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W. F. SANFORD.

GATE.

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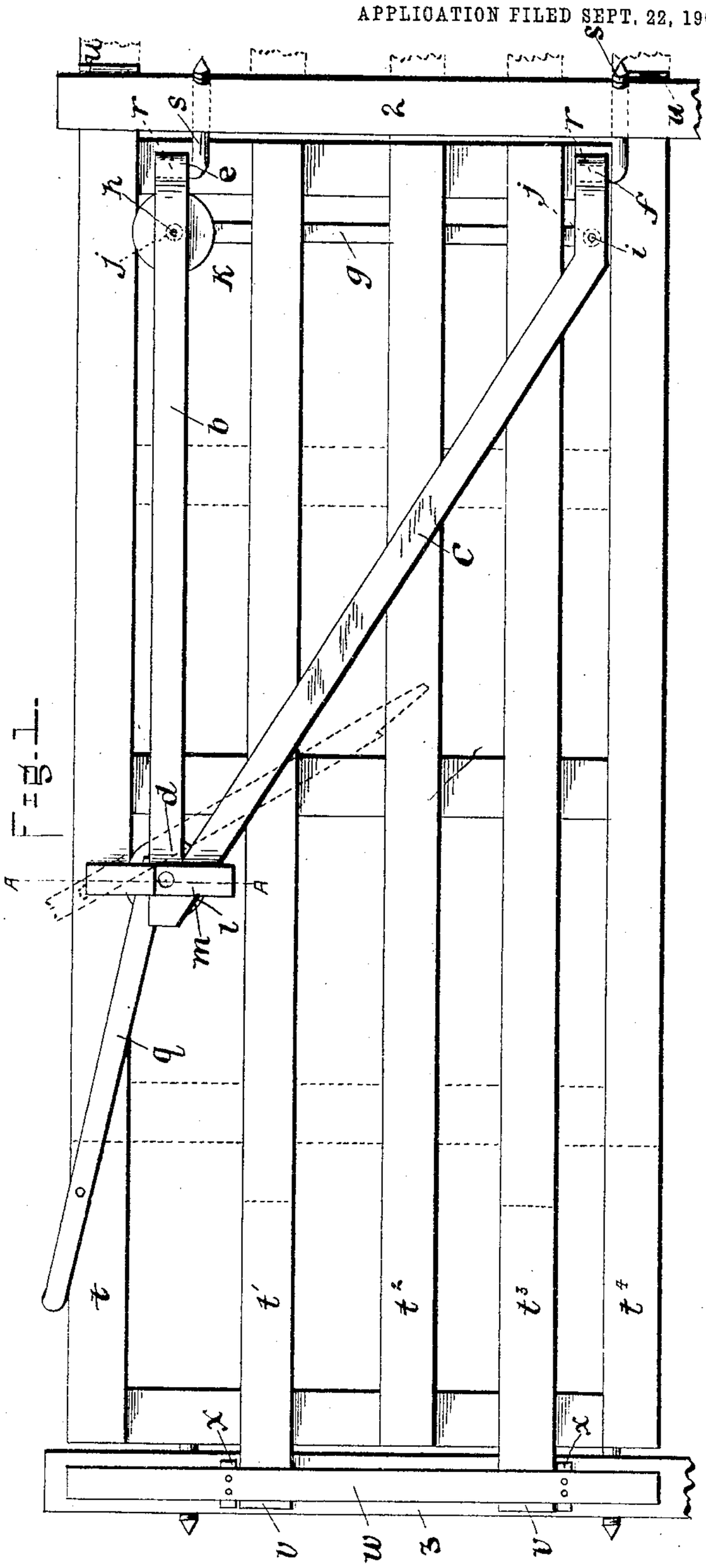

Fig. 1.

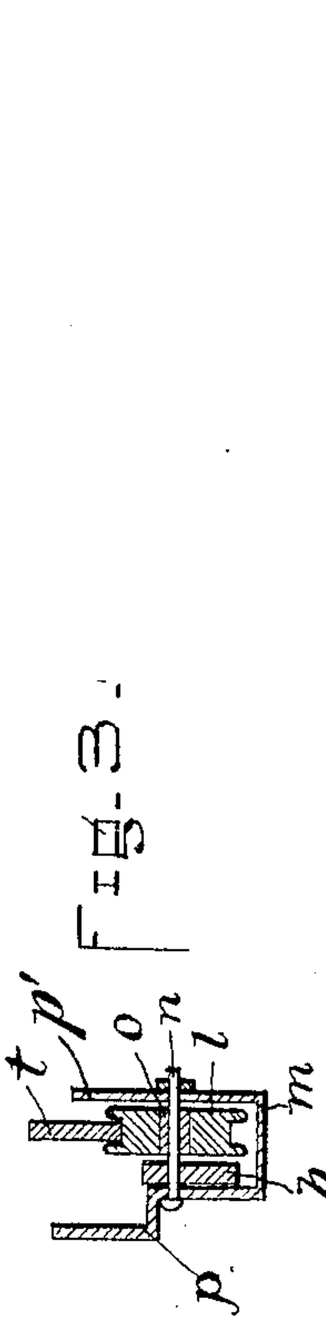

Fig. 3.

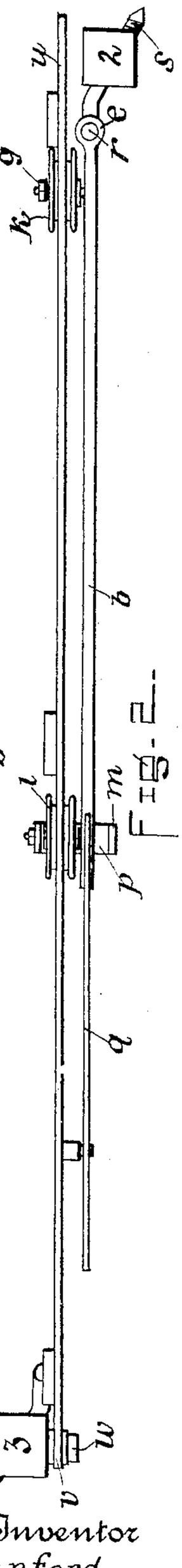

Fig. 2.

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UNITED STATES PATENT OFFICE.

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GATE.

No. 803,436. Specification of Letters Patent. Patented Oct. 31, 1905.

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To all whom it may concern:

Be it known that I, WILLIAM FRANCIS SANFORD, a subject of the King of Great Britain, residing at Leamington, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Gates; and I do 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 improvements in gates, and particularly to sliding and swinging gates.

The object of my invention is to provide a gate adapted to be supported directly over the points at which its carrier member is hinged.

A further object of the invention is to enable gates of this type to be hung right or left, as required.

A further object of the invention is to improve and simplify the construction and operation of gates of this character, and thereby render them more durable and efficient in use and less expensive to manufacture.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of a gate constructed in accordance with my invention. Fig. 2 is a plan view of the same, and Fig. 3 is a transverse vertical sectional view taken on the line A A of Fig. 1.

My improved crane consists of a horizontal portion *b* and a diagonal portion *c*, connected rigidly together, as at *d*, at one end and having their opposite ends formed with hinge-eyes *e* and *f*, respectively. A vertical cross-bar *g* extends across the crane near its hinged end, and a pin or short spindle 8 projects through the horizontal portion *b* of the crane and the upper end of the cross-bar, while a similar pin or short spindle *i* projects through the lower end of the diagonal portion *c* of the crane and the lower end of the cross-bar. Each of these pins or short spindles has a sleeve *j* thereon, the lowermost sleeve constituting a distance-piece between the crane and the lower end of the cross-bar and the upper sleeve constituting a bushing upon which the antifriction-roller K is rotatably mounted, another such roller *l* being mounted in a bracket *m*, secured rigidly to the free end of the crane and having a pin or short spindle *n*, with a bushing *o* thereon, to support such other antifriction-roller. This bracket has one of its legs offset, as at *p*, to act as a guide or guard for the usual latch *q*, and its other end *p'* projects upwardly and acts as a guide or guard for the gate. The crane is hung from the gate-post 2 by slipping its hinge-eyes over the upwardly-bent pins or pintles *r*, made in one with screw-bolts *s*, adapted to be screwed into the gate-post.

My improved gate proper is preferably provided with five bars $t\ t'\ t^2\ t^3\ t^4$, the top and bottom ones being extended, as at *u*, beyond one end of the gate proper, and the intermediate bars t' and t^3 being extended, as at *v*, beyond the opposite end of the gate proper. The gate-post 3 opposite to the post 2, to which the gate proper is hinged, is provided with a retaining-bar *w*, having distance pieces or blocks *x* between it and such posts and arranged to receive the ends of the gate-bars t' and t^3 between them and between the retaining-bar *w* and its carrying-post or allow the projecting ends *u* of the bars t^4 to be inserted between the ends of this retaining-bar and its carrying-post, this latter being the arrangement when the gate is reversed to swing in the opposite direction to that to which the gate illustrated will swing.

When it is desired to open the gate, the outer end of the latch *q* is depressed to move its notched inner end out of engagement with the crane, so that the gate proper may be slid longitudinally to disengage its projecting portion *u* from the post 3 and retaining-bar *w*. When the outer end of the gate is thus disengaged, the crane may be swung upon its hinges to move the gate to its open position, as will be readily understood.

The offset *p* of the bracket *m* serves to support the free end of the latch when the gate is open, the lower side of the latch riding on the said offset and the pivot of the latch adapting the latter to play laterally to the extent required to cause the latch after having been disengaged from the outer end of the crane to be engaged with the said offset when the gate is being moved to open it.

If desired, instead of making the swinging crane integral and of metal, as shown in the drawings, I may construct the same of wood and bolt or otherwise secure the metal hinge-eyes *e* and *f* thereto, as will be readily understood.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. The combination of a swinging crane having supporting-rollers on one side, a gate having a bar bearing on said supporting-rollers, the gate being thereby suspended from said rollers, a bracket at the free end of the crane, having vertical arms which respectively bear against the outer side thereof and one of the rollers, an axle for the said roller connecting the said bracket to the crane and passing through the latter and the said arms of said bracket, one of said arms having a lateral offset and extending above the crane, and a latch loosely connected to the gate and adapted to engage the crane to lock the gate in a closed position, said latch being adapted to be moved laterally at its free end, to cause its free end to bear on the said offset of the bracket during the initial movement of the gate to open position, substantially as described.

2. The combination with a gate-post having a pair of pintles carried rigidly thereby, of a crane made from a single piece of metal and consisting of a horizontal member having a hinge-eye formed at one end thereof adapted to take over the upper pintle, and a diagonal member having a hinge-eye formed at one end thereof and adapted to take over the other and lowermost pintle, the opposite ends of said members being united, a vertical cross-bar, a pair of pins connecting the upper and lower ends of said cross-bar of said crane, a pair of sleeves upon said pins between said cross-bar and crane, an antifriction-roller carried upon the sleeve upon the upper pin, a bracket secured to the free end of said crane and adapted to afford a bearing for an antifriction-roller and present a support or guide, a slidable gate-panel slidably supported upon said antifriction-rollers and having its top and bottom bars projecting beyond one end thereof and two of its intermediate bars projecting beyond the opposite end thereof, and a second gate-post having a retaining-bar secured thereto and adapted to prevent the gate-panel from swinging when it is closed, substantially as described and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM FRANCIS SANFORD.

Witnesses:
GEORGE A. GRENVILLE,
T. H. NORMAN.