PATENT SPECIFICATION

Convention Date (Germany): Dec. 7, 1925.

262,400

Application Date (in United Kingdom): Nov. 1, 1926. No. 27,303/26.

Complete Accepted: Dec. 23, 1926.

COMPLETE SPECIFICATION.

Improved Braking Means for Driving Mechanism especially for Mechanical Toy Railways.

We, BING-WERKE, vorm. Gebruder Bing A.G., of 16, Blumenstrasse, Nurnberg, Germany, a German joint stock company, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The known braking devices for mechanically operated toy railways consist in arranging, on or between the rails, a lever or the like which during the passing of the locomotive releases a lever provided on the underpart of the locomotive and stops the train by means of a brake. In order to re-start the train, that is the spring mechanism, it is necessary to release the brake. For this purpose a further lever or push device is required, which is located in the casing of the locomotive or in the driver's stand. The mounting and operating of this lever are difficult on account of the usually cramped arrangement of the parts.

The present invention relates to a very simple braking device, which is set in operation by a striker, bow, loop or equivalent, mounted between the rails in the usual manner and is set out of action automatically by a slight rearward movement of the train.

According to this invention, the axle of the spring-operated driving wheels carries a ratchet wheel, the teeth of which are engaged by a pawl lever, rockably mounted on the frame of the locomotive. Said lever is raised from below by the striker, bow, loop or equivalent situated between the rails, and thereby suddenly brakes the driving wheels and the spring mechanism. If the train is to be re-started, the locomotive is moved backward a few millimetres. This causes the driving wheels and ratchet wheel to reverse as well, and the pawl lever drops down out of the teeth by gravitation.

Our invention will be clearly understood from the following description aided by the annexed drawings in which a typical embodiment of the invention is illustrated and in which:—

Figure 1 is a side elevation of the ratchet mechanism when the train is running in the direction of the arrow A; Figure 2 is a front elevation of Figure 1 and Figure 3 is a side elevation of the ratchet mechanism after the brake has been applied to the train.

The axle a of the driving wheels r, driven by a spring f, carries a ratchet wheel d. On the front wall of the locomotive gear frame k is rockably mounted a two-arm pawl lever h^1, h^2. When the train is running the pawl lever h^2 hangs down, and the arm h^1 bears against the frame k of the driving gear.

A bow or loop b, adapted to pivot or to be displaced in the direction of the double-headed arrow B (Figure 2) is mounted between the rails s. When the locomotive is running in the direction of the arrow A (Figure 1) this bow or loop raises the pawl lever h^2 up beside the ratchet wheel d, so that a bent lug w, at the end of the lever arm h^2, engages one of the teeth of the ratchet wheel d (Figure 3), checking said wheel d and braking the locomotive.

In order to release the brake, the locomotive is moved backwards a short distance in the direction of the arrow R of Figure 3. This causes the ratchet wheel d to reverse as well and release the pawl lever h^2, which drops by gravitation.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to

be performed, we declare that what we claim is:—

1. Braking means on running gear, especially for mechanical toy trains, characterised in that the axle of the driving wheels which are driven by spring mechanism, carries a ratchet wheel adapted to be engaged by a pawl lever controlled by an adjustable striker arranged on the track, said pawl lever being adapted to be released by a slight rearward movement of the vehicle.

2. The improved braking means for driving mechanism, especially for mechanical toy railways, constructed substantially as described with reference to the annexed drawings.

Dated this 1st day of November, 1926.

H. GARDNER & SON,
Chartered Patent Agents,
173—4—5, Fleet Street, London, E.C. 4,
Agents for the said Applicants.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1927.

Fig.1.

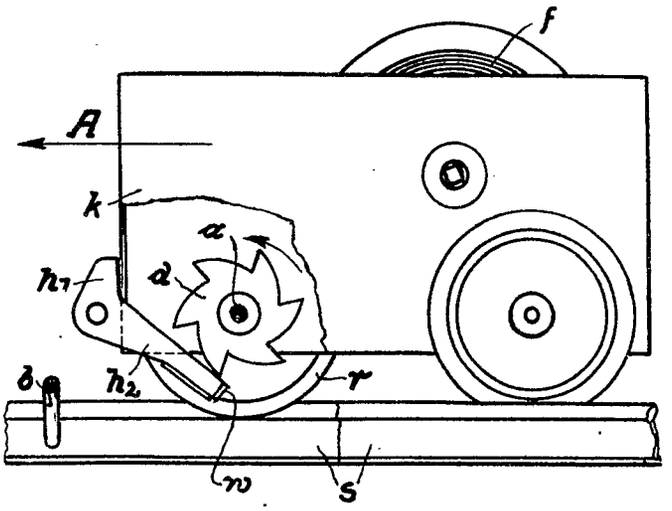


Fig.2.

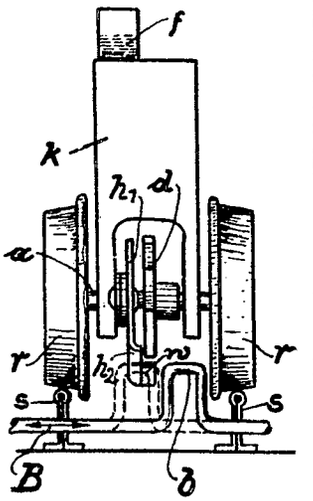
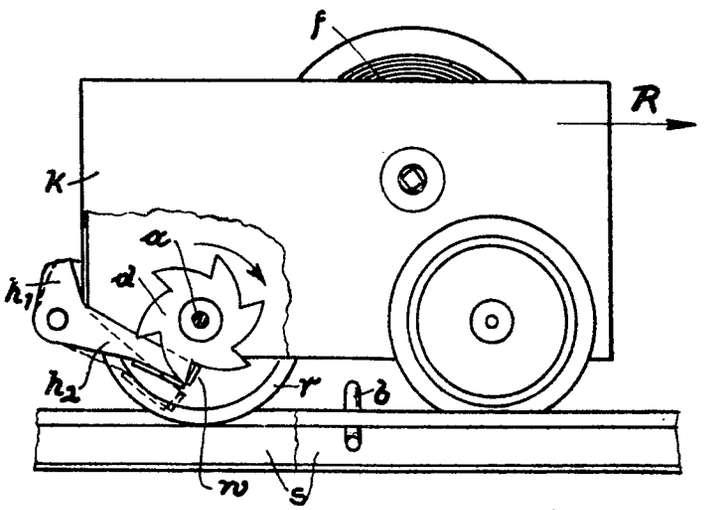


Fig.3.



Charles & Read Ltd. Photo Litho.