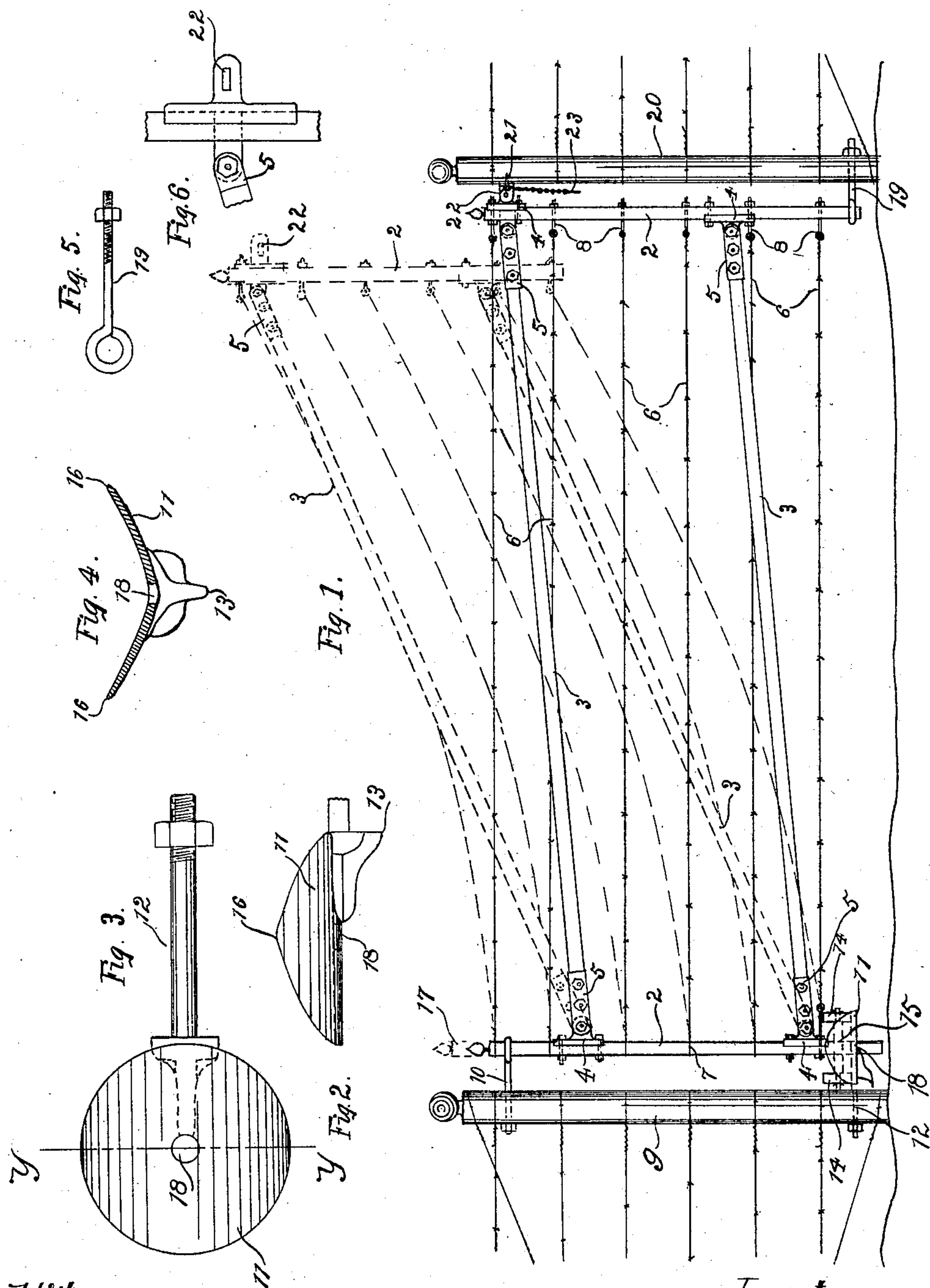


No. 763,499.

PATENTED JUNE 28, 1904.

E. D. MILLS.
RAILROAD OR FARM GATE.
APPLICATION FILED JULY 20, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

EUGENE D. MILLS, OF KANSAS CITY, MISSOURI.

RAILROAD OR FARM GATE.

SPECIFICATION forming part of Letters Patent No. 763,499, dated June 28, 1904.

Application filed July 20, 1903. Serial No. 166,219. (No model.)

To all whom it may concern:

Be it known that I, EUGENE D. MILLS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in Railroad or Farm Gates, of which the following is a specification.

My invention relates to gates, and is especially adapted for railroad-gates for use at crossings and other places on the line of the railroad and can be used as a farm-gate as well.

My first object in producing such a gate is that it can be placed on ground of uneven surface or on the hillside and be opened and closed the same as when the ground is level, and it can be used and manipulated in sections of the country where the snow drifts or accumulates in heaps without first removing the snow, as it can be raised from its fastening and swung over the snow-drifts or toward the hillside.

Another object that I have in view in the construction of such a gate is that it will automatically close without the assistance of an operator.

With these ends in view I will further proceed to describe my invention by referring to the figures illustrating the different parts thereof.

Figure 1 is the gate in a closed position, showing a position in dotted lines in which it would be necessary to place the gate when opening it upward on the hillside or in raising the same over a snow-drift. Fig. 2 is a side elevation of a cam which is rigidly secured to the gate-post near the ground indicated at Fig. 1. Fig. 3 is a top plan view of the same, disclosing the bolt or shank which is passed through the gate-post and secured by means of a nut, as indicated. Fig. 4 is a cross-sectional view taken on line Y Y of Fig. 3. Fig. 5 is an enlarged view of an eyebolt which is rigidly secured to the gate-post near the ground at the closing side of the gate and also the same at the top of the gate-post at the hanging side. Fig. 6 is an enlarged view of the top end of the front stile of the gate, disclosing a bracket which passes through the stile, the outer end serving as a fastener for the

gate, the inner end disclosing a pivotal connection of a horizontal bar.

With the above illustration and description I will now proceed to further describe my invention by referring to corresponding numerals on the drawings and specification.

1 is the gate, which is constructed in the form of a rectangular adjustable frame with longitudinal strands of wire interposed, barbed wire being preferable, as shown. Said frame is composed of two vertical stiles 2 and two strut-rails 3.

Secured to the stiles of the gate are brackets 4. These brackets are provided with inwardly-extending bifurcated ears or arms 5 and are adapted to pivotally engage the ends of the strut-rails 3. The wires already referred to, which I will designate 6, are secured to the hanging stile of the gate at 7 by means of passing the ends through an opening in the stile, then giving the wire a twist around the stile, which makes it secure. Said wires are secured to the front stile of the gate by means of eyebolts 8.

The gate when in position and ready for use is hung to a gate-post 9 by means of a sufficient eyebolt 10 at the top of said post, as indicated.

The swinging apparatus secured to the gate-post 9 near the ground consists of a concavo-convex cam 11. This cam is provided with an extended shank 12. Said shank passes through the post 9 and is made secure by a nut on the outside of the post, as indicated.

In order that the cam may be susceptible of carrying the weight of the gate without sagging out of level, I have provided a depending shoulder 13 integral thereto, so that when the extended shank 12 is bolted tightly to the post said depending shoulder will hold the cam in position.

In order to make my gate a self-closer or an automatically-closing gate, I have provided rollers 14. These are loosely secured to a cross-beam 15. Said cross-beam is rigidly secured to the hanging stile of the gate, as indicated in or over the upper or concave face of the cam.

When the gate is opening or closing, the

rollers 14 travel on the irregular face of said concavo-convex cam. When the gate is open at right angles to the fence, the rollers will stand at the summit 16 of the cam. When in
 5 this position, it is clear to be seen that the gate will be raised to the position indicated by dotted lines 17 at the hanging stile of the gate, and then with a light tip the gate will swing to a closed position.

10 When it is desired for the gate to stand open, it is forced outward until the roller leaves the pivotal point 16 of the cam in the opposite direction from the closing direction. The gate will then stand in an open position until the
 15 roller is forced back over the pivotal point of said cam, when it will again close without further assistance. It will further be seen that the cam is provided with a central opening 18. Through this opening the lower end of stile 2
 20 is adapted to work loosely up and down, and also the same through the eye of the bolt 10.

The eyebolt 19, secured to the lower end of the gate-post 20, is adapted to receive loosely the lower end of the closing-stile 2 of
 25 the gate when the same is closed.

To secure the gate when in a closed position, I have provided a bifurcated catch 21, secured near the top of the gate-post at the closing side. The bracket described in Fig.
 30 6 is provided with an elongated opening 22. The outward-extended end of said bracket engages the bifurcated latch, when a toggle-pin 23 is inserted, making the gate secure.

It will be further observed that when the
 35 gate is in a closed position, as shown at Fig. 1, the strands of wire will be under a high tension, while the adjustable strut-bars stand in an inclined position and the gate cannot sag below the points indicated in the illustration. When the front end of the gate is
 40 raised, the tension of the wires slacken, as indicated.

The gate may be located in places or conditions where it cannot swing either way sufficiently to admit the passing team. Under
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such circumstances the opening can be attained by raising the gate to a perpendicular position in the direction indicated by the dotted lines.

Having now fully described my invention, 50 what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an adjustable self-closing gate, of the character described, the combination of a hanging stile and a closing-stile, brackets and
 55 a cross-beam mounted on said hanging stile, rollers carried by said cross-beam, brackets carried by the closing-stile, horizontally-disposed strut-bars pivotally carried by said brackets, and means for hanging the gate to a
 60 gate-post, substantially as described.

2. In an adjustable self-closing gate of the character described, the combination of a hanging stile and a closing-stile, brackets mounted on said stiles, strut-bars carried by
 65 said brackets and stiles, tension-wires horizontally secured to the hanging stile and the closing-stile, and means for hanging the gate to the gate-post, substantially as described.

3. In an adjustable self-closing gate of the
 70 character described, the combination of a frame comprising a hanging stile, a closing-stile, and brackets carried by said hanging stile, rollers carried by the cross-beam, horizontal strut-bars carried by said brackets,
 75 tension-wires secured to said stiles, eyebolts secured to the gate-posts adapted to hold the upper end of the hanging stile and the lower end of the closing-stile in position, a concavo-convex cam provided with a central opening
 80 secured to the hanging gate-post, and a cross-beam carrying rollers secured to the lower end of the hanging stile and adapted to adjustably engage said cam, substantially as described.

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

EUGENE D. MILLS.

Witnesses:

JAMES F. YEAGER,
 M. L. LANGE.