

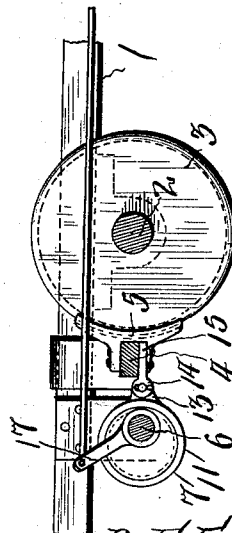
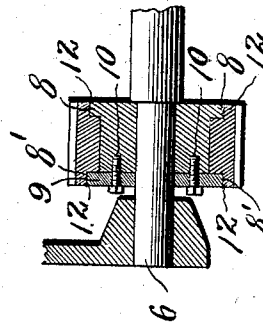
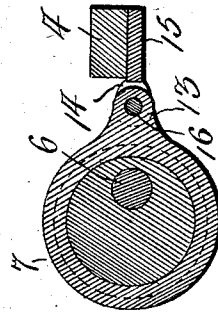
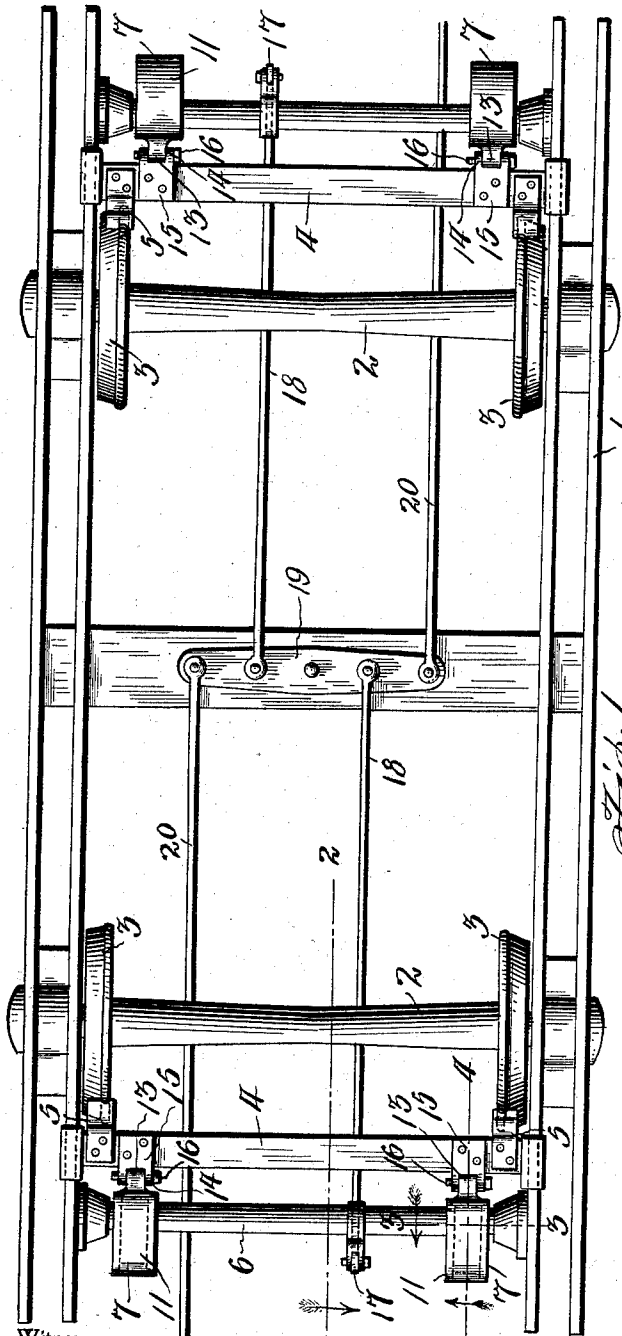
No. 748,355.

PATENTED DEC. 29, 1903.

D. F. EARNEST.
BRAKE.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL.



Witnesses

fast Koehl

[Signature]

By

[Signature]

Inventor

D. F. Earnest.

Attorney

UNITED STATES PATENT OFFICE.

DAVID F. EARNEST, OF WEST NORFOLK, VIRGINIA.

BRAKE.

SPECIFICATION forming part of Letters Patent No. 748,355, dated December 29, 1903.

Application filed September 14, 1903. Serial No. 173,123. (No model.)

To all whom it may concern:

Be it known that I, DAVID F. EARNEST, a citizen of the United States, residing at West Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Brakes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to brakes, and is an improvement upon the brake structure shown in patent to Edward B. Eason, No. 675,203, dated May 28, 1901.

The object of the invention is to provide a brake of the general type shown in said patent wherein the cams or eccentrics for actuating the brake-shoes are so arranged that they cannot become choked or injured by dirt or grit scraped by the brake-shoes from the wheels and wherein also the cams or eccentrics are so constructed as to simplify the construction, reduce the number of parts, and obviate the use of elements which are liable to spread under strain and cause injury to the eccentrics or coacting parts of the operating mechanism.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a bottom plan view of a car-truck embodying my invention; and Figs. 2, 3, and 4 are sections taken, respectively, on the lines 2 2, 3 3, and 4 4 of Fig. 1 looking in the direction of the arrows.

Referring to the drawings, the numeral 1 designates a car-truck carrying the axles 2, on which are mounted supporting-wheels 3. Disposed adjacent to the wheels 3 and extending transversely of the truck are brake-beams 4, one for each pair of wheels, each brake-beam being suitably mounted to have movement toward and from said wheels and carrying brake-shoes 5 to engage the same.

Arranged in parallel relation to each beam 4 is a transverse shaft 6, and keyed on said shaft is an eccentric 7, one for each wheel 3. As these eccentrics are identical in construction, a description of one will suffice for all. Each eccentric 7 is provided at one side with an annular rim-flange 8, formed integrally thereon or rigidly secured thereto in any preferred way, said flange forming an abutting

head. On the side of the eccentric opposite said head a plate or head 9 is secured and is of proper diameter to have its rim edge project a distance beyond the periphery of the eccentric equivalent to the flanges 8, so as to form coacting rim-flanges 8'. The plate 9 is removably secured to the eccentric by screws, bolts, or like fastenings 10. In the space between the rim-flanges 8 and 8' of the eccentric is fitted a ring or strap provided with laterally-projecting flanges 12. These flanges 12 project over upon the flanges 8 and 8' and cover the same and prevent dirt, grit, and other foreign matter from entering between the eccentric and strap and interfering with their proper relative action. The strap 11 is provided with an apertured ear or lug 13, which enters between two ears or lugs 14 on a plate 15, secured to the contiguous end of the beam, 4 and is pivotally connected thereto by means of a transverse pin or key 16.

To operate the brakes, each shaft 6 is provided with a crank-arm 17, connected to a rod 18, the inner ends of the two rods 18 being pivotally connected to the opposite ends of an intermediately-pivoted lever 19, to which are also attached rods 20, operative in any preferred way from the opposite ends of the car. By actuating either rod 20 to swing the lever 19 in one direction or the other the shafts 6 will be rocked to apply or release the brake-shoes, as will be readily understood.

It will be observed that the eccentrics are connected to the shaft 6 at a point opposite from or inside of the line of the brake-shoes 5, the object of which is to prevent the dirt and grit scraped off the wheels 3 by the shoes 5 from dropping upon the eccentrics. In the patented construction above referred to the eccentrics are disposed in line with the brake-shoes and are liable to be covered by the dirt removed from the wheels and to be choked or injured by the dirt working between the straps and eccentrics, and, further, in said patented construction each brake-shoe is connected to a pair of rings or straps upon each eccentric, which rings or straps are liable to spread in use. My construction obviates all these objections, as the eccentrics are arranged out of line with the wheels and brake-shoes, and consequently receive little or none of the dirt therefrom, and the access of any

dirt or dust which may fall thereon to the space between the eccentrics and straps is prevented by the peculiar construction forming the covering-flanges which inclose the parts and prevent any dirt or dust from working therein. Furthermore, in my improved construction of eccentric there are no parts which are liable to spread and thus cause casual disconnection of the eccentric-straps.

10 In applying each ring or strap 11 to its eccentric 7 it is slipped upon the unflanged side of the eccentric and the plate 9 then applied to retain it in position.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of the invention will be readily understood without requiring a more extended explanation.

20 Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention. For instance, a single eccentric centrally arranged may be used in place of a pair of eccentrics for each set of brake-shoes, and the shoes may be mounted to engage wheels, as shown, or to engage track-rails.

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

1. In a brake, the combination of a brake-

beam, brake-shoes carried by said brake-beam, a shaft in parallel relation to the brake-beam, and eccentrics on said shaft and connected to the brake-beam and offset from the line of the brake-shoes, substantially as described.

2. In a brake, the combination of a brake-beam, brake-shoes carried by said brake-beam, a shaft in parallel relation to the brake-beam, brackets upon the brake-beam, eccentrics on the shaft and connected to the brackets, each eccentric comprising an eccentric-head having a flange at one side, a head detachably secured at the opposite side, and a strap confined by said flange and head and having flanges projecting laterally over the same, and a pivotal connection between the strap and coöperating bracket, substantially as described.

3. In a brake, an actuating eccentric comprising an eccentric-head having a flange at one side, a head detachably secured at the opposite side, and a strap confined by said flange and head, and having flanges projecting laterally over the same, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID F. EARNEST.

Witnesses:

C. C. HINES,

J. A. GRIESBAUER, Jr.