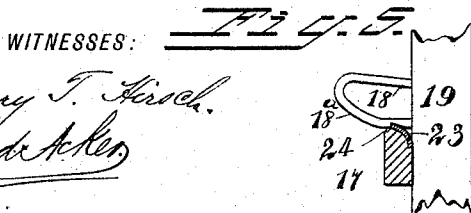
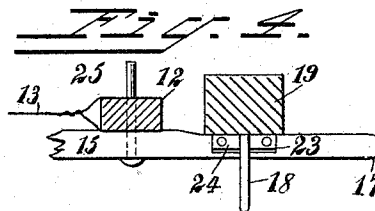
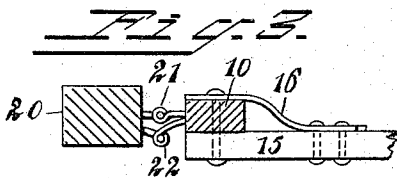
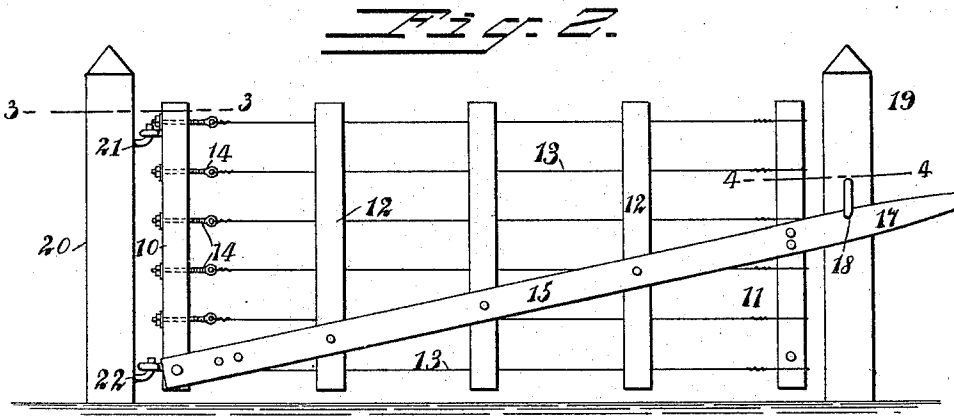
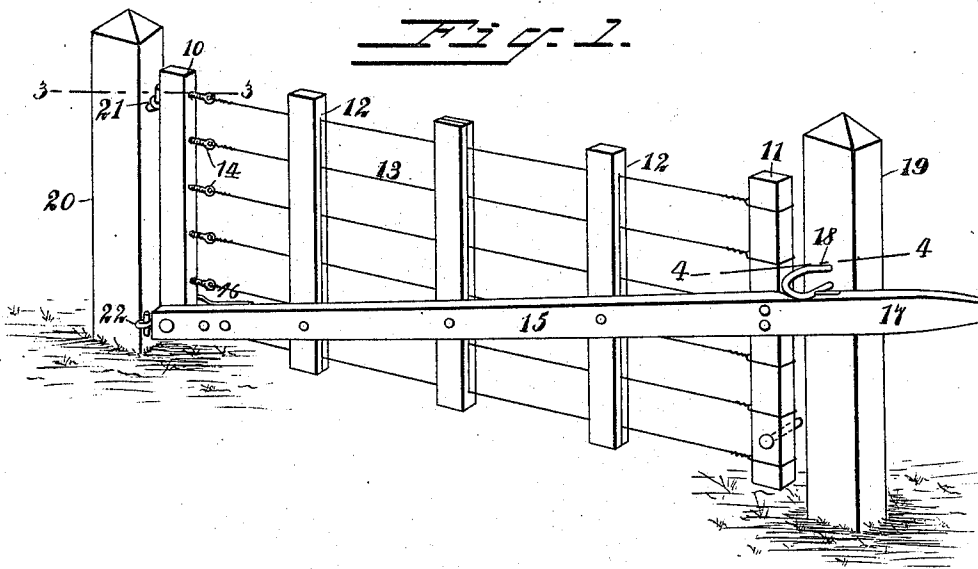


(No Model.)

A. H. BARNHILL & T. I. THURMAN.
GATE.

No. 570,362.

Patented Oct. 27, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALVA H. BARNHILL AND THOMAS I. THURMAN, OF ALTOONA, KANSAS.

GATE.

SPECIFICATION forming part of Letters Patent No. 570,362, dated October 27, 1896.

Application filed March 26, 1896. Serial No. 584,977. (No model.)

To all whom it may concern:

Be it known that we, ALVA H. BARNHILL and THOMAS I. THURMAN, of Altoona, in the county of Wilson and State of Kansas, have
5 invented a new and useful Improvement in Gates, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in gates, and especially to an improvement
10 in tension-gates or those in which swing, intermediate, and latch bars are connected by running wires and also connected by a tension-bar, the arrangement being such that the tension of the wires will raise the gate as it
15 is opened and give the gate a strong tendency to close.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

25 Figure 1 is a perspective view of the improved gate. Fig. 2 is a side elevation of the same. Fig. 3 is a horizontal section taken substantially on the line 3 3 of Figs. 1 and 2. Fig. 4 is a horizontal section taken substantially on the line 4 4 of Figs. 1 and 2, and
30 Fig. 5 is a partial side elevation of the keeper-post and a sectional view through the latch end of the tension-bar.

In carrying out the invention the frame of
35 the gate consists of a swing-post 10, a latch-bar 11, intermediate bars 12, and a series of wires 13, which extend longitudinally from the swing-bar to the latch-bar and loosely through the intermediate bars 12. Preferably
40 the wires are firmly attached to the latch-bar, but are connected with tension devices carried by the swing-bar, and, as shown in the drawings, these tension devices may consist of eyebolts 14, passed loosely through the
45 swing-bar, having their outer ends provided with a suitable nut and washer, the eyebolts being of such length as to admit of any slack in the wires, after they are once stretched, being readily taken up.

50 The main feature of the invention consists in the location of the longitudinally-diagonal bar 15. This bar is only a portion of the gate

proper, and is pivotally attached at one end to the lower portion of the swing-bar 10 of the gate-frame, and preferably the bar 15 engages with the outer face of the swing-bar, having a bracket 16 secured to its inner face, which is likewise pivoted to the swing-bar of the gate, as is shown in Fig. 3.

The bar 15 is carried upward across the intermediate bars 12 of the gate-frame to a point near the center of the outer face of the latch-bar 11 of the gate-frame, being preferably firmly attached to the said latch-bar. The intermediate bars 12 of the gate-frame are likewise attached to the bar 15, thereby materially strengthening the entire structure of the gate. The bar 15 is carried beyond the latch-bar of the gate to form a latch end 17, the said latch end being adapted for engagement with a keeper 18, which is secured upon a keeper-post 19. The gate has a hinged connection with a swing-post 20, and preferably but two hinges 21 and 22 are employed, the said hinges being out of vertical alignment, the lower hinge being nearer the front of the swing-post than the upper hinge 21, whereby when the gate is opened it will have more or less of a tendency to rise and a decided tendency to close.

80 The keeper 18 is preferably made in staple form, as shown in Fig. 5, and the front lower surface 18^a of the keeper is beveled in a downwardly direction, and the upper portion of the latch end of the bar 15, which is to engage with the keeper 18, is beveled in direction of the said keeper, as shown particularly at 23 in Fig. 4, the beveled surface being covered by a suitable wear-plate 24.

In order that the gate may be opened by means of the foot when approached from the back or at the side opposite which the bar is placed, a projection 25 is formed upon the lower end of the latch-bar, which projection may be and preferably is in the nature of a pin.

In the operation of this gate when it is closed the latch end of the bar 15 will pass under the keeper, and as it travels down the inclined surface 18^a of the keeper to an engagement with the keeper-post 19 the bar 15 will be depressed and will cause all the wires to be placed under full tension, rendering the gate exceedingly rigid, and when the gate

is opened, while it will be substantially under the same tension, the wires will cause the forward end of the gate to rise slightly, which fact, together with the manner in which the gate is hinged, enables the gate to clear any obstructions that may be in its path, and no matter if the wind is blowing hard when the gate is opened as soon as a comparative lull occurs the gate will automatically swing to and latch itself, owing to the manner in which it is hung.

It is evident that the bar 15 places all parts of the gate under equal tension, and also that the gate is complete in itself and may be lifted from its connection with the swing-post, remaining intact when so removed.

Attention is further called to the fact that in operation the bar 15 does not push back to any greater extent than it pulls forward, so that it exerts an equal influence over the entire gate-frame, being connected as it is with both ends of the gate and likewise with any intermediate bars that may be used.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A gate comprising a swing-bar, a latch-bar, intermediate bars, and wires attached to the swing and latch bars, being passed loosely through the intermediate bars, and a diagonal bar pivotally connected at one end with the lower portion of the swing-bar, engaging with the intermediate bars, being attached to the latch-bar near a central point thereon, whereby the diagonal bar constitutes a portion of the gate proper and serves to bind the several parts together, as and for the purpose specified.

2. A gate, consisting of a swing-bar, a latch-bar, intermediate bars, wires extending from the latch-bar loosely through the intermediate bars to the swing-bar, tension devices car-

ried by the swing-bar and attached to the said wires, and a diagonal bar pivotally connected at one end to the lower portion of the swing-bar, being secured to the intermediate bars and to the latch-bar at a point near the center of the latter, as and for the purpose set forth.

3. The combination, with a keeper-post, a latch-post, a keeper located on the keeper-post, and hinges located on the swing-post, the said hinges being out of vertical alignment, of a tension-gate comprising a swing-bar, a latch-bar, intermediate bars, wires attached to the swing and latch bars, being loosely passed through the intermediate bars, and a tension-bar pivotally connected to the lower end of the swing-bar of the gate and to the central portion of the latch-bar, the said keeper-bar extending beyond the latch-bar, and adapted for engagement with the said keeper, whereby the tension-bar is entirely disconnected from the swing-post, being solely a portion of the gate proper, as and for the purpose specified.

4. The combination, with a swing-post, a keeper-post, and a tension-gate hung upon the said swing-post, of a keeper secured to the keeper-post, the said keeper being of staple-like construction, having the lower portion of its under face beveled in a downwardly direction, and a tension-bar controlling the gate and extending beyond the swing-bar thereof, the extension of the tension-bar being adapted for engagement with the beveled surface of the aforesaid keeper, as and for the purpose specified.

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