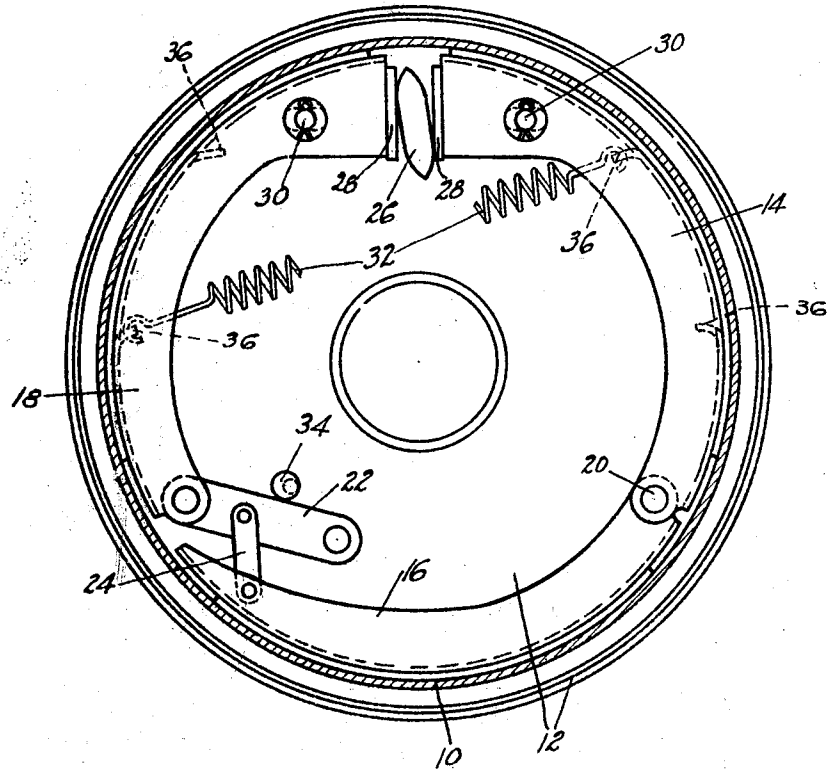
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BRAKE

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UNITED STATES PATENT OFFICE.

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BRAKE.

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This invention relates to brakes, and is illustrated as embodied in an automobile brake of the three-shoe type. An object of the invention is to provide a mechanically-operated brake with a lever mechanism, or other power-multiplying connections, operated by one shoe to force an adjacent shoe against the drum. Another feature relates to simplifying the arrangement, by arranging the return spring of the first shoe at such an angle that it acts through the connection to urge the second shoe away from the drum.

The above and other objects and features of the invention, including various novel combinations of parts and desirable particular constructions, will be apparent from the following description of the illustrative embodiment shown in the accompanying drawing, in which:

The figure is a vertical section through the brake, just inside the wheel, and showing the shoes in side elevation.

In the arrangement selected for illustration, a drum 10 and a backing plate 12 form in effect a housing for three brake shoes 14, 16, and 18, each of which may be stamped from sheet metal in the form of a channel. Shoes 14 and 16 are anchored at adjacent ends at 20, so that they are oppositely-effective. The unanchored shoe 18 is pivoted at its end to one end of a lever 22 fulcrumed at its opposite end on the backing plate, and intermediately connected by a pair of short links 24 to the adjacent unanchored end of shoe 16.

The shoes may be applied against the drum by a double cam 26, engaging wear plates 28 on the ends of shoes 14 and 18. Steady rests 30 of any desired form hold the shoes laterally. Shoe 16 is forced against the drum by the swinging of lever 22, due in part to cam 26, and in part to the friction of the drum on the shoe 18.

According to an important feature of the invention, a single return spring 32 acts through lever 22 or its equivalent to urge shoe 16 away from the drum to an idle position shown as determined by an eccentric adjustable stop 34, which may be engaged by lever 22. Preferably spring 32 is connected between shoes 14 and 18, and serves to return all the shoes to idle position. For this reason it is arranged at such an angle, illustrated as approximately 60° inclined with respect to the drum axis passing though the cam or the like 26, that it not only urges shoe 18 about its pivoted end away from the drum, but a substantial component urges lever 22 in a clockwise direction to swing shoe 16 away from the drum.

The spring may be connected at its ends to lugs 36 punched from the bottoms of the channels of shoes 14 and 18, and in order that shoes 14 and 18 may be interchangeable, each of them may have two lugs as shown.

While one illustrative embodiment has been described in detail, it is not my intention to limit the scope of the invention to that particular embodiment, or otherwise than by the terms of the appended claims.

I claim:

1. A brake comprising, in combination, a pair of shoes arranged end to end within the drum, a lever fulcrumed at one end and pivoted at its opposite end to the end of one of the shoes, a connection between the lever and the other shoe, and a spring connected to the first shoe and urging it away from the drum, the spring being arranged at an angle to the lever such that a component of its force urges the lever to swing about its fulcrumed end in a direction to move said other shoe away from the drum.

2. A brake comprising, in combination, a pair of shoes arranged end to end within the drum, an oppositely-effective third shoe, a lever fulcrumed at one end and pivoted at its opposite end to the end of the first of the pair of shoes, a connection between the lever and the other of the pair of shoes, and a spring connected to the third and first shoes and urging both away from the drum, the spring being arranged at an angle to the lever such that a component of its force urges the lever to swing about its fulcrumed end in a direction to move said other of the pair of shoes away from the drum.

3. A brake comprising, in combination, a drum, a pair of shoes arranged end to end within the drum, a power-multiplying connection positively connecting adjacent ends of the shoes, a third shoe between the other ends of the pair of shoes, and a spring connecting said third shoe and the first of the pair of shoes and acting through said connection to urge the second of the pair of shoes away from the drum.

In testimony whereof I have hereunto signed by name.

WALTER L. KRIEG.