(Model.)

W. D. ELLIS.

GATE.

No. 341,896. Patented May 18, 1886.

Fig. 1.

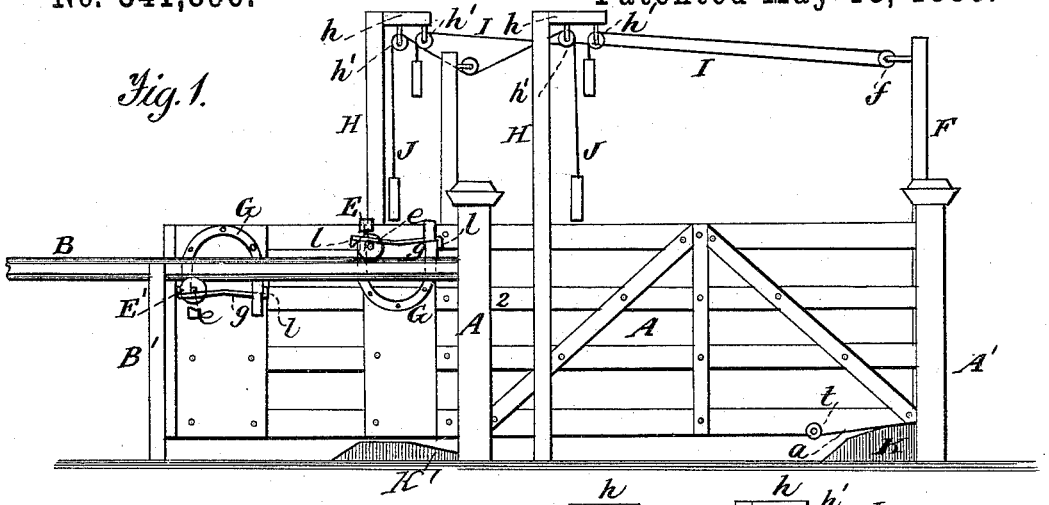

Fig. 2.

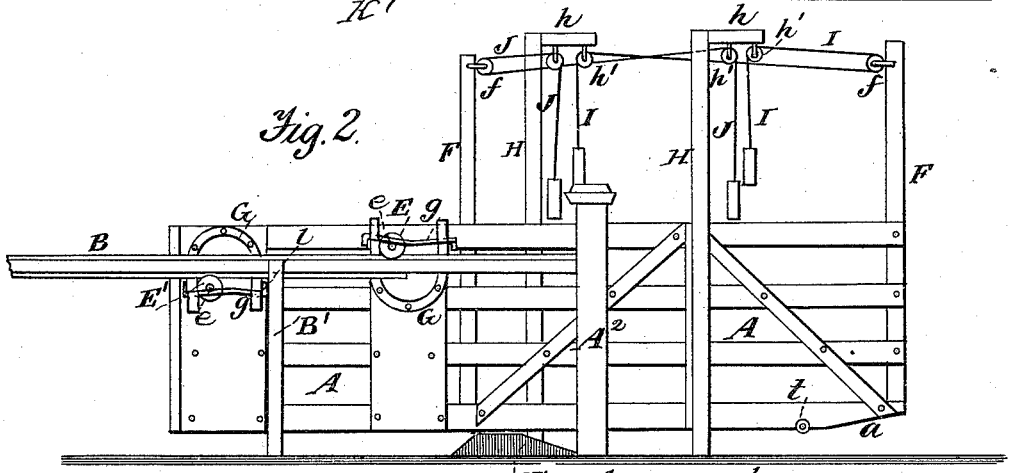

Fig. 3.

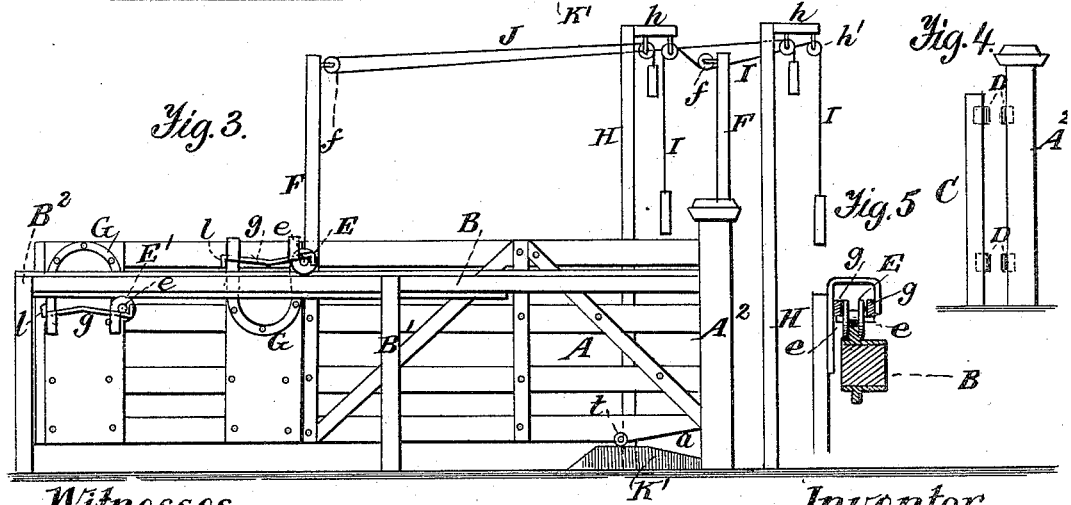

Fig. 4.

Fig. 5

Witnesses.
A. Ruppert.
R. E. Grant

Inventor.
Wm. D. Ellis,
per
Thomas P. Simpson
atty

UNITED STATES PATENT OFFICE.

WILLIAM D. ELLIS, OF BLAINE, ILLINOIS.

GATE.

SPECIFICATION forming part of Letters Patent No. 341,896, dated May 18, 1886.

Application filed December 8, 1885. Serial No. 185,060. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM D. ELLIS, a citizen of the United States, residing at Blaine, in the county of Boone and State of Illinois, 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 and figures of reference marked thereon, which form a part of this specification.

The invention relates, generally, to that class of gates which slide laterally on a track and are provided with friction-rollers.

The features of invention will first be described in connection with the drawings, and then pointed out in the claims.

Figure 1 of the drawings is a side elevation showing the gate closed; Fig. 2, a similar view showing it half open; Fig. 3, a similar view showing it entirely open; and Fig. 4 is a view in detail of several parts. Fig. 5 is a vertical cross-section showing the two inclined tracks.

In the drawings, A represents the gate, A′ A^2 the gate-posts, B, the track, and B′ B^2 the track-posts.

C is a guide-post, which is parallel to the gate-post A^2, both posts being provided with the opposite guide-rolls, D, between which passes the gate.

E E′ are flanged rollers provided with the trunnions *e e*, and G G yokes fastened on opposite sides of the gate-rails, parallel to each other, and carrying the tracks *g*. One of these yokes is placed as near as possible to the rear end of the gate, while the other is about four feet therefrom in a gate having a length of twelve feet. The flanges of the rolls embrace or receive between them the track B, while the auxiliary tracks *g* come into contact with the trunnions *e e*, which pass from end to end of said tracks *g* in the same time that the rollers pass over the track B, the circumference of the trunnions bearing the same relation to the length of the tracks *g* that the circumference of the rolls bears to the length of the track B. The gate is made considerably heavier at the rear end, so that it will press down on the end roll and up on the other, thus keeping the rollers on the track. The auxiliary tracks *g* are inclined from the middle toward each ends and reversed in position, so as to give a descending motion on the last half of the movement of the gate in opening or closing, and also to prevent the gate from running back or forward when it is fully open or closed, the gate being thus compelled to take an upgrade. The hooks *l* are placed on the ends of the track, so as to prevent the rollers from running off, if they should pass the yokes.

F F are vertical draw-bars carrying pulleys *f f*, and H H are fixed posts having horizontal arms *h*, carrying pulleys *h′ h′*.

I J are end-weighted cords or ropes passing over the pulleys *f h*, so that the gate may be opened or closed by pulling on one or the other of the cords.

K is a block beveled downwardly from the inner side of the gate-post A′, so as to receive the beveled end *a* of the gate, and thus support the front end of the gate with sufficient friction to render any gate-latch unnecessary, and at the same time to prevent sagging. The beveled end of the gate may have side flanges, one passing on each side of the block, and outwardly flared at the front ends.

K′ is another block on an upward incline from the gate-post A^2, and arranged at one side of it. On this block runs a friction-roller, *t*, under the front end of the gate, so that when the gate is open the front end is supported and cannot sag. In some gates the yokes G may have straight auxiliary tracks *g*, while my rollers, yokes, and tracks may be employed with picket, slat, and other forms of gate with equal advantage.

Having thus described all that is necessary to a full understanding of my invention, what I claim to be new, and desire to protect by Letters Patent, is—

1. The sliding gate provided with yokes G, having double-inclined tracks *g*, in combination with the flanged rolls having trunnions resting on the incline, and with a stationary

track, substantially as and for the purpose specified.

2. In a sliding gate, the combination of a bottom rail having the subjacent roll *t*, the posts A′ A², and the two inclined blocks K K′, the latter constructed and arranged with respect to the posts substantially as and for the purpose set forth.

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

WILLIAM D. ELLIS.

Witnesses:

PETER CRAMER,
AMOS PIERCE.