

June 17, 1969

D. M. FOLTZ

3,450,187

WIRE TYPE PASTURE FENCE GATE

Filed May 1, 1967

Sheet 2 of 3

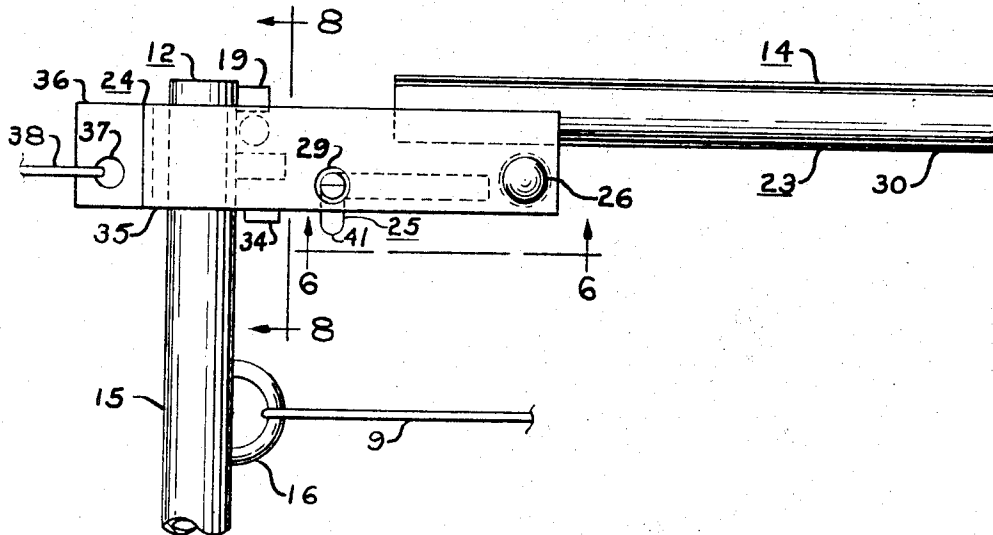
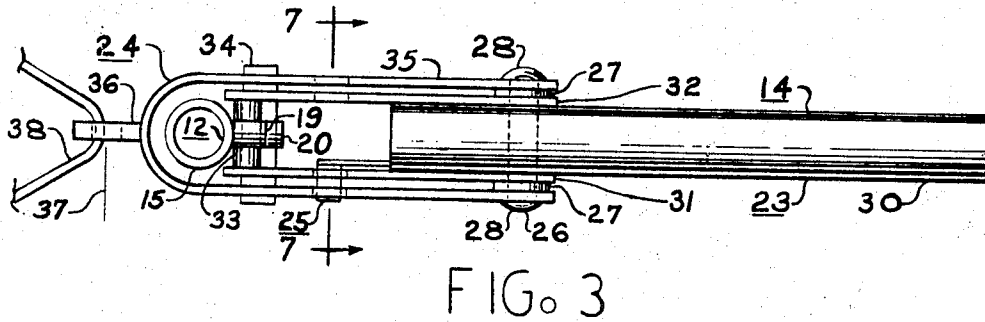


FIG. 4

INVENTOR.
DONALD M. FOLTZ
BY
Donald M. Foltz

June 17, 1969

D. M. FOLTZ

3,450,187

WIRE TYPE PASTURE FENCE GATE

Filed May 1, 1967

Sheet 3 of 3

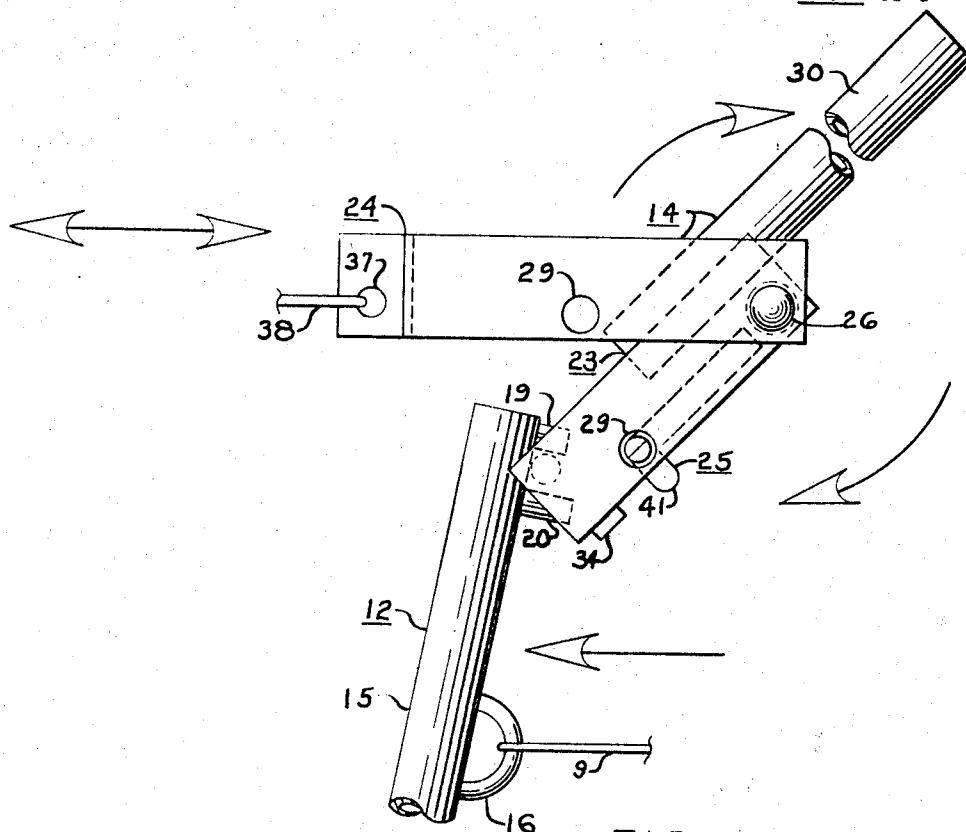


FIG. 5

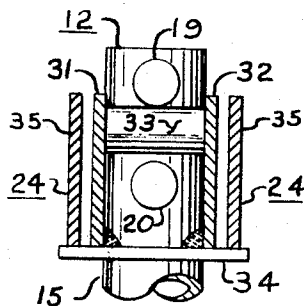


FIG. 8

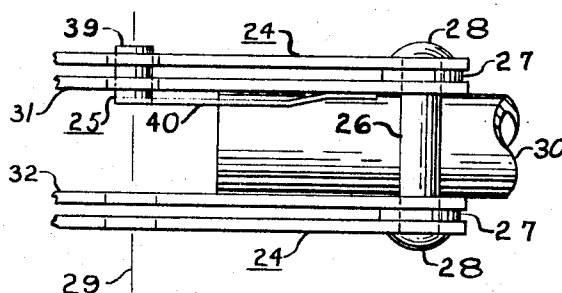


FIG. 6

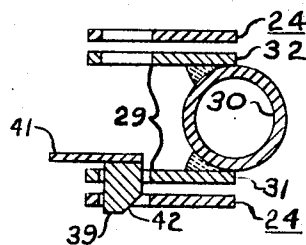


FIG. 7

INVENTOR.
DONALD M. FOLTZ

BY
Donald M. Foltz

3,450,187

WIRE TYPE PASTURE FENCE GATE

Donald M. Foltz, Sedgwick County, Kans.
(11004 E. Pawnee Road, Wichita, Kans. 67207)

Filed May 1, 1967, Ser. No. 640,771

Int. Cl. E06b 3/80; E05c 19/14

U.S. Cl. 160—328

13 Claims

ABSTRACT OF THE DISCLOSURE

A tensioning and latching construction for a wire gate of the type disposed between fixed gate posts. The gate is formed of fencing wire extending between a pair of gate stems. One of the gate stems is flexibly attached to one gate post, and the other gate stem has a lower end removably received in a loop embracing a lower portion of the other gate post. An improved device is provided for detachably connecting the upper portions of said other post and other gate stem. The improved device comprises a clevis having its open end flexibly attached to said other gate post, and a lever or handle pivotally connected within its open end. The lever includes a pair of spaced plates that extend toward the closed end of the clevis and the end portions of the plates are connected by a member engageable with the upper end portion of said other gate stem, the latter being receivable within the clevis. The member is engageable between a pair of studs fixed to said gate stem. The plates carry a stop engageable with the clevis to limit pivotal movement of the lever corresponding to a predetermined pivotal relationship, and means are provided for releasably retaining or latching the lever and the clevis in such predetermined pivotal relationship.

The present invention relates to new and useful improvements in pasture gates, and more particularly pertains to a lever actuated means for tensioning and releasably latching such gates in closed position.

A broad aspect of the invention involves, in apparatus for tensioning and releasably securing the gate stem of a gate, the improvement comprising an integral clevis having open and closed ends, means including a lug integral with the closed end of the clevis for flexibly attaching the closed end of the clevis to a fence post, a tubular actuating lever having spaced parallel plates disposed on opposite sides of and fixed to one end portion thereof, said plates extending from the lever and being disposed within the clevis, a clevis pin pivotally connecting the lever to the clevis, said clevis pin being adjacent the open end of the clevis, said parallel plates having end portions extending toward and terminating in spaced relation to the closed end of the clevis, the clevis and the plates being so constructed and arranged as to be adapted to receive a cylindrical gate stem within the clevis between the end portions of the plates and the closed end of the clevis, a member connecting the end portions of the plates and adapted to engage the gate stem received in the clevis, and means for releasably securing the lever and the clevis in a predetermined pivotal relationship.

One of the principal objects of my invention is to provide a device for positioning and thereafter retaining a wire or a number of wires in an approximate desired location forming a gate, putting the wires in tension and latching and locking in place.

Another object of my invention is to provide a device for placing in tension and latching and locking in place a section of wire fence forming a gate which is so designed, constructed, and arranged that it can be

moved with relative ease into and out of its tensioned and latched and locked position.

Another object of my invention is to provide a conveniently portable device for positioning a section of wire fence, forming a gate, and for thereafter latching and locking the section in place under tension in such manner that it becomes an integral portion of the completed fence.

Another object of my invention is to provide a device for latching a section of wire fence, forming a gate, in place under tension which can be readily transported from one location to another and easily installed in numerous locations without the necessity of any special tools or equipment.

Still another object of my invention is to provide a durable, practical, economical, and relatively maintenance-free fence support and latching device forming a gate which can be operated under adverse weather conditions without undue hinderance from snow, ice, wind, and the terrain and which cannot be inadvertently manipulated into its unlatched and open position by farm livestock or human beings.

A further object of my invention is to provide a gate which is readily adaptable to the existing spacing of any two fence posts selected to serve as anchors for a gate.

Further objects and advantages of my invention will become apparent from the following description and accompanying drawings wherein the embodiment of my invention is illustrated. In the drawings:

FIGURE 1 is a top plan view of a section of fence showing my device in its tensioned and latched position.

FIGURE 2 is a side plan view of the same section of fence again showing my device in a tensioned and latched position.

FIGURE 3 is an enlarged top plan view of a portion of my device also shown in the tensioned and latched position.

FIGURE 4 is an enlarged side plan view of the same portion of my device shown in FIGURE 3.

FIGURE 5 is a side plan view of the same portion of my invention shown in FIGURE 4 except in an unlatched position illustrating the action.

FIGURE 6 is a view of a portion of my device taken on line 6—6 of FIGURE 4.

FIGURE 7 is a cross sectional view of a portion of my device taken on line 7—7 of FIGURE 3.

FIGURE 8 is a cross sectional view of my device taken on line 8—8 of FIGURE 4.

Referring more specifically to the drawings and to the embodiment of my invention illustrated in FIGURES 1 through 8, numerals 9 designate sections of a conventional type fence wire extensively used to retain livestock, numerals 10 and 11 designate typical fence posts commonly used to support a fence and serve as an anchor for a gate, numeral 12 designates one unit of my device, numeral 13 designates another unit of my device and numeral 14 designates still another unit of my device.

Unit 12 consists of a section of rigid tubing 15 to which a series of U-shaped rod like anchors 16 are integrally and spacedly affixed for the purpose of anchoring one end of wires 9. A stud 17 integrally affixed to the lower end of tubing 15 releasably engages with an elongated wire or rod like loop 18 which is so adapted as to encompass the lower ends of both unit 12 and post 10. Two similar studs 19 and 20 are integrally and spacedly affixed to the upper end of tubing 15 so adapted as to releasably engage with tensioning and latching device unit 14, stud 20 being slightly longer than stud 19 to facilitate this engagement. Anchors 16 and studs 17,

19, and 20 are all positioned in approximate alignment with one another.

Unit 13 consists of a section of rigid tubing 21 to which another series of anchors 16 are also integrally and spacedly affixed in approximate alignment with one another for the purpose of anchoring the other ends of wires 9. Two elongated wire or rod like loops 22 are so adapted as to encompass both unit 13 and post 11, each said loop passing through an anchor 16 near either end of unit 13 thus fixedly attaching unit 13 to post 11.

Unit 14 consists of lever 23, clevis 24 and lock 25. Lever 23 is pivotally joined to clevis 24 by clevis pin 26 which is the fulcrum of lever 23, a pair of washers 27 serve as spacers between lever 23 and clevis 24 and are retained by clevis pin 26 which features a head portion 28 or other retaining means on either end.

Aligned holes 29 extending through both sides of unit 14 when said unit is in the latched position are destined to accommodate lock 25 on one side and a conventional pad-lock on the opposite side.

Lever 23 of unit 14 is comprised of a rigid tubular handle 30 integrally joined at one end to one end of a pair of rectangular plates 31 and 32 which are positioned in parallel spaced relation to one another. A round bar 33 is situated to bridge between and integrally join to plates 31 and 32 near their upper edges and ends opposite of handle 30. A flat bar like stop 34 is integrally joined to the lower edges of plates 31 and 32 downwardly situated from bar 33 and adapted to extend to the approximate outside surface on both sides of clevis 24.

Clevis 24 of unit 14 is comprised of a U-shaped member 35 with a lug 36 integrally affixed to the approximate center on the outside surface of the closed end of said U-shaped member. A downwardly off-set hole 37 in lug 36 provides the method of attachment to post 10 by means of a wire or rod like loop 38 or other means.

Lock 25 consists of bolt 39 situated within hole 29 in either one of plates 31 or 32 and fixedly attached at one end to one end of both actuating spring 40 and lock release tab 41. The other end of bolt 39 features a bevel 42 so arranged and adapted that bolt 39 will automatically engage with associated hole 29 in one side of clevis 24 as unit 14 is actuated to the tensioned and latched position. The other end of spring 40 is fixedly attached to the inside surface of the selected plate 31 or 32 of lever 23.

Referring again to unit 14, aligned holes 29 passing through both sides of U-shaped member 35 and through plates 31 and 32 are in alignment only when said unit is in the tensioned and latched position and with stop 34 of lever 23 being in contact with the lower edges of U-shaped member 35 of clevis 24.

To further explain the working and operation of my invention the lower end of unit 12 is first inserted into loop 18 by engaging stud 17 as shown in FIGURE 2. This is accomplished by tilting the upper end of unit 12 slightly away from post 10, unit 14 tensioning and latching device is then engaged with the upper end of unit 12 as illustrated in FIGURES 5 and 8 with bar 33 positioned between studs 19 and 20. A downward force applied to handle 30 moves units 12 and 14 to the tensioned and latched position. The latching action is achieved when the center of bar 33 passes beyond an imaginary straight line intersecting the centers of both hole 37 and fulcrum pin 26 and being stopped in this position by stop 34 thus attaining a beyond dead center position which provides positive latching action with the advantage of being proportionally more secure with increasing gate tension.

I claim:

1. In combination with two fixed and upright fence posts, an improved gate construction comprising a pair of spaced gate stems connected by a section of flexible wire fencing, said stems and fencing constituting a gate adapted to extend between said posts, a pair of vertically

spaced loops each loosely embracing one of the posts and one of the stems, a further loop loosely embracing a lower end portion of the other post, with the other of said stems having a lower end portion removably received in said further loop, said other stem being provided with a laterally projecting stud adjacent its lower end and underlying said further loop for preventing inadvertent removal of said other stem from within said further loop, and securing means for releasably securing the gate to the posts in a position extending between the latter, said securing means comprising a single means for engaging an upper portion of said other stem, moving the latter toward said other post to a latched position whereby the gate is tensioned, and for releasably latching said other stem in its latched position, said single means comprising an integral clevis having open and closed ends, means including a lug on and integral with the closed end of the clevis for flexibly attaching the closed end of the clevis to an upper end portion of said other post, a tubular lever having a pair of parallel spaced plates disposed on opposite sides of and fixed to one end portion thereof, said plates extending from the lever and being disposed within the clevis, a clevis pin pivotally connecting the lever to the clevis, said clevis pin being adjacent the open end of the clevis, said parallel plates having end portions extending toward and terminating in spaced relation to the closed end of the clevis, said upper end portion of said other stem being removably receivable within the clevis in the space between the end portions of the plates and the closed end of the clevis, a pair of vertically spaced studs fixed to the upper end portion of the stem and extending between the plates toward the clevis pin, a member fixed to and extending between the plates at a position intermediate the clevis pin and said end portions thereof, said member being also disposed between the studs, and means for releasably retaining the lever in a pivotal relationship to the clevis such that the end portions of the plates are directed generally toward the closed end of the clevis.

2. The combination of claim 1, wherein said last means comprises one of said plates and one side of the clevis having openings that are aligned when the lever and the clevis are in said pivoted relationship, and latch pin means including a latch pin and spring means yieldingly urging said pin through said openings when the latter are in alignment.

3. The combination of claim 2, wherein said spring means comprises a leaf spring connecting the latch pin to said one of the plates, and said leaf spring having a laterally projecting tab for facilitating manual movement of the latch pin against the bias of the leaf spring, said latch pin having a cam surface engageable with said one side of the clevis to move the latch pin against the bias of the spring on pivotal movement of the handle toward said pivotal relationship to the clevis.

4. The combination of claim 1, wherein said last means comprising one of the plates and one side of the clevis having openings that are aligned when the lever and the clevis are in said pivotal relationship, and a padlock releasably secured through said aligned openings.

5. The combination of claim 1, including a stop attached to the plates that is engageable with the clevis for limiting pivotal movement of the lever relative to the clevis.

6. In apparatus for tensioning and releasably securing the gate stem of a gate, the improvement comprising an integral clevis having open and closed ends, means including a lug integral with the closed end of the clevis for flexibly attaching the closed end of the clevis to a fence post, a tubular actuating lever having spaced parallel plates disposed on opposite sides of and fixed to one end portion thereof, said plates extending from the lever and being disposed within the clevis, a clevis pin pivotally connecting the lever to the clevis, said clevis pin being adjacent the open end of the clevis, said parallel plates

5

having end portions extending toward and terminating in spaced relation to the closed end of the clevis, the clevis and the plates being so constructed and arranged as to be adapted to receive a cylindrical gate stem within the clevis between the end portions of the plates and the closed end of the clevis, a member connecting the end portions of the plates and adapted to engage a gate stem received in the clevis, and means for releasably securing the lever and the clevis in a predetermined pivotal relationship.

7. The combination of claim 6, including a stop fixed to the plates and engageable with the clevis for limiting pivotal movement of the lever relative to the clevis in one direction at said predetermined pivotal relationship.

8. The combination of claim 6, wherein said last means includes one of said plates and one side of the clevis having openings that are aligned when said lever and the clevis are in said predetermined pivotal relationship, and means removably extensible through said openings when they are in alignment.

9. The combination of claim 6, wherein said clevis pin extends through said plates.

10. The combination of claim 6, including a gate stem, said gate stem being receivable within the clevis and being provided with a pair of spaced studs, and said member being receivable between said spaced studs.

11. The combination of claim 6, wherein the means for flexibly attaching the closed end of the clevis to a fence post includes said lug having an opening there-through adapted to receive a loop loosely therethrough, said opening and the clevis pin being positioned to define a straight line that parallels the extent of the clevis and which is displaced from the medial plane of the clevis that parallels the clevis pin, said member being movable

6

through said straight line on pivotal movement of the lever to its predetermined pivotal relationship to the clevis, and said member being disposed within the clevis when the lever and the clevis are in said predetermined pivotal relationship, and a stop fixed to and extending between the plates that is engageable with the clevis to limit pivotal movement of the lever at said predetermined pivotal relationship.

12. The combination of claim 11, including a gate stem receivable in the clevis, and said gate stem being provided with a stud receivable between said member and said stop when the clevis and the lever are in said predetermined pivotal relationship.

13. The combination of claim 12, wherein the gate stem is provided with a second stud that is spaced from and which is relatively shorter than the first mentioned stud, and said member being received between said studs when the lever and the clevis are in said predetermined pivotal relationship.

References Cited

UNITED STATES PATENTS

1,035,505	8/1912	Williams	160—328
1,063,151	5/1913	Wiltse	160—328
1,268,471	6/1918	Jones	292—247
1,549,321	8/1925	MacFarland	292—247
1,570,734	1/1926	Eversman	292—247
2,613,972	10/1952	Gifford	292—247
2,973,595	3/1961	Lamphier	49—34 X

DENNIS L. TAYLOR, *Primary Examiner.*

U.S. Cl. X.R.

292—247