W. Y. CRUIKSHANK.

CAR-WHEEL.

No. 195,583. Patented Sept. 25, 1877.

Fig. 1.

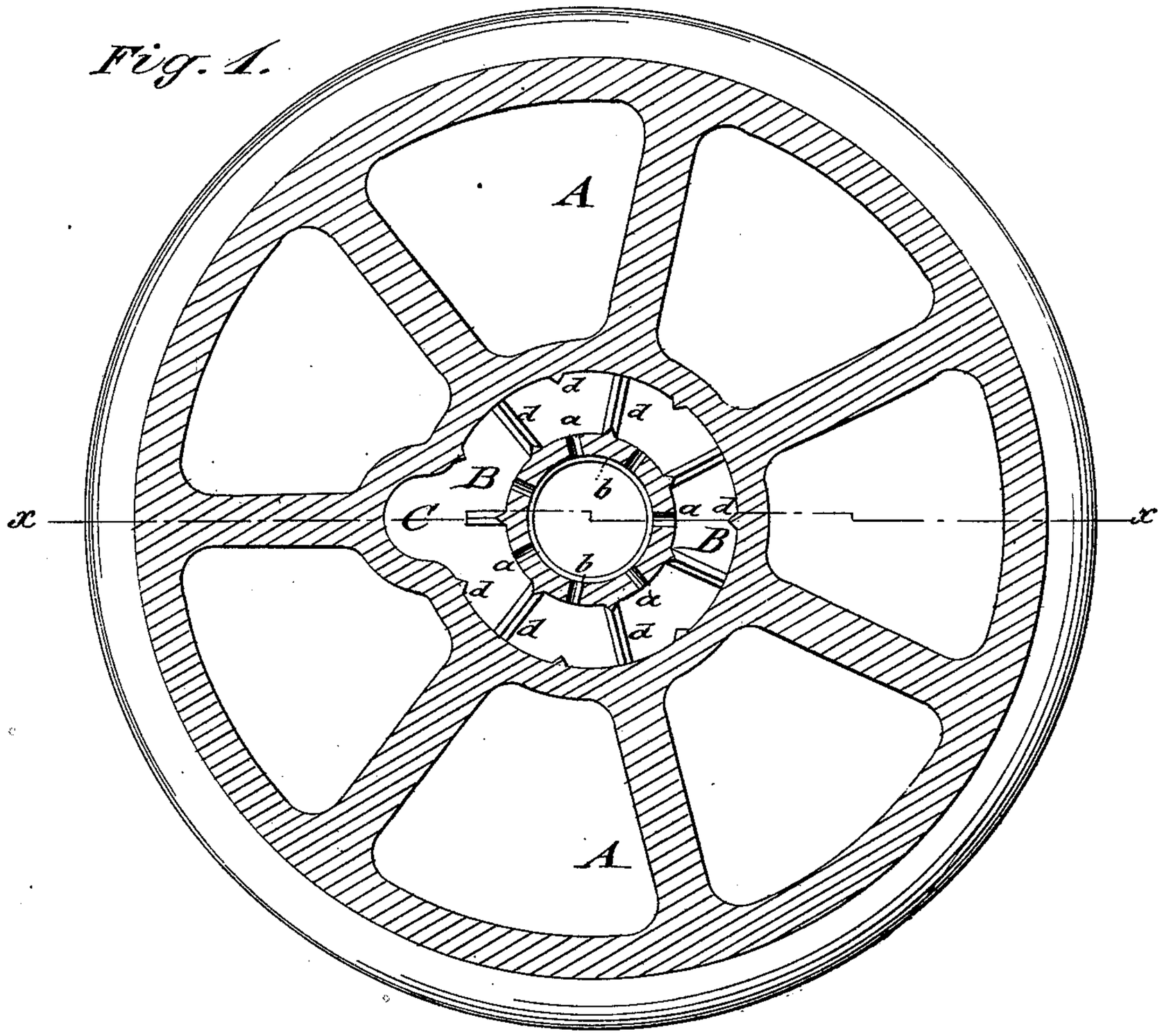
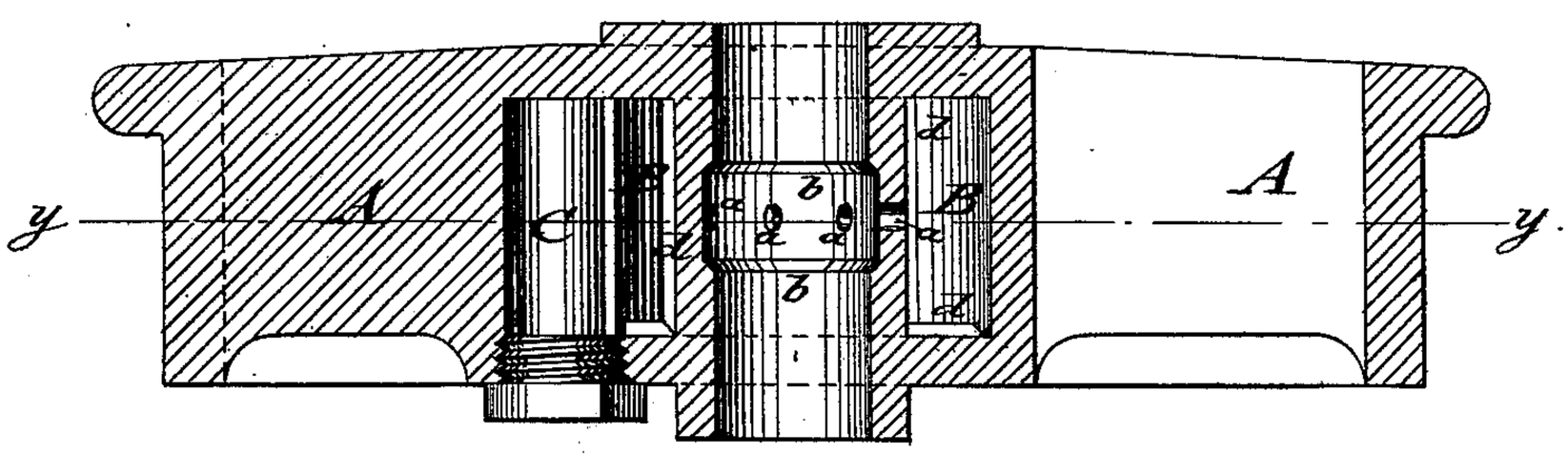


Fig. 2.



WITNESSES:

H. Rydquist

J. H. Scarborough

INVENTOR:

W. Y. Cruikshank

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM Y. CRUIKSHANK, OF SHAMOKIN, PENNSYLVANIA, ASSIGNOR TO JOHN CRUIKSHANK, OF SAME PLACE.

IMPROVEMENT IN CAR-WHEELS.

Specification forming part of Letters Patent No. **195,583**, dated September 25, 1877; application filed November 25, 1876.

To all whom it may concern:

Be it known that I, WILLIAM Y. CRUIKSHANK, of Shamokin, in the county of Northumberland and State of Pennsylvania, have invented a new and Improved Car-Wheel, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved self-lubricating car-wheel on line *y y*, Fig. 2; and Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish for coal-mine and other cars an improved self-lubricating wheel, which supplies the oil in reliable and economical manner, without the use of springs to get out of order, and without the use of cotton waste or sponge to get clogged with dirt and grit.

The invention consists of an oil-chamber arranged in the hub of the car-wheel, and connected by radial holes to an annular recess in bore of wheel or groove of axle. Ribs or elevations of the oil-chamber arrest the oil, and feed it to the supply-holes to lubricate the bearings, and pass the surplus back again to oil-chamber.

In the drawing, A represents a car-wheel of any suitable construction, running loose on the axle or shaft.

An oil-chamber, B, of annular shape, is arranged in the enlarged hub of the wheel around the bore of the same. The oil-chamber B communicates, by radial holes *a*, with an annular recess, *b*, in the bore of the wheel, or with a groove in the axle, to supply the oil to the journal of the same.

The oil-chamber B is provided with ribs or elevations *d*, which are preferably so arranged that lateral elevations *d* at the outer surface and at one side of the oil-chamber alternate with side elevations and cross-ribs at the inner circumferential surface of the oil-chamber, as shown in Fig. 1.

The oil-chamber is filled up to a level with or near to the lower extremity of the axle through an opening, C, that is closed tightly by a cork or screw-plug, *e*.

The centrifugal force distributes the oil during the running or revolving of the wheel by the aid of the outer elevations around the outer surface of the oil-chamber, while the side elevations conduct the oil and cause it to flow through the holes to the axles.

When the wheel ceases to revolve the oil above the axle is guided along the ribs to the holes, and along or around the axle or shaft in the recess or groove *b* back to the holes below the axle, and thence into the oil-chamber again, saving thus all the oil which is not used actually in lubricating the axle or shaft. Sufficient oil adheres to the axle to run the wheel in either direction and lubricate the bearings.

I am aware that an oil-chamber around an axle, and connected therewith by inlet-holes, is not new; but

What I claim is—

A car-wheel whose annular oil-chamber is divided by ribs *d* and provided with holes between each pair of ribs, substantially as and for the purpose specified.

WILLIAM YOUNG CRUIKSHANK.

Witnesses:

W. H. GILYER,

CHARLES BERRY.