

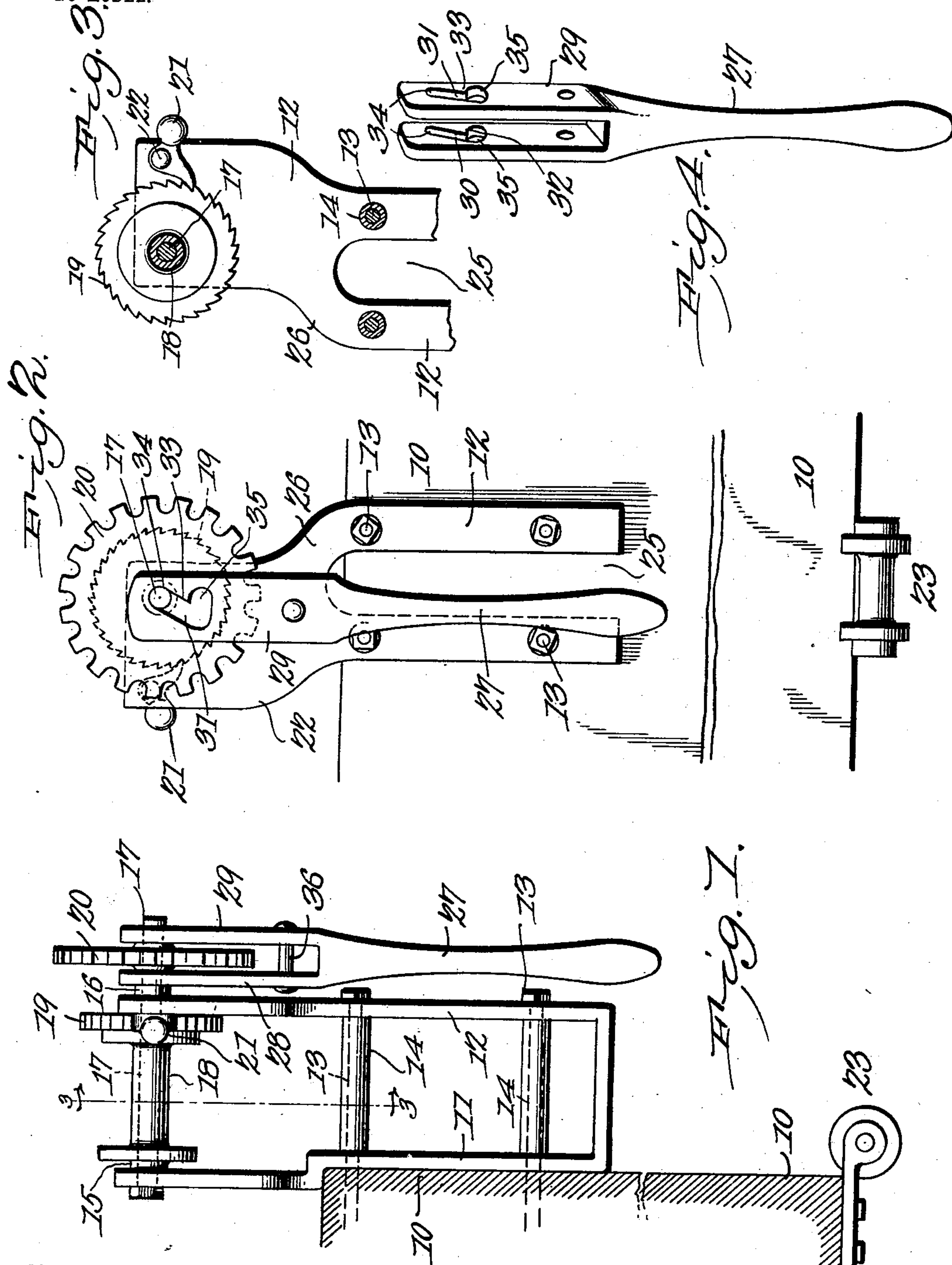
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C. P. MORAN.
CAR BRAKE.

APPLICATION FILED AUG. 28, 1903.

NO MODEL.



Witnesses
E. H. Stewart
C. H. Woodward.

by *C. P. Moran,* Inventor,
C. H. Woodward
Attorneys

UNITED STATES PATENT OFFICE.

CORNELIUS P. MORAN, OF GALLITZIN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO FRANCIS H. SANKER, OF GALLITZIN, PENNSYLVANIA.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 742,798, dated October 27, 1903.

Application filed August 28, 1903. Serial No. 171,126. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS P. MORAN, a citizen of the United States, residing at Gallitzin, in the county of Cambria and State of Pennsylvania, have invented a new and useful Car-Brake, of which the following is a specification.

This invention relates to the brakes of railway-cars, more particularly the hand-operated brakes of freight-cars of various kinds, some forms of mining-cars, and some forms of specially-constructed cars; but while the device is more specifically adapted for freight-cars of various kinds I do not wish to be limited in any manner in the use of the device to any specific form or structure of car or to any specific form or structure of brake mechanism, but reserve the right to its use upon any form of car or in connection with any of the various brake mechanisms in common use or to be specifically constructed therefor.

The object of the invention is to simplify and improve devices of the character to which it appertains; and to this end the invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a side view, and Fig. 2 is a front view, of the device applied. Fig. 3 is a sectional view on the line 3-3 of Fig. 1. Fig. 4 is a perspective view of the operating-lever detached.

This invention may be applied to any of the various forms of freight-cars and to any of the various forms and constructions of brakes and brake mechanisms; but as these form no part of the present invention they are not illustrated in the drawings, sections only of a car-body being indicated at 10 to illustrate the application of the device, the sections represented indicating the upper and lower corners of the car-frame, respectively.

The improved device consists of a supporting-frame, preferably pressed or otherwise formed of a single piece of steel, with parallel sides 11 12, spaced apart and connected to the car-body, as by bolts 13 and spacer-tubes 14 or by any other suitable connecting means. The side portions 11 12 are provided with

aligned bearings 15 16, in which an axle or shaft 17 is journaled, and carrying a drum or windlass 18 and ratchet-wheel 19 between the frame members and a toothed wheel 20 outside the outer frame member 12, as shown, the parts 18, 19, and 20 being all connected rigidly to the shaft 17 and partaking of its motion. A pawl or "dog" 21 is pivoted at 22 to the frame member 12 and operates against the ratchet-wheel 19 to hold it from turning in one direction, while leaving it free to rotate in the opposite direction.

At the lower side of the car-body 10, in vertical alinement with the side of the windlass opposite from the pawl 21, is a chain-carrier or guide-pulley 23, so that the brake-operating chain attached to the windlass will lead over the guide-pulley and thence to the brake-operating mechanism, the latter not being shown, as it forms no part of the present invention.

To provide for the passage of the chain, the frame 11 12 is provided with an opening 25, as shown, and to this end the frame is offset laterally, as shown at 26, to bring the opening 25 beneath the winding side of the windlass, as shown in Figs. 2 and 3.

Outside the frame member 12 the axle 17 is provided with an operating-lever 27, forked at one end, as at 28 29, embracing the opposite sides of the toothed wheel 20, and the forked portions provided with elongated apertures 30 31, engaging the axle, as shown. The apertures are formed with intermediate inwardly-projecting lugs 32 33, as shown, whereby spaced recesses 34 35 are formed in the ends of the apertures, as shown. The forked portions 28 29 are connected below the apertures by a pin 36, so located that when the lever is set with the lugs 32 33 upon one side of the axle 17 or with the latter in the recess 35 the pin will engage one of the teeth of the wheel 20 and be disengaged therefrom when the lever is set with the lugs upon the opposite side of the axle or in the recess 34. By this arrangement when the lever 27 is moved longitudinally toward the toothed wheel the pin 36 will engage one of the teeth of the wheel and with the axle 17 in the recess 35, and then when the lever is actuated in the direction of the arrow the recess and

axle coact and become the fulcrum of the lever and maintain the requisite connection between the parts to cause the pin 36 to retain its connection with the wheel during the forward stroke. In the meantime, it will be obvious, the pawl 21 has by its action on the ratchet-wheel retained the windlass in position and prevented backward movement thereto, so that when the lever is released at the end of the stroke and permitted to drop with the axle in the recess 34 the windlass will retain its "windings." The lever can now be returned to its former position, as the pin 36 is free from the wheel-teeth, and the stroke repeated as often as required.

The outer sides of the lugs 32 33, it will be noted, are inclined, whereby the movement of the lever 27 when about to be engaged with the toothed wheel is less obstructed and whereby the action is rendered more certain.

When required, the axle 17 may be partially released by moving it forward slightly until the pawl 21 can be disconnected and the windlass permitted to slowly rotate backwardly as far as required by holding back on the lever. By this simple means the brake mechanism may be quickly applied and with increased force, as the lever 27 may be of any required length and strength.

The parts can be very cheaply constructed, easily applied to any form of car, and will be found very useful and convenient for the purposes designated.

Having thus described my invention, what I claim is—

1. A brake mechanism comprising a windlass, a ratchet-wheel and a toothed wheel connected to rotate together, a pawl operating upon said ratchet-wheel, and an operating-lever formed with an elongated aperture engaging said axle contiguous to said toothed wheel and provided with an intermediate lug, and a laterally-extending pin adapted for engagement with the teeth of said wheel when said lever is set with said lug at one side of the axle and released therefrom when the lever is set with the lug at the opposite side of said axle, substantially as described.

2. A brake mechanism comprising a supporting-frame having spaced sides, an axle mounted for rotation through said frame and carrying a windlass and ratchet-wheel between said spaced side portions and a toothed

wheel exteriorly of said side portions, a pawl carried by said frame and engaging said ratchet-wheel, and a lever formed with an elongated aperture and provided with an intermediate lug and engaging said axle and having a lateral pin adapted for engagement with the teeth of said wheel when said lever is set with said lug upon one side of the axle, and disengaged therefrom when the lever is set with said lug upon the opposite side of said axle, substantially as described.

3. A brake mechanism comprising a supporting-frame having spaced sides, an axle mounted for rotation through said frame and carrying a windlass and ratchet-wheel between said side portions and a toothed wheel exteriorly of said side portions, a pawl carried by said frame and engaging said ratchet-wheel, and a lever forked at one end embracing said toothed wheel, said forked portions formed with elongated apertures provided with intermediate lugs and engaging said axle upon opposite sides of said toothed wheel, and a pin disposed transversely through said forked portions and adapted for engagement with the teeth of said wheel when said lever is set with said lug upon one side of said axle and disengaged therefrom when said lever is set with said lug upon the other side of said axle, substantially as described.

4. A brake mechanism comprising a supporting-frame having spaced sides formed with an intermediate lateral offset, an axle mounted for rotation through said frame members above said offset and carrying a windlass between said frame members and likewise carrying a ratchet-wheel and toothed wheel, a pawl carried by said frame and engaging said ratchet-wheel, and an operating-lever connected to be alternately connected with and disconnected from said toothed wheel, the portion of said frame below said offset being provided with an aperture in vertical alinement with the winding side of said windlass, substantially as described.

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

CORNELIUS P. MORAN.

Witnesses:

M. P. FREDERICK,
F. H. SANKER.