(No Model.) 2 Sheets—Sheet 1.

# T. A. McCANDLESS.

## AUTOMATIC BRAKE.

No. 482,378. Patented Sept. 13, 1892.

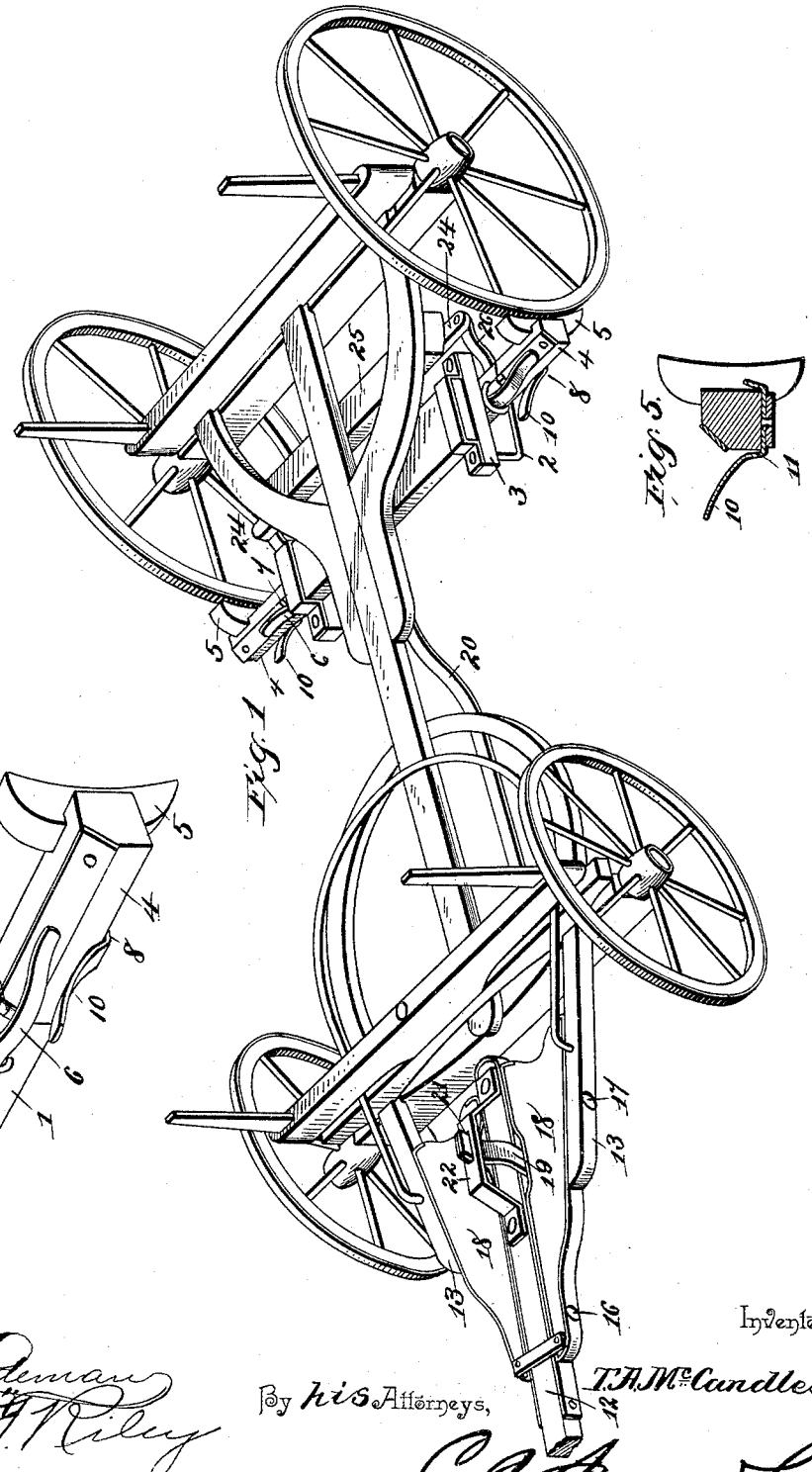

Fig. 1.

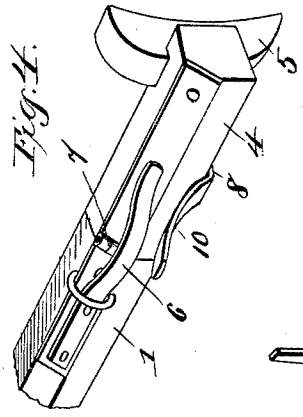

Fig. 4.



Fig. 5.

Witnesses

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(No Model.)

2 Sheets—Sheet 2.

# T. A. McCANDLESS.

## AUTOMATIC BRAKE.

No. 482,378. Patented Sept. 13, 1892.

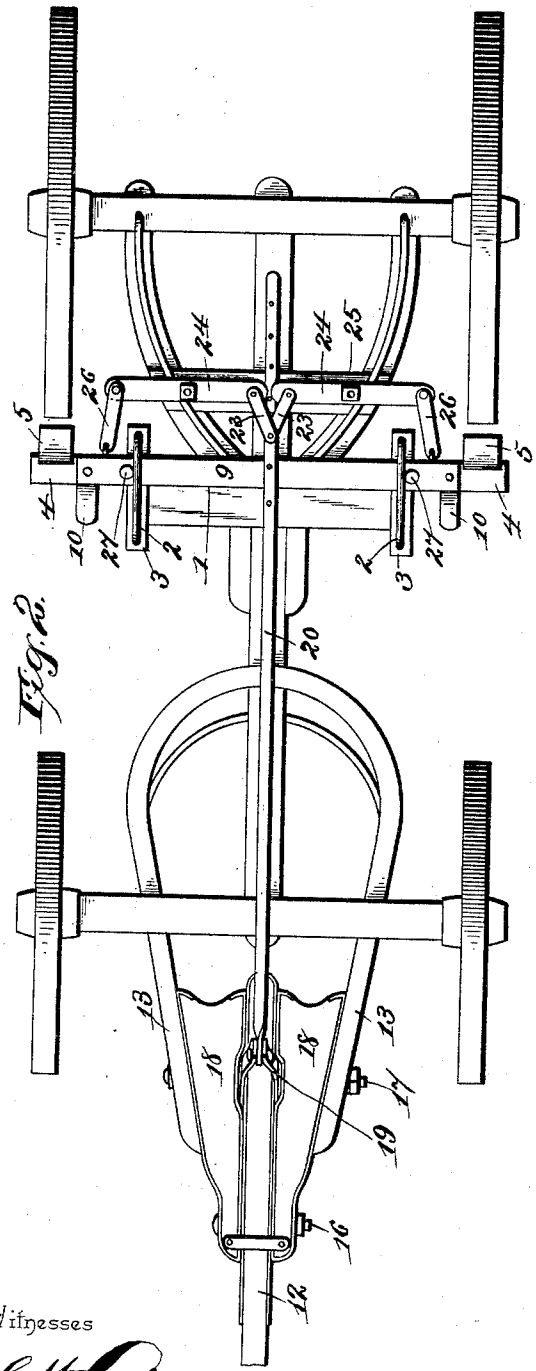

Fig. 2.

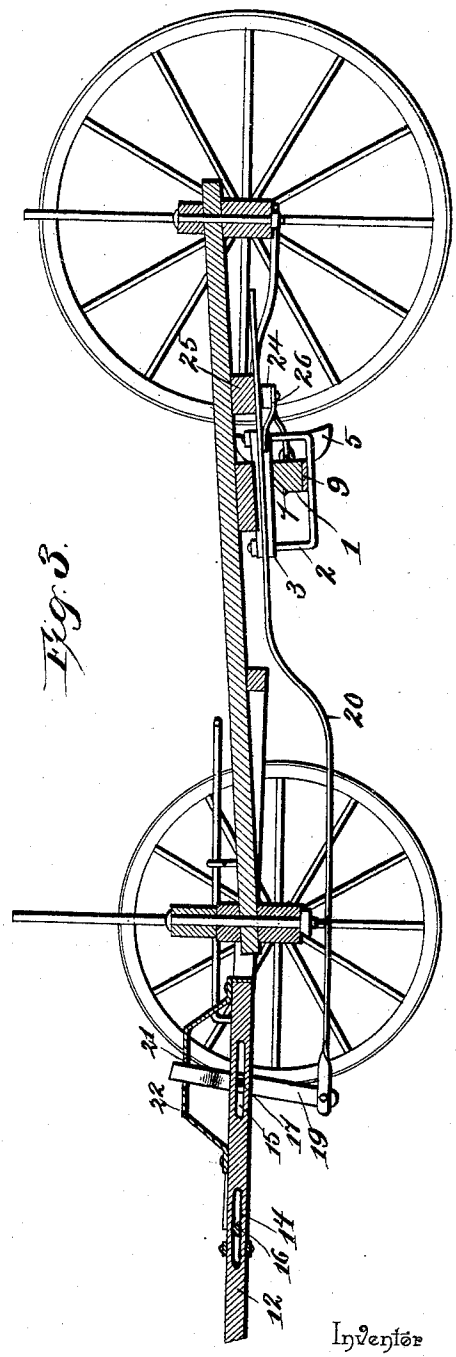

Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS A. McCANDLESS, OF IRVING, KANSAS.

## AUTOMATIC BRAKE.

SPECIFICATION forming part of Letters Patent No. 482,378, dated September 13, 1892.

Application filed April 9, 1892. Serial No. 428,524. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS A. McCANDLESS, a citizen of the United States, residing at Irving, in the county of Marshall and State of Kansas, have invented a new and useful Automatic Brake, of which the following is a specification.

The invention relates to improvements in automatic brakes.

The object of the present invention is to simplify and improve the construction of automatic brakes and to provide one in which when the vehicle is backing the brake-shoes will be thrown off the wheels and in which the brake-shoes will assume their normal and operative position as soon as the vehicle is started forward.

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 running-gear constructed in accordance with this invention. Fig. 2 is a reverse plan view. Fig. 3 is a longitudinal sectional view. Fig. 4 is an enlarged detail view of the end of the brake-bar. Fig. 5 is a detail sectional view of the same.

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

1 designates a brake-bar arranged in guides 2, depending from a transverse bar 3, whereby the brake-bar is suspended from a running-gear. The brake-bar is provided at its ends with spring-actuated hinged arms 4, carrying brake-shoes 5. It is adapted to reciprocate laterally in the guides to carry the brake-shoes in contact with and off the hind wheels, and when the running-gear is being backed the rotation of the hind wheels is reversed, and they thereby move the brake-arms 4 upward and forward against the action of the springs 6 to throw the brake-shoes off of them. The springs 6 are arranged on the upper faces of the brake-bar and have their free ends bearing against the arms 4, which are connected with the brake-bar by hinges 7. The brake-arms are held rigid with the brake-bar when the running-gear is moving forward by clip-plates 8, secured to and arranged transversely of the extended ends of a bar of metal 9, secured to the lower face of the brake-bar and projecting therefrom beneath the brake-arms and supporting the same. The clip-plate 8 has a rectangular portion to receive the brake-arm to lock it rigid with the brake-bar, and the said clip 8 is provided at its front end with an upwardly-inclined portion 10, forming a guide and support for the brake-arm when the latter is thrown upward by the wheel in backing. The forward rotation of the wheel presses the brake-arm downward into the rectangular portion of the clip, between the shoulders 11 thereof.

The tongue 12 of the running-gear is adapted to slide between the blocks of the front hounds 13 and is provided with horizontal slots 14 and 15, through which pass transverse pins 16 and 17, the latter pivoting the tongue and the blocks 18 between the hounds 13. On the pin 17 is fulcrumed a vertical lever 19, composed of two sides bowed intermediate the ends to form a tongue-opening and having their lower ends pivotally connected to a draft or connecting rod 20 and their upper ends arranged in a slot 21 of a metal strap 22, which is secured to the upper face of the tongue and arched over the lever 19, and having its front end perforated and forming a yoke for the doubletree. (Not shown.) The connecting-rod 20 extends rearward and has pivotally secured to it links 23, having their other ends similarly secured to the inner ends of brake-levers 24, fulcrumed on the lower face of a cross-bar 25, and having their outer ends connected by links 26 with the brake-bar. As the tongue moves rearward between the blocks 18, the brake-levers 24 have their inner ends drawn forward and cause the brake-shoes to be applied to the wheels. The bar 20 is provided with series of perforations to enable it to be adjusted to suit the adjustment of the reach, which may be coupled long or short to adapt the running-gear to be employed for different purposes.

It will be seen that the brake mechanism is simple and comparatively inexpensive in construction, and that it is arranged beneath the running-gear and is thereby out of the way.

The brake-bar is prevented moving longitudinally by lugs 27, depending from the lower face of the metal bracing-bar 9.

What I claim is—

1. In a brake, the combination, with a running-gear, of a brake-bar provided at its ends with arms forming extensions of the brake-bar and hinged to the same at their inner ends and at their upper edges and adapted to swing upward, the springs secured to the upper face of the brake-bar and engaging the upper faces of the arms to force the latter downward, and the clips arranged beneath the arms and having rectangular portions to receive the same and provided at their front ends with upwardly-inclined guiding portions, substantially as described.

2. In a brake, the combination, with a running-gear having a longitudinally-movable tongue, and an arched plate 22, secured to the tongue and provided with a slot, of a vertical lever having a tongue-opening to receive the tongue and fulcrumed on the pivot of the latter and having its upper end arranged in the slot of said plate 22, a transverse bar provided with keepers, a brake-bar arranged in the keepers and having hinged arms carrying brake-shoes, brake-levers fulcrumed intermediate their ends and having their outer ends connected with the brake-bar, and a connecting-rod connected with the inner ends of the brake-levers and the lower end of the vertical lever, substantially as described.

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

THOMAS A. McCANDLESS.

Witnesses:

L. E. HARVEY,

R. A. HARVEY.