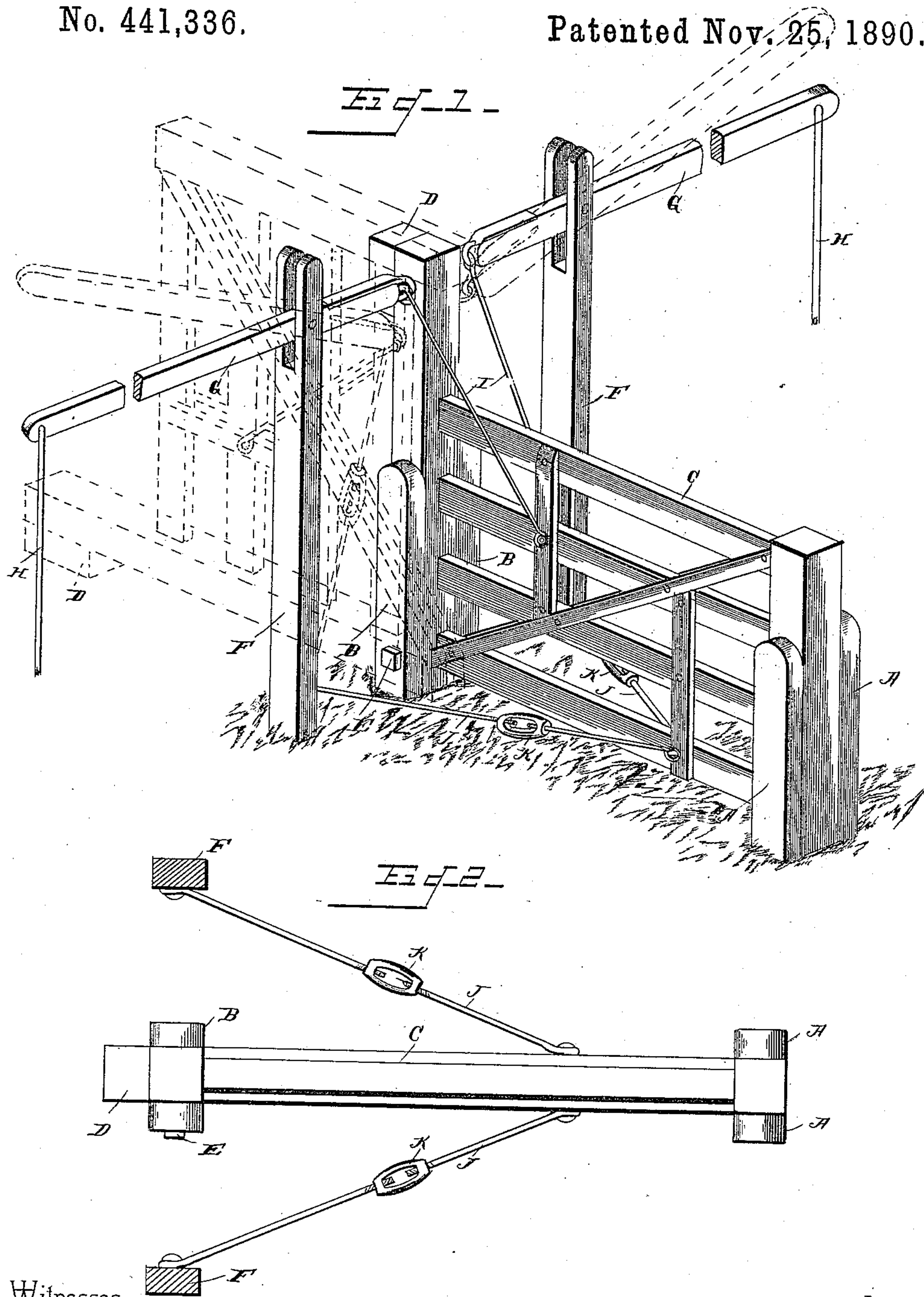


(No Model.)

S. SMALLEY.
GATE.

No. 441,336.

Patented Nov. 25, 1890.



Witnesses

Geo. E. French.

R. K. Bishop.

By his Attorneys,

C. A. Snow & Co.

Inventor
Samuel Smalley.

UNITED STATES PATENT OFFICE.

SAMUEL SMALLEY, OF RICH HILL, MISSOURI.

GATE.

SPECIFICATION forming part of Letters Patent No. 441,336, dated November 25, 1890.

Application filed August 2, 1889. Serial No. 319,542. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SMALLEY, a citizen of the United States, residing at Rich Hill, in the county of Bates and State of Missouri, have invented a new and useful Gate, of which the following is a specification.

My invention relates to improvements in gates; and it consists in certain novel features, hereinafter described and claimed.

10 In the accompanying drawings, Figure 1 is a perspective view showing the gate closed in full lines and open in dotted lines. Fig. 2 is a plan view with a part in horizontal section.

15 In carrying out my invention I set in the ground at one side of the roadway a pair of short posts A A, between which the free end of the gate plays, and on the opposite side of the roadway I set in the ground the short posts
20 B B, between the lower ends of which I pivot the gate C. The gate may be of any desired size, and is constructed of horizontal rails and vertical end bars in the usual manner and has its inner end bar extended upward and pro-
25 vided with a counterbalancing-weight D, secured to the rear side thereof, as shown, the lower end of said end bar being engaged by the pivot-pin E, passed through the lower ends of the posts B. At a suitable distance
30 from the posts B, I erect the posts F, the upper ends of which are bifurcated, and the operating-levers G are fulcrumed within said bifurcations. These operating-levers are provided at their outer ends with depending op-
35 erating cords or handles H, and their inner ends are connected with the gate by the pitmen or links I, which have their upper ends linked to the inner ends of the levers and their lower ends pivoted at a proper point to
40 the gate.

To the lower ends of the lever-posts F, and in line with the pivot of the gate, I pivotally secure the ends of the brace-rods J, the outer ends of said rods being pivoted to the lower
45 rail of the gate on opposite sides of the same. These brace-rods are constructed in two sections, which are connected by turn-buckles K, so that the length of the said rods may be varied at will.

50 In practice, when it is desired to open the gate, the person approaching draws down the adjacent lever, so as to raise the gate and

throw it beyond the dead-center, when its weight will carry it over until it is entirely open. The person then passes through the
55 gateway and draws down the opposite lever, so as to close the gate.

It will be observed that my gate is very simple in its construction and operation and that it can be operated by any person ap-
60 proaching in a vehicle or on horseback without alighting. Furthermore, it may be opened only partially, so as to allow small stock to pass through and at the same time keep back
65 the large stock, and thereby separate the stock. The brace-rods J prevent lateral swaying of the gate and hold it in its proper position. They also prevent the gate's mov-
70 ing to one side or the other when being opened or closed, and consequently they prevent twisting and bending of the pivot-pin. By rotating the turn-buckles in one or the
other direction the brace-rods may be length-
75 ened or shortened, and the gate thus adjusted so as to take up the wear on the pivot-pin or compensate for any unequal swelling of the parts, as will be readily understood.

As the gate-links I are pivoted to the gate at a point above the vertical center thereof, their lower ends pass over the posts B when
80 the gate is operated. So, also, as the inner ends of the brace-rods T are remote from the posts B and their outer ends connected with the gate near its free end, they too pass over the posts B when the gate is operated. More-
85 over, by making the posts B shorter than the height of the gate this is permitted, yet the inner end bar of the gate stands closely between the posts B when the gate is closed.

By placing the weight D in rear of the pivot
90 E the weight of the gate is at all times partially counterbalanced, and by connecting the lower ends of the links I with the gate at a point equally distant from the bottom and the inner end thereof an equal force is required
95 to operate the gate in either direction—that is to say, if the pivoted point were nearer the inner end the leverage would be poorer when opening the gate, and if it were nearer the bottom rail (which stands about between the
100 posts F when the gate is opened) the leverage would be poorer in closing. Obviously the point of best leverage would be the upper outer corner; but that would necessitate a too

great movement of the levers. If the weight D about counterbalances the gate, the point should be equally distant from the inner end and bottom of the gate, as shown, although I
5 do not confine myself to this precise construction.

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

10 In a tilting gate, the combination, with the pair of short inner posts B, the pair of outer posts A, the gate proper C, whose end bars stand normally between said pairs of posts and whose inner end bar rises above the gate,
15 the pivot-pin E, connecting the lower end of the inner end bar and the inner posts, and the weight D, secured to the rear side of said inner bar at its upper end, of the lever-posts F in line with and remote from said inner posts

B, the levers G, pivoted in the upper ends of 20 said posts, the links I, connecting the inner ends of said levers with the body of the gate at a point farther from the pivot than the height of said inner posts, the brace-rods J, pivoted at one end to the inner faces of said 25 lever-posts in line with the pivot-pin E and connected at the outer end with the gate at a point near its free end, so as to pass over the inner posts B when the gate is operated, and the turn-buckles K in said brace-rods J, substantially as described. 30

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL SMALLEY.

Witnesses:

JOHN GOUGH,
JAMES M. HOOK.