing gate hinged to a rod passing through extensions of the upper and lower cross-bars, a jaw connected to the extension of the lower cross-bar, an automatic closing device comprising a weight, its lower end normally resting in such jaw and suspended at its upper end from a swivel or its equivalent connected to an upper plate supported upon the fence-post, the central part of the upper section of the closing device grooved to admit a headed pin connected to an extension of the central cross-bar of the gate, such upper section pivoted to the lower weighted section, and a frame-work for supporting the gate and its closing mechanism, substantially as shown and described.

2. A self-closing gate comprising a frame-work hinged to a rod having bearings in upper and lower supports, an automatic closing device connected to the rear of such gate, comprising a weighted section pivoted to an upper section, the latter in turn pivoted to a swivel, and the whole suspended upon a pivotal pin passing through the upper plate of the frame-work of the fence, the central part of the upper section grooved to admit a headed pin connected to an extension of the central cross-bar of the gate, a latch passing through a mortise in the front bar of the gate-frame, which is mounted on a vertical rod secured therein, and a pair of gravity-catches pivoted to a front plate connected to the gate-post and adapted to engage with the latch of the gate, all combined substantially as shown and described.

3. In a self closing and locking gate, a pair of gravity-catches pivoted to a plate secured to the inner face of the post, such plate provided with stops to limit the upward and downward movement of the gravity-catches, a latch passing through a mortise in the gate-frame and adapted to engage with such gravity-catches and connected to a lifting-handle mounted on a rod supported in the gate-frame, in combination with a gate and automatic weight-closing device connected at the rear thereof, substantially as shown and described.

In witness whereof I have hereunto set my hand this 12th day of July, 1889.

WILLIAM LEBO.

Witnesses:
C. P. JACOBS,
E. B. GRIFFITHS.