(No Model.)

G. W. WOLFE & W. F. REECE.

GATE.

No. 547,467. Patented Oct. 8, 1895.

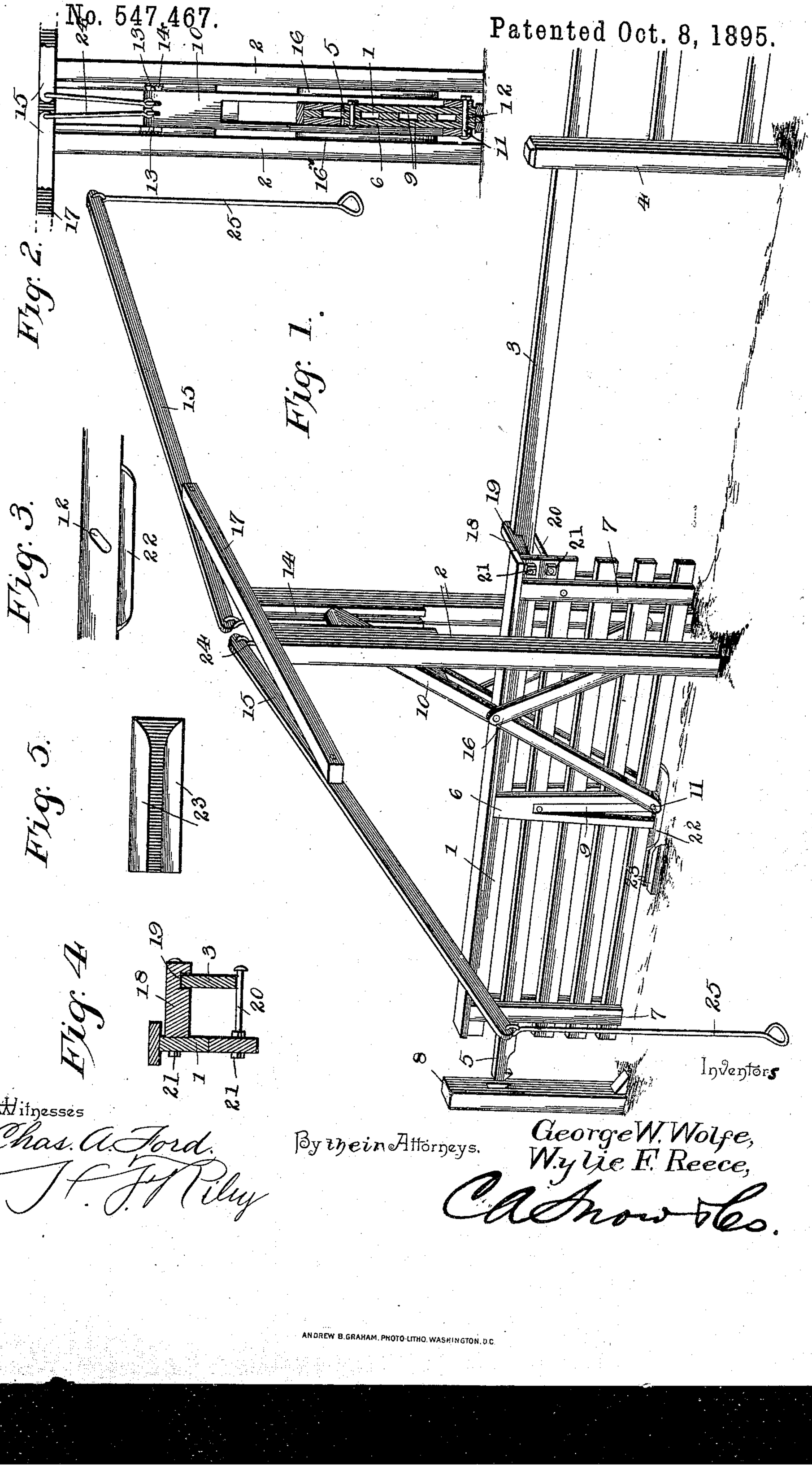

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4

Fig. 5.

Witnesses
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GATE.

SPECIFICATION forming part of Letters Patent No. 547,467, dated October 8, 1895.

Application filed June 22, 1895. Serial No. 553,722. (No model.)

To all whom it may concern:

Be it known that we, GEORGE WILLIAM WOLFE and WYLIE FRANKLIN REECE, citizens of the United States, residing at North Baltimore, in the county of Wood and State of Ohio, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

The object of the present invention is to improve the construction of sliding gates, and to provide a simple, inexpensive, and efficient one, which may be readily operated to open and close it on foot or on horseback or from a vehicle.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the latch-operating mechanism. Fig. 3 is a detail view of a portion of the bottom rail of the gate, showing the inclined slot thereof. Fig. 4 is a detail sectional view illustrating the manner of connecting the rear end of the gate with the horizontal guide-bar. Fig. 5 is a detail view of the guide-bars or strips at the bottom of the gate.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a sliding gate constructed of any suitable material, either metal or wood, and arranged between a pair of uprights 2 of a supporting-frame and having its rear end connected at the top with a stationary horizontally-disposed guide-bar 3, secured to one of the uprights and supported at its rear end by a post 4 and located at one side of the gate. The gate is provided with a horizontally-disposed latch-bar 5, mounted between intermediate and end bars 6 and 7 of the gate and pivoted at its rear end to the rear end bars 7. The front end of the latch-bar projects beyond the gate and is provided at its lower end with a shoulder and is adapted to fit in an opending of a latch-post 8 and to engage the same, whereby the gate is locked when closed. The latch-bar is connected at an intermediate point by a pair of link-bars 9 with the lower end of an oscillating bar 10, which is bifurcated throughout the greater portion of its length and has the arms formed by such bifurcation straddling the gate and connected with the lower ends of the link-bars by a pivot 11, which passes through a rearwardly-inclined slot 12 of the bottom rail of the gate. The upper end of the oscillating bar 10 is arranged between the uprights 2 and is provided with lateral projections 13, arranged in vertical guides or ways 14 of the uprights and forming a pivot on which the oscillating bar swings. The guides or ways are preferably formed by cleats arranged in pairs and secured to the inner faces of the upper portions of the uprights and forming vertical grooves.

The oscillating bar has its upper end connected with operating-levers 15, and is connected intermediate of its ends to oscillating link-bars 16, located at opposite sides of the gate and having their lower ends fulcrumed on the uprights and located at the inner faces thereof.

The latch-operating link-bars 9 are located in openings of the intermediate bars 6, and have a limited movement through the medium of the inclined slot 12. When either one of the operating-levers 15, which are fulcrumed on the ends of a horizontal bar 17 of the supporting-frame, has its outer end drawn downward, the upper end of the oscillating bar is caused to slide upward in the vertical ways of the supporting-frame. The result of this, first, is to lift the link-bars 9 the length of their movement to disengage the latch-bar and then to produce a swinging or oscillating motion in the bars 16, which causes a sliding of the gate and the latter is open. The closing of the gate is effected in the same manner.

The rear end of the gate is provided with a laterally-disposed block 18, having a recess 19 to receive the upper edge of the guide-bar 3, and the block 18 is maintained in engagement with the guide-bar 3 by a horizontally-disposed bolt 20, projecting laterally from the gate and located beneath the guide-bar and secured at the desired adjustment by nuts 21.

The gate is provided at its bottom with a depending rib or flange 22, which is received when the gate is closed between stop-strips 23, arranged in the path of the gate and having their rear ends cut away or beveled at their inner sides to form guiding-surfaces to direct the flange or rib between the bars 23, whereby the latch-bar is guided into the opening of the latch-post and is supported when the gate is closed.

The operating-levers 15 are connected at their inner ends with the oscillating bar by means of links 24, and the outer ends of the operating-levers are provided with depending handles 25, whereby the operating-levers may be conveniently grasped by a person on foot or on horseback or from a vehicle.

The gate in opening slides freely and has sufficient momentum to prevent any dead-center, and it will be seen that it may be readily opened and closed and that the latch is automatically operated.

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

What we claim is—

1. The combination of a supporting frame, a sliding gate provided at its bottom with an opening, a latch bar pivotally mounted on the gate, a link bar pivoted to the latch bar and depending therefrom, and having its lower end arranged adjacent to said opening, an oscillating bar having its upper end arranged in suitable guides of the supporting frame and having its lower end pivoted to said link bar with a pivot arranged in the same opening, whereby the link bar has a limited movement to operate the latch bar, an oscillating link bar 16 fulcrumed on the frame and pivoted to the oscillating bar 10, and means for raising and lowering the upper end of the oscillating bar, substantially as described.

2. The combination of a supporting frame provided with guides, a sliding gate provided at its bottom with an inclined slot and having intermediate bars provided with vertical openings, a pivotally mounted horizontally disposed latch bar, an oscillating bar engaging said guide at its upper end and straddling the gate and pivoted at its lower end to the gate, the pivot being arranged in the inclined slot, the bars 9 arranged in the openings of the intermediate bars and connected with the latch bar and with the lower end of the oscillating bar, the bars 16 fulcrumed on the supporting frame at their lower ends and pivoted at their upper ends to the oscillating bar, and operating levers connected with the upper end of the oscillating bar, substantially as described.

3. The combination of a supporting frame provided with vertical guides and having a horizontal guide bar, a sliding gate provided at its rear end with a laterally disposed block having a recess receiving one of the longitudinal edges of the guide bar, a bolt mounted on the gate and arranged at the opposite edge of the guide bar, a latch bar mounted on the gate, an oscillating bar having its upper end engaging said vertical guides and having its lower end pivotally connected with the gate and having a limited movement independent thereof, and connected with the latch bar, an oscillating link bar 16 fulcrumed on the support and connected with the said oscillating bar, and operating levers connected with the upper end of the oscillating bar, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

GEORGE WILLIAM WOLFE.
WYLIE FRANKLIN REECE.

Witnesses:
E. R. DEAN,
R. E. MILBOURN.