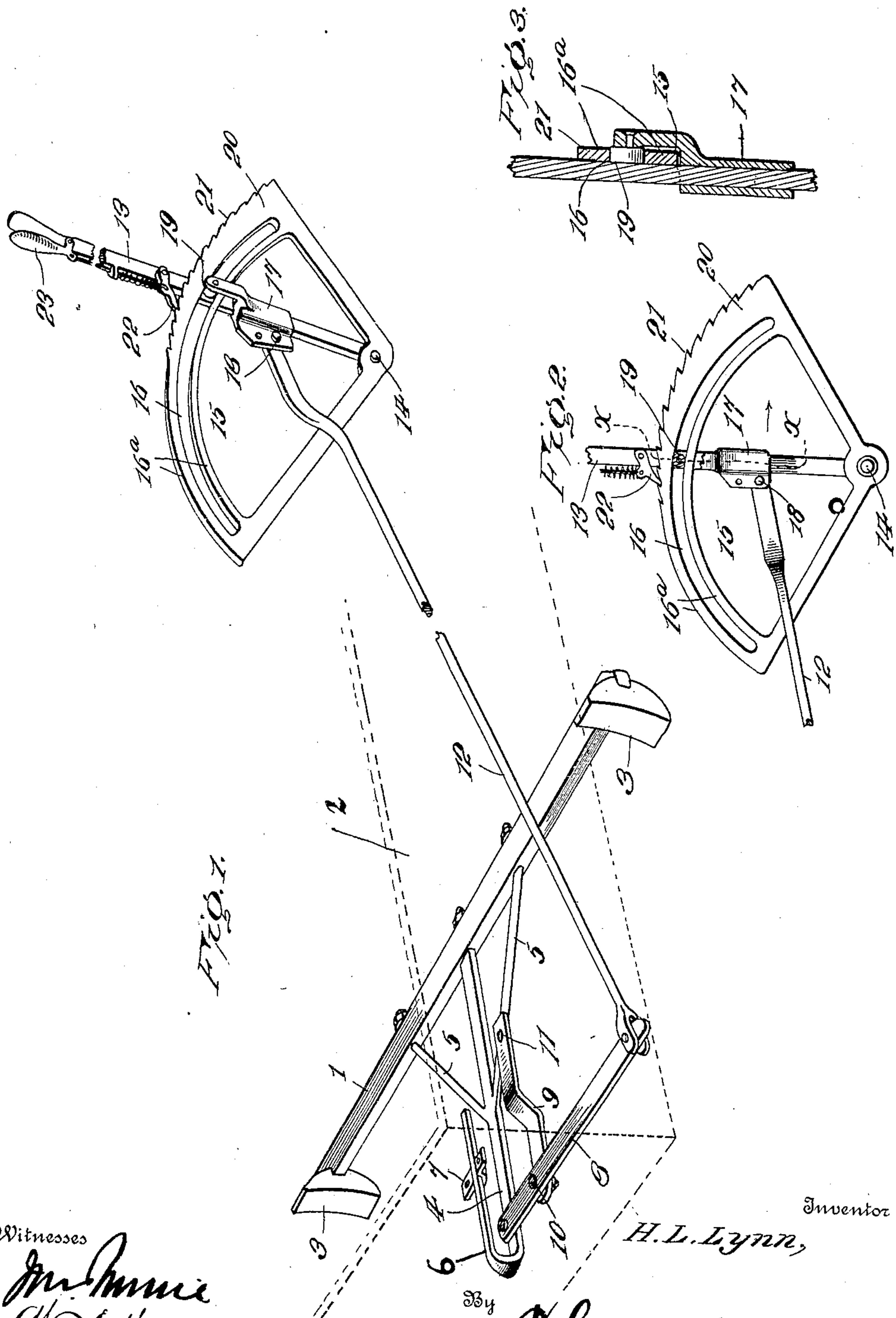


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H. L. LYNN.
BRAKE.

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Witnesses

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HUGH L. LYNN, OF GLENVILLE, KENTUCKY.

BRAKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HUGH L. LYNN, a citizen of the United States, residing at Glenville, in the county of McLean and State of Kentucky, have invented certain new and useful Improvements in Brakes, of which the following is a specification.

This invention involves novel improvements in brakes for wagons and the like.

10 An essential feature of the invention consists in the provision of brake mechanism by which the brake-beam commonly employed to support brake-shoes may be moved much farther from the wheels than is allowable
15 when the brake mechanisms at present most commonly in use are operated. When the brakes at present in use are released, the brake-shoes are so near the wheels as to catch and carry mud or foreign matter, which
20 wedges between the shoe and the wheel, the above being disadvantageous for obvious reasons.

A further object of the invention is to secure operating mechanism for the brake
25 mechanism by which greater power may be secured in setting the brakes than is secured by the common brake mechanisms.

For a full description of the invention and the merits thereof and also to acquire a
30 knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view showing the
35 invention applied, the body of the wagon being shown in dotted lines broken away. Fig. 2 is a side elevation showing more clearly the segment-plate and adjacent parts. Fig. 3 is a vertical section on the line X X of Fig. 2.

40 Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In the practical embodiment of the invention it is designed to use a suitable brake-beam 1, mounted on the wagon bed or box 2,
45 (shown in dotted lines,) in the customary way, said beam 1 carrying the brake-shoes 3, adapted to engage the wheels of the vehicle.

50 An arm 4 extends from the central portion of the beam, being braced by braces 5, and said arm is formed with a guide member 6, coacting with the guide 7, attached to the under side of the body of the wagon or vehicle.

55 The guide member may consist of a suitable plate provided with a loop or offset portion

through which the member 6 passes, and the parts 6 and 7 coact to insure proper movement of the beam 1 lengthwise of the body of the wagon, so that both brake-shoes 3 will
60 approach and move away from the wheels simultaneously and always assume positions equal distances therefrom. In other words, the provision of the members 6 and 7 may not admit of any lateral play of the beam 1,
65 whereby the brake-shoes thereof will engage the wheels at different times, a defect in the brakes ordinarily employed at the present time. The straight longitudinal movement of the beam 1, which is connected with a
70 brake-lever 8, necessitates the provision of a movable or floating support 9, which is connected with said lever 8. The lever 8 is connected at one end with the outer end of the arm 4, being pivotally mounted at a
75 point between its ends, as shown at 10, to the support 9, which latter consists of a bar pivoted at one end, as shown at 11, the opposite end having pivotal connection at 10, as
80 above mentioned.

The bar 9 is pivoted to the wagon-body, and as the beam 1 is actuated the pivotal support of the bar shifts in order to admit of the straight movement of the beam lengthwise of the wagon. The end of the lever 8 opposite that connected with the arm 4 has
85 pivotal connection with a brake-rod 12, which latter in turn is connected with an operating-lever 13, the latter being located convenient to the seat of the wagon for operation by the
90 driver in the customary way. The mounting of the operating-lever 13 and the means for connecting the same with the brake mechanism are peculiar and constitute an
95 important feature of the invention, for the reason that such mounting and connection admits of increasing the leverage of the member 13 materially in actuating the brake
mechanism, and, further, permits of moving the brake-shoes 3 a suitable distance from the
100 wheels to avoid catching mud and similar foreign matter.

The lever 13 is preferably pivoted at its lower end, as shown at 14, to a segment-plate
15, and said plate 15 is formed with a curved
105 guide 16 by the provision of spaced flanges 16^a, and this guide 16 is preferably formed on the arc of a circle, as will be noted on reference to the drawings. The point of pivotal support 14 of the lever 13 is eccentric of the
110 point constituting the center from which the arc in which the arcuate guide 16 is received

is generated. Mounted for movement longitudinally of the lever 13 is a connecting member 17 in the form of a block provided with an opening therein through which the lever passes. The rod 12 is directly connected with the block 17, as shown at 18, and said block may have one or more openings in order to adjust the point of connection of the rod 12 should this be desired. An extension of the block 17, projecting from the upper portion thereof, carries a roller 19, and this roller is adapted to move in the guide 16 of the plate 15. It will be noted that as the pivotal point 14 of the lever 13 is at different distances from points at intervals in the length of the guide 16 the roller 19 as it travels toward the rear end of the guide 16 moves farther and farther away from said point of pivotal support 14 and the latter will necessarily cause longitudinal movement of the block or member 17 on the lever 13, varying the point of connection of the rod 12 with the lever accordingly. The upper portion of the plate 15, near one end of the guide 16, is formed with an integral web 20, having teeth 21, arranged in arcuate formation, said teeth being adapted to be engaged by a pawl 22, forming a part of a latch carried by the lever 13, the pawl being operated by a small hand-piece 23, such as commonly employed for the purpose.

A description of the invention will disclose the advantages of the special construction shown. When the brake mechanism is released, the lever 13 will be located near the rear end portion of the guide 16. Should the operator desire to apply the brakes, it is only necessary to move the lever 13 forward in the customary manner, and by so doing the rod 12 will be actuated, pulling upon one end of the lever 8 and forcing the beam 1 toward the wheels, causing the shoes 3 to engage therewith. As the lever 13, however, moves forwardly in being actuated the block 17 must gradually move toward the point of pivotal support 14 of said lever, because the roller 19 travels in the guide 16, and thus the point of pivotal connection of the rod 12 with the lever 13 will gradually be shifted toward the pivot 14, a greater power or leverage being obtained for this reason, as will be apparent to those acquainted with the principles of leverage, said power increasing gradually in the forward movement of the lever. As the lever 13 is moved rearwardly to release the brakes on disengagement of the pawl 22 the block 17 must necessarily move toward the upper end of the lever or away from the pivot 14. The upward movement of the block 17 in this instance will gradually in-

crease the throw of the lever as it approaches its limit of rearward movement, because the farther away the connection 18 gets from the pivot 14 the greater the movement of the rod 12 will be, such increase in movement being secured in releasing the brake. The increasing movement of the rod 12 on releasing the brake transmits a similar increasing movement to the brake-beam 1 through the several connections therewith, and the shoes 3 will be thrown a suitable distance from the wheels, a much greater distance than can be secured in the use of the ordinary brake mechanisms.

Having thus described the invention, what is claimed as new is—

1. In a brake, the combination of an operating-lever, a block slidable longitudinally of said lever, brake mechanism, a rod connected with said brake mechanism and adapted for adjustable connection with the block on the lever, a plate arranged adjacent the lever and provided with a curved guide-slot generated on an arc eccentric of the pivot of the lever, an arm projecting upwardly from the block, a roller carried by said arm and moving in the guide-slot of the plate aforesaid, said plate being notched, and a latch-pawl connected with the lever to hold the same in an adjusted position.

2. In a brake, the combination of brake mechanism including a brake-beam, the guide 7, the arm 4 projecting from the brake-beam, the guide member 6 formed with the arm aforesaid and moving in the guide 7, the floating support comprising the member 9, the brake-lever 8 pivoted to the member 9 and connected at one end with the arm 4, a rod connected with the opposite end of the brake-lever, a plate provided with an arc-shaped guide-slot, an operating-lever pivoted to said plate, and movable about a center eccentric of that from which the arc-shaped guide-slot is generated, a block slidable longitudinally of the operating-lever and provided with openings admitting of adjustable connection with the brake-rod, the plate aforesaid being toothed, an extension projecting upwardly from the block, a roller carried by said extension and operating in the guide-slot, and a latch-pawl carried by the operating-lever to hold the same at a predetermined adjustment.

In testimony whereof I affix my signature in presence of two witnesses.

HUGH L. LYNN. [L. s.]

Witnesses:

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