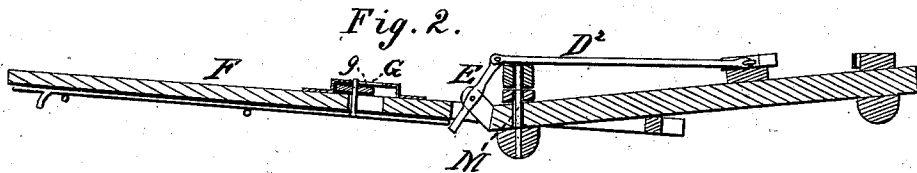
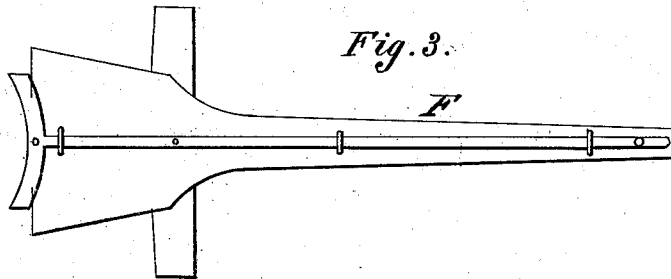
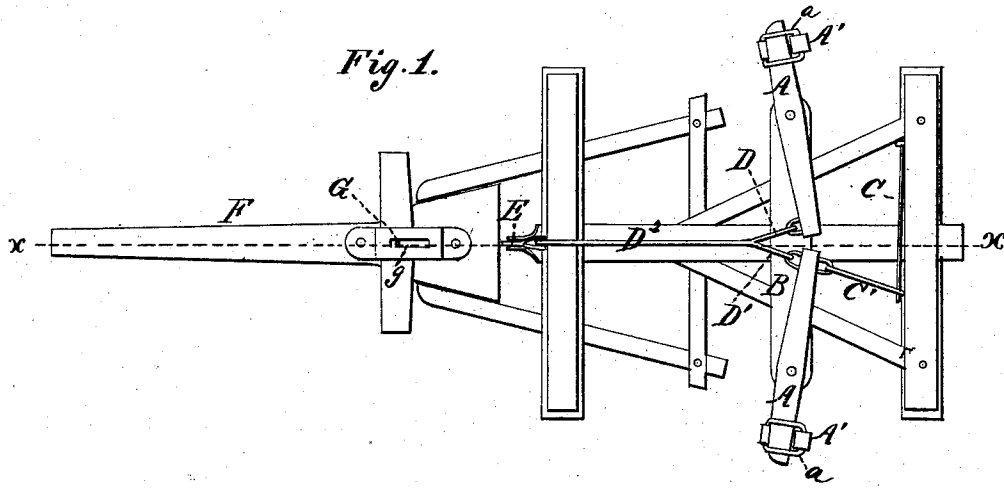


M. CLIFFORD.
WAGON-BRAKE.

No. 191,932.

Patented June 12, 1877.



WITNESSES:

H. J. Wiswall
Jno. P. Jacobs

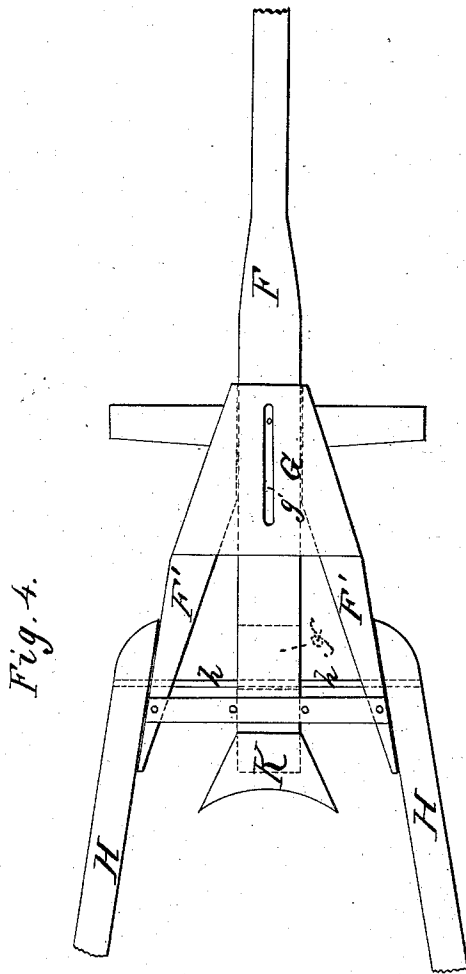
Martin Clifford
INVENTOR.

J. Mc. Perkins
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UNITED STATES PATENT OFFICE.

MARTIN CLIFFORD, OF EAST LEMON, PENNSYLVANIA.

IMPROVEMENT IN WAGON-BRAKES.

Specification forming part of Letters Patent No. **191,932**, dated June 12, 1877; application filed April 26, 1877.

To all whom it may concern :

Be it known that I, MARTIN CLIFFORD, of East Lemon, in the county of Wyoming and State of Pennsylvania, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The same letters and figures of reference are used to indicate the corresponding parts.

After describing the invention, its nature and extent will be shown in the claims.

Figure I is a plan view embodying my invention. Fig. II is a sectional view through line *xx*, Fig. I. Fig. III is a bottom view of tongue and sliding bar. Fig. IV is a bottom view of sliding tongue and plate K.

The object of my invention is to provide for operating brakes on wagons and other wheeled vehicles by means of a sliding bar, to be attached to the under side of the tongue, which bar is connected with the brakes, as hereinafter more fully described; or, preferably, the brakes are operated by a sliding tongue, dispensing with the bar altogether.

My invention consists of a sliding tongue and other suitable devices, as will be hereinafter more fully described.

A A are the brakes, which are pivoted to the bar B, as shown in Fig. I. The brake-blocks A' A' have their axes in the link *a*, which is hinged to the brake A, as shown in Fig. I. The brakes are thrown forward by the spring C, which is connected with and operates them by the cord or chain C'. The brakes are connected with, and applied by, the lever E. The iron bars D D¹ and chain D² form the connecting-links between the brakes and lever, as shown in Fig. I. The chain D² is fastened to the upper end of the lever E, which is pivoted to the forward end of the coupling-pole,

as shown in Figs. I and II. The tongue F is made to slide back and forth in the tongue-hounds F'. The hammer plays in the slot *g*, cut in the plate G, as shown in Figs. I, II, and IV. The bar *h*, which pivots the tongue-hounds to the wagon-hounds H, plays in the slot *f*, cut in the tongue, as shown in Fig. IV. An iron plate, K, is rigidly fastened to the rear end of the tongue F. The edge of this plate projecting beyond the end of the tongue is cut in the form of an arc, whose radius is the distance from the kingbolt *m* to said plate K, when the tongue F is drawn forward, as in hauling. In going down any grade the brakes are applied by means of the tongue F, pressing the plate K against the lower arm of the lever E. The plate K acts equally well from any angle. The pressure of the brakes is removed the moment the tongue is drawn out by the spring C.

The links *a* are made strong, and allow of sufficient space between the blocks and the brakes to permit the mud or substance scraped off to pass through, and thus prevent loading the ends of the brakes.

In backing the wagon the wheels revolve in a contrary direction, and so raise the brake-blocks up, and there is no friction or pressure to overcome.

Having thus described my invention, I claim—

1. The sliding tongue F, having the slot *f* and plate K, as and for the purpose described and shown.

2. The brakes A, pivoted to bar B, lever E, and tongue F, having plate K, when combined, arranged, and operated as shown and described, and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 23d day of April, 1877.

MARTIN CLIFFORD. [L. S.]

Witnesses :

C. S. HALLSTEAD,
A. W. STEPHENS.