(No Model.)

F. W. DOBBEL.

WAGON BRAKE.

No. 457,544. Patented Aug. 11, 1891.

FIG. 1.

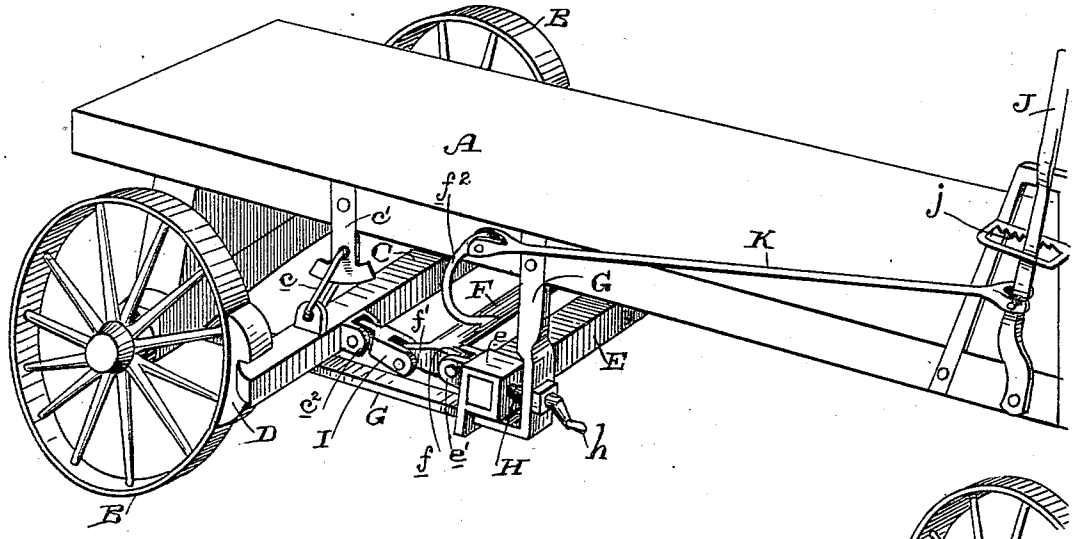
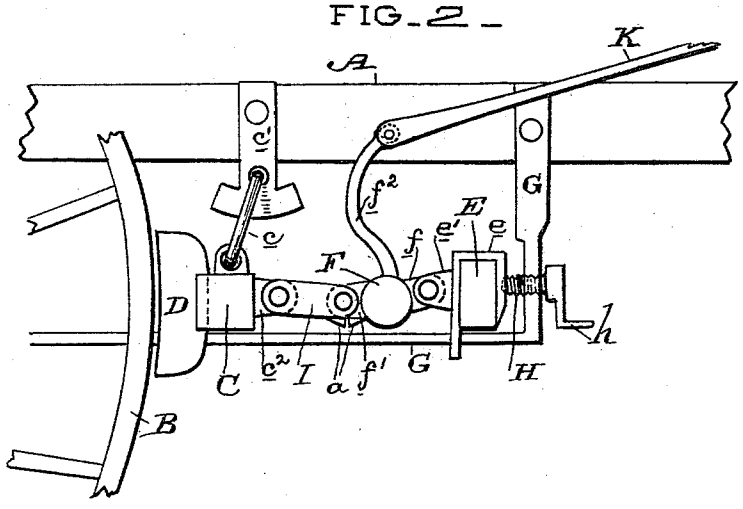


FIG. 2.



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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM DOBBEL, OF PURISSIMA, CALIFORNIA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 457,544, dated August 11, 1891.

Application filed April 11, 1891. Serial No. 388,584. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM DOBBEL, a citizen of the United States, residing at Purissima, San Mateo county, State of California, have invented an Improvement in Wagon-Brakes; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of wagon-brakes in which the swinging brake-bar is operated by connections with a rock-shaft, which is itself operated by the brake-lever in front and intervening connections.

My invention consists in the novel construction and arrangement of rock-shaft and its connections with the brake-bar hereinafter fully described, and specifically pointed out in the claims.

It also consists in the novel means for adjusting the brake mechanism to compensate for the wear upon the brake-blocks.

The object of my invention is to provide for a greater throw off of the brake-shoes from the wheel than is usual, and at the same time to use a powerfully-acting block; and a further object is to provide simple and convenient means for adjusting the brake mechanism when desired.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my wagon-brake. Fig. 2 is a side elevation of same.

A is the frame of a wagon, of which B are the rear wheels.

C is the brake-bar carrying the brake-blocks D, which are adapted to operate against the rear wheels. This brake-bar is suspended by links *c* from hangers *c'*, as shown.

E is a transverse adjusting-bar which forms a support and bearing for the rock-shaft F. This adjusting-bar is carried and guided upon brackets G by means of clips *e*, secured to said bar and having perforated ends fitted and sliding upon the brackets. The adjustment of this bar is effected by means of set-screws H, passing through the front ends of the brackets and engaging the bar, said set-screws having cranks *h*, by which they may be readily operated.

The rock-shaft F is provided at each end with forwardly-extending crank-arms *f*, which are hinged to lugs or ears *e'*, extending from the bar E. The rock-shaft at each end has also rearwardly-extending crank-arms *f'*, which are hinged to links I, the other ends of said links being hinged to lugs or ears c^2, extending forwardly from the brake-bar.

J is the brake-lever on the front of the wagon guided and controlled by a rack *j*, and said lever is connected by a rod K with an upwardly-extending crank-arm f^2 of the rock-shaft.

The operation of the brake mechanism is as follows: By throwing the lever backwardly the rock-shaft F, in addition to its usual rocking movement, has on account of its forwardly-extending crank-arms *f* a second movement bodily downward and forward, so that through the link connection with the brake-bar the brake-blocks are drawn forwardly away from the wheels a distance greater than they would be moved by the mere rocking of the shaft, as in ordinary cases, the increase in said movement being due to the peculiar construction and mounting of the rock-shaft by means of end crank-arms, which enables it to have a bodily swinging movement in addition to its axial movement. This increase of movement, it will be seen, is gained by the same throw of the operating-lever. The advantage of this movement is that the brake-blocks will be thrown, under all circumstances, far enough away from the wheels to avoid any choking due to mud, gravel, &c. Now to put the brakes on again the lever is thrown forward and the rock-shaft is not only turned, but is brought upwardly and backwardly, thus forcing the brake-blocks against the wheels.

It may be necessary, for the sake of safety, to make the hinge connections between the rock-shaft and the adjusting-bar and between the links and the brake-bar limited ones, so that the parts when moving up to a straight line or approximately so to set the brakes cannot move beyond said line, which would have the effect of throwing the brakes off again; or this limitation may be formed in the under side of the joint between the links and the crank-arms *f'*. This limitation can be effected by having abutting shoulders or lugs, (shown at *a*,) which will prevent the movement of the hinge-joints beyond a certain point. When it is desired to adjust the brake

mechanism to compensate for the wear on the brake-blocks, the cranks *h* can be easily reached, and by turning the set-screws H the adjusting-bar E is moved back to the necessary position.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A brake mechanism consisting of a swinging brake-bar having blocks operating against the wheels, a rock-shaft having crank-arms by which it is suspended and has a swinging movement and having also other crank-arms, and the links connecting said last-named crank-arms with the brake-bar, substantially as herein described.

2. A brake mechanism consisting of a swinging brake-bar having blocks operating against the wheels, a transverse supporting-bar, a rock-shaft having crank-arms hinged to the supporting-bar and having also other crank-arms, links connecting said last-named crank-arms with the brake-bar, and a lever and connections for operating the rock-shaft, substantially as herein described.

3. A brake mechanism consisting of a swinging brake-bar having blocks operating against the wheels, a transverse adjusting-bar adapted to be moved back and forth, a rock-shaft carried by the adjusting-bar, and connections between said rock-shaft and brake-bar, substantially as herein described.

4. A brake mechanism consisting of a brake-bar having blocks operating against the wheels, a transverse adjusting-bar mounted upon suitable brackets, set-screws with crank-handles for adjusting said bar, a rock-shaft carried by the adjusting-bar, and connections between said shaft and brake-bar, substantially as herein described.

5. The brake mechanism consisting of a swinging brake-bar having blocks operating against the wheels, the sliding adjusting-bar, and means for moving it back and forth, the rock-shaft having forwardly-extending crank-arms by which it is suspended from the adjusting-bar, and rearwardly-extending crank-arms, the links connecting said last-named crank-arms with the brake-bar, and the lever and connections for operating the rock-shaft, substantially as herein described.

In witness whereof I have hereunto set my hand.

FREDERICK WILLIAM DOBBEL.

Witnesses:
GEO. SHOULTS,
THOS. C. YATES.