

J. E. JONES.
 DRIVE GEAR WHEEL.
 APPLICATION FILED DEC. 6, 1909.

963,153.

Patented July 5, 1910.

Fig. 1.

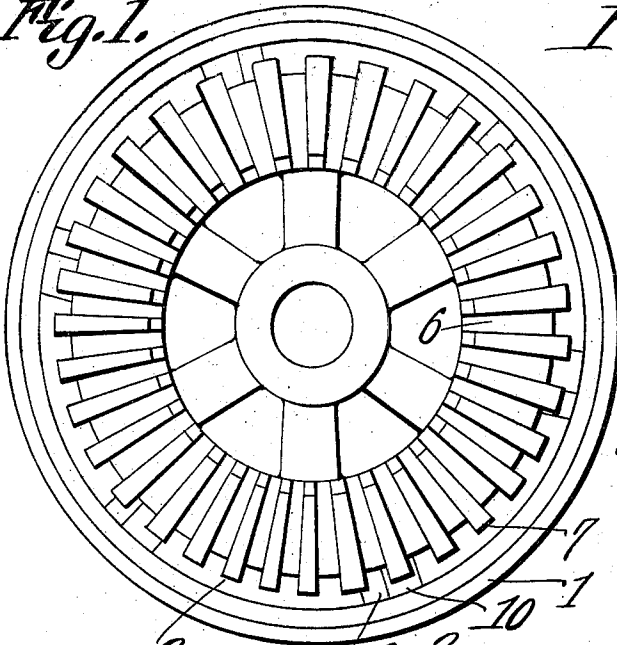


Fig. 2.

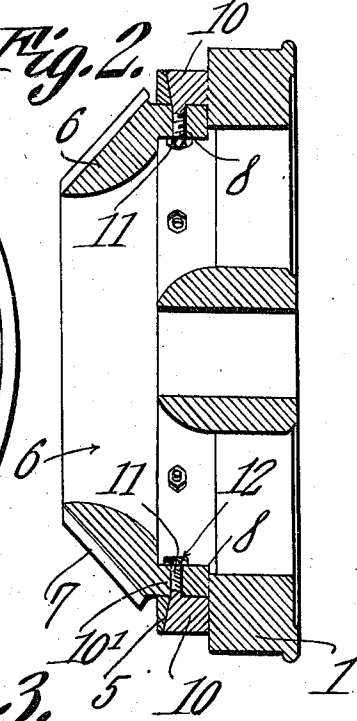


Fig. 3.

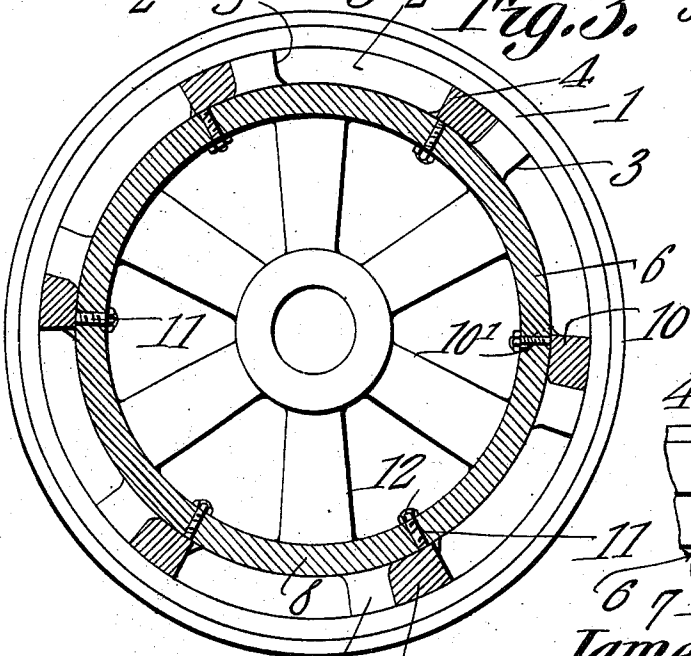


Fig. 5.

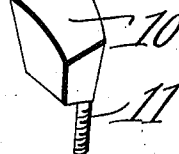
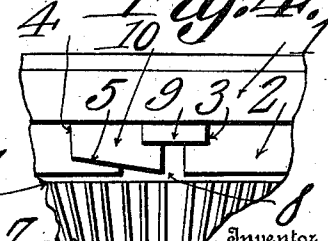


Fig. 4.



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 Attorneys

Witnesses

J. T. Lawson,

UNITED STATES PATENT OFFICE.

JAMES EDWARD JONES, OF LUFKIN, TEXAS.

DRIVE GEAR-WHEEL.

963,153.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed December 6, 1909. Serial No. 531,684.

To all whom it may concern:

Be it known that I, JAMES EDWARD JONES, a citizen of the United States, residing at Lufkin, in the county of Angelina and State of Texas, have invented a new and useful Drive Gear-Wheel, of which the following is a specification.

This invention has relation to drive gear wheels adapted to be used upon locomotives, and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a beveled gear or disk which may be easily and readily applied to the outer side of a drive wheel and which is provided with means for effectually holding the same in position upon the wheel. It is of course understood, that when the present attachment is employed rotary movement is transmitted to the drive wheel through a shaft and beveled pinion which meshes with the beveled rim or disk upon the drive wheel. As such shaft and pinion forms no part of the present invention, it is not shown or described in the present application.

With the above said object in view, the structure of the drive gear wheel includes spaced lugs mounted upon the outer side of the drive wheel said lugs having notched and recessed ends for the reception of wedges or securing members and lugs mounted upon a peripheral portion of the bevel gear member.

In the accompanying drawings—Figure 1 is a side elevation of the drive gear wheel. Fig. 2 is a transverse vertical sectional view of the same. Fig. 3 is a vertical sectional view of the same cut in a plane at a right angle to the view illustrated in Fig. 2. Fig. 4 is a plan view of a portion of the edge of the gear wheel. Fig. 5 is a perspective view of a wedge member forming a component part of the structure.

As illustrated in the accompanying drawings, the drive wheel 1 is provided upon its outer side with a series of spaced lugs 2. The outer sides of the lugs 2 lie in the arc of the same circle, which circle is of less diameter than that in which the tread of the wheel 1 lies. The lugs 2 are provided at one end with notches 3 and at their other end with recesses 4. The outer face of the wheel 1 forms the inner wall of the notches 3 and the recesses 4 have inclined outer walls 5 which slant inwardly toward the center of

the wheel and are disposed approximately spirally with relation to the axis of the said wheel.

A rim 6 is provided with a set of beveled gear teeth 7, and the said rim is further provided with an annular flange 8 which is adapted to fit snugly within the inner circumference of the series of lugs 2. The flange 8 is provided upon its periphery with a series of lugs 9 which are adapted to enter the spaces between the lugs 2 and when the said rim is turned upon its axis the lugs 9 are adapted to enter the notches 3 and fit snugly therein. The flange 8 is of such transverse breadth that when its inner face fits against the outer face of the side of the wheel 1, the inner ends of the teeth 7 are spaced from the outer faces of the lugs 2. The flange 8 is provided with a series of bolts or shank perforations 10' which correspond in number to the number of spaces between the ends of the adjacent lugs 2 upon the side of the drive wheel 1. Wedge-shaped blocks 10 are adapted to fit snugly in the recesses 4 and against the adjacent end portions of the lugs 9 and against the outer faces of the said lugs, and serve as means for preventing the lugs 9 from moving out of the notches 3. Each block 10 is provided with a threaded shank 11 which is adapted to pass through one of the perforations 10' provided in the flange 8 and when so inserted, nuts 12 are screw threaded upon the inner ends of the said shank 11 and serve as means for holding the said shanks and the blocks in proper position upon the flange 8 and within the recesses 4. Inasmuch as the wedge blocks 10 fit snugly in the recess 4 and the said recess is provided with an outer wall 5 of the peculiar inclination described, it will be seen that when pressure is applied to the outer end of the block 10 the said wall 5 will have a tendency to force the block against the side of the drive wheel 1 and toward the lugs 9 against which it bears. Thus as the parts become worn or subjected to pressure they are more firmly held together.

In practice, a drive shaft is radially disposed with relation to the drive wheel 1 and said drive shaft is provided with a pinion which meshes with the teeth 7. As these parts form no feature of the first invention they are not shown or described. The lugs 2 have considerable breadth and in the event the drive wheel 1 should be derailed the

outer edges of the lugs 2 will come in contact with the tread of the rail and may serve as temporary means for supporting the drive wheel 1 upon the rail and at the same time the said lugs will protect the teeth 7 against contact with the rail.

Having described my invention what I claim as new and desire to secure by Letters-Patent is:—

10 In combination with a wheel having upon its side a series of spaced lugs, said lugs provided at one end with notches and at their other end with recesses having inclined outer walls, a member having a series of
15 gear teeth and provided with an annular flange adapted to fit within the lugs upon the wheel, said flange having upon its periphery a series of lugs adapted to enter the

spaces between the lugs upon the wheel and also enter the notches provided at the ends 20 of the lugs upon the wheel, wedge-shaped blocks fitting snugly in the recesses at the ends of the lugs upon the wheel and bearing against the lugs upon the annular flange and having threaded shanks which pass trans- 25 versely through the flange and securing devices attached to the inner ends of said shank.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature 30 in the presence of two witnesses.

JAMES EDWARD JONES.

Witnesses:

FRED McCLENDON,
W. M. GLENN.