

(No Model.)

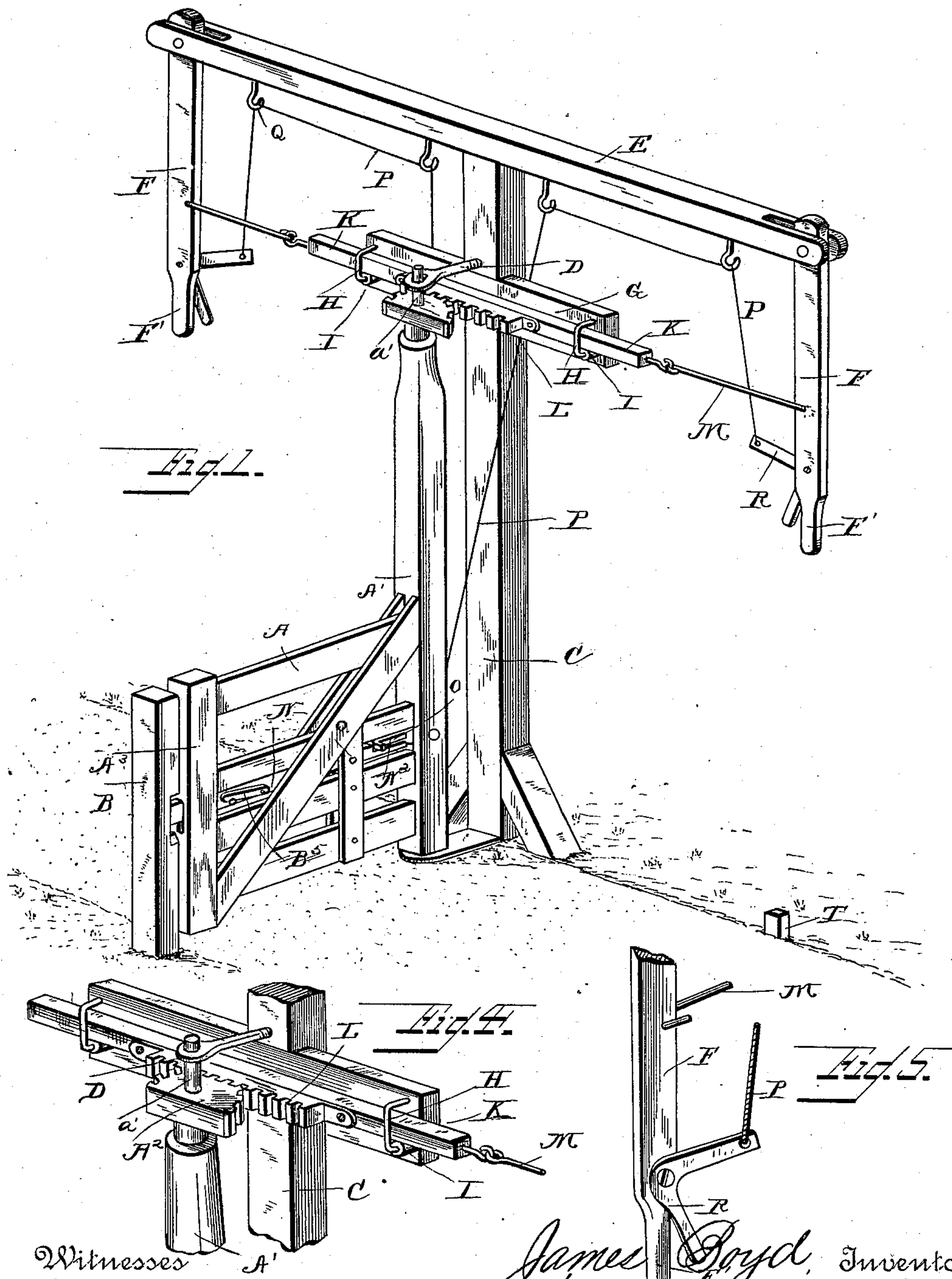
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J. BOYD & W. F. GOLDENBURG.

GATE.

No. 365,573.

Patented June 28, 1887.



Witnesses
F. L. Ourand
Benj. G. Cowl

James Boyd, Inventors
William F. Goldenburg,
By their Attorneys
Louis Daggu & Co.

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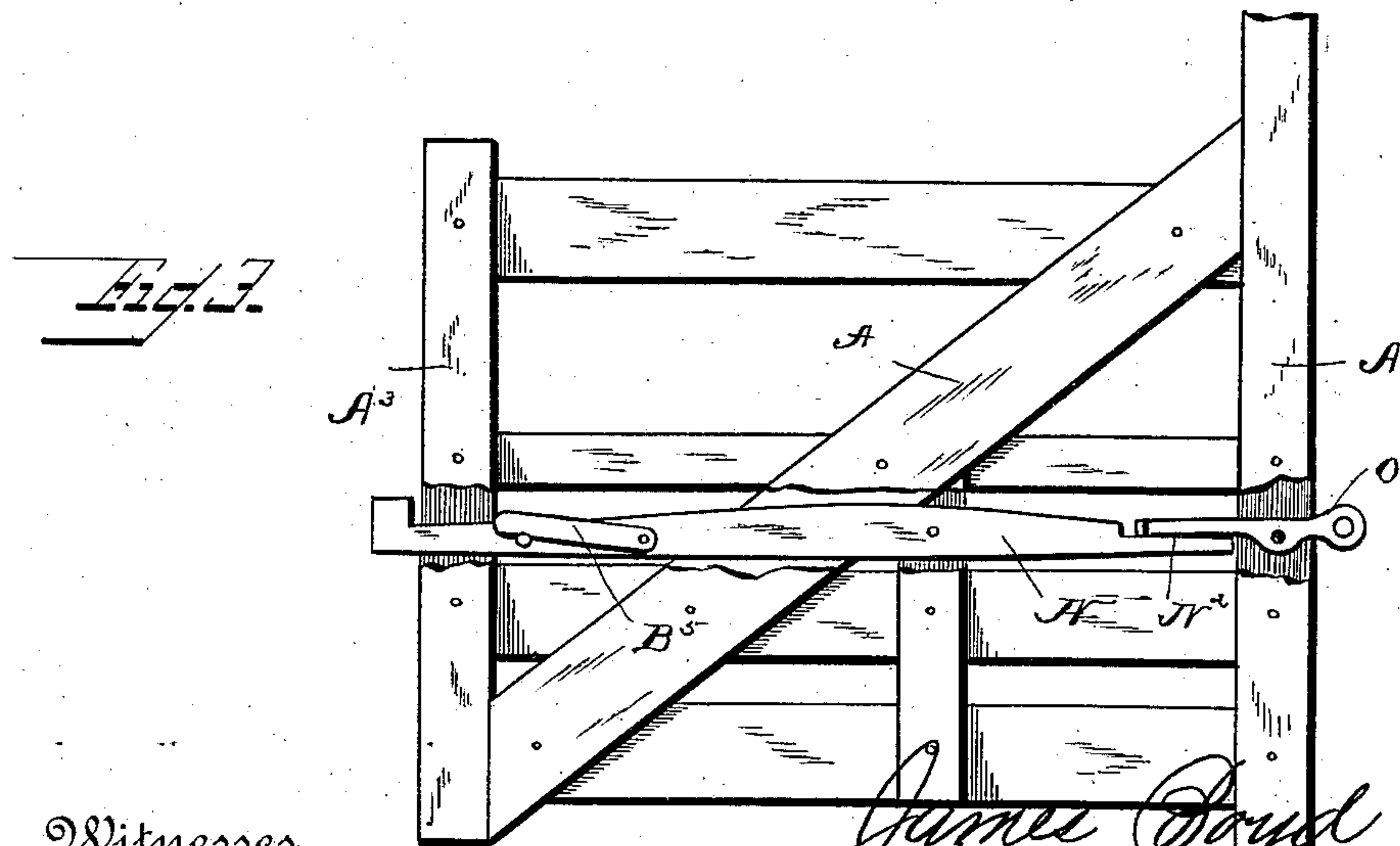
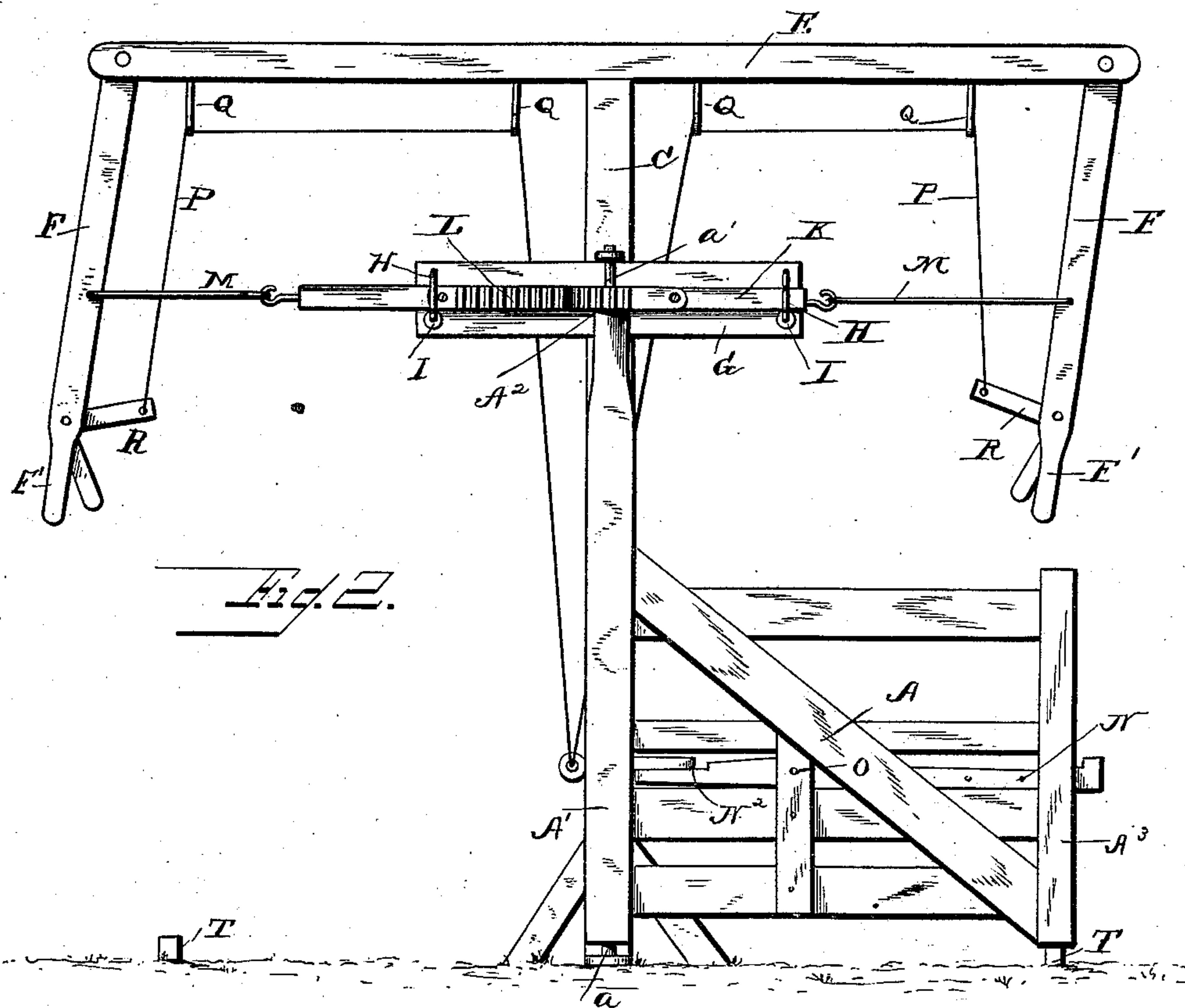
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UNITED STATES PATENT OFFICE.

JAMES BOYD AND WILLIAM F. GOLDENBURG, OF VEVAY, INDIANA.

GATE.

SPECIFICATION forming part of Letters Patent No. 365,573, dated June 28, 1887.

Application filed April 18, 1887. Serial No. 235,200. (No model.)

To all whom it may concern:

Be it known that we, JAMES BOYD and WILLIAM F. GOLDENBURG, both residents of Vevay, in the county of Switzerland and State of Indiana, have invented certain new and useful Improvements in Gates; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of our improved swinging gate, showing the same in its closed position. Fig. 2 is a front elevation showing the gate swung open. Fig. 3 is a side elevation of the gate alone, partly in section. Fig. 4 is an enlarged detail view of the rack for swinging the gate and the upper end of the rear gate-upright, and Fig. 5 is an enlarged detail view of the lower part of one of the gate-levers.

The same letters of reference indicate corresponding parts in all the figures.

Our invention consists in an improved swinging gate, which is especially adapted for use as a farm-gate, and which may be opened from either side and swung either to or from a person mounted on horseback or seated in a wagon, and after the person has driven through can be swung back into its closed position without his dismounting; and our invention will be hereinafter fully described and claimed.

Referring to the several parts by letter, A indicates the gate proper. The forward upright or end piece, A^3 , is of the usual height, while its rear upright, A' , is extended up for a considerable height above the level of the top of the gate, as shown, the lower end of this rear upright having a spindle or stud, a , on which the said lower end is hung or pivoted, and on which it turns. The upper end of the said rear upright is provided with a vertical pivot, a' , and has a toothed wheel, A^2 , rigidly secured upon its top, the said pivot passing through the center of the said toothed wheel, this wheel being preferably but two-thirds of a perfect wheel, its forward side being formed

straight, as shown, and the teeth being formed only on the curved periphery.

B and C indicate the gate-posts, between which the gate A is swung in its operative position, the forward gate-post, B, being of ordinary height, while the rear gate-post, C, is about two and one-half times the height of the forward post, B. The upper end of the rear upright, A' , of the gate is pivotally connected to this rear gate-post by means of an eyebolt, D, the stem of which is screwed into the post C at the proper height, while the upright pivot a' on the top of the rear gate-upright passes through the eye of the said eyebolt D, thus permitting the gate to swing freely to either side. Upon the top of the rear gate-post, C, is centrally and rigidly secured a top piece, E, in or to the ends of which are pivoted the upper ends of the levers F, which are used to swing the gate into its open and closed positions, and which we shall denominate the "gate-levers." The lower ends of these gate-levers extend down within convenient reach of a person seated in a wagon or carriage or on horseback, and their lower ends are rounded to form convenient handles, F' .

G indicates a cross-piece, which is secured centrally to the rear gate-post, C, parallel with the top piece, E, and immediately below the eyebolt D, or rather the said eyebolt is placed immediately above the said cross-piece, and this cross-piece is provided at points near its ends with the stirrups or clips H H, having the small anti-friction rollers I journaled or mounted on their lower sides. Through these stirrups pass and slide the end portions of a transverse sliding bar, K, to the central part of which is secured by screws or bolts a rack, L, the teeth of which mesh with the teeth of the mutilated wheel A^2 , which is rigidly secured to the top of the rear gate-upright, A' , and the ends of this preferably wooden slide-bar K are pivotally connected by connecting-rods M M with the central points of the gate-levers F, as shown.

N indicates the centrally-pivoted latch of the gate A, this latch being centrally pivoted within the gate, and being of such length that its forward end extends through the forward

gate-upright to engage with a notch formed in the gate-post B, the post being cut away at that point to form a space through which the forward end of the latch can pass when the said end is lifted, and the forward portion of the latch being preferably weighted, as at B¹, to cause the forward end of the latch to fall by its own weight when the pressure on its rear end is removed. By reducing the latch near its forward end it can be operated through a smaller opening in the gate than if it were of the full width throughout, thus not having to weaken the gate with a large opening. In the rear end upright of the gate, at the rear end of the latch, is centrally pivoted a dog, O, the forward bent end of which rests in a recess, N², in the upper side of the rear end of the centrally-pivoted latch N, and to the rear projecting end of this dog O are secured the lower ends of operating-cords P P, which extend up by the sides of the rear gate-post, one on each side of the said post, and then through eyes Q on the lower side of the top piece, E, the outer end of each operating-cord then passing down near the outer end of the top piece, and being secured to the upper inner end of a small L-shaped lever, R. These we shall denominate the "latch-levers," as they serve to operate the gate-latch, the said levers R being centrally pivoted at their curve or elbow to one side of the gate-levers F, near the lower ends thereof, so that they can be operated by the hand as the latter grasps the handle of the gate-lever F.

It will be seen that in operation the passenger, approaching the gate from either side, either on horseback or seated in a wagon or carriage, grasps the handle of the gate-lever F on that side of the gate, his hand at the same time closing around the handle of the latch-lever R, and by merely closing the hand tightly the small latch-lever will be turned on its central pivot, drawing its inner upper end down and pulling on that operating-cord P, so as to raise the rear end of the dog O, which is centrally pivoted, as described, and pressing down the forward end of this dog upon the rear end of the centrally-pivoted gate-latch N, thus raising the weighted forward end of the latch so as to clear it from the notch, thus unlatching the gate. By then pushing or pulling on the lower handle end of the lever F the sliding bar K will be slid to one side, as the case may be, and the rack L on it, the teeth of which engage with the teeth of the mutilated wheel A², will thus turn the said wheel, and with it the rear gate-upright, to the upper end of which it is rigidly attached, thus swinging the gate around on its pivotal points either to or from the approaching passenger, so as to leave the gateway open for the passage of the carriage or wagon in which the passenger is seated, the lower outer end of the gate, when it has swung out at right angles to the gateway, striking against a suitable stop, T, the said stops being arranged at each side of

the gateway, as shown. It will be seen that the slide-bar K, the weight of which is supported by the anti-friction rollers I, will run very easily, and being made preferably of wood its weight is very light. The operating gate-levers can be pivoted to posts set in the ground at those points, instead of being pivoted to the ends of the top piece, if desired. After the passenger has driven through the gateway sufficiently far to clear the gate as the latter swings, he closes the gate by catching hold of the handle of the gate-lever on that side and pushing or pulling on the same, as may be required, thus swinging the gate back into its closed position. As his hand tightens around the handle of the gate-lever, it draws in the handle of the small latch-lever on that side, thus raising the latch, in the manner just described, to allow it to clear the lip of the notch on that side, and when the forward end of the gate-latch has cleared this lip the gate will be standing in its closed position, and may be held in that position by the gate-lever, while at the same time relaxing the fingers sufficiently to permit of the latch-lever R swinging up as the weighted forward end of the latch falls by its own weight into the space between the lips, thus latching the gate in its closed position.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of our improved gate will be readily understood. It will be seen that it is comparatively simple and very strong in construction, and is therefore not liable to break or get out of order, and that it is exceedingly efficient in its operation. As described, it can be opened in either direction and closed by the passenger without dismounting from his horse or carriage and without stopping the same, and is therefore especially useful as a farm-gate, and it is also exceedingly useful as a stock-gate, as it can be opened and closed very quickly, so as to admit certain stock into a field, and yet stop stock not wanted from entering a field, opening the gate only as far as desired, the motions of the gate being very rapid and easily controlled.

The mutilated wheel A² and the reciprocating bar carrying the rack can be arranged at the bottom of the gate instead of at the top, as here shown, when so desired, and will operate in precisely the same manner. The arrangement of the operating-levers, &c., would of course in that case have to be slightly changed.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

The combination, with the pivoted gate having the mutilated gear-wheel on the top of its rear upright, of the rear gate-post having the top piece provided with the eyes or guides, and the cross-piece having the stirrups provided with the anti-friction rollers, the recip-

roccating bar having the rack, the levers piv-
oted at their upper ends in the outer ends of
the said top piece, the rods or wires connect-
ing the said levers with the ends of the recip-
5 roccating bar, the forward gate-post formed
with the upright lips, the centrally-pivoted
latch having the weighted forward end, the
centrally-pivoted dog, the latch-cords, and the
small centrally-pivoted latch-levers, all con-
10 structed and arranged to operate substantially

in the manner and for the purpose herein set
forth.

In testimony that we claim the foregoing as
our own we have hereunto affixed our signa-
tures in presence of two witnesses.

JAMES BOYD.

WILLIAM F. GOLDENBURG.

Witnesses:

E. M. STEVENS,

L. W. GOLAY.