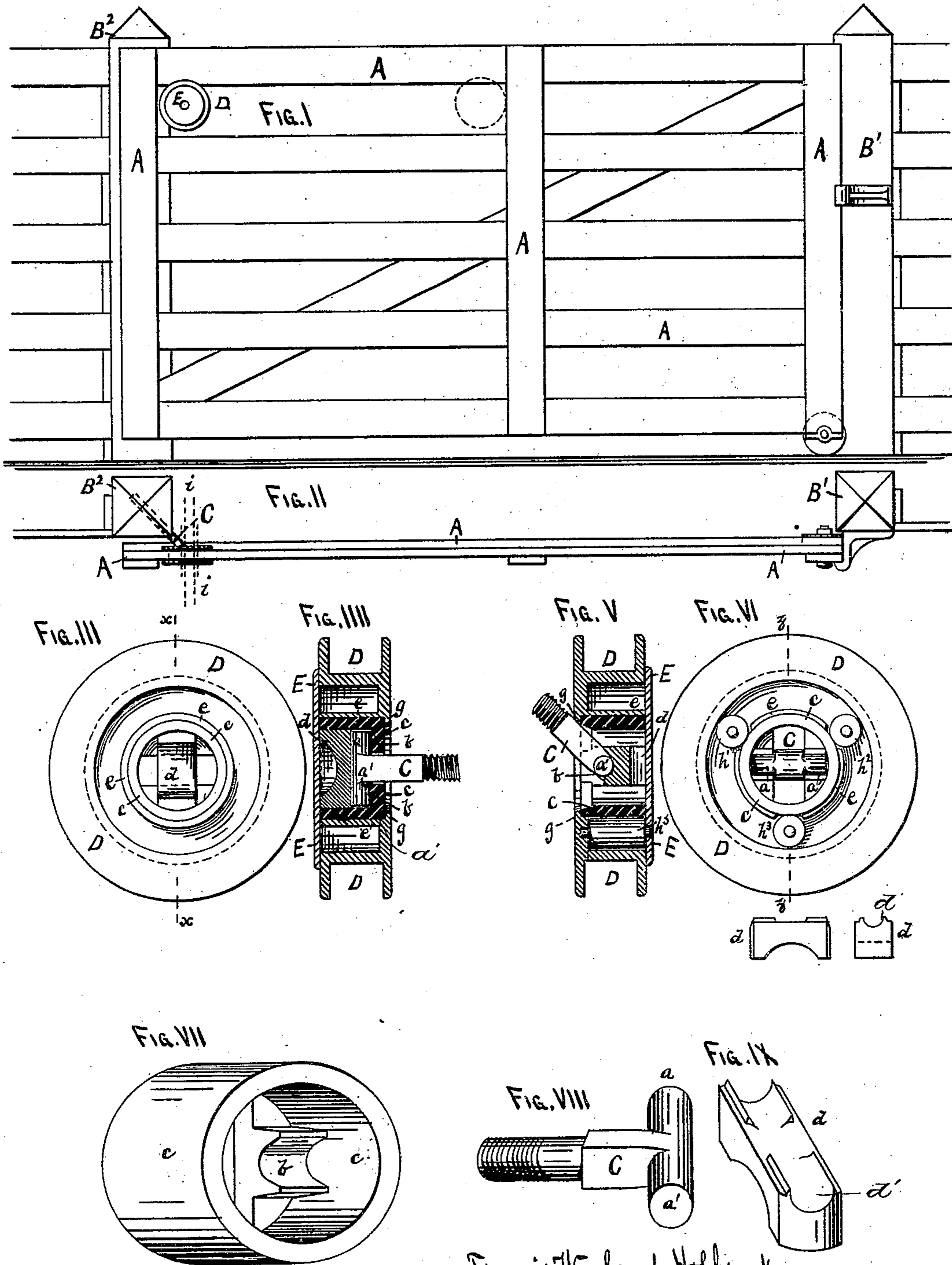


(No Model.)

F. W. HOLBROOK.  
Gate-Roller.

No. 228,354.

Patented June 1, 1880.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

FRANCIS W. HOLBROOK, OF MINNEAPOLIS, MINNESOTA.

## GATE-ROLLER.

SPECIFICATION forming part of Letters Patent No. 228,354, dated June 1, 1880.

Application filed March 16, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS WAYLAND HOLBROOK, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Gate-Roller, of which the following is a specification.

This invention relates to that class of gate-rollers which are pivoted upon a bolt screwed into the corner of a post, and upon which a gate is adapted to be run back and forth and swung around at right angles to the fence; and it consists in a collar pivoted to the end of the screw-bolt, and upon which the pulley revolves, and in the method of arranging the different parts, with or without friction-rollers, as hereinafter set forth. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure I is a side elevation, and Fig. II is a plan view, of a gate and a portion of a fence, showing my roller attached thereto. Fig. III is a front elevation, and Fig. IV a sectional side elevation on the line  $xx$  of Fig. III, of one of the rollers enlarged and detached. Fig. V is a sectional side elevation on the line  $zz$  of Fig. VI; and Fig. VI is a front elevation of one of the rollers detached and enlarged, showing a variation in the method of construction; Figs. VII, VIII, and IX, perspective views, enlarged, of the revolving collar, the pivotal pin or bolt, and the clamping-block detached.

A is the gate; B', the front post, and B<sup>2</sup> the rear or hinge post. C is a bolt arranged to be screwed or otherwise secured to the corner of the hinge-post B<sup>2</sup> in the usual manner, and provided at its outer end with two pivots,  $a a'$ , at right angles thereto, and adapted to fit into sockets  $b$  in the bottom of a round collar,  $c$ .  $d$  is a block or clamp, having its lower side,  $a'$ , hollowed out to fit over the outer end of the bolt C and the outer sides of the pivots  $a a'$ , and made large enough to fill up the space between the sockets  $b$  and top of the collar  $c$ , the sockets and clamp thus holding the pivots between them, and enabling the bolt to be turned back and forth at an angle of forty-five degrees, as shown in Figs. II and V.

The collar  $c$  fits into a rim,  $e$ , forming part of the shell D of the roller, which thus forms a socket for it, while a small shoulder,  $g$ , at the bottom and a cover, E, at the top hold it

in place and prevent end movement. By this arrangement the outer shell or pulley, D, is free to revolve upon the collar  $c$ , while the latter may be oscillated upon the bolt C, and with it the roller D, to give the required movement to the gate.

Figs. V and VI show the same arrangement with small friction-rollers  $h' h^2 h^3$  set in the shell D, so that the collar  $c$  can revolve in contact with them, and thus reduce the friction and cause the pulley to run more smoothly. Any desired number of these rollers  $h$  may be used.

In operating the gate the bolt is screwed into the post and set with the pivots  $a a'$  in a perpendicular line; then the collar  $c$  and clamp  $d$  and the shell D and its cover E are placed in position thereon. The gate is then placed upon the roller, as shown in Figs. I and II.

When it is desired to open the gate, it is run back one-half ( $\frac{1}{2}$ ) its length, or until it will just balance on the pulley, and then swung around at right angles, as shown by dotted lines at  $i$  in Fig. 2. By this arrangement a large surface is formed by the collar  $c$  for the pulley to run on, thus not only rendering it very strong, but causing it to run more steadily, and be less liable to become disarranged or "wobble" sidewise.

The collar  $c$  being made in one piece, no joints occur to catch upon or be cramped against the sides of the inner rim,  $e$ , or the friction-rollers  $h$ .

What I claim as new is—

1. The combination, with the shell or rim D, of the pulley having the inner socket or rim  $e$  of the collar  $c$  in one piece, and having the sockets  $b b$  and clamp  $d$ , adapted to receive the pivots  $a a'$  on the bolt C, as set forth.

2. The combination and arrangement of the shell D, having friction-rollers  $h' h^2 h^3$ , collar  $c$ , having sockets  $b b$  and clamp  $d$ , and the bolt C, having the pivots  $a a'$ , substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANCIS WAYLAND HOLBROOK.

Witnesses:

C. N. WOODWARD,  
EDWARD ROTERT.