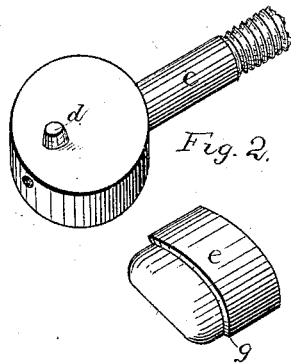
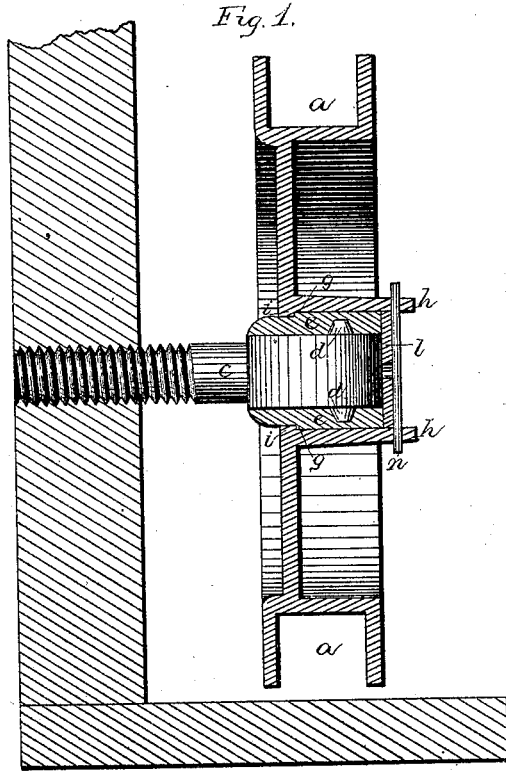


G. D. ROWELL.
Gate-Roll.

No. 212,574.

Patented Feb. 25, 1879.



Witnesses:

J. W. Garner,
H. S. D. Barnes.

Inventor:
G. D. Rowell,
per
F. A. Lehmann,
att'y.

UNITED STATES PATENT OFFICE.

GUILFORD D. ROWELL, OF APPLETON, WISCONSIN, ASSIGNOR TO THE
APPLETON MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN GATE-ROLLS.

Specification forming part of Letters Patent No. 212,574, dated February 25, 1879; application filed
January 3, 1879.

To all whom it may concern:

Be it known that I, GUILFORD D. ROWELL, of Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Gate-Rolls; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in rollers for gates; and it consists in making the head of the bolt on which the roller turns flat on two of its opposite sides, and forming a stud or projection on the sides thus flattened, for the purpose of holding two movable pieces in position, which pieces enable the roller to swing around sidewise, as will be more fully described hereinafter.

Figure 1 represents a vertical section of my invention. Fig. 2 is a perspective of the bolt and the two movable pieces that are applied thereto.

a represents a common roller, upon which the gate moves back and forth, and which serves as a pivot for the gate to open and close upon. This roller is placed upon the end of the bolt *c*, which is screwed or driven into the gate-post, and which has its outer end flattened on two of its opposite sides, as shown. Projecting outward from the center of each of these flattened sides is a stud or pivot, *d*, which catches in a recess on the inner flattened side of the pieces *e*. These pieces are oval on their outer sides at their largest end, have a shoulder, *g*, running transversely across them, and their inner or smaller ends rounded away, as shown.

Through the center of the roller is made an opening large enough to pass freely over the head of the bolt, but the rear edge of which opening forms a flange, *i*, to catch behind the shoulders *g* on the pieces *e*, so as to prevent the roller from moving too far forward. The hub *h* of the roller projects forward beyond

the front end of the bolt *c*, and has a cap, *b*, inserted in it, which is held in position by the pin *n*. This cap bears against the outer end of the bolt and prevents the roller from moving backward on the bolt. The bolt projects a considerable distance out from the post, so that the roller can be passed back over the head of the bolt before the pieces *e* are placed in position. After the pieces have been placed upon their pivots, the roller is moved forward until the flange catches behind the shoulders on the pieces, when the cap is placed in position and locked by the pin *n*.

The roller can turn freely around upon the end of the bolt without coming in contact with anything else than the outer sides of the pieces *e*, and as these pieces turn freely around upon their pivots the roller swings freely around upon them. Where the journal is thus constructed the roller turns around as the gate is being moved back and forth, and when it is desired to swing the gate open or shut the roller turns freely with it.

I am aware that ball-and-socket joints have been formed between the roll and the end of its supporting-bolt, and this I disclaim.

Having thus described my invention, I claim—

1. The gate-roller herein described, consisting, essentially, of a fixed bolt, *c*, having its flattened ends provided with the pivots *d*, pivoted bearings *e*, the gate-roller *a*, and a suitable means, *l n*, for holding the parts together, constructed substantially as shown.

2. In a gate-roller having a fixed bolt, *c*, provided with pivots *d*, one or more detachable pieces, *e*, held to the roller, and a suitable holding device, whereby the parts may be readily attached and detached, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand.

G. D. ROWELL.

Witnesses:

E. H. ENOS,
JACOB CRIDER.