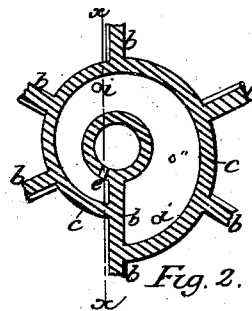
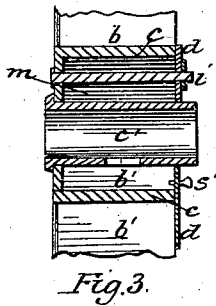
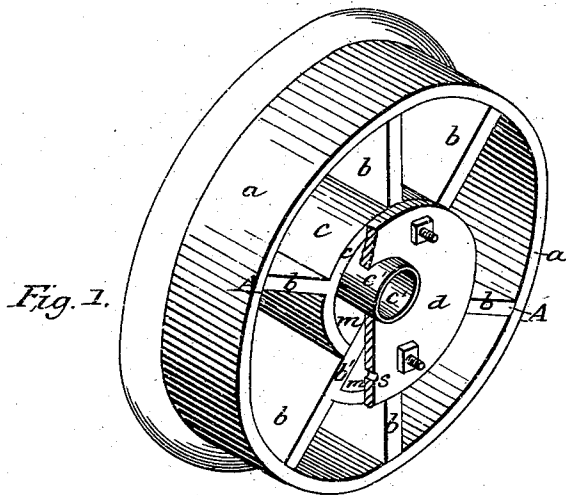


S. E. PEART.
Lubricator for Loose Wheels.

No. 106,614.

Patented Aug. 23, 1870.



Witnesses:
Thomson
R. C. Wrenshaw

Inventor:
Sylvanus E. Peart,
by Batewell Whistly,
his Att'y.

United States Patent Office.

SYLVANUS E. PEART, OF McKEESPORT, PENNSYLVANIA.

Letters Patent No. 106,614, dated August 23, 1870.

IMPROVEMENT IN LUBRICATOR FOR LOOSE WHEELS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, SYLVANUS E. PEART, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Construction of Loose Wheels; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of my improved wheel, a portion of the cap which covers the oil-chamber being broken away, the better to show the construction of the latter;

Figure 2 is a section of the hub as formed by a plane passing through at right angles to the axis; and

Figure 3 is a section through the line *x x*, fig. 2.

Like letters of reference indicate like parts in each.

In the use of loose wheels for mechanical purposes, such as pulley-wheels, car-wheels, &c., considerable difficulty is sometimes experienced in keeping the wheels properly oiled.

For this purpose wheels have been made which had an oil-chamber in the hub or extending around it, to contain a supply of oil for the axle.

My improvement relates to this class of wheels, and consists in making the oil-chamber or reservoir of an improved form, in connection with an oil-opening from at or near the smallest part of the chamber to the axis of the wheel.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with particular reference to its construction and use in wheels for coal-cars, as they are called, in the coal-mining sections of the country.

The casting of the wheel *A* is done in any of the ways known to the art, so as to give a tread, *a*, or rim, spokes *b b'*, and a chambered hub, *c*, being the outside of the chamber, *c'* the inside or axle-box, and *c''* the end made close in casting.

The chamber *m*, included between these sides, is made in casting, by the use of a dry sand core. The chamber *m* is of the form shown, and, instead of extending entirely around the hub, is interrupted at one point by one of the spokes, *b'*, which extends to the box *c'*, or by a suitable diaphragm in lieu thereof.

On one side of this diaphragm the chamber *m* is narrow, say about one-half an inch wide, more or less, measured on the line of the radius of the wheel which runs through it, and thence extending around the inner box *c*, it increases in width till it again

strikes the diaphragm *b'*, where it is, say, about two inches in width, more or less, similarly measured.

At or near the narrowest part of the chamber, an oil-opening, *e*, extends through the inner box *c'* and supplies oil to the axle.

The outside of the chamber is closed by a cap, *d*, which, suitably packed if need be, is fastened on by bolts and nuts, *i*, or in other similar way.

The chamber is kept supplied with oil, from time to time, through an opening, *s*, which may be closed by a plug, *s'*, cap, or other like device.

But I do not wish to limit myself to the dimensions named for the chamber, nor to its use in coal-cars, but include in my invention any chamber in the hub of a loose wheel which chamber increases in width from one side of a diaphragm around to the other side.

In the use of chambered wheels, as heretofore constructed, I have found that they commonly supply oil to the axles or bearings in too great abundance and waste the oil.

My improved wheel is, like them, a self-oiler, but it oils the axle or bearing only at intervals.

When the car is in rapid motion the centrifugal force (as it is called) tends to keep the oil clear of the slot *e*, and causes it to accumulate in the larger part of the chamber, this result being further secured by the eccentric form of the inner face of the outer shell *c*.

As the cars move slowly in stopping and starting, the oil, of course, flows to the lowest point, and during a portion of the revolution of the wheel will set back in the narrowest part of the chamber against the diaphragm *b'*, and a portion of it will then pass through the slot *e* and oil the axle.

I have found in practice that by the use of these devices the wheel will be kept sufficiently well oiled, and that little or no oil will be wasted.

What I claim as my invention, and desire to secure by Letters Patent, is—

The chamber *m*, cast with and extending around through the hub, and increasing in width from one side of the diaphragm *b'* to the other, and with an oil-opening, *e*, at or near the narrowest end of the chamber.

In testimony whereof, I, the said SYLVANUS E. PEART, have hereunto set my hand.

S. E. PEART.

Witnesses:

THOS. B. KERR,
JNO. C. NEWMYER.