No. 641,277. Patented Jan. 16, 1900.

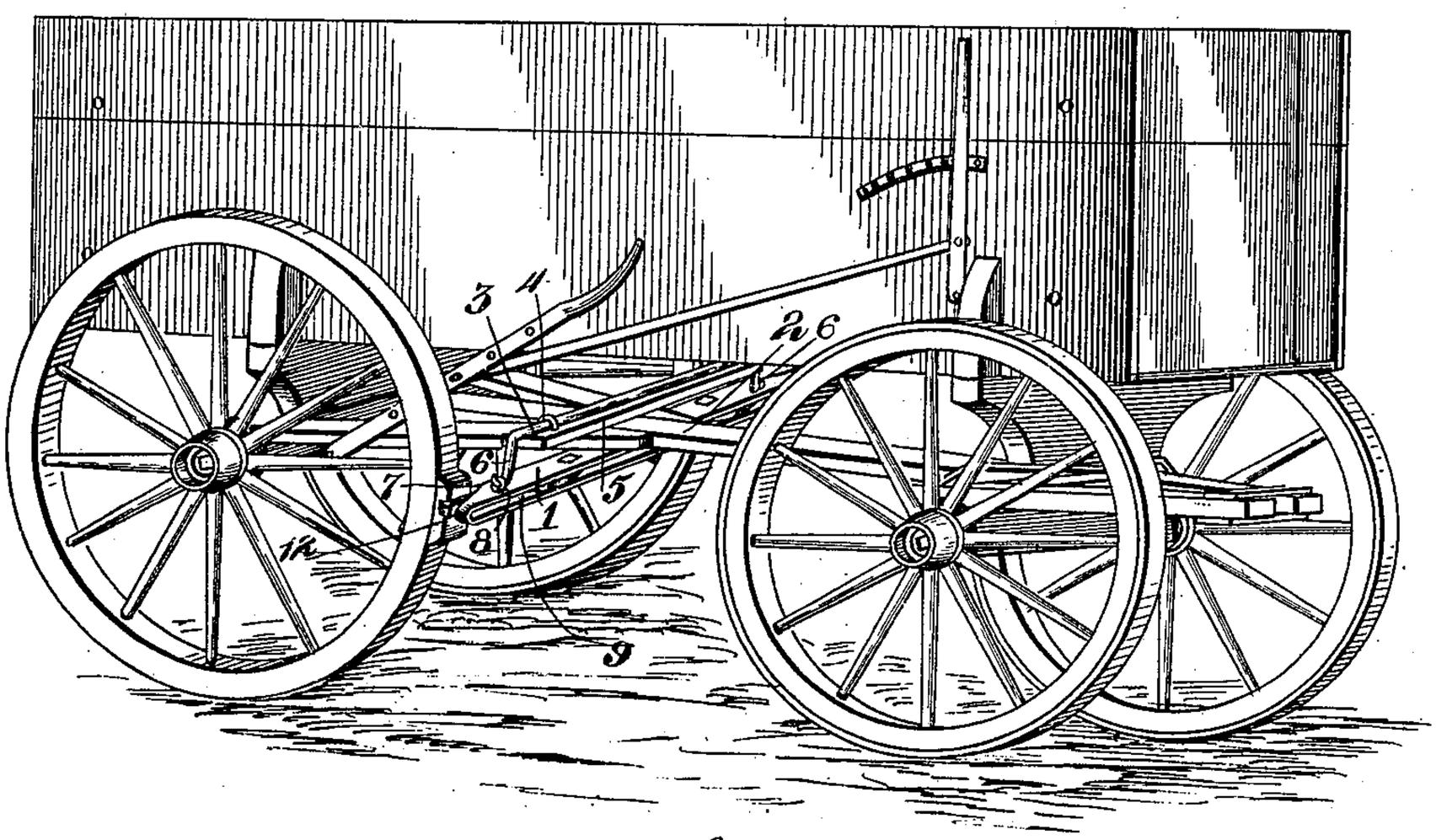
B. I. DAVIS.

WAGON BRAKE.

(Application filed Oct. 16, 1899.)

(No Model.)

Fig. 1.



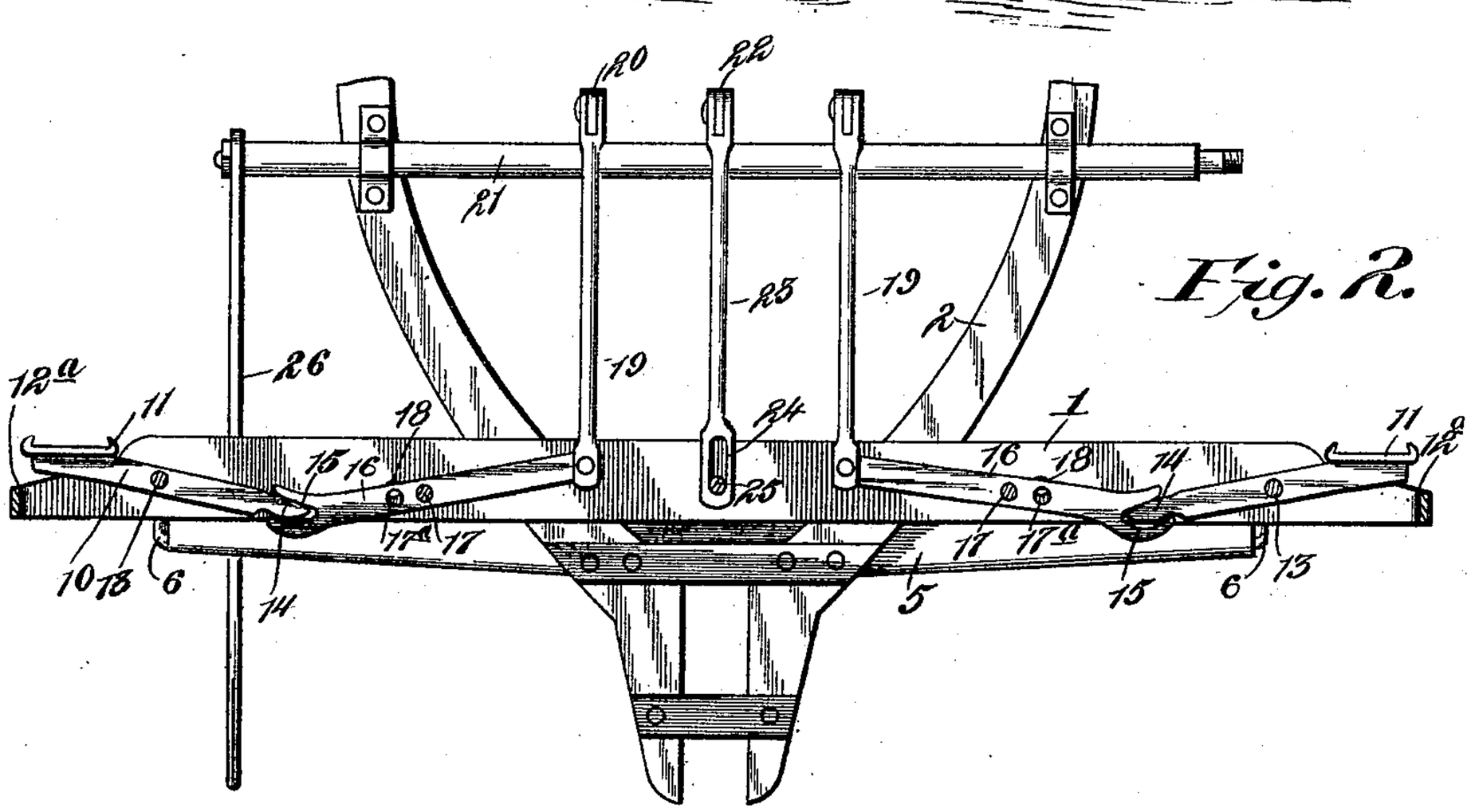


Fig. 2.

Witnesses
C. H. Walker.
F. F. Riley

Benjamin I. Davis Inventor
By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

BENJAMIN I. DAVIS, OF BOONEVILLE, VIRGINIA, ASSIGNOR OF ONE-HALF TO JAMES C. SULLIVAN, CHARLES P. DAVIS, AND ROBERT L. WOOD, OF SAME PLACE.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 641,277, dated January 16, 1900.

Application filed October 16, 1899. Serial No. 733,817. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN I. DAVIS, a citizen of the United States, residing at Booneville, in the county of Albemarle and State of Virginia, have invented a new and useful Wagon-Brake, of which the following is a specification.

The invention relates to improvements in wagon-brakes.

The object of the present invention is to improve the construction of vehicle-brakes and to provide a simple, inexpensive, and efficient one which will be strong and durable and capable of clamping the hind wheels of a vehicle with great force, whereby the vehicle may be effectively checked.

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 vehicle provided with a brake constructed in accordance with this invention. Fig. 2 is a reverse plan view, partly in section, illustrating the construction of the brake mechanism.

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

1 designates a transverse brake-beam suspended from the rear portion of the running-gear 2 of a wagon by means of a hanger, consisting of a shaft 3, journaled in suitable bearings 4 of a transverse bar 5 and having its terminals bent downward to form arms 6, which terminate in hooks 7 for engaging eyes 8 of the transverse brake-beam 1. The transverse bar 5 is secured to the upper faces of the rear hounds of the running-gear, and the arms of the transverse shaft are adapted to oscillate to permit the brake-beam to move backward and forward, as hereinafter described.

The brake-beam 1 is provided with a longitudinal opening 9 and is composed of a top and bottom suitably connected at their ends. Within the opening 9 at the ends of the brake-beam are fulcrumed a pair of brake-levers 10, provided at their outer ends with suitable slits or clamps 11 for the reception of brake-shoes 12; but the latter may be mounted on the outer portions of the brake-levers by any suitable means, and the transverse beam 1 is provided with end recesses 12 for the reception of the brake-shoes when the same are thrown forward. The brake-levers 10 are fulcrumed between their ends on vertical pivots 13, preferably consisting of bolts having the said eyes 8 at their upper ends for the reception of the hooks 7. The inner ends of the brake-levers are provided with heads 14, which are arranged within recesses 15 of supplemental levers 16, and the latter are fulcrumed between their ends on removable pivots 17, and are provided with perforations for the adjustment of the pivots for changing the leverage. The beam 1 is also provided with perforations 18, corresponding with the perforations 17^a, to receive the said pivots 17. The inner ends of the supplemental levers 16 are connected by links or rods 19 with arms 20 of a rock-shaft 21, which is provided with a central arm 22, located between the said arms 20 and connected by a link or rod 23 with the center of the beam 1. The front end of the central link or rod 23 is provided with a longitudinal slot 24, through which passes a pin 25, which connects the link or rod 23 with the beam, whereby the said link or rod 23 has a limited movement independent of the beam 1, for the purpose hereinafter described.

The rock-shaft 21, which is journaled in suitable bearings of the hounds 2, is provided at one end with an arm or lever 26, located at one side of the wagon and adapted to be either operated directly or to be connected with the usual operating mechanism extending to the front of the wagon and consisting of a rod, an operating-lever, and a suitable ratchet for locking the operating-lever at the desired adjustment.

When the rock-shaft is operated to apply the brake, the side links or rods 19 are first operated to actuate the brake-levers and the intermediate lever 16 to carry the brake-shoes into engagement with the hind wheels, and this movement of the brake-shoes is effected preparatory to the rearward movement of the transverse beam 1 and is permitted by the slot-and-pin connection at the front end of the central link or rod 23. The movement of

the side rods 19 in carrying the brake-shoes against the wheels is sufficient to operate or move the central link or rod a distance equal to the length of the slot 24, and further operation of the rock-shaft causes the beam and the brake-shoes to move rearward and firmly clamp the hind wheels with sufficient pressure to effectually check the forward movement of the wagon. In applying the brake during the latter part of the operation the strain is equally distributed through the central and side links or rods 23 and 19. By this successive operation of the brake-shoes and the brake-beam great power may be applied to the hind wheels and a wagon may be positively locked against movement in either direction.

It will be seen that the brake mechanism is simple and comparatively inexpensive in construction, that it is strong and durable and easily operated, and that the brake-levers and their shoes and the brake-beam are successively operated to clamp the wheels of a vehicle.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention, such as providing an arm at each end of the rock-shaft, so that one arm may be connected with the operating-lever and the other arm be operated by hand when the wagon-body is removed.

What is claimed is—

1. In a device of the class described, the combination with a brake-beam, of brake-shoes connected with the brake-beam and capable of movement independent thereof, and means for successively actuating the brake-shoes and the brake-beam, substantially as and for the purpose described.

2. In a device of the class described, the combination of a brake-beam, brake-levers fulcrumed thereon and carrying brake-shoes, a rock-shaft, and connections between the rock-shaft and the levers and the brake-beam, whereby the levers and the beam will be successively actuated, substantially as and for the purpose described.

3. In a device of the class described, the combination of a brake-beam, brake-levers fulcrumed thereon and carrying brake-shoes, a rock-shaft, side links or rods connected with the rock-shaft and with the brake-levers, and a link or rod connected with the rock-shaft and with the brake-beam and capable of a limited movement independent of one of such parts, whereby when the rock-shaft is operated, the brake-shoes and the beam will be successively actuated, substantially as described.

4. In a device of the class described, the combination of a brake-beam, brake-levers fulcrumed thereon, a rock-shaft connected with the brake-levers, and a link or rod connected with the rock-shaft and with the beam and having a slot-and-pin connection with one of them, whereby the beam and the brake-shoes will be successively actuated, substantially as described.

5. In a device of the class described, the combination of a brake-beam, brake-levers fulcrumed thereon and carrying brake-shoes, intermediate levers fulcrumed on the brake-beam and connected between their ends with the same and having their outer ends connected with the brake-levers, a rock-shaft connected with the inner ends of the intermediate levers, and connections between the beam and the rock-shaft, substantially as described.

6. In a device of the class described, the combination of a brake-beam, a shaft designed to be mounted on a running-gear and having depending arms supporting the brake-beams, brake-shoes movably mounted on the brake-beam, and means for successively actuating the brake-shoes and the beam, substantially as and for the purpose described.

7. In a device of the class described, the combination of a brake-beam having a longitudinal opening and provided at its ends with recesses, brake-levers fulcrumed within the opening of the beam and provided at their outer ends with brake-shoes located at the said recesses, intermediate levers fulcrumed within the opening of the beam and connected with the inner ends of the brake-levers, a rock-shaft provided with central and side arms, side links connecting the side arms with the intermediate levers, and a central link connected with the central arm and having a slotted connection with the beam, substantially as and for the purpose described.

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

BENJAMIN I. DAVIS.

Witnesses:
H. F. RILEY,
J. ROSS COLHOUN.