Aug. 21, 1923. **1,465,832**

F. J. ANDEL

OUTSIDE BRAKE

Filed April 27, 1922

Fig. 1

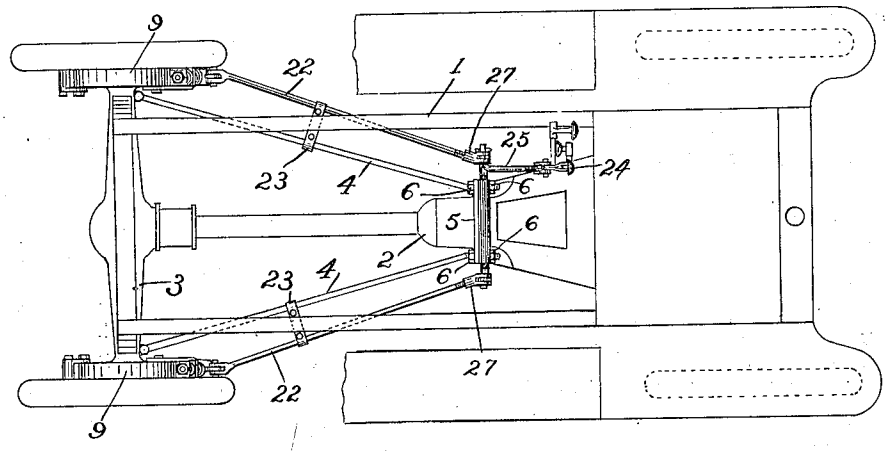


Fig. 2

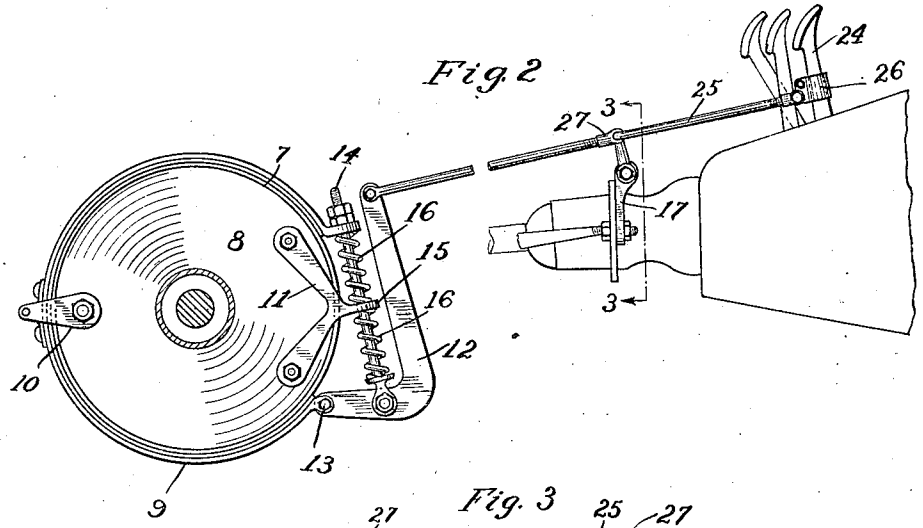
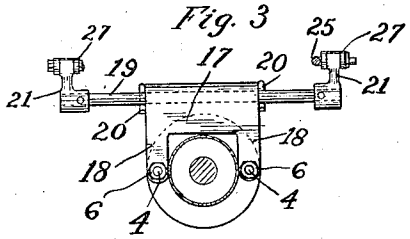


Fig. 3



WITNESS
F. R. Walker.
S. W. Foster

INVENTOR
Frank J. Andel
BY Munn & Co
ATTORNEYS

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UNITED STATES PATENT OFFICE.

FRANK J. ANDEL, OF CLEVELAND, OHIO.

OUTSIDE BRAKE.

Application filed April 27, 1922. Serial No. 556,973.

To all whom it may concern:

Be it known that I, FRANK J. ANDEL, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and Improved Outside Brake, of which the following is a full, clear, and exact description.

This invention relates to improvements in outside brakes for cars of a well known type, an object of the invention being to provide a brake, and more particularly a brake operating mechanism which may be readily attached to a car of a certain type without altering the construction in the slightest.

A further object is to provide an improved construction of outside brake and operating means therefor, which insure a quick response to the action of the brake pedal, and which operates to bring the car to a stop smoothly and without vibration or rattling.

A further object is to provide a brake and operating means which may be easily and quickly attached to the car and which can be manufactured and sold at a reasonably low price.

With these and other objects in view, the invention consists in certain novel features of construction and combinations, and arrangement of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a plan view illustrating my invention applied to a car.

Figure 2 is a view in side elevation showing parts enlarged for purposes of clearness.

Figure 3 is a view in transverse section on the line 3—3 of Figure 2.

1 represents the chassis, 2 the drive shaft housing, 3 the rear axle housing and 4, the radius rods, which are employed on cars to connect the housing 2 with the rear axle housing 3. These radius rods are projected through a flange 5 on the housing 2 and are secured at their forward ends by nuts 6 screwed onto the radius rods at opposite sides of the flange 5. 7 represents the brake drum, or drums, and 8 the stationary disc or housing with which cars are ordinarily equipped.

Around the outside of the drums 7 I provide external brake bands 9, these bands 9 being connected to the disc 8 by arms 10 at the intermediate portions of the bands and angle brackets 11 are secured to the discs 8 at their forward portion. Each brake band is provided with an angle lever 12 pivotally connected at one end to one of the brake bands as shown 13, and having its shorter arm connected by rod 14 with the other end of the brake band 9. This rod 14 is positioned through a perforated lug 15 on the bracket 11, and is provided with coil springs 16 around the rod 14, at opposite sides of said lug 15, so that said springs 16 tend to expand the brake band and hold it in an inoperative position.

17 represents a bracket which constitutes one of the essential and important features of my improved attachment, and which is provided with a pair of depending perforated lugs 18 receiving the forward ends of the radius rods 4 and clamped against the flange 5 by the forward nuts 6. In other words, to attach this bracket 17 it is simply necessary to remove the forward nuts 6 position the bracket or the radius rods, and then screw home said nuts.

The upper portion of this bracket 17 has a longitudinal bore constituting a bearing for a rocker shaft 19, which projects at both ends beyond the bracket and is held against longitudinal movement preferably by means of cotter pins 20, which are positioned through the shaft 9 and are easily removable for purposes of disconnection or assemblage of parts.

On the outer ends of the shaft 19 a pair of crank arms 21 are secured, and these crank arms 21 are connected by rods 22 with the longer upper ends of the levers 12 and are guided and held in operative position by means of links 23 secured to the radius rods 4.

24 represents the brake pedal of the car and this pedal has a split sleeve 26 clamped thereon and pivotally connected by a rod 25 with one of the crank arms 21. A preferable construction is to bend the rear end of the rod 25 at right angles and project the same through openings in the crank arm 21 and through similar openings in the bifurcated coupling sleeve 27. As a matter of fact both of the rods 22 are provided with similar bifurcated coupling sleeves 7 having screw threaded engagement with the rods 22 so as to permit of a certain amount of adjustment to insure a proper connection.

In operation, when the brake pedal 24 is pushed forwardly, it will cause the rocker

shaft 19 to turn by reason of the connection of the rod 25 with one of the arms 22, and thus exert a forward pull on the rods 22 compelling the levers 12 to pivot and compress the brake bands 9 around the drums 7. This construction is readily and quickly responsive to the movement of the brake pedal and a quick, sure braking action is had without vibrating or rattling.

It will be noted that my improved arrangement of outside brakes and operating mechanism can be attached to the car without the necessity of employing skilled labor, and without altering the present construction, or injuring the same in any manner, and that the mechanism is so simple and involves so few parts, that it can be manufactured and sold at an extremely low price, and yet most efficiently perform the functions for which it is intended.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. An outside brake of the character described, comprising brake bands adapted to engage the outside of brake drums, levers for operating said bands, a bracket having perforated lugs adapted to receive the radius rods of a car and be secured thereon, a rocker shaft mounted in said bracket, crank arms on said shaft, rods connecting the crank arms with the brake band levers, a brake pedal, and a rod connecting one of said arms with the brake pedal.

2. The combination with a car having a brake pedal, a drive shaft housing, a flange on the drive shaft housing, a rear axle housing, radius rods connecting the flange and the rear axle housing, nuts screwed onto the radius rods at opposite sides of the flange, brake drums on the wheels of the car, brake bands around the drums, elastic means holding the brake bands expanded, levers controlling the contraction of the bands, a bracket secured on the radius rods and clamped against the flange by certain of the said nuts, a rocker shaft mounted in the bracket, arms on the rocker shaft, rods connecting the arms with the brake levers, links secured to the radius rods and supporting the intermediate portions of the rods, and a rod connecting one of said arms with the brake pedal.

FRANK J. ANDEL.