

No. 796,096.

PATENTED AUG. 1, 1905.

J. F. WEISBROD & J. D. RHODES.
SELF OILING WHEEL FOR MINE CARS.

APPLICATION FILED JAN. 5, 1905.

Fig. 1.

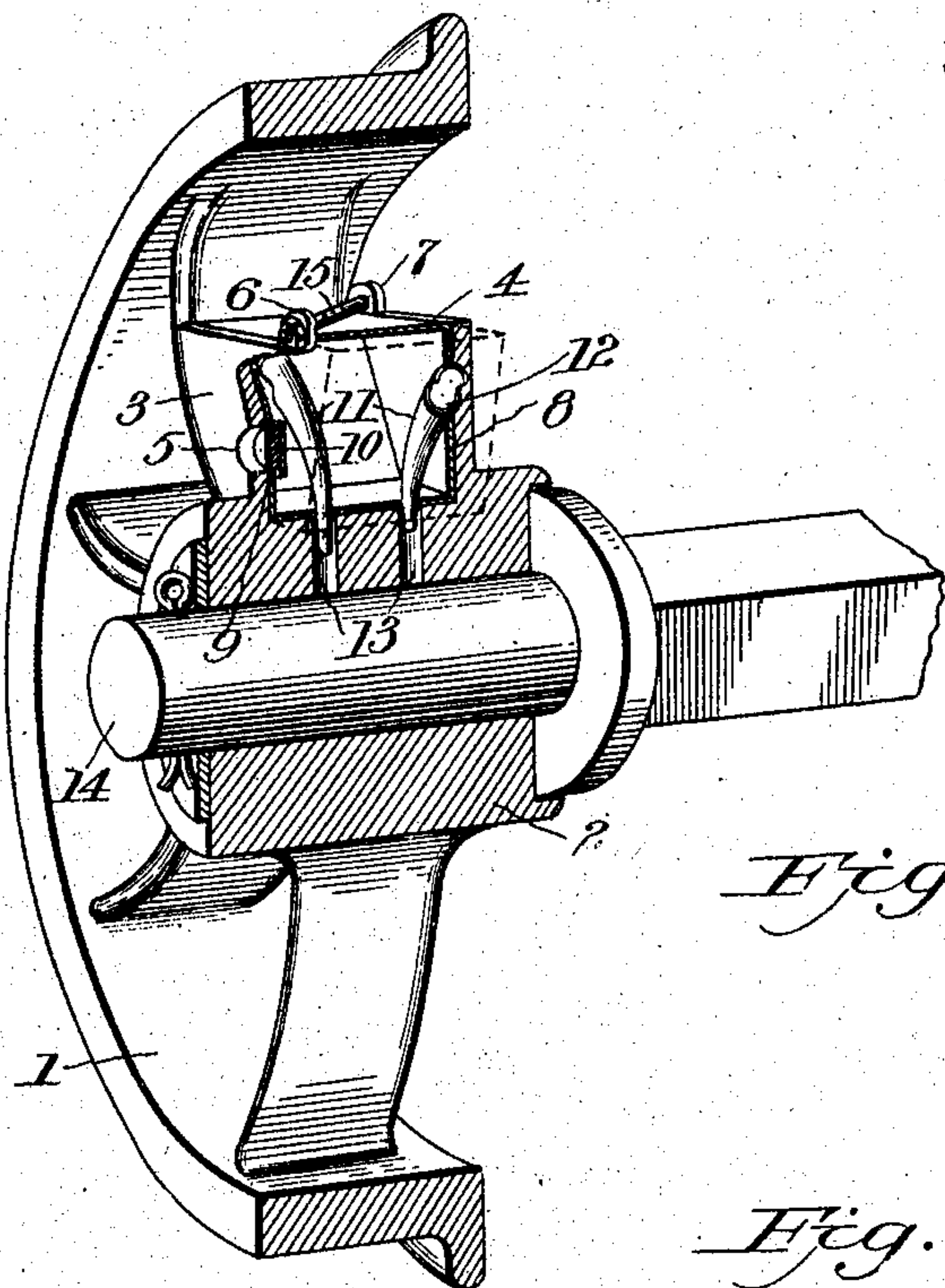


Fig. 3.

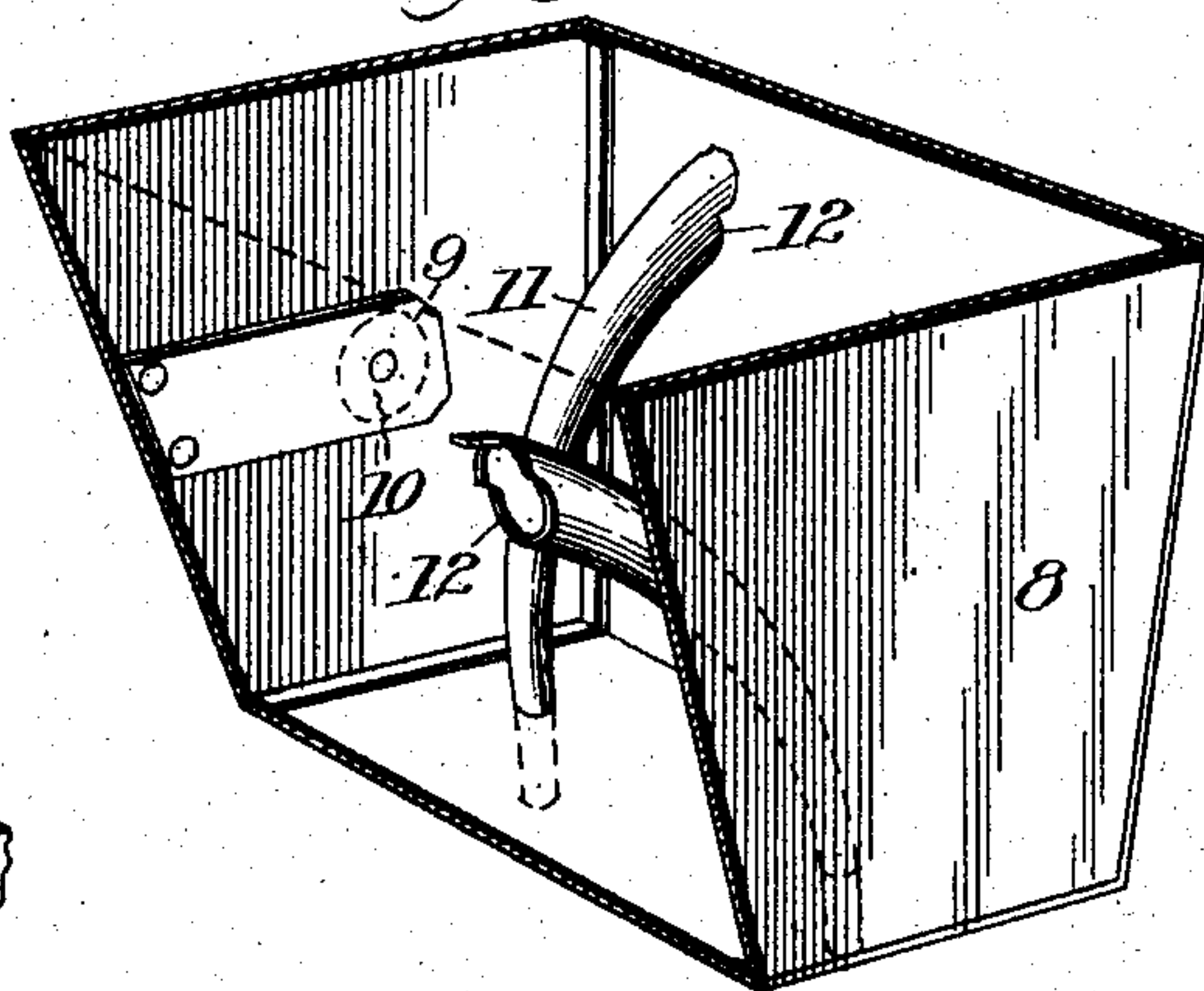


Fig. 4.

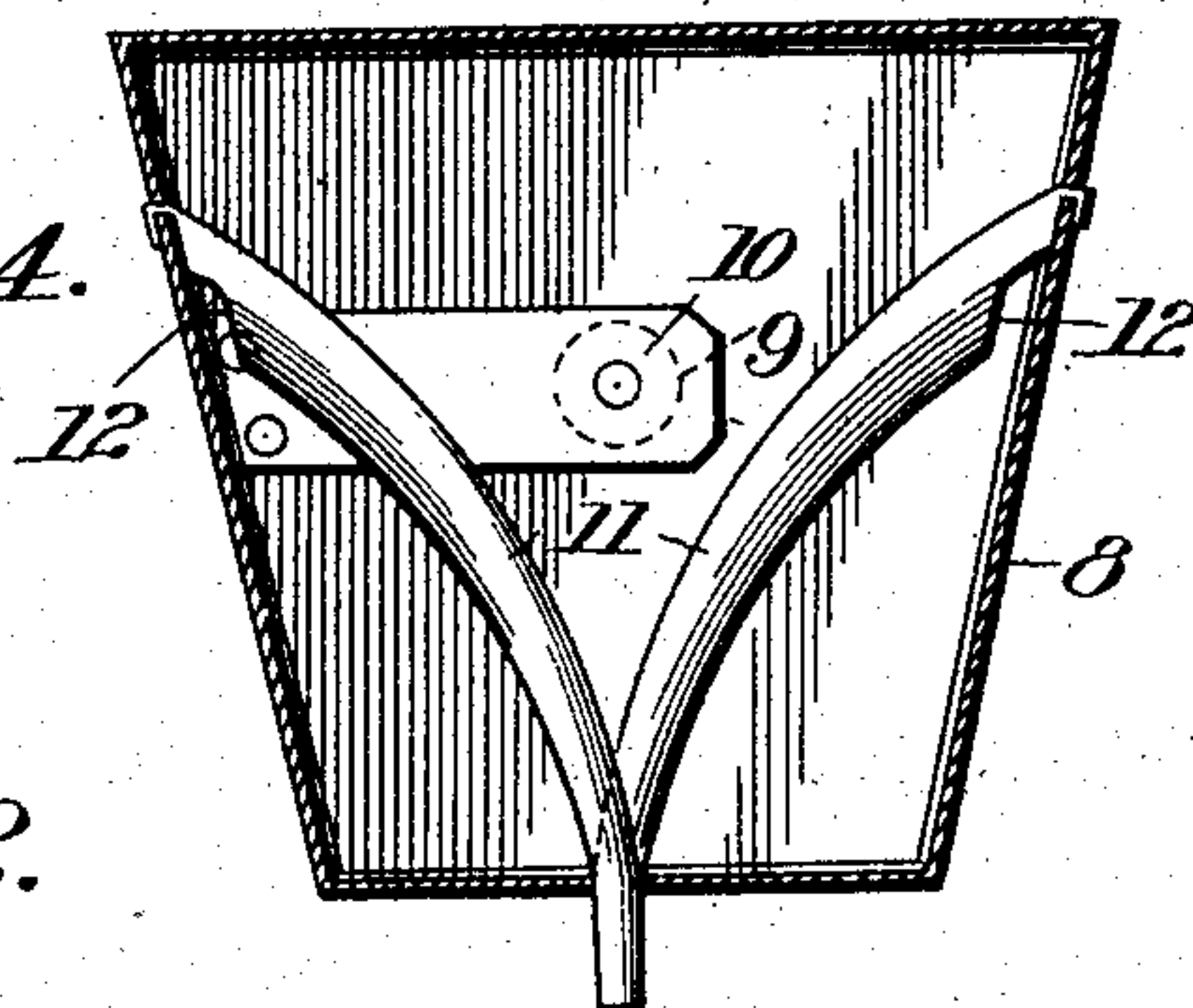
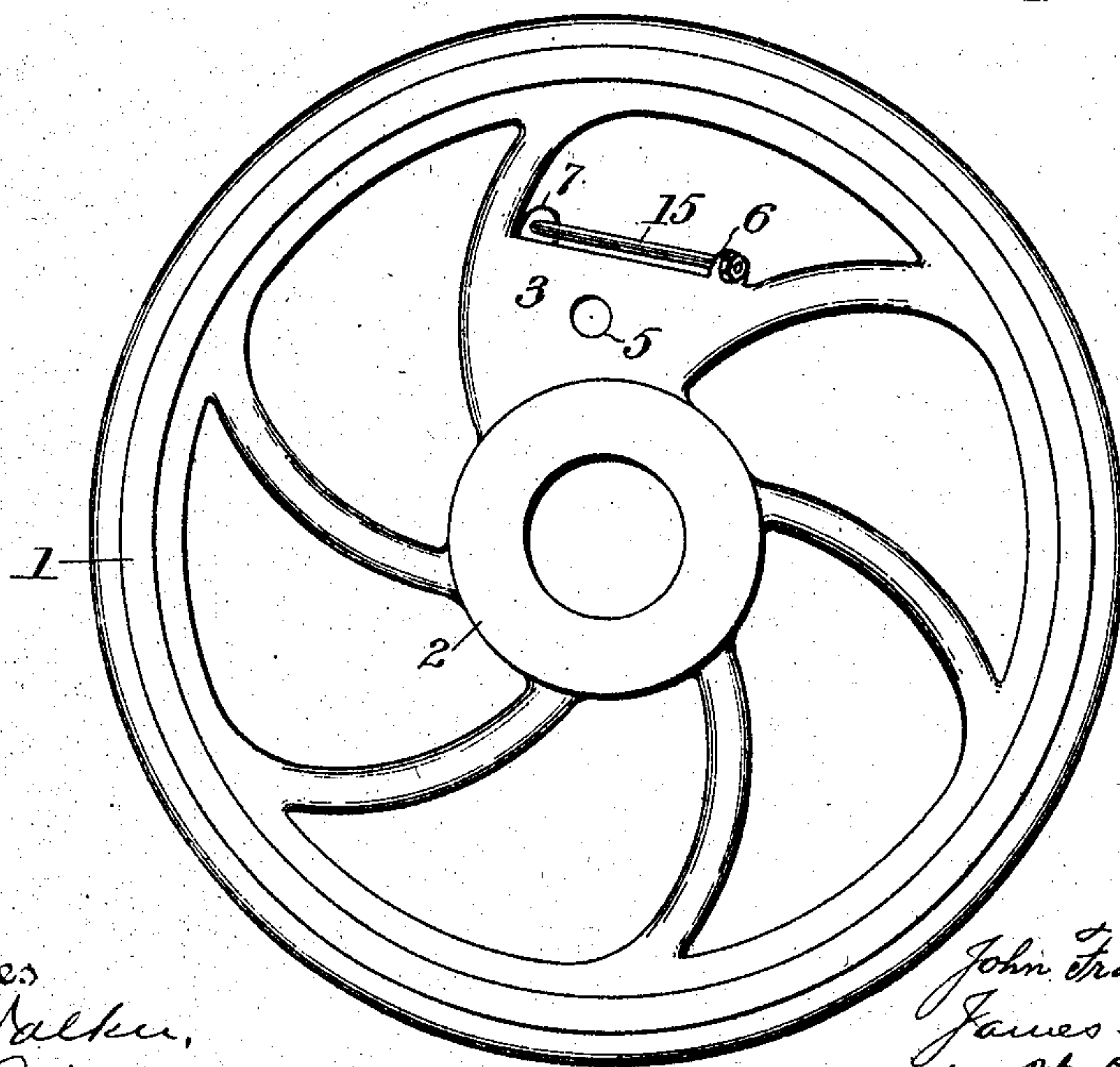


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SELF-OILING WHEEL FOR MINE-CARS.

No. 796,096.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed January 5, 1905. Serial No. 239,782.

To all whom it may concern:

Be it known that we, JOHN FRANCIS WEISBROD, residing at Allegheny, and JAMES D. RHODES, residing at Sewickley, in the county of Allegheny and State of Pennsylvania, citizens of the United States, have invented a certain new and useful Improvement in Self-Oiling Wheels for Mine-Cars, of which the following is a full, clear, and exact description.

The object of the invention, stated specifically, is to provide for the lubrication of mine-car wheels with the least possible waste of lubricant; and the invention consists of a car-wheel carrying a lubricant-receptacle which communicates with the axle, preferably through the hub, the communicating channel or channels, or, in other words, the outlets from the receptacle, being constructed and arranged in such manner that no lubricant can escape while the wheel is at rest or is rapidly revolving and can escape only when and as long as the wheel is turning at slow speed in either direction.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a sectional perspective view of the self-oiling wheel for mine-cars, the near wall of the receptacle being broken away; and Fig. 2 is a front elevation. Fig. 3 is a perspective view of the lubricant-receptacle detached, with the two near sides removed; and Fig. 4 is a side elevation thereof, the end wall being broken away.

The wheel 1, with its hub 2, may be of any approved construction, excepting that two of its adjacent spokes are connected front and back by vertical walls 3 and 4, the outer wall having in it a hole 5 and the two walls having at diagonal corners the perforated ears 6 and 7. These walls, with the hub, constitute a pocket for the reception of a can or vessel 8, closed on all sides, excepting as hereinafter specified, and this can or vessel is the lubricant-receptacle herein referred to. A hole 9 is made in one side of the lubricant-receptacle to register with the hole 5, and said hole 9 is normally closed by a spring-pressed stopper 10, adapted to open inwardly for the introduction into the lubricant-receptacle of suitable oil or other lubricant. Any number, preferably two, tapering tubes 11 are fixed within the lubricant-receptacle and have

openings 12 into them at the under side of their upper and wider ends, so as to fill with lubricant only as the receptacle rises in the turning of the wheel, and their lower ends open into ducts 13 in the hub or otherwise communicate with the axle 14. It will be observed that the upper sides of the upper ends of the tubes are closed tight against the adjacent walls of the lubricant-receptacle, and hence no lubricant can enter these tubes from the outside, but the lubricant must enter the tubes from the under side and when these tubes are in position to admit it.

The lubricant-receptacle is held in the pocket by a diagonal bolt 15, fastened in the ears 6 and 7, and may be readily removed for renewals or repairs.

While the wheel is not in service there is and can be no escape of lubricant, and the bearing or hub and axle will be lubricated only while the wheel is in slow motion either forward or backward, and hence enough lubricant will flow to the axle while the car is being moved for coupling to thoroughly oil the parts for the ordinary run from mine to tipple, or vice versa. It is necessary, however, that the wheel be turned sufficiently far—say one revolution—to enable the open ends or mouths 12 of the tubes to stand upward, and thus fill with oil, and when the receptacle reaches the highest point gravity and air-pressure will suffice to cause the oil to flow down to the axle. Should the wheel be run at too high speed, centrifugal action will interrupt more or less the flow of the oil, and when the wheel is at rest so also is the oil and it cannot flow through the tubes.

Obviously the lubricant-receptacle may be filled whether it be for the time being above, below, or at the side of the axle.

In using the term "mine-car wheel" we do not wish to be limited to a car-wheel for that one specific purpose, since obviously our invention is applicable to other car-wheels that require lubrication under conditions similar to the mine-car wheels, and our claims are to be read accordingly.

What we claim is—

1. A self-oiling wheel for mine-cars, comprising a pocket, a lubricant-receptacle arranged in said pocket, and tubes connecting the said lubricant-receptacle and the part to be lubricated, said tubes having inlet-openings on their under sides and adapted to col-

lect and discharge lubricant only when the wheel is running at a relatively low speed.

2. A self-oiling wheel for mine-cars, comprising a wheel, of substantially ordinary construction, having a pocket, a closed lubricant-receptacle arranged in said pocket and having a number of outlet-tubes closed on their upper sides and having openings on their under sides and discharging at their lower ends.

3. A self-oiling wheel for mine-cars, comprising a wheel, of substantially ordinary construction, having a pocket, a closed lubricant-receptacle arranged in said pocket and having a number of tapering outlet-tubes, the larger diameters of which are closed on their upper sides and open on their under sides, and discharging at their lower ends.

4. A self-oiling wheel for mine-cars, comprising a pocket, a lubricant-receptacle arranged in said pocket, and tubes connecting the said lubricant-receptacle and the part to be lubricated, said tubes having inlet-openings on their under sides and adapted to collect and discharge lubricant only when the wheel is running at a relatively low speed, and means to fasten the said lubricant-receptacle in said pocket.

5. A self-oiling wheel for mine-cars, comprising a pocket, a lubricant-receptacle arranged in said pocket, and tubes connecting the said lubricant-receptacle and the part to be lubricated, said tubes having inlet-openings on their under sides and adapted to collect and discharge lubricant only when the wheel is running at a relatively low speed, said pocket having diagonally-disposed ears, and a bolt secured in said ears above the lubricant-receptacle.

6. A self-oiling wheel for mine-cars, comprising a pocket, a lubricant-receptacle arranged in said pocket, and tubes connecting the said lubricant-receptacle and the part to be lubricated, said tubes having inlet-openings on their under sides and adapted to collect and discharge lubricant only when the wheel is running at a relatively low speed, and an automatic closure for the filling-hole.

In testimony whereof we have hereunto set our hands this 3d day of January, A. D. 1905.

JOHN FRANCIS WEISBROD.
JAMES D. RHODES.

Witnesses:

HENRY RAINEY,
HARRY JALKER, Jr.