

No. 704,354.

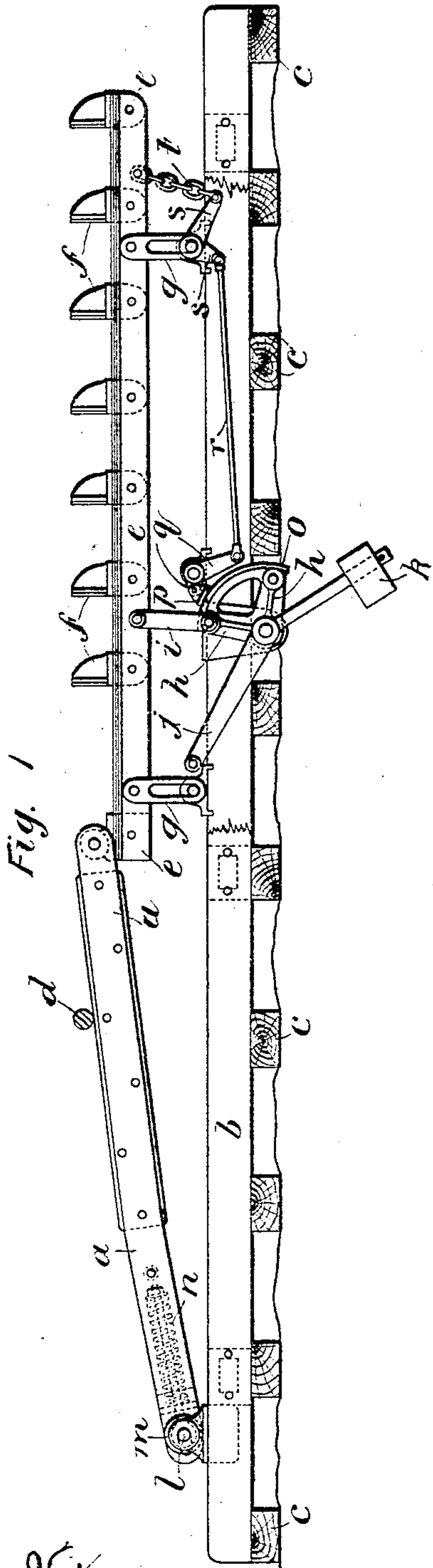
Patented July 8, 1902.

J. D. MILLER & R. YATES.

APPARATUS FOR CONTROLLING RAILWAY WAGONS IN LOADING OR UNLOADING.

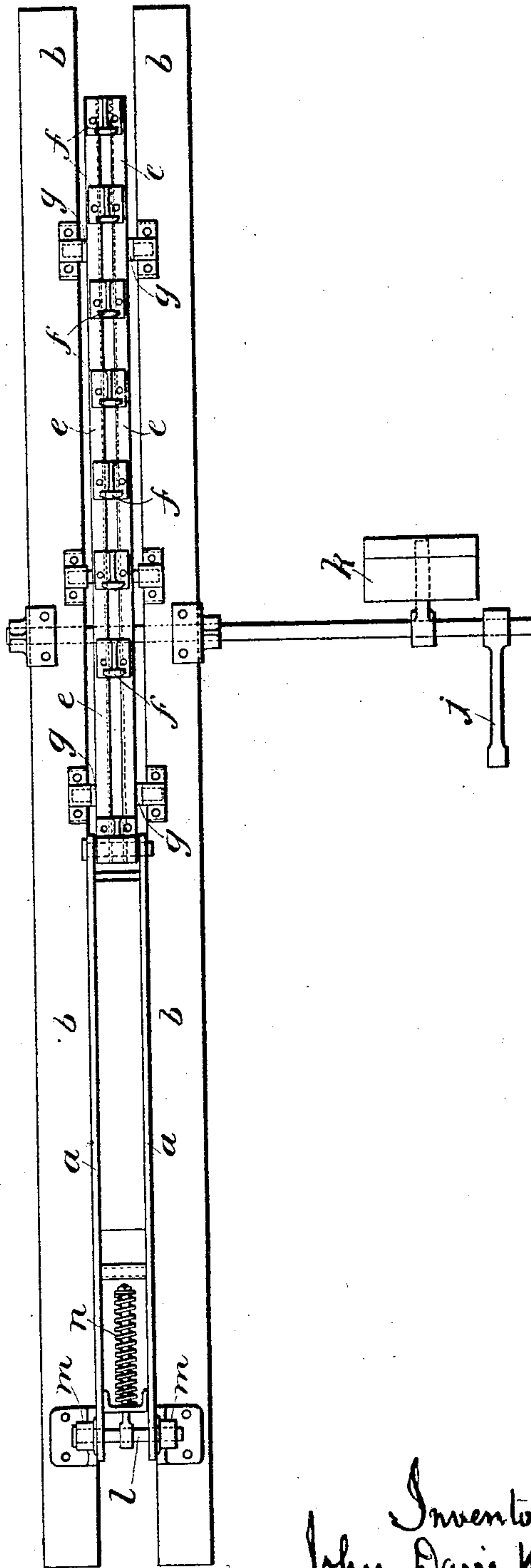
Application filed Apr. 22, 1902.

(No Model.)



Witnesses
Thos. Kilpatrick
H. Van Heeren

Fig. 2.



Inventors
John, Darie Miller
Robert Yates
by Alexander Co
attorneys

UNITED STATES PATENT OFFICE.

JOHN DAVIE MILLER AND ROBERT YATES, OF COATBRIDGE, SCOTLAND.

APPARATUS FOR CONTROLLING RAILWAY-WAGONS IN LOADING OR UNLOADING.

SPECIFICATION forming part of Letters Patent No. 704,354, dated July 8, 1902.

Application filed April 22, 1902. Serial No. 104,206. (No model.)

To all whom it may concern:

Be it known that we, JOHN DAVIE MILLER and ROBERT YATES, subjects of the King of the United Kingdom of Great Britain and Ireland, residing at Shawhead, Coatbridge, county of Lanark, Scotland, have invented certain new and useful Apparatus for Controlling Railway-Wagons in Loading or Unloading, (for which application for patent has been made in Great Britain, No. 22,692, dated November 11, 1901,) of which the following is a specification.

The object of this invention is to provide apparatus for controlling the movements of wagons upon railway inclines at railway-stations, goods-yards, shipping-docks, colliery-screens and the like and for controlling colliery-tubs or other rolling-stock running upon rails and by means of which wagons in motion may be slowed and stopped at points convenient for loading or unloading and for being trimmed in the loading operations without the use of wedges, skids, or like devices inserted by hand between the wheels and rails.

In the accompanying drawings, Figure 1 is a longitudinal elevation showing an example of the improved controlling apparatus, and Fig. 2 is a plan of the same.

As shown by the drawings, the improved apparatus is designed to be operated by hand-levers or by hydraulic or other power appliances from any point within convenient reach of the attendant in charge of the loading operations, and it is composed of a wooden or other lever-bar *a*, placed longitudinally between the rails and above their level and pivoted to a cross-bar *l*, carried on brackets *m*, secured to a long beam or beams *b*, secured to the sleepers *c* at a point where an incline is formed to facilitate the movement of the wagons. This lever-bar *a* is slotted at its pivot end to permit of a certain length of movement in one direction against the action of a spring *n*, this spring normally retaining the bar *a* with one end of its slot against the cross-bar *l*, as shown at Fig. 1. The lever-bar or brake-bar *a* is adapted to be raised more or less at its farther end, so as to bring it to or above the level of the wagon-axles *d*, as shown at Fig. 1, in order that by coming

into contact with the axle or other fixture under the wagon it may serve as a brake to slow or stop the wagons running down the incline. To the upper or free end of this brake-bar *a* and serving as a longitudinal continuation of it is hinged or pivoted a bar *e*, having projecting upwardly from it a number of equidistant paws or catches *f*. This catch-bar *e*, which is guided by slotted links *g*, pivoted to it and to the longitudinal beam *b* below, is raised or lowered vertically by means of a toggle or other lever or, as shown, by a quadrant *h* and link *i*, operated by a hand-lever *j* or by a hydraulic ram or like means within control of the attendant.

In the operation of the apparatus the wagons are allowed to run down the incline until the axle *d* of that in front reaches the previously-raised brake-bar *a*, which slows and stops the wagons, this wagon being thereby raised slightly clear of the rails. The attendant then by means of the lever *j* or power mechanism lowers the catch-bar *e* and the brake-bar *a*, attached to it, to allow the axle *d* to pass. As the axle *d* slips over the brake-bar *a* the catch-bar *e* is again raised, so that the axle *d* is engaged by the first of the series of catches, the spring *n* acting on the bar *a* and admitting of a slight forward cushioned movement of the catch-bar *e* to prevent shock upon the catches *f*. The loading operation is then commenced, and as it proceeds the catch-bar *e* is lowered at suitable intervals to allow the wagon to move forward step by step the distance between the catches *f*, so that in loading from a screen or chute the wagon may be properly trimmed. The brake-bar *a*, acting on the rear axle of the wagon, prevents sudden movement and insures that the wagon will only shift from one catch *f* to the next in succession. The catches are suitably spaced to suit the trimming of the wagons in loading.

In order to permit of the operator after each stoppage lowering the raised wagon gradually and without shock onto the rails, a brake-rim *o* is provided on the quadrant *h*, with which a shoe *p*, attached to a lever *q*, is brought into contact to prevent the sudden throw over of the hand-lever, the brake-shoe being applied through the intervention of a link *r*, bell-crank lever *s*, and connecting-chain *t*

from the catch-bar *e* when the outer end of the latter is tilted by the weight of the wagon during the lowering operation.

Instead of raising the catch-bar *e* and brake-bar *a* by lever or other mechanism to engage the wagon-axle *d* they may be normally maintained in the raised position by counterweights *k*, as shown, or otherwise and lowered by the lever *j* or other mechanism under control of the attendant to disengage the axle *d* and permit of the wagon moving from catch to catch. In some cases, as when careful trimming of the wagons is not required, the pivoted brake-bar *a* may be used without attachment of the catch-bar *e* and may be directly operated to control the movement of the wagons passing over it.

Having now described the invention, what we claim, and desire to secure by Letters Patent, is—

1. Apparatus for controlling the movements of railway-wagons composed of an inclined lever-bar or brake-bar located and pivoted between the rails and adapted to act as a brake upon the wagon-axle, and means such as levers operated by an attendant for lowering and raising the said brake-bar to graduate the progressive forward movement of the wagon, substantially as described.

2. Apparatus for controlling the movements of railway-wagons comprising an in-

clined lever or brake bar located and pivoted between the rails and a catch-bar pivoted thereto and furnished with projecting paws adapted to engage with the axle or other fixture on the wagon and means such as levers for supporting and operating said catch-bar to bring the paws successively into engagement with the wagon-axle, substantially as described.

3. Apparatus for controlling the movements of railway-wagons upon inclines comprising in combination a lever or brake bar extending longitudinally between the rails and pivoted yieldingly to beams secured to the sleepers, a catch-bar provided with upwardly-projecting catches hinged to said brake-bar and pivotally guided from the beams a supporting-link centered on said bar a brake-wheel or quadrant connected to said supporting-link and operated by hand or power and a brake-shoe adapted to automatically act upon the quadrant on the lowering of the catch-bar, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

JOHN DAVIE MILLER.
ROBERT YATES.

Witnesses:

WALLACE FAIRWEATHER,
JOHN ARMSTRONG, June.