L. C. BECKFORD.
Gates.

No. 195,972.

Patented Oct. 9, 1877.

Fig. 1.

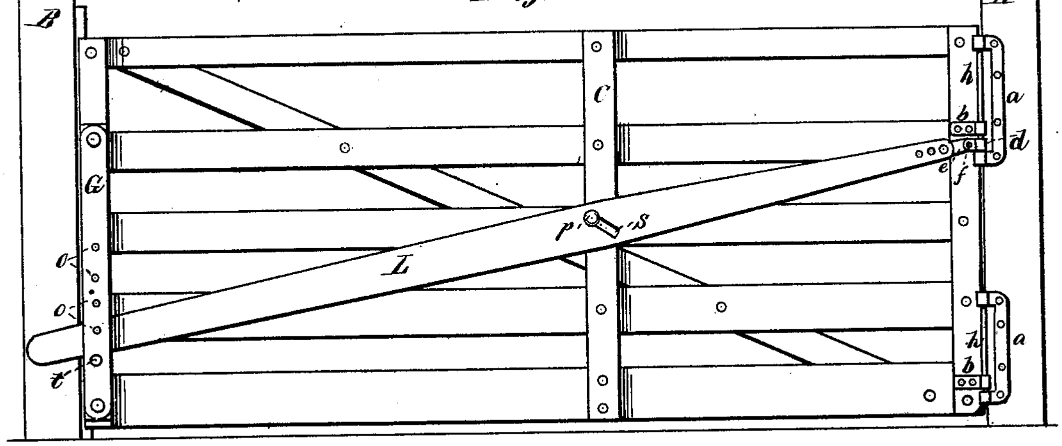


Fig. 2.

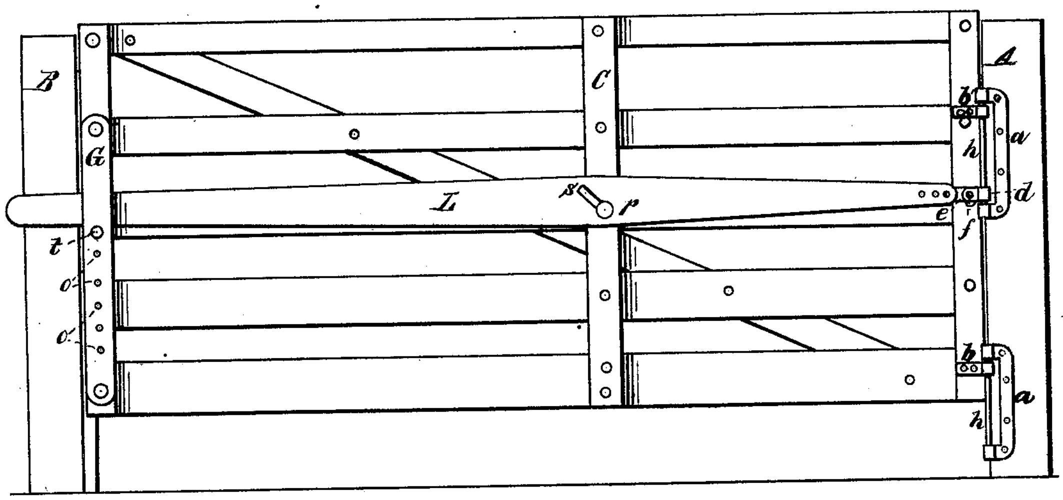
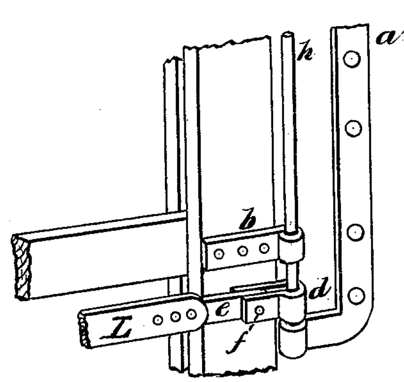


Fig. 3.



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UNITED STATES PATENT OFFICE.

LEWIS C. BECKFORD, OF MOUNT ETNA, INDIANA.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **195,972**, dated October 9, 1877; application filed September 5, 1877.

To all whom it may concern:

Be it known that I, LEWIS C. BECKFORD, of Mount Etna, county of Huntington, and State of Indiana, have invented certain new and useful Improvements in Gates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is an elevation of my improved gate, representing the same as it appears when in its lowermost position; and Fig. 2 is a similar view, showing the same as elevated or raised up from the ground. Fig. 3 is a perspective view of a portion of the hinge, illustrating the means employed for forming the fulcrum of the operating-lever.

Like letters in all the figures refer to corresponding parts.

My invention has relation to that class of gates which are so constructed as that they may be elevated above the ground-line, in order to permit them to be swung easily over a bank of snow or other obstruction with which they would otherwise interfere; and it consists in certain details of construction and arrangement of parts, all of which will be hereinafter fully described, and then pointed out in the claim.

Heretofore, in this class of gates, wherein a slotted lever is employed, it has been customary to fulcrum the elevating-lever at a point near the top of the hinge-post, which is about three feet higher than the gate, and to cut the pin-slot in the direction of the length of said lever. The first of these points of construction is objectionable, in that when the gate is elevated the weight thereof is thrown upon the operating-lever, and thence to the top of the post, which is thereby gradually inclined out of the vertical line, and the working of the gate interfered with. The second point of construction is defective in compelling the elevating-pin to travel upwardly at an angle of about thirty degrees upon the inclined face of the slot, thereby crowding the gate against the hinges and rendering its operation too difficult.

To overcome these defects my gate is mounted as follows: A is the hinge-post, and B the opposite vertical post, against which the gate is closed. C is an upright plate upon the timbers of the gate, serving to connect them, as well as to afford a bearing for the elevating-pin *p*. The hinge-rods *h* are firmly secured to the hinge-plates *a a*, and are sufficiently long to permit the straps *b b* to rise and fall a distance equal to the desired vertical play of the gate. The upper hinge-rod is longer than the lower one by the depth of the hinge-strap *d*, which is connected with the lever L, so that when the gate is down the upper strap shall bear upon the top of *d*, and the lower one upon the lower hinge-plate. This construction permits the gate-hinges to move an equal distance in a vertical direction. The lever L, instead of being pivoted near the top of the post A, is connected with strap *d* by a second strap, *e*, pivoted therein, as at *f*, so that the lever may move vertically as well as swing horizontally with the gate; and the fulcrum being thus lowered, the end of the lever does not require to be moved through so great an arc to accomplish the desired lifting. The lever L being slotted, as at *s*—that is, so that the slot inclines downwardly and toward the hinge-post A—the inclined walls of the slot slide over the pin *p*, and tend, by reason of their inclination, to diminish the force required to elevate the gate upon the hinge-rods.

In order to elevate the gate it is only necessary to lift up upon the end of lever L, and then, if desired to retain said gate in an elevated position, a pin, *t*, may be inserted through any one of a series of pin-holes, *o o*, provided in the guide G. When the gate is swung open, after having been elevated, the weight thereof is transferred to the hinge-rod *h* through the medium of strap *d* and its connections. This strap should, therefore, be made sufficiently strong to bear the required strain, and should be capable of moving easily over the bearing-point upon plate *a*. This bearing-point, which is practically the fulcrum of the lever, being located considerably below the top of the post, the danger of disarranging said post by inclining it from the vertical line is very much lessened, and by hinging the elevating-lever to the same rod *h*, this lever will swing around easily with the gate, not being liable to cramp and twist.

By use of the straps *a* the hinges are adapted

to be applied to gates already built without disarranging either the hinge or latch posts. With the previous constructions, hereinbefore alluded to, this cannot be done, since the hinge-rod is placed between the end of the gate and the hinge-post, thereby necessitating a shorter gate, or else a greater distance between the two posts.

The hinges are intended to be made and sold separately from the gate, so that the latter may be built and mounted as desired.

When constructed and arranged in accordance with the foregoing description, the gate is simple, cheap, and easy of operation, and admirably answers the several purposes of the invention.

I do not desire to be understood as claiming a gate which may be elevated and retained in such position by means of a hand-lever to avoid obstacles thereunder, as I am aware that such construction is not new.

I am also aware that a gate capable of being elevated has been hinged to the hinge-post by means of a secondary post, which bears the guides for the gate. This construction is not applicable to gates already made and posts erected for them, whereas the invention herein set forth is specially applicable to such gates.

Having thus fully described my invention, what I do claim as new, and desire to secure by Letters Patent, is—

In combination with a gate and hinge post of the character herein specified, the hinge-straps *a a*, applied to the face of said post, and carrying the rods *h h*, upon which the straps *b b* are hung, and the elevating-lever, connected with the upper hinge-rod by means of the jointed coupling *e d*, the whole arranged and operating substantially as herein shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

LEWIS C. BECKFORD.

Witnesses:

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STEPHEN R. ALDRICH.