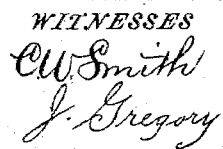



J. H. DICKENSON.
GATE.

Patented Jan. 17, 1893.



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UNITED STATES PATENT OFFICE.

JOHN H. DICKENSON, OF BAYARD, KANSAS.

GATE.

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To all whom it may concern:

Be it known that I, JOHN H. DICKENSON, a citizen of the United States, residing at Bayard, in the county of Allen, State of Kansas, have invented certain new and useful Improvements in Gates; 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 appertains to make and use the same.

My invention relates to certain improvements in adjustable gates and has for its object to provide a gate of simple, durable and inexpensive construction which shall be readily adjustable to different lengths within limits, and which will not sag from long continued use.

My invention will be hereinafter fully described and its novel features carefully defined in the claim.

In order that my invention may be better understood I have illustrated in the accompanying drawings a gate constructed according to my invention in which—

Figure 1 is a side elevation of the gate, adjusted to the proper length for use and Fig. 2 is an end view of the same. Fig. 3 is a fragmentary perspective view of the right hand portion of the gate seen in Fig. 1, and Fig. 4 is a vertical mid section of the same.

In constructing my improved gate I employ two pairs or sets of uprights A, A and A' A' respectively which are joined together in pairs by means of bolts B, B four such bolts being employed for forming each of the battens of the gate. On the bolts B, between the respective uprights A A, A', A', are arranged small grooved sheaves *d, d*, and said bolts are provided with nuts, by means of which the several parts of the battens are securely fastened together when properly assembled.

As seen in Fig. 1, the bolts B are set in the battens A, A' at substantially equal distances apart, one of said bolts being arranged at each end of each batten and the other two bolts intermediate such end bolts and equidistant therefrom. In the lower end of each batten somewhat above the lowermost bolt B is mounted still another bolt or pin *n*, which pins serve as pivots for the diagonal braces of the gate. The pin *n* in batten A, serves as a pivot for the brace F extending from the lower left hand

corner of the gate as seen in Fig. 1, to the upper right hand corner, and said brace F is formed of two halves or sections *f, f*, having 55 interposed between them at their lower ends a short spacing bar or block *f'* which projects slightly beyond the lower ends of said section *f*, and is perforated to receive the pivot pin *n*, said block *f'* being of a thickness adapted 60 to enter between the uprights of the batten A. Between the upper ends of the sections *f, f*, of the double brace F, is secured a similar spacing block or bar G. This latter bar G is pivoted in said sections at *g*, and projects beyond the ends of the sections *f*, to 65 form a tongue *g'*, adapted to be inserted between the uprights of the batten A'.

A series of holes *c, c*, formed in the upper end of the batten A', serve to receive a pin or bolt *m*, set through the perforation in tongue *g'* whereby the upper end of brace F is secured to the batten A'.

Pivoted on the pin *n* in the lower end of the batten A' is a single brace E, passing through 75 the central longitudinal space or opening in the double brace F formed between the sections *f*, thereof by the interposition of the spacing blocks *f'*, and G, and said single brace E is perforated at its upper end to receive a bolt *m*, set through one of a series of holes *c, c*, formed in the upper end of the batten A; these holes in batten A and the means for 80 securing the brace E thereto, are in every way similar to the holes in batten A' and the means for securing the brace F therein, excepting that there is no pivoted block such as the spacing block G provided for said brace E. The ends of the brace E are reinforced 85 by blocks *e*, bolted or otherwise securely fastened thereto as clearly seen, the object being to strengthen said brace.

Secured to the bolt B, at the upper end of the batten A (in which case the roller *d* on said bolt may be omitted), or secured in any 95 other manner to said batten A, is one end of a wire *d'*, which passes across the gate lengthwise of the same and over the roller *d*, mounted on the uppermost bolt B, in batten A', thence said wire passes down as seen over the 100 roller *d* on the next lower bolt B, in batten A' whence it passes again across the gate back to batten A, over the roller *d*, on the second bolt B from the top of said batten A. Thence

said wire passes down over the roller *d* on the next lower bolt B in batten A, and thence across the gate again to batten A', thence over the roller *d*, on the next to the lowermost bolt B, in said batten, whence it passes down around the roller *d* on the lowermost bolt B in batten A. Then said wire passes again across the gate to batten A, and may be secured at its other free end to the lowermost bolt B, in said batten or otherwise fastened to said batten.

As stated in case the ends of the wire are secured to the bolts B, at top and bottom of the batten it will not be essential to employ rollers *d* on such bolts, but where the wire is otherwise secured at its ends to the batten I prefer to employ such rollers on all the bolts over which the wire passes.

Securely fastened to the inner faces of the uprights of the batten A', at the upper ends thereof, as seen in Figs. 1, 3 and 4, are toothed racks C, C having teeth similar to those of a ratchet wheel with their beveled faces upwardly directed, and secured to the upper faces of the sections *f, f*, of the brace F at the upper ends thereof, are metal plates *h, h*, the end of each of which projects from the end of the section *f*, to which it is secured, in a manner to form a dog to engage the ratchet teeth of the rack C facing it.

I will now describe the method of adjusting the gate. The wire having been carried over the rollers *d* and attached at its ends to the batten A, the braces F and E are drawn down and the perforated tongues thereof are inserted through the space between the uprights of the battens A, and A', after which they are pushed down, the dogs *h*, wiping over and locking under the teeth of the ratchets C. When said braces have been pushed down until the wires *d'* are taut, the pins or bolts *m* are inserted whereby the gate is locked in its assembled position. Should the wire sag or be found too taut, it may be tightened or loosened by removing the pins *m, m* and pressing down or lifting the ends of the braces until the required strain is placed upon the wires when the pins *m, m* will be replaced.

By pivoting the spacing bar G, in the end of the double brace F, it is evident that the brace is capable of being lifted to reduce the strain on the wires *d'* while the pin *m* is still in place, the brace and the spacing block G, then lying at angles with one another. While in this

bent position pin *m* may be removed and the tongue *g'* dropped until it comes to the next hole of the series *c*, when the pin *m* is again inserted. The brace and bar G are then straightened, the dog *h*, wiping down over the ratchet teeth of plate C, until the wire is tightly strained. By this means said wire may be strained very readily and to a much greater tension than would be possible were mere manual force employed. When the wires have been strained to the desired tension and the inner end of the spacing bar G has been pressed firmly down into its seat between the sections *f* of the double brace F, a locking pin *t* is inserted through corresponding holes formed in the said sections *f* and in the end of said spacing bar G, whereby the parts will be held securely in position.

Having thus described my invention, I claim—

In a gate, the combination, with the end battens each consisting of a pair of suitably spaced uprights united by bolts, one of said battens having toothed plates mounted on its inner face, of a wire secured at its ends to one of said battens and having its intermediate portion arranged over the bolts in the other batten, braces each pivoted at one end to one end of the said battens one of said braces having its other end perforated and the other brace being formed in two sections adapted to receive the first named brace between them, said sections of the double brace being provided with metallic plates which project beyond the ends of the sections and are adapted to engage the said ratchet plates on one of the battens, a lever pivoted between said sections of the double brace and having a perforated end projecting beyond the said sections, said battens being each provided with a series of holes at its end opposite the pivot of the brace, and pins adapted to be inserted through either of the said holes in the respective battens and through the perforated ends of the respective braces, substantially as set forth.

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

JOHN H. DICKENSON.

Witnesses:

PHILIP HOWERTON,
JOHN S. PATTERSON.