2 Sheets—Sheet 1.

T. G. MANDT.

WAGON RUNNING-GEAR AND BRAKE.

No. 194,160. Patented Aug. 14, 1877.

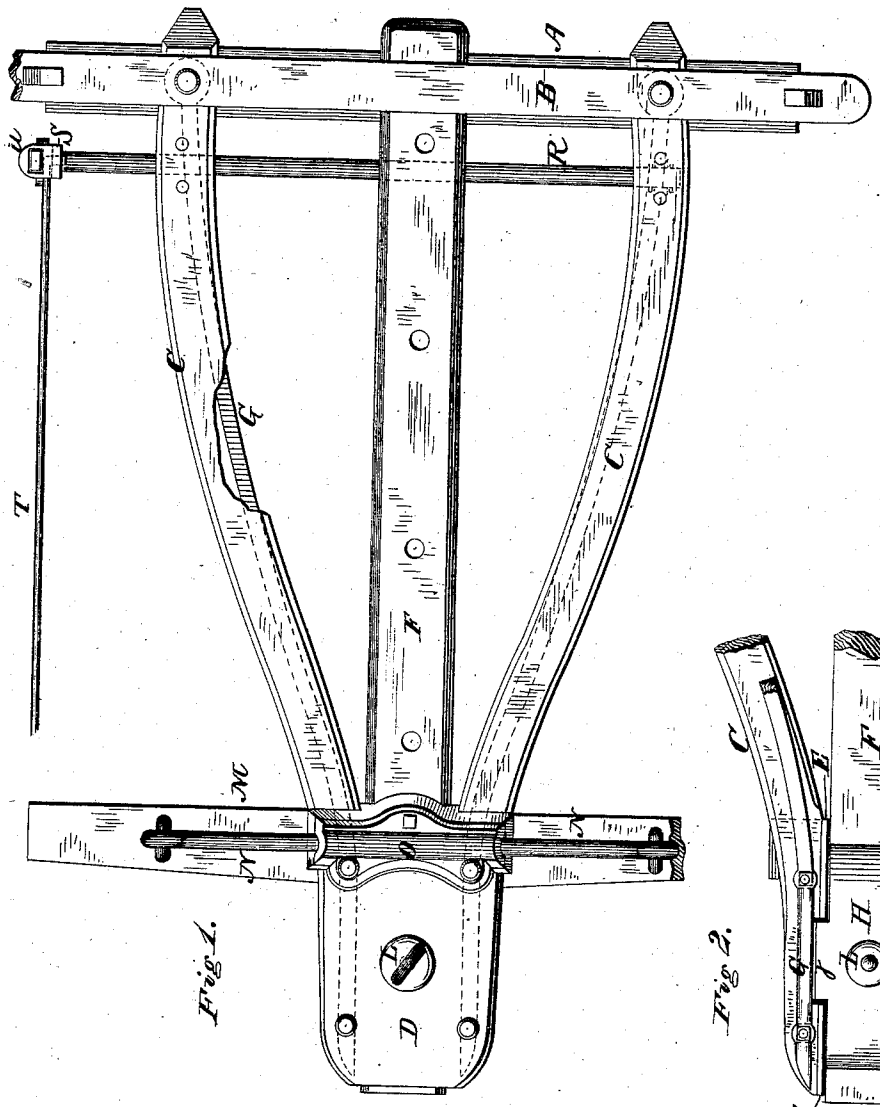

Fig. 1.

Fig. 2.

Witnesses.

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2 Sheets—Sheet 2.

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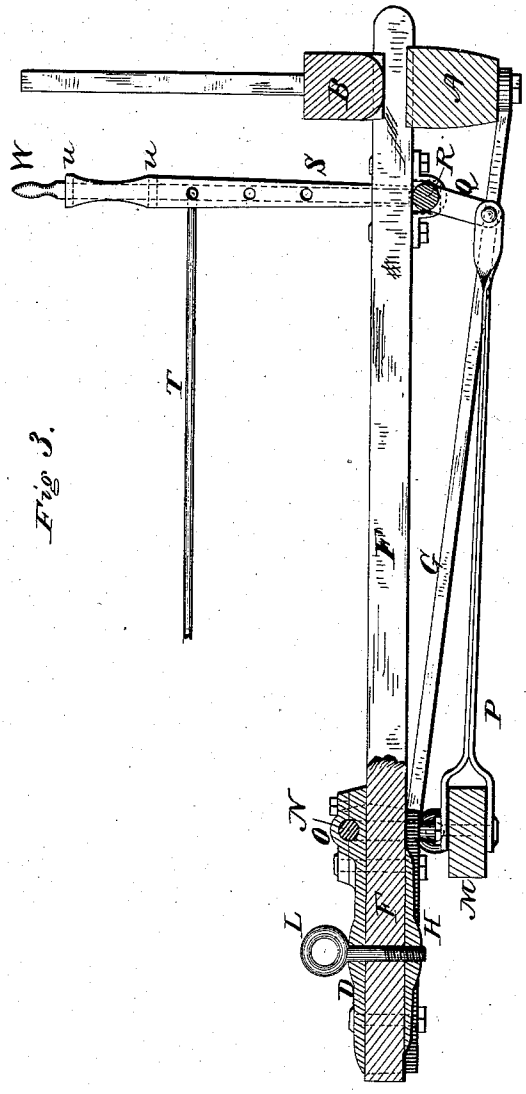

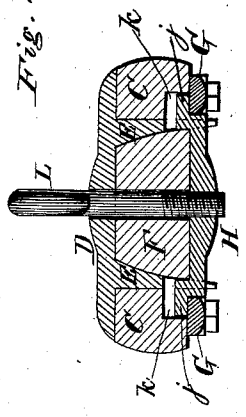

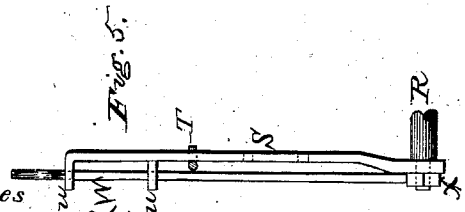

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UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

IMPROVEMENT IN WAGON RUNNING-GEAR AND BRAKE.

Specification forming part of Letters Patent No. **194,160**, dated August 14, 1877; application filed May 23, 1877.

To all whom it may concern:

Be it known that I, TARGE G. MANDT, of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Wagons and Wagon-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet I, is a top-plan view of the hind gear of a wagon. Fig. 2, Sheet I, is a bottom-plan view of the reach brake-plate and its connections. Fig. 3, Sheet II, is a side elevation of the hind gear, partly in section. Fig. 4, Sheet II, is a transverse section through the reach brake-plate; and Fig. 5, Sheet II, is an elevation of the brake-lever.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention has for its object to provide improved means for applying brakes and extension-reaches to wagons; and consists, first, in the construction of the reach brake-plate and the reach itself, by which the latter may, when adjusted to the required position, be held firmly and rigidly in place; secondly, in the combination of an adjustable bottom plate with the reach and brake plate, whereby the reach may be held rigidly up within the brake-plate; thirdly, in the method of hanging the brake upon the brake-plate; and, lastly, in the construction of the brake-lever, as I will presently describe.

In the accompanying drawings, A is the rear axle, B the bolster, and C C the hounds, connected at their forward ends to the metal reach-plate D. The reach-plate is cast or otherwise formed with two downwardly-projecting longitudinal flanges, E E, slightly inclined outward, so as to form a long recess with beveled sides *m'*, the under side of the plate for the reception of the reach F, whose edges or narrow sides are also beveled, as shown, to correspond to the form of the recess. The reach or brake plate thus formed is bolted to the hounds and to the hound-irons G G, which extend along the under side of the hounds outside the flanges of the brake-plate, as shown in Fig. 2.

H is the under plate for the reach, made in the requisite form to fit between the flanges of the reach-plate, and provided with two angular side wings, *j j*, (shown in Fig. 5,) which enter recesses in the edges of the flanges E E, and extend inward over the hound-irons. The shoulders of the side wings fit loosely in their places, and the spaces *k* between them and the hounds, and between them and the flanges at the bottom of the recesses, is sufficient to permit considerable vertical movement of the plate to and from the reach.

When the reach has been adjusted to the proper length within the recess of the brake-plate, an adjusting-screw, L, is passed downward through both, and is tapped in the under plate, as shown in Fig. 5, so that when it is set up the under plate is drawn upward against the reach, forcing it firmly into the recess of the reach-plate, thereby holding it rigidly in place, and forming a complete and perfect fastening. M is the brake-bar, hung under the reach and hounds by means of a bent bar, N, the center of which is straight, and rests within a transverse box formed in the upper side of the reach-plate at the rear end. A long half-box, O, fits upon the center of the rod, and is bolted to the brake-plate, as shown, to form the other half of the box.

By this construction the brake-bar is firmly supported from the reach-plate, and the long bearing for its supporting-rod prevents the bar from twisting, or from being unequally moved forward to bear the shoes against the hind wheels of the wagon.

The center of the brake-bar is connected at or near its center by a forked rod, P, to an arm, Q, which projects downward from a transverse rock shaft or bar, R, hung in bearings upon the under side of the hounds near the rear axle. One end of the rock-shaft projects beyond the hounds, to receive an upright arm, S, near the end of the bolster. This upright arm is perforated, to receive the end of an operating-rod, T, which extends forward upon the wagon within reach of the driver, so that by operating it the brakes can be applied or relieved, as will be readily understood. The operating-rod may be inserted in any one of the holes in the upright, for operating the brakes with more or less leverage, as desired. The upright arm is also formed with two guide-

loops, *u u*, which receive and hold a brake-handle, W, placed in an upright position, as shown in Fig. 4, and made of such length as to be reached by any person upon the top of the wagon, or upon a load of lumber or other material on the wagon, for the purpose of applying or relieving the brake. The foot of the handle W rests upon the side of the nut X, which holds the upright arm S upon the end of its rock-shaft, and thereby prevents the nut from turning. It also performs the added function of holding the operating-rod T to its place in the upright arm.

By this means the brake can be applied or relieved from the front or rear of the wagon, at the will of the operator, while the construction of the devices for its operation is strong and durable.

I claim as my invention—

1. The metal reach-plate D, constructed with the two downwardly-projecting longitudinal flanges E E on its under side, to form a recess having beveled sides, for the reception of the beveled reach F, substantially as described.

2. The metal reach-plate D, constructed with the beveled recess for the reception of the reach, and combined with the hounds and the hound-irons, in the manner described, for the purpose specified.

3. The combination of the adjustable bottom or under plate H with the reach and reach-plate, substantially as described, for the purpose specified.

4. The adjusting-screw L and movable under plate H, combined with the reach-plate, to clamp the reach rigidly within the recess of such reach-plate, substantially as described.

5. The movable under plate, constructed with angular side wings *j j*, substantially as described, for the purpose specified.

6. The movable under plate, held loosely within the flanges of the reach-plate by means of the angular side wings *j j* and the hound-irons, substantially as described.

7. The bent bar N, having a straight center, held or journaled transversely upon the rear end of the reach-plate by means of the transverse half-box therein, and the upper half-box O, substantially as described, for the purpose specified.

8. The combination of the looped and perforated upright arm S, the removable brake-handle W, and the adjustable operating-rod T with the rock-shaft R of the brakes, substantially as described, for the purposes specified.

TARGE G. MANDT.

Witnesses:
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H. G. VEUVES.