

No. 772,988.

PATENTED OCT. 25, 1904.

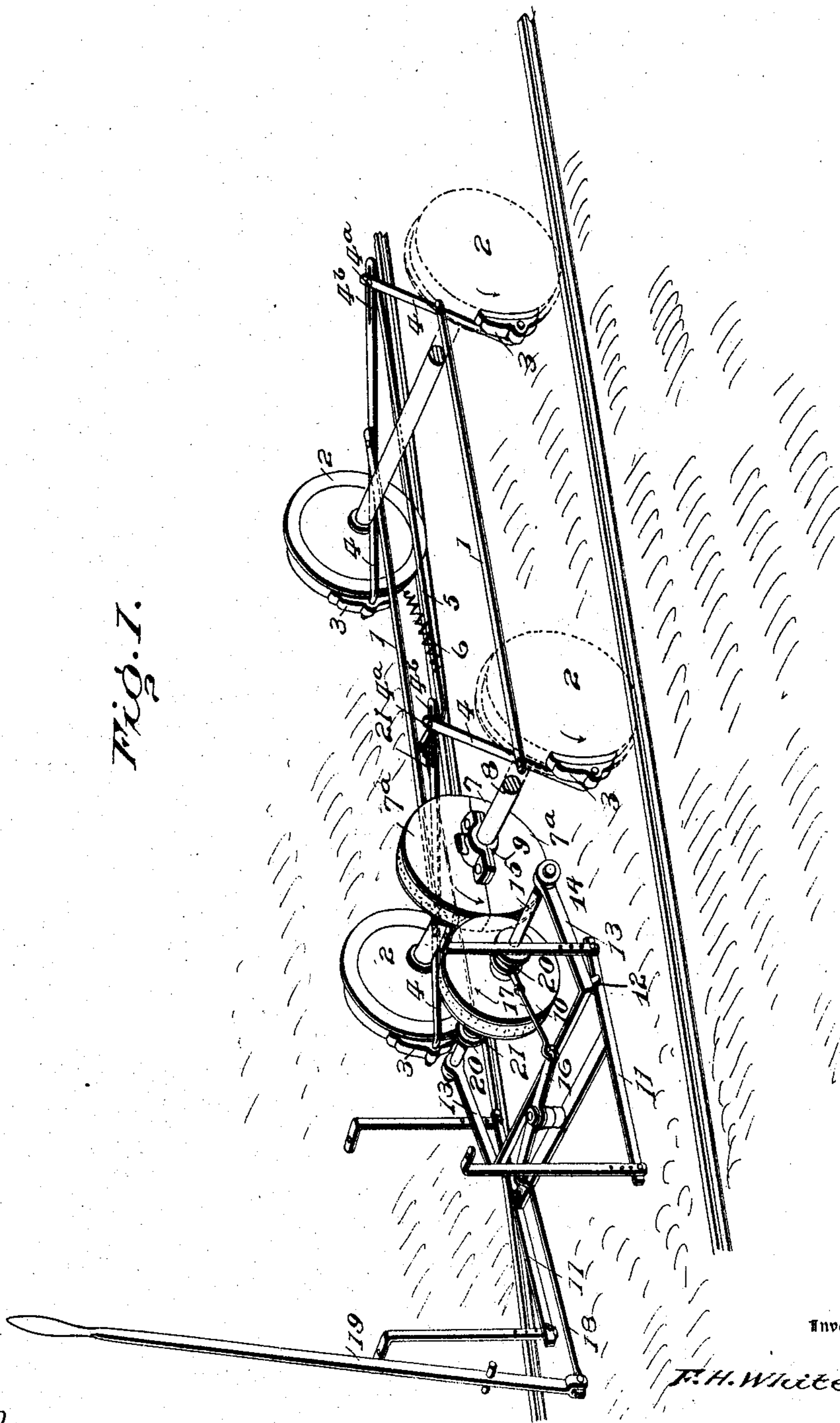
F. H. WHITE.
BRAKE.

APPLICATION FILED JUNE 22, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



Inventor

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Witnesses

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BY

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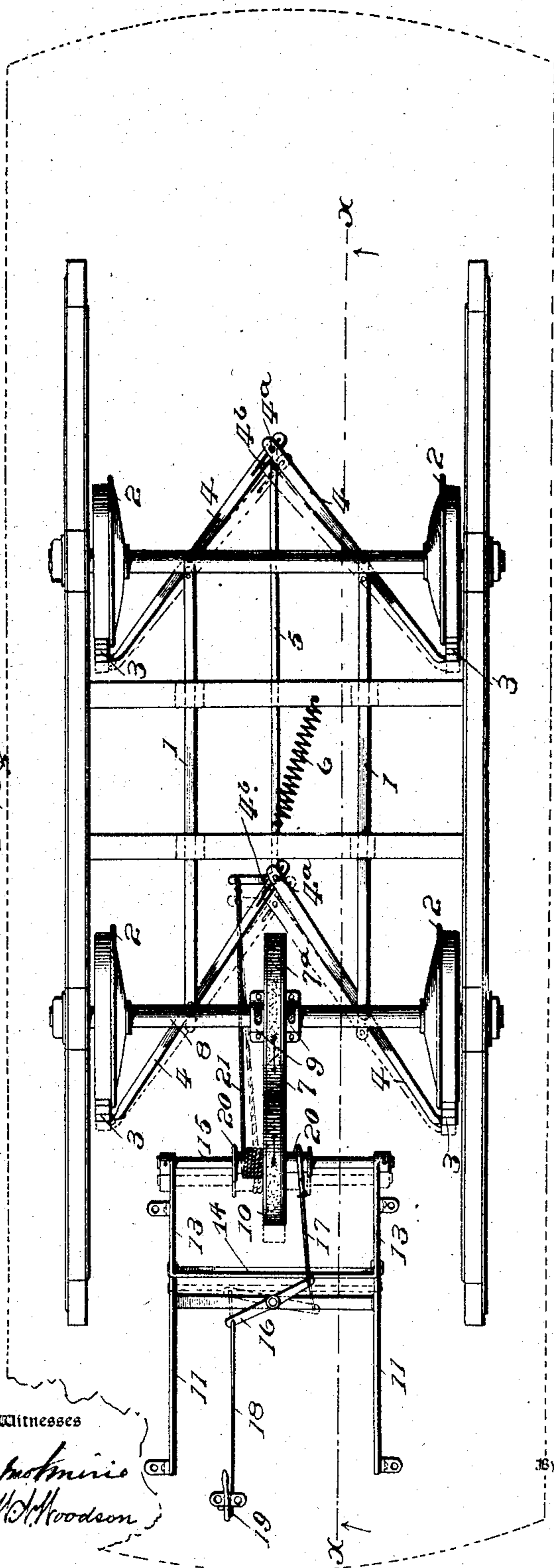
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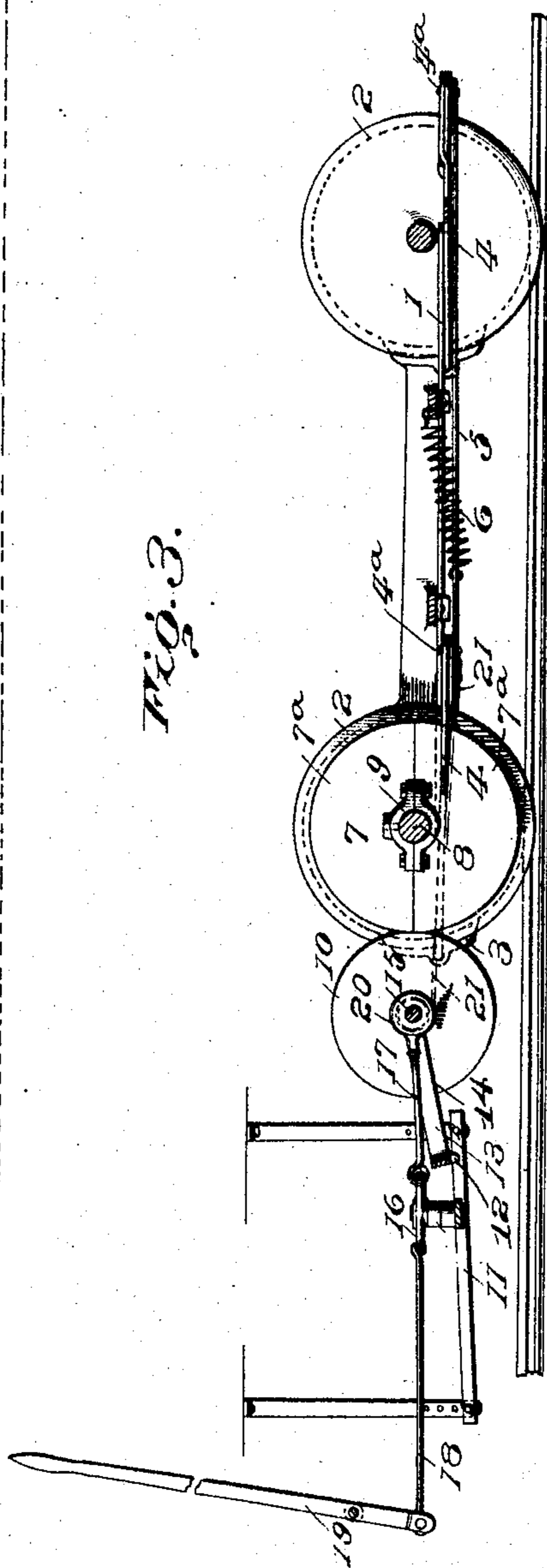
2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK H. WHITE, OF HOLLOWAY, KENTUCKY, ASSIGNOR OF ONE-HALF
TO WILLIAM J. PRICE AND WILLIAM C. PRICE, OF MOUND CITY,
ILLINOIS.

BRAKE.

SPECIFICATION forming part of Letters Patent No. 772,988, dated October 25, 1904.

Application filed June 22, 1904. Serial No. 213,683. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. WHITE, a citizen of the United States, residing at Holloway, in the county of Ballard and State of Kentucky, have invented certain new and useful Improvements in Brakes, of which the following is a specification.

This invention relates to an improved brake mechanism especially designed for use upon railway rolling-stock, though susceptible of use upon any type of vehicle; and the primal feature of the invention resides in the peculiar form and arrangement of the operative parts whereby a maximum degree of braking action is attained with the exercise of a comparatively small amount of motive power.

For a full description of the invention and the merits thereof and also to acquire a 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.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a top plan view. Fig. 3 is a longitudinal vertical sectional view.

The brake, as illustrated in the drawings, is especially adapted for application to railway-cars, and the numeral 1 designates the truck of the car, upon which the brake parts are arranged. The truck may be of any suitable form, such as is now in common use, and is supported by the wheels 2, with which the brake-shoes 3 cooperate when in action. The brake-shoes 3 are carried by brake-levers 4, a lever being provided for each shoe, and the levers 4 are pivoted at a point between their ends to the truck 1. The levers 4 are disposed in pairs, a pair of levers being located adjacent the front and rear wheels of the truck. The brake-shoes are substantially mounted upon the outer ends of the levers 4, and one of each pair of levers is provided at its inner end with a pin 4^a, received by a slot

4^b of the other lever. The inner ends of the respective pairs of levers are thus slidably connected together, and the pairs of levers are connected by means of a rod 5, which may be attached to the inner ends of the levers in any suitable manner. The rod 5, which connects the several levers 4, is actuated by the operating means for applying the brake, and a spring 6 is connected at one end with the rod 5 and at the opposite end with the truck 1, and this spring normally cooperates with the rod 5 to hold the brake-levers 4 in such a position as to prevent braking action of the shoes 3, carried thereby.

The braking-levers 4 are operated by special-mechanism devices for this purpose, and said mechanism comprises in its organization a friction member 7, mounted upon the axle of the front wheels 2 of the truck. The friction member 7 is a brake-wheel and rotates with the axle, which latter is designated 8. The wheel 7 is keyed to the axle 8, upon which it is mounted, and is preferably of sectional formation, similar to a split pulley. The sections 7^a of the wheel 7 are attached together by means of clamp-plates 9, connecting said sections upon opposite sides. Cooperating with the friction-wheel 7 is a second friction-wheel 10, and the latter is carried by a movable frame 14, mounted on horizontal guides 11, suitably secured to the sides of the truck. The guides 11 are spaced from each other and are received in longitudinal guide-grooves 12, provided in the side bars 13 of the frame aforesaid. The frame 14 is of rectangular formation and slides horizontally on the guides 11, moving therebetween. The outer transverse cross-bar 15 of the frame 14 constitutes a shaft upon which the friction-wheel 10 is mounted, and the frame 14 is actuated by means of a lever 16, pivoted between its ends to the truck. The lower end of the lever 16 is connected by a rod 17 with the friction-wheel 10, and the upper end of said lever is connected with the main operating means by a brake-rod 18. The brake-rod 18 may be initially actuated by means of an operating-lever 19 or any other suitable power within the

contemplation of the invention. The friction-wheel 10, which is mounted on the frame 14, is movable toward and from the friction-wheel 7, and this friction-wheel 10 is provided with 5 laterally-extending hub portions 20. The rod 17 is connected with one of the parts 20 of the friction-wheel 10, so as to impart movement to the frame and the said wheel upon operation of the lever 19. A cable 21 or similar 10 connection is adapted to wind upon the other hub member 20 of the wheel 10, and this cable is connected at one end with the adjacent end of the actuating-rod 5. Winding of the 15 cable 21 upon the wheel 10 imparts movement to the rod or member 5, so as to cause actuation of the levers 4, and said actuation throws the brake-shoes 3 against the wheels 2 to apply the brakes.

Describing generally the operation of the 20 brake mechanism, the parts being in their normal positions, upon actuation of the main operating-lever 19 the frame 14 is slidably actuated on the guides 11, so as to force the wheel 10 into frictional contact with the wheel 7 25 upon the axle 8 aforesaid. The wheel 7, which is constantly rotated, imparts revolatory movement to the brake-wheel 10 and in so doing winds the connecting-cable 21 thereon. As the cable 21 is wound upon the wheel 10 30 the bar or rod 5 is moved longitudinally and the brake-levers 4 pivotally, said levers thus forcing the brake-shoes hard against the wheels 2. The coöperation of the wheels 10 and 7 effects almost instantaneous application 35 of the brake mechanism and in so doing affords great power in stopping the vehicle.

After the brakes have been applied movement of the lever 19 will disengage the wheels 10 and 7, and the spring 6, coöperating with the rod 5, will throw the same into its normal po- 40 sition and accomplish the desired movement of the shoes 3 away from the wheels 2. While the invention is particularly designed for rolling-stock, it is to be understood that it may be adapted for hoisting mechanism of any char- 45 acter or for machinery requiring the application of brake mechanism for controlling the speed.

Having thus described the invention, what is claimed as new is— 50

In a brake, the combination of a truck, a revolving axle, wheels supporting the truck, brake-levers pivoted to the truck and arranged in pairs, truck-shoes mounted upon said levers, 55 a rod connecting the respective pairs of levers, a friction-wheel mounted upon the revolving axle, guides secured to the truck, a frame slidably mounted in said guides, a friction-wheel mounted upon the frame and movable toward and from the friction-wheel of the axle, a ca- 60 ble adapted to wind upon the friction-wheel of the frame and connected with the brake-rod aforesaid, a lever mounted upon the truck and connected at one end with the friction-wheel of the frame, and means for actuating 65 said lever to effect movement of the frame.

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

FRANK H. WHITE. [L. S.]

Witnesses:

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