W. B. HOMER.

GATE.

APPLICATION FILED JULY 9, 1912.

1,044,388.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.

Fig. 4.

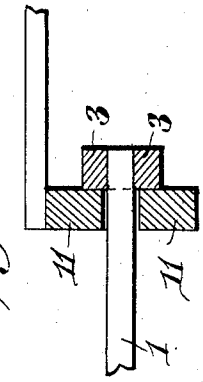

Fig. 1.

WITNESSES

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2 SHEETS—SHEET 2.

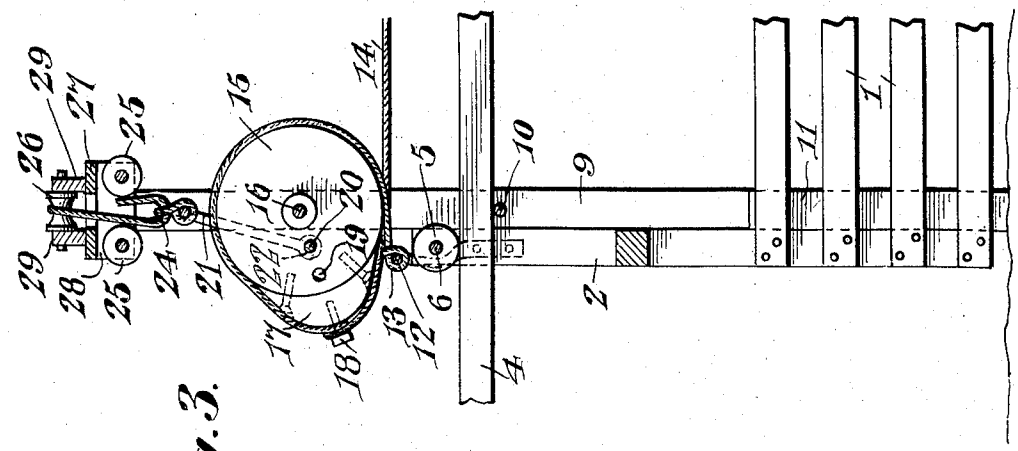

Fig. 3.

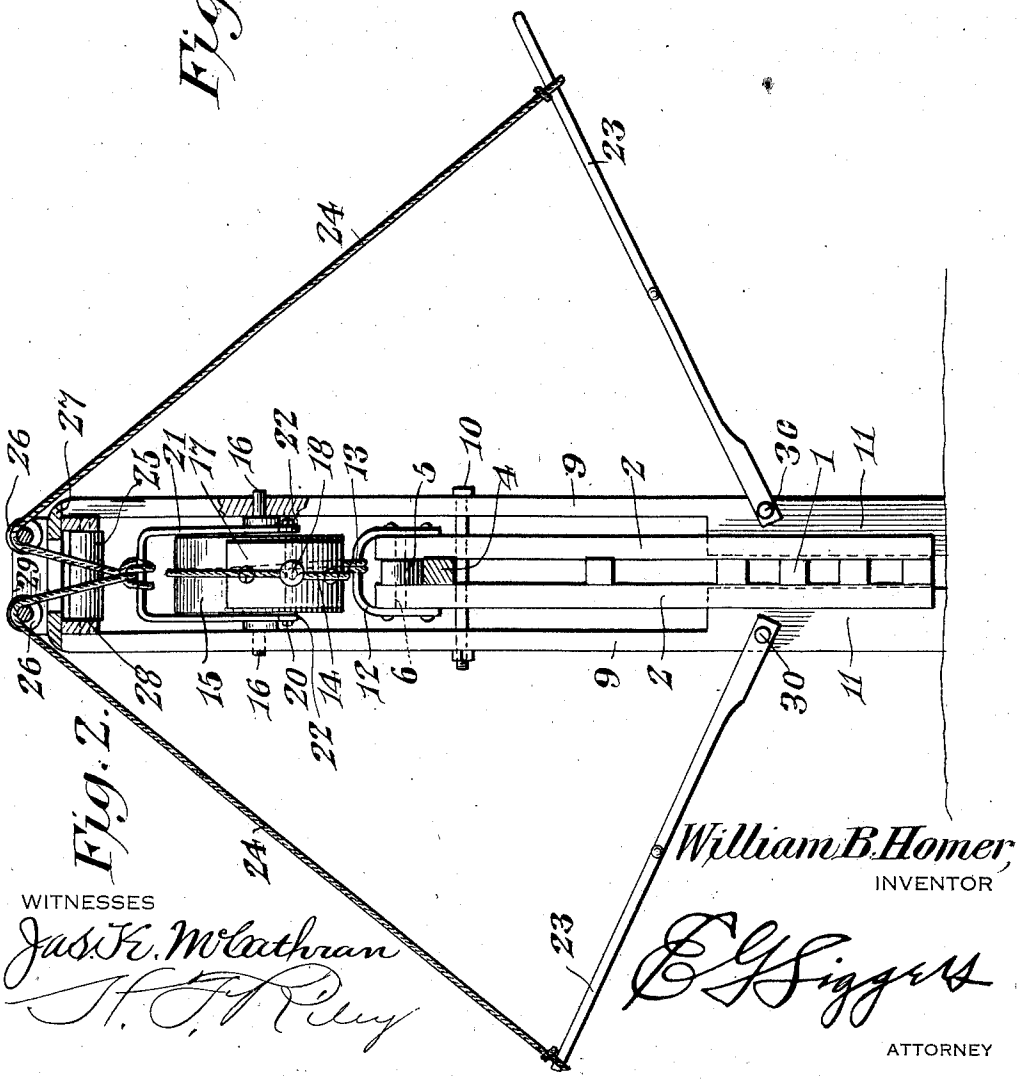

Fig. 2.

WITNESSES

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GATE.

1,044,388. Specification of Letters Patent. Patented Nov. 12, 1912.

Application filed July 9, 1912. Serial No. 708,468.

To all whom it may concern:

Be it known that I, WILLIAM B. HOMER, a citizen of the United States, residing at Springfield, in the county of Bonhomme and State of South Dakota, 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, more especially the means for operating the same, and to provide a simple, strong and durable sliding gate of inexpensive construction, adapted to be readily operated at either side of it without dismounting from a horse or leaving a vehicle.

A further object of the invention is to provide a gate of this character equipped with operating mechanism, capable of adjustment to secure the desired leverage for the easy operation of the gate.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a side elevation of a sliding gate, constructed in accordance with this invention and shown closed. Fig. 2 is a transverse sectional view, the gate being open. Fig. 3 is a vertical longitudinal sectional view of a portion of the gate, the parts being arranged as shown in Fig. 2. Fig. 4 is a detail horizontal sectional view on the line 4—4 of Fig. 1.

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

In the accompanying drawings in which is illustrated the preferred embodiment of the invention, 1 designates a sliding gate composed of horizontal rails and connecting end bars 2 and 3, arranged in pairs and suspended from a horizontal track bar 4 by rollers 5. Although a rail gate is illustrated in the accompanying drawings, the body of the gate or gate proper may be of any other preferred construction. The end bars 2 and 3, which are extended above the gate, are arranged at opposite sides of the track bar and the rollers are arranged between the upper ends of the bars 2 and 3 and are mounted on suitable pivots 6.

The horizontal rail, which may be constructed of any suitable material, is supported at its ends by posts 7 and 8 and at its center by uprights 9, arranged in pairs at opposite sides of the gate and connected at an intermediate point by a transverse fastening device 10, which extends beneath and supports the intermediate portion of the track bar. The track bar, the posts and the uprights constitute a supporting frame, and the uprights are provided at the bottom with inwardly extending portions 11, adapted to steady and guide the gate and forming abutments for the end bars. The inwardly extending portions 11 may be formed integral with the uprights, as shown, or separate pieces may, of course, be employed.

The gate is equipped at the upper terminals of the end bars 2 and 3 with yokes 12, constructed of suitable metal and composed of spaced sides and a curved top connecting portion, the sides being secured to the outer faces of the end bars 2 and 3, and the connecting portions being arched over the same. The yokes constitute attaching means for connecting the ends 13 of a rope 14 with the gate. While ropes are illustrated in the accompanying drawings, wires or any other flexible connections may, of course, be employed for operating the gate.

The rope 14 is arranged on the periphery of a gate actuating wheel 15, centrally mounted between the upper portions of the uprights 9 on a shaft 16, and provided with an eccentrically arranged weight 17 suitably secured to the periphery of the wheel and having curved inner and outer faces. The inner face fits the wheel and the outer face, which merges into the periphery of the wheel at spaced points, increases the length or extent of the periphery. The rope 14 is centrally secured to the weight by a headed fastening device 18, and it encircles the weight and the wheel and extends from the latter in opposite directions to the ends of the gate.

The wheel is provided with a plurality of eccentrically arranged perforations 19, located different distances from the center of the wheel and adapted to receive a bolt 20 for pivoting a bail 21 to the wheel. The bail 21, which straddles the wheel, is provided

at its ends with eyes 22 through which the bolt 20 passes. The bail is connected with operating levers 23 by flexible connections 24, preferably consisting of a rope, but a wire or any other flexible connection may be employed. The rope 24 is centrally secured to the transverse connecting portion of the bail, and the side portions of the rope extend upwardly between lower transversely disposed guide pulleys 25 and over upper longitudinally disposed guide pulleys 26, which are preferably grooved, as shown. The upper and lower pulleys, which are arranged horizontally, are supported by a cap 27, secured to the upper ends of the uprights and provided with lower longitudinally disposed flanges 28 and having upper transversely disposed flanges 29. The side portions of the rope 24 extend downwardly and outwardly to the operating levers 23 and are adjustably secured to the same, and their attached ends are adapted to be moved inwardly or outwardly on the operating levers to secure the desired leverage, which with the adjustment of the bail will enable the operating mechanism to be readily arranged to secure an easy operation of the gate.

The operating levers 23 are pivoted at their inner ends to the lower portions of the uprights by horizontal bolts 30, and they are supported against lateral movement by braces 31. The lower pivoted end of each lever is located at one face of the supporting upright and the brace 31 is pivoted at the opposite face of the upright, as clearly illustrated in Fig. 1 of the drawings. In practice the levers are of a length to extend a sufficient distance from each side of the gate to enable the latter to be easily operated from a vehicle or on horse back. When either of the levers is swung downwardly, the gate actuating wheel is rotated and the weight is lifted and carried upward to the top of the wheel, and the momentum thereof will swing the weight beyond the center, so that the downward movement of the weight will actuate the gate and complete the sliding movement thereof. The weight will also operate to retain the gate positively in its open and closed positions.

What is claimed is:—

The combination with a supporting frame having a horizontal track, and a gate slidably suspended from the track and movable along the same, a gate actuating wheel mounted in the frame and provided with an eccentrically arranged weight secured to the wheel at the periphery thereof and having a curved outer face merging into the periphery of the wheel and increasing the length or extent of the same, a flexible connection secured to the weight centrally thereof and encircling the wheel and extending in opposite directions therefrom and connected to the gate at the ends thereof, a bail straddling the gate actuating wheel and eccentrically pivoted to the same, operating levers located at opposite sides of the gate, flexible connections extending from the bail to the operating levers, and means located above the gate actuating wheel for guiding the last-mentioned flexible connections.

In testimony, that I claim the foregoing as my own, I have hereto affixed by signature in the presence of two witnesses.

WILLIAM B. HOMER.

Witnesses:
C. L. HILL,
VINTA R. NASE.