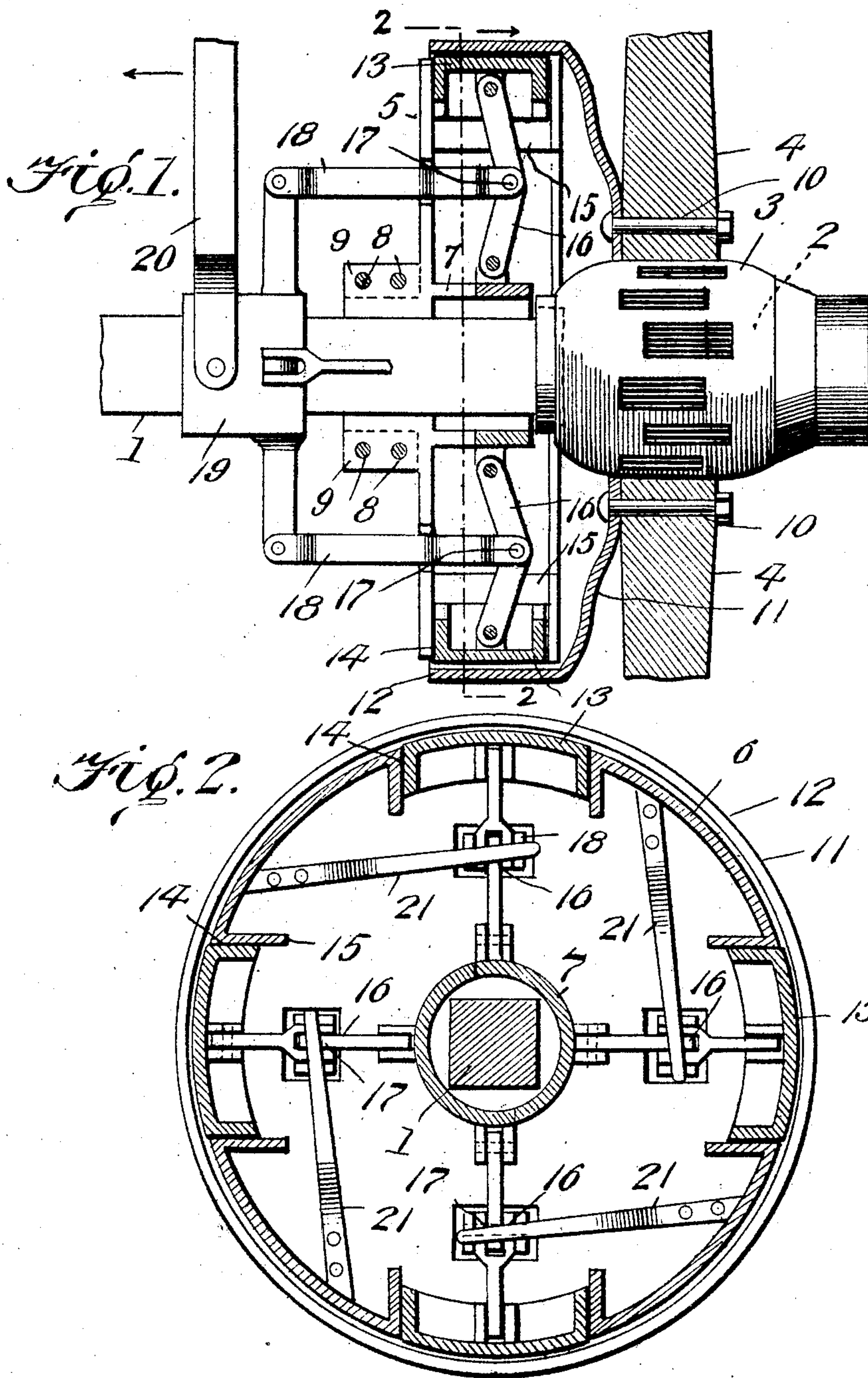


No. 829,489.

PATENTED AUG. 28, 1906.

H. R. SCOTT.  
VEHICLE BRAKE.

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Witnesses  
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# UNITED STATES PATENT OFFICE.

HAYWARD ROTHEN SCOTT, OF CHRISTINE, CALIFORNIA.

## VEHICLE-BRAKE.

No. 829,489.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed September 23, 1905. Serial No. 279,864.

*To all whom it may concern:*

Be it known that I, HAYWARD ROTHEN SCOTT, a citizen of the United States, residing at Christine, in the county of Mendocino and State of California, have invented new and useful Improvements in Vehicle-Brakes, of which the following is a specification.

This invention relates to vehicle-brakes, and has for its objects to produce a comparatively simple inexpensive device of this character which may be readily installed, one whereby the wheel may be quickly and securely locked against movement, and one wherein the wheel will be relieved of wear usually attendant upon the operation of brake-shoes.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a central transverse section through a braking mechanism embodying the invention and showing the same applied for use. Fig. 2 is a section taken on the line 2-2 of Fig. 1 and looking in the direction of the arrow.

Referring to the drawings, 1 designates a vehicle-axle provided with a spindle 2, on which is arranged for rotation a wheel comprising a hub 3 and spokes 4, these parts, which are foreign to my invention, being of the usual or any preferred construction and material and adapted in practice to perform their ordinary functions.

Fixed upon the axle 1 at the inner end of the spindle 2 is a hollow shell or casing 5, presenting an annular-edged flange or wall 6 and an inner flange or wall 7, which encircles the spindle 2, said casing being preferably formed in a pair of sections connected together and onto the axle 1 by means of bolts 8, entered through flanges 9, provided on that part of the flange or sleeve 7 which projects in rear of the casing 5.

Fixed on the inner end of hub 3 and secured to the wheel by means of bolts 10, entered through the spokes 4, is a hollow shell 11, presenting an annular marginal flange 12, which when the parts are assembled surrounds flange 6 and constitutes a brake band or surface, the shell 11 being of slightly greater diameter than that of casing 5, whereby the surface or band 12 is spaced from the wall 6, as seen in Fig. 2, it being noted in this connection that the shell 11 is

movable with the wheel, while the casing 5 is stationary.

Arranged for movement in and radially of the casing is a plurality, preferably four, of braking members or shoes 13, adapted to project through suitable openings 14, formed in the flange 6, and to be guided in their movements by webs or flanges 15, formed in the casing 5, these webs being arranged in pairs and parallel with the diametrical axes of the casing.

Provided for moving each of the shoes 13 is a pair of toggle members or links 16, pivoted, respectively, to the member 13 and inner flange 7 and in turn having their meeting ends pivotally connected at 17, there being engaged with each of the toggles 16 and at the pivotal joint 17 a longitudinally-movable connecting rod or element 18, which projects horizontally outward through the rear wall of casing 5, the elements 18 being in turn pivotally connected with a sliding head 19, arranged for movement on and longitudinal of the axle 1 and operable through the medium of a forked lever 20. It will be understood, of course, that there are four sets of the toggles 16 and a corresponding number of elements 18 and that owing to engagement of the elements with the sleeve 19 movement of the latter will serve for moving the brake-shoes 13 simultaneously.

Arranged in the casing 5 and each fixed at one end thereto is a plurality of leaf-springs 21, disposed, respectively, for action on the joints 17 of the toggles to maintain the latter normally in break-joint relation, with the shoes 13 retracted to negative or non-braking position. In practice the brake-shoes 13 stand normally retracted by means of the spring 21, under which conditions the shell 11 is released to permit free rotation of the wheel upon the spindle 2. When, however, it is desired to brake the wheel for retarding the motion or the stopping of the vehicle, the head 19 is moved by the lever 20 in the direction indicated by the arrow in Fig. 1, thereby exerting traction on the elements 18, thus operating the toggles 16 to move the shoes 13 outward through openings 15 and into frictional engagement with the surface or band 12, it being understood that as soon as the lever 20 is released the springs 21 will again actuate the toggles for automatically retracting the shoes.

From the foregoing it is apparent that I



produce a simple efficient form of device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

10 In a device of the class described the combination with a vehicle axle and wheel, of a casing fixed on the axle and having an annular marginal wall, a shell fixed for rotation with the wheel and presenting a brake-band surrounding said wall, the said annular marginal wall having openings therethrough at  
15 regular intervals, a plurality of radially-movable brake-shoes arranged in the casing

and movable through the said openings, to contact with the brake-band of the shell, a plurality of toggles connected respectively with and for actuating the said shoes, means for simultaneously operating the toggles to project the shoes outwardly into braking position, and springs having loose bearing against the intermediate portions of the toggles to automatically move the shoes to non-braking position.

In testimony whereof I affix my signature in presence of two witnesses.

HAYWARD ROTHEN SCOTT.

Witnesses:

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J. A. EMERSON.