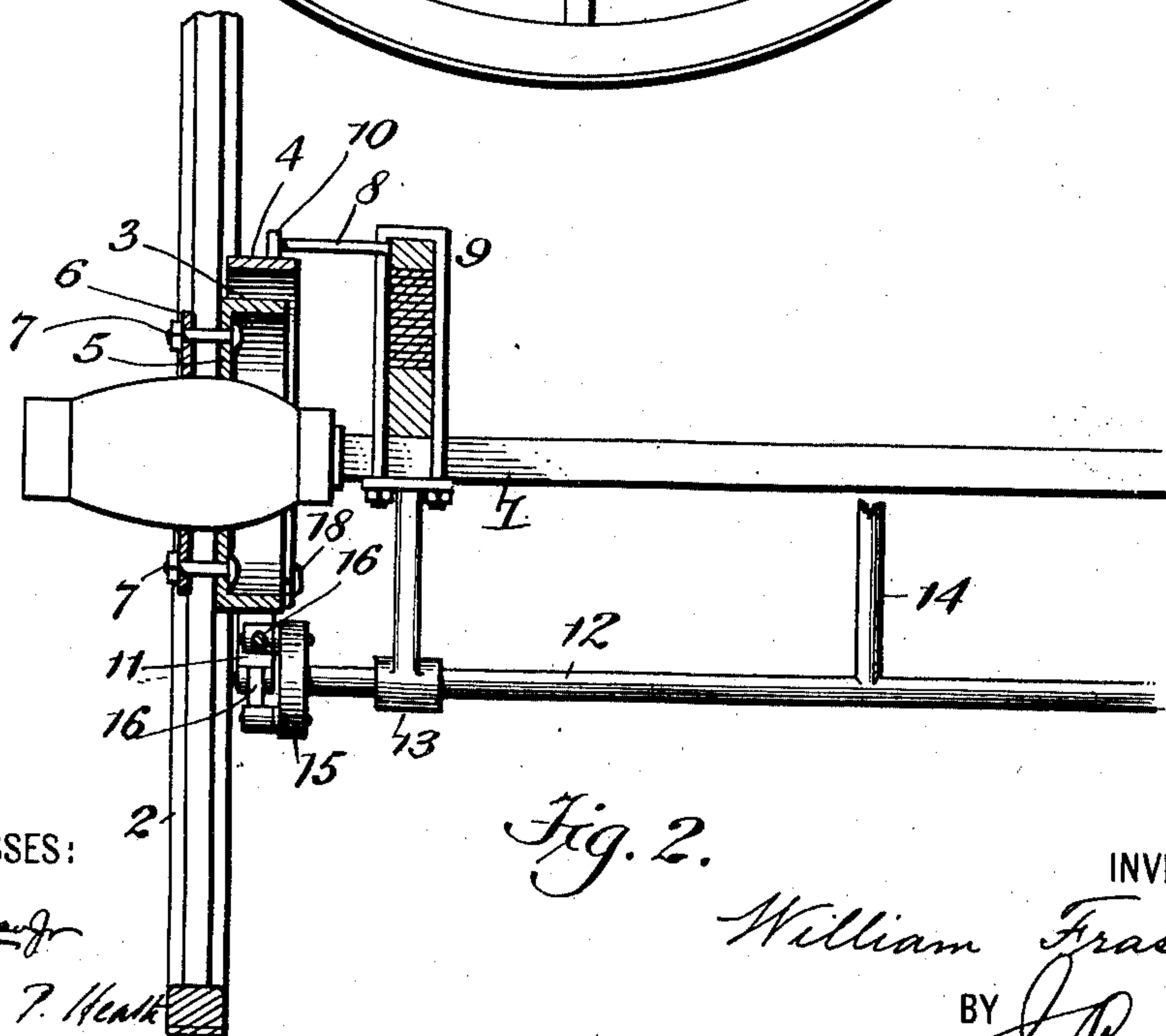
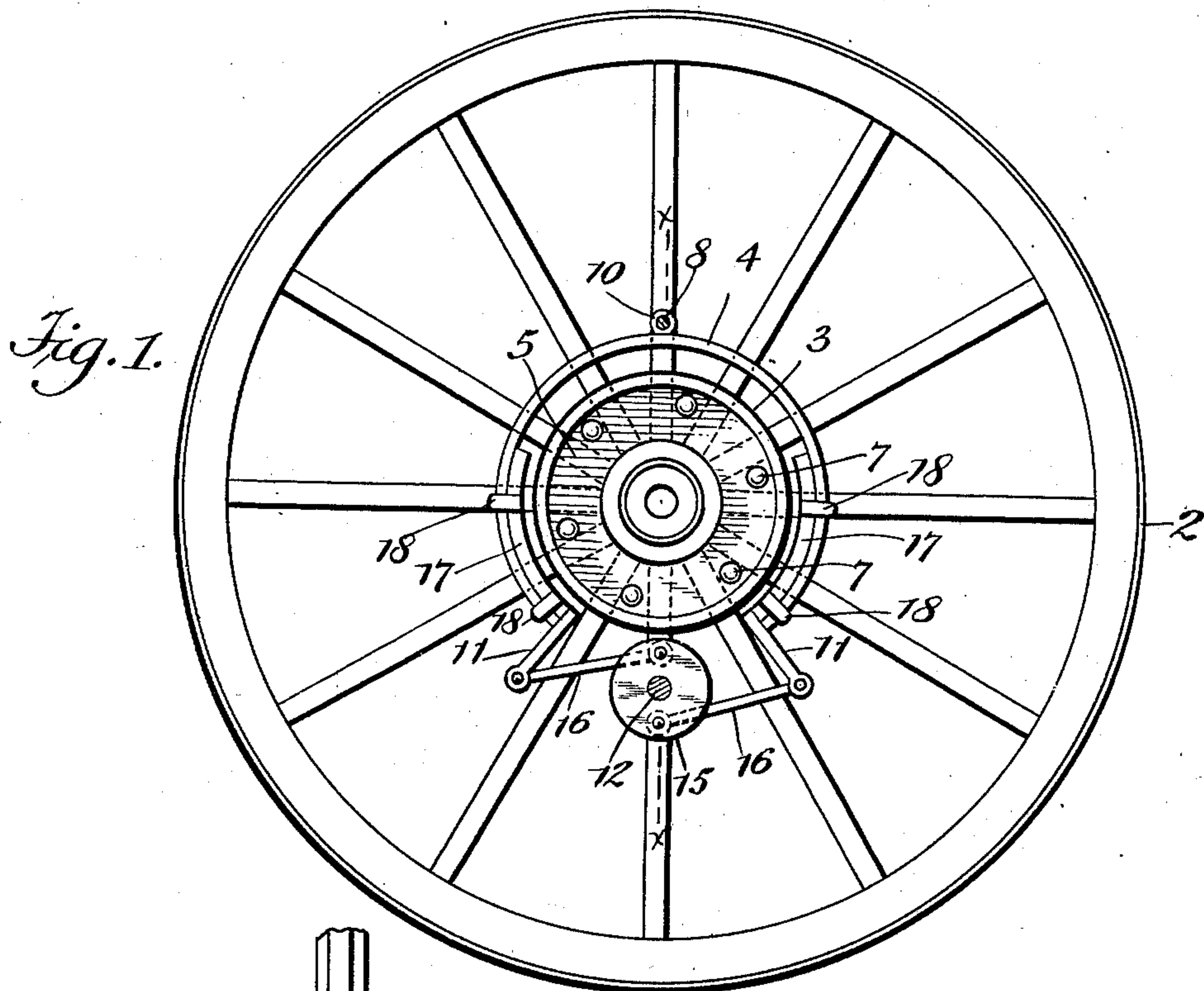


No. 719,578.

PATENTED FEB. 3, 1903.

W. FRASER.
VEHICLE WHEEL BRAKE.
APPLICATION FILED JAN. 16, 1902.

NO MODEL.



WITNESSES:

H. R. Appleman

Hartwell P. Heath

Fig. 2.

INVENTOR

William Fraser

BY

J. R. Littell
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UNITED STATES PATENT OFFICE.

WILLIAM FRASER, OF DOBBS FERRY, NEW YORK.

VEHICLE-WHEEL BRAKE.

SPECIFICATION forming part of Letters Patent No. 719,578, dated February 3, 1903.

Application filed January 15, 1902. Serial No. 89,811. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FRASER, a citizen of the United States, residing at Dobbs Ferry, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Vehicle-Wheel Brakes, of which the following is a specification.

This invention relates to vehicle-wheel brakes, and has for its object to provide an improved device of the class described which will possess points of advantage in convenience, simplicity, inexpensiveness, effectiveness, and general efficiency.

Another object of this invention is to provide an improved device of the class described which will be clamped simultaneously and with equal power upon opposite sides of the axis of the wheel to which the brake is applied.

Another object of this invention is to provide an improved device of the class described which can be applied to all sorts of vehicles.

In the drawings, Figure 1 is a side elevation of a wheel embodying my improved brake. Fig. 2 is a sectional view on the line *xx*, Fig. 1.

Corresponding parts in both figures are denoted by the same reference characters.

The brake is illustrated as applied to a spring-vehicle, and the latter may be of any approved type. Referring to the drawings, 1 designates one end of an axle of such vehicle, and 2 designates a wheel mounted thereon.

My invention comprises an annular friction-surface 3, secured to the wheel 2, a divided band 4 of resilient material, as steel, supported above the axle 1 and extending about the friction-surface 3, and means connected with the open ends of the band 4 for drawing said ends simultaneously in opposite directions and clamping the band 4 upon the friction-surface 3. In the form shown in the drawings the annular friction-surface 3 consists of a metal drum secured in any suitable manner to the spokes of the wheel 2 around the inner end of the hub of the wheel 2. As here shown, said drum is formed integral with or secured to a plate 5, which rests against the inside of the spokes of the wheel 2 and is clamped to said spokes by means of a plate 6, placed on the outside of said spokes, and

bolts 7, passing through said plates 5 and 6. The brake consists of the divided band 4, which is here shown as supported by an arm 8, secured at its inner end near the top of the spring-block 9 and having its outer end connected with the outer upper surface of the band 4, as by an eye 10. The band 4 extends around the metal drum composing the annular friction-surface 3, and its open ends below the hub of the wheel 2 are provided with arms 11, projecting outwardly at right angles to such open ends. A brake-beam 12 is suitably mounted in brackets 13, secured to the axle 1 and depending therefrom and is provided with a suitable brake-handle 14 for operating the brake. The brake-beam 12 is provided at its ends with disks 15, rigidly mounted thereon. Eccentrically connected with the disks 15 are arms 16, which have their outer ends pivotally connected with the arms 11. The band 4 is provided with detachable brake-shoes 17, connected thereto preferably close to the open ends thereof, and brake-shoes 17 may be secured to the band 4 in any suitable manner, herein shown as by clamps 18.

It will be evident that upon the turning of the brake-beam the ends of the spring-band 4 will be drawn upon by the arms 11 and 16, and as the band bends the brake-shoes 17 are brought into firm contact with the annular friction-surface 3. The annular friction-surface 3 may consist of a disk secured to the inner end of the hub or the drum secured thereon and may vary in size without affecting my invention, which consists in means for simultaneously and equally drawing the open ends of the brake-band 4 toward each other, so that the brake-shoes 17 will be brought into clamping contact with the annular friction-surface 3, whereby the wear upon the braking-surfaces is equalized and made uniform and the force applied equally from both sides of the axis of the wheel 2.

The operation and advantages of my invention will be readily understood and appreciated.

The parts being in the position shown in Fig. 1, the proper manipulation of the brake-handle 14 to turn the brake-beam 12 and draw the open ends of the band 4 toward each other causes the brake-shoes 17 to clamp the

annular friction-surface 3 on both sides simultaneously and with equal force, thus most effectually braking the wheel 2 and also insuring uniform wearing of the parts, so that
 5 the operation of the brake will continue to be equally effective until the braking-surfaces are practically all worn out.

This brake is equally applicable to all sorts of vehicles, including automobiles and cars,
 10 and may be applied to machinery also. It is direct and positive in its action and so placed that it does not gather dirt, as a brake applied to the periphery of the wheel does, and therefore the contacting surfaces do not wear
 15 as rapidly, since substantially there is only friction to cause wear and no grit, sand, and other foreign substances interposed between the contacting surfaces, as in the ordinary wheel-brake.

20 I do not wish my device to include a band contacting throughout the whole length between its ends with a frictional surface nor yet to be confused with devices where the brake-shoes are connected to hinged or swinging arms.
 25

I do not desire to be understood as limiting myself to the details of construction and arrangement as herein described and illustrated, as it is manifest that variations and
 30 modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I
 35 therefore reserve the right to all such variation and modification as properly fall within the scope of my invention and the terms of the following claims.

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

1. The combination with a vehicle-wheel affording a cylindrical frictional surface, of a brake-band of resilient material straddling
 45 but normally out of contact with such frictional surface, and having open ends and

provided with brake-shoes situated so that they may engage the frictional surface at points approximately opposite each other, of means—as links and a rotatable disk—in connection with the ends of the resilient brake-band and with an oscillatory brake-beam carried by the vehicle and adapted to actuate the means for drawing the ends of the brake-band toward each other and thus applying
 55 the brake-shoes to the frictional surface upon the wheel, substantially as set forth.

2. The combination with a vehicle-wheel, of a friction-drum secured about the inner end of the wheel-hub, a brake-band of resilient material, with open ends carrying brake-shoes, means for supporting said band centrally and normally out of contact with the friction-drum, diverging arms projecting from the ends of the brake-band, an oscillatory brake-beam suspended from the vehicle-axle and parallel therewith, a disk on the ends of said beam, and a pair of links pivotally secured at diametrically opposite points to said disk and connected pivotally to the
 65 diverging arms of the brake-band.

3. The combination with a vehicle-wheel, of a friction-hub secured about the inner end of the wheel-hub concentric therewith, an arm projecting laterally from the vehicle-frame, a divided brake-band suspended from said arm, and having diverging arms, brake-shoes detachably secured to the brake-band, an oscillating brake-beam suspended below the vehicle-axle parallel thereto, a disk on
 75 the end of said beam, and links pivotally secured at diametrically opposite points to said disk, and pivotally connected to the diverging arms of the brake-band.

In testimony whereof I have signed my
 85 name in the presence of the subscribing witnesses.

WILLIAM FRASER.

Witnesses:

M. A. CASHIN,
 W. C. KING.