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P. G. GILBERT  
RIM DRIVING WHEEL

2,659,405

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FIG. 2.

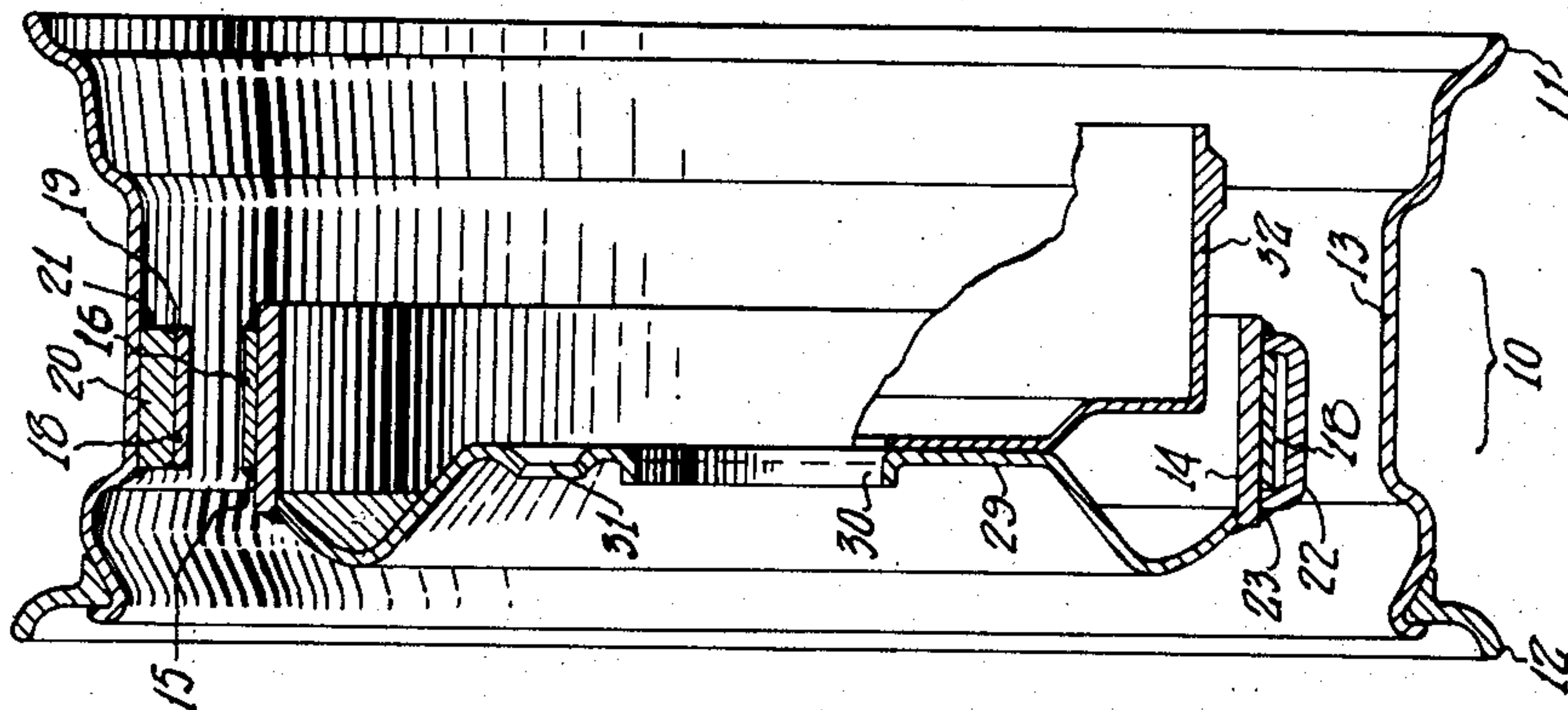


FIG. 1.

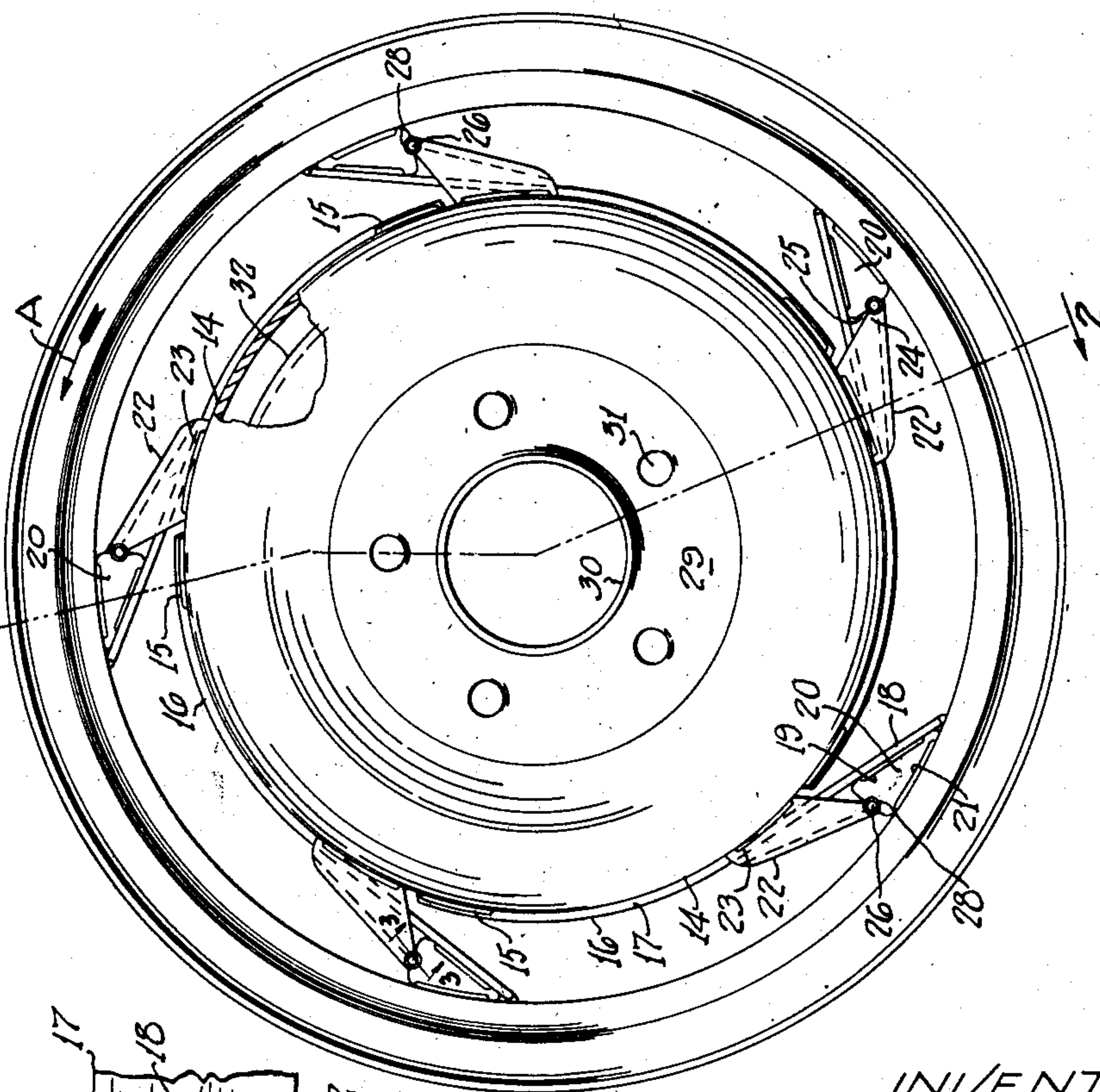
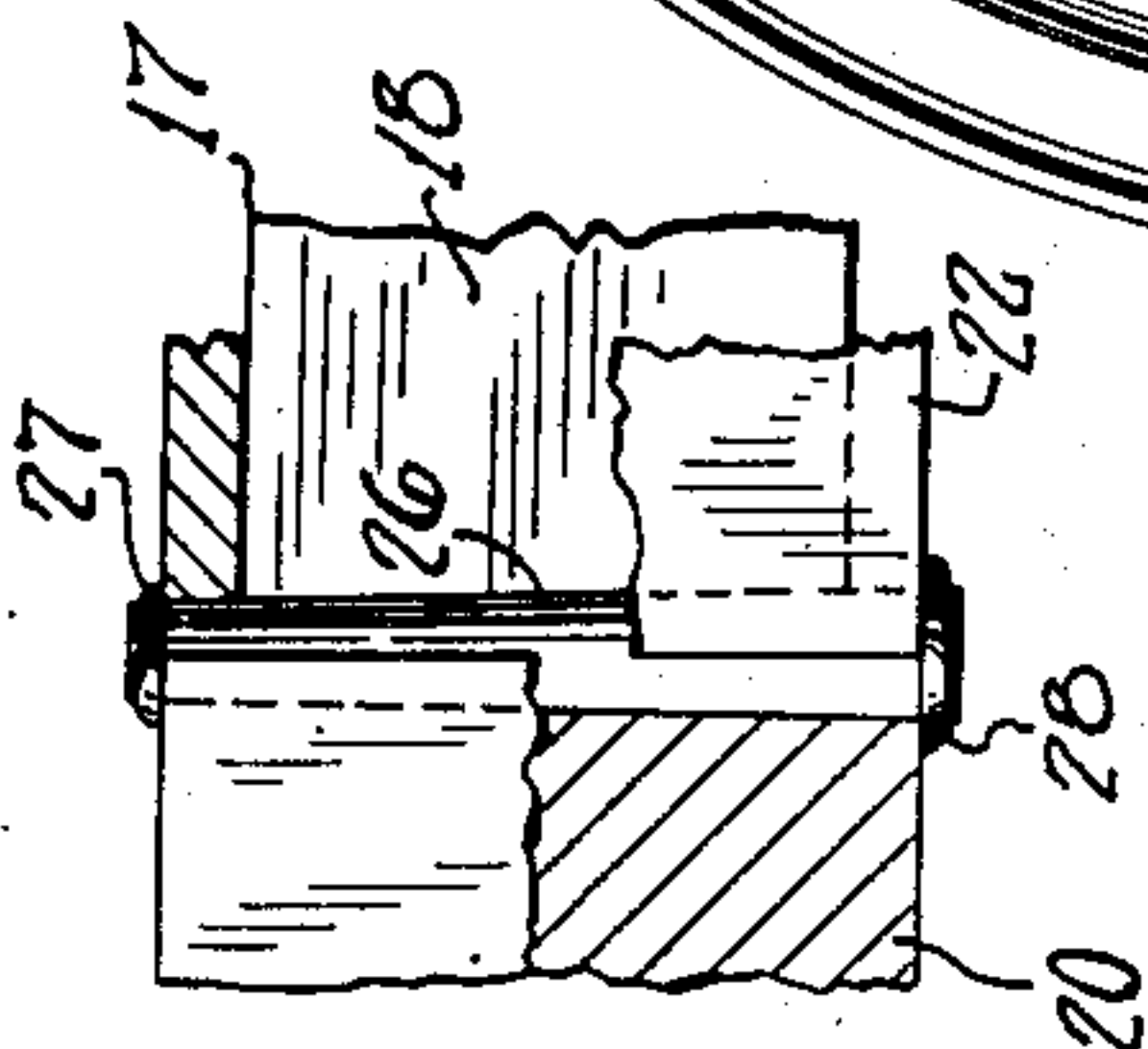


FIG. 3.



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## UNITED STATES PATENT OFFICE

2,659,405

## RIM DRIVING WHEEL

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mesne assignments, to Gilbert Wheel, Inc.,  
Portland, Oreg., a corporation of Delaware

Application September 6, 1950, Serial No. 183,315

2 Claims. (Cl. 152—75)

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This invention relates generally to land traveling vehicles and particularly to a rim driving wheel.

The main object of this invention is to construct a wheel which requires no balancing.

The second object is to construct a wheel which will eliminate side stress when rounding curves.

The third object is to improve the braking and clutching action.

The fourth object is to reduce the tendency of the motor to labor as engine does not strain under a dead torque.

The fifth object is to increase the safety factor in a car.

The sixth object is to produce a wheel which rolls instead of having to be pushed.

The seventh object is to eliminate the squealing of tires on curves.

The eighth object is to reduce tendency to skid on wet pavements or gravel.

The ninth object is the saving of motor fuel.

The tenth object is to hold the weight of the car in suspension.

The eleventh object is to direct the weight and shock in a forwardly driving direction against the rim of the wheel.

The twelfth object is to construct a wheel having the foregoing characteristics without having any relative movement between the parts of the wheel.

The thirteenth object is to protect the tires against heat generated by the brakes.

I accomplish these and other objects in the manner set forth in the following specifications as illustrated by the accompanying drawing, in which

Fig. 1 is a side elevation of my wheel.

Fig. 2 is a section taken along the line 2—2 in Fig. 1.

Fig. 3 is a section taken along the line 3—3 in Fig. 1.

Like numbers of reference refer to the same or similar parts throughout the several views.

Referring in detail to the drawing, there is shown a rim 10 having the usual fixed bead 11 and the demountable bead 12. Within the middle portion 13 and concentric therewith is a wheel drum 14.

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Secured to the drum 14, by means of welds 15, are the curved portions 16 of straps 17 whose straight ends 18 are secured by welds 19 to the wedge shaped blocks 20 which are in turn secured by the welds 21 to the interior of the rim portion 13.

Over the point of tangency between the strap portions 16 and 18 is placed a clip 22 which is not secured to the strap 17 but to the drum 14 on opposite sides of the strap 17 by means of welds 23 to the part 14. The end 24 of each clip 22 extends to the butt end 25 of the next block 20.

A taper pin 26 is driven between the members 20 and 22 in a tapered groove formed in the parts.

When all the pins 26 are driven home and uniform tension is applied to the straps 17 then each pin 26 is secured thoroughly at both ends by means of the welds 27 and 28 to the block 20 and to the clip 22. It is imperative that these pins be secured as stated.

A wheel so made will possess the advantages and characteristics set forth in the objects of invention.

It can be seen that the straps 17 are always in tension and there is no flexing of the parts or relative movement thereof and that all load shocks and stresses are imparted in a driving direction as indicated.

The drum 14 is provided with the usual disk center 29 having a central opening 30 and bolt holes 31, affording a means for attaching it to the conventional brake drum 32.

It will be noted that the arrow A indicates the direction of forward travel of the rim and that while the brake drum 14 floats in central suspension within the rim 10, the driving thrust and shock is imparted through the clips 22; that is, in the direction of wheel rotation.

I claim:

1. A rim driving wheel consisting of a wheel rim, a wheel drum disposed within said rim and spaced therefrom, straps secured at one end of said wheel drum and wrapped partially around said drum and then tangentially extending to said rim, a wedge shaped block between each tangential end and its adjacent rim part, said tangential end, block and rim part being united by welds, a clip straddling each strap having one end attached to said wheel drum and the other

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end inclined towards said block, together with a taper pin driven between the inclined end of said clip and said block, said pin being welded to said block and clip.

2. An apparatus of the class described, the combination of a wheel drum, a rim encircling said drum and spaced therefrom, a strap having one end wrapped around said drum and welded thereto and having the other end tangential to said drum and extending to said rim, a wedge shaped block disposed between said tangential end and rim and a clip on said drum straddling said strap having an arm inclined towards said wedge block and a taper pin driven between said wedge block and clip, together with a weld be-

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tween said pin and wedge block for preventing the withdrawal of said pin, said pin being secured at both ends to said block and clip.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,217,190	Jutila	Feb. 27, 1917
2,170,666	Sinclair	Aug. 22, 1939
2,628,651	Gilbert	Feb. 17, 1953

FOREIGN PATENTS

Number	Country	Date
498,074	France	Oct. 4, 1919