

J. GRABACH.
Axle Lubricator.

No. 93,707.

Patented Aug. 17, 1869.

Fig. 1.

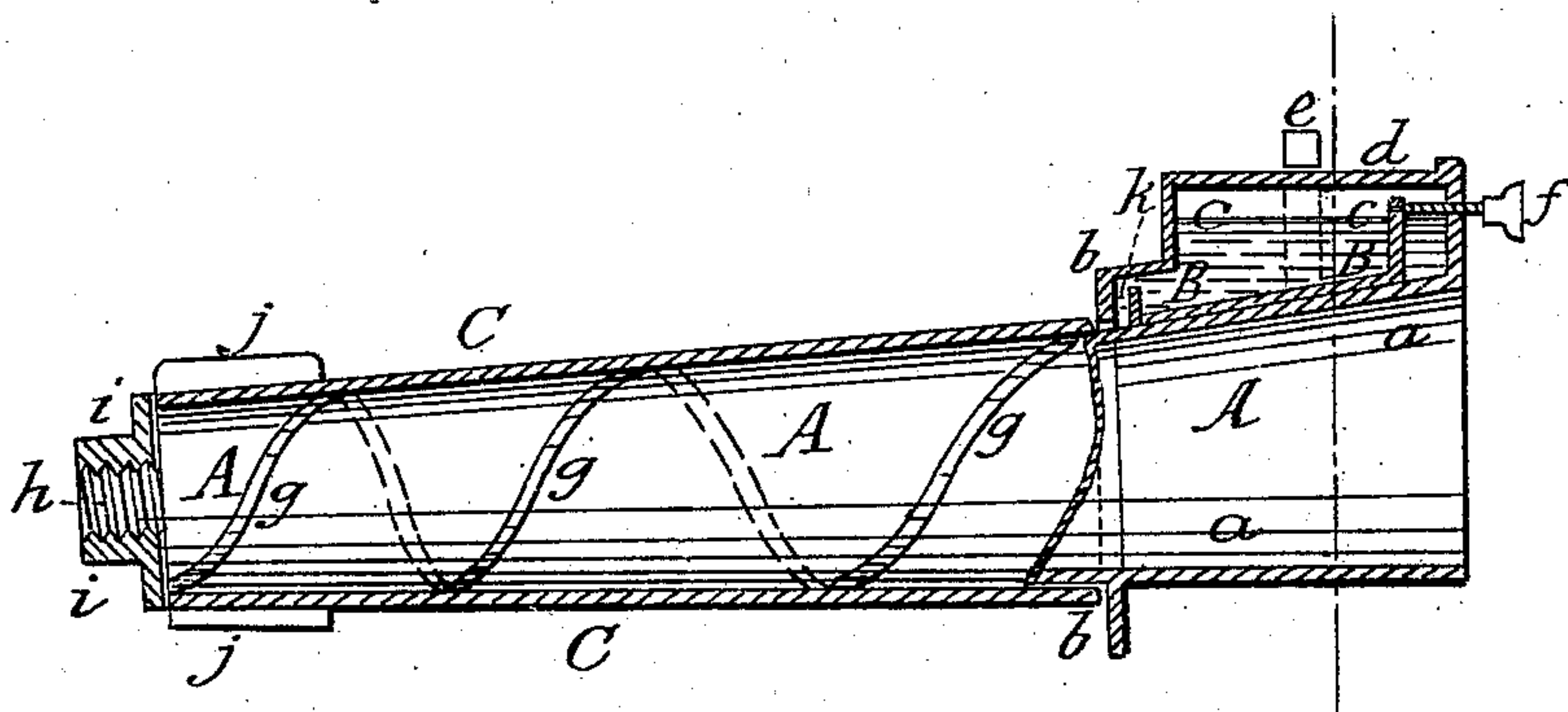
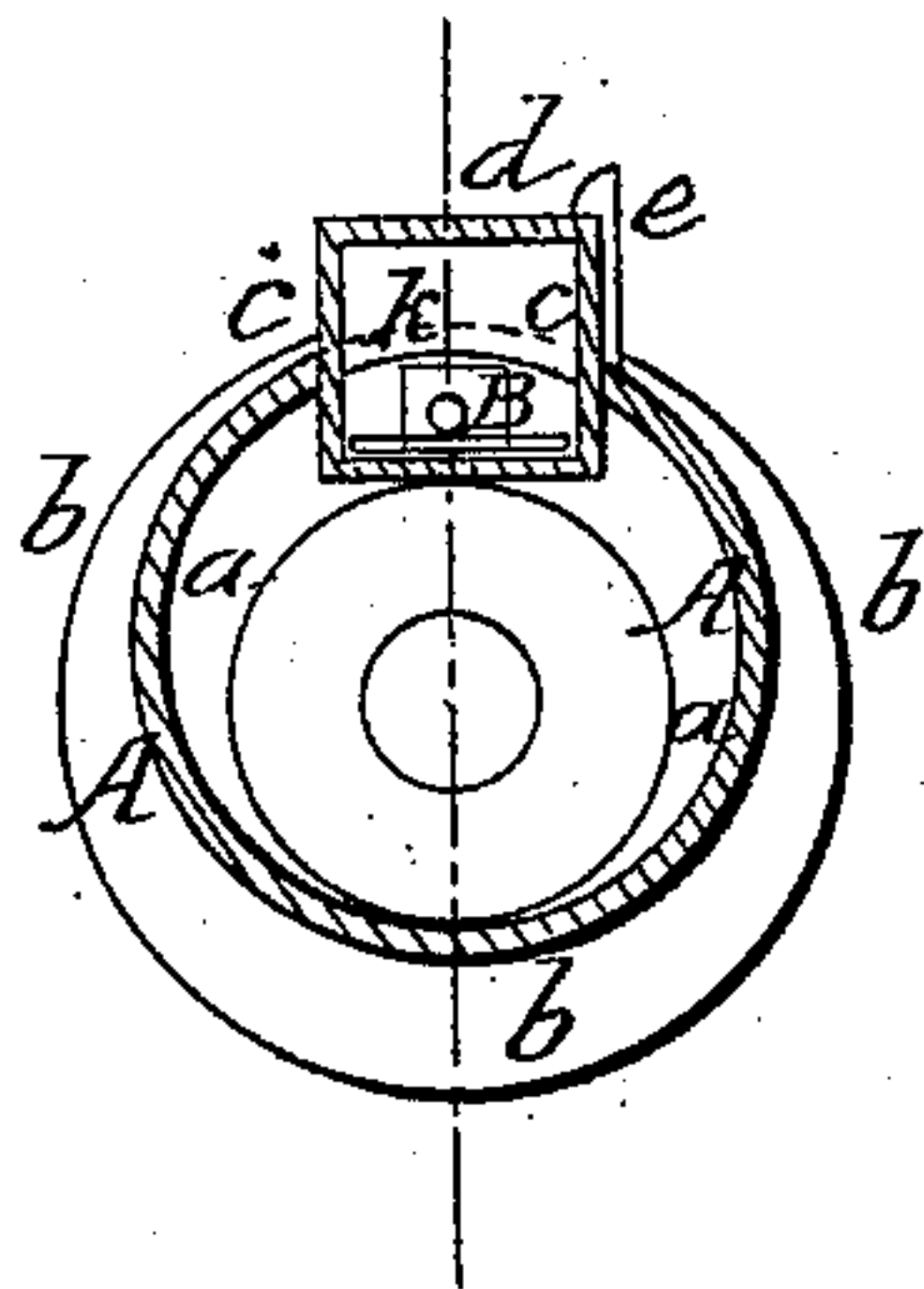


Fig. 2.



Witnesses.

Stuchman
not a Brooks

Inventor.

J. Grabach
per Munn & Co

United States Patent Office.

JOHN GRABACH, OF CLYDE, OHIO.

Letters Patent No. 93,707, dated August 17, 1869.

IMPROVEMENT IN CARRIAGE-AXLES.

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, JOHN GRABACH, of Clyde, in the county of Sandusky, and State of Ohio, have invented a new and improved Axle for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side view, partly in section, of my improved wagon-axle.

Figure 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new spindle and oil-reservoir for wagon-axles, and has for its object to provide a continuous self-acting lubricating-device, by which the axle will be kept greased in a uniform manner.

The invention consists in forming an oil-reservoir with an adjustable slide on the shank of the spindle, and a spiral groove on the body of the spindle, all as hereinafter more fully described.

A represents the spindle.

a, the shank of the spindle.

b, the shoulder.

c, the oil-reservoir, arranged upon the shank *a*. It is calculated to hold sufficient oil to run a wagon fifteen or twenty days.

The lid *d*, to this reservoir, is held closed by means of a spring-catch, *e*, which is attached to the side of the reservoir, and which is sprung back to take the lid off.

f is a screw, working through the back end of the reservoir, and swivelled to a regulator-plate B, which works in the reservoir, and by which the oil is admitted to or shut off from the spindle.

The spindle is attached to a wooden or other axle of a wagon, in the same manner as an ordinary pipe-box.

Channels *g* are cut into the spindle to form one or more continuous spiral grooves from the shoulder *b*,

through which the oil is first admitted, to the end of the spindle or screw *h*, where the oil will drop off if used too fast, thereby preventing poor oil from getting gummy, which it would do if not allowed to pass off. The oil will work forward only by the forward revolution of the wheel.

A nut, *i*, is screwed upon the end *h* of the spindle, when the wheel is placed on the axle, to hold it in its place, or taken off when required.

C is the boxing or thimble, which is fitted to the inside of the hub, and differing only from the common thimble by being plain all along its whole length, while the common thimble has a sort of recess on the middle, and works not so close on the middle of the spindle as on the ends.

The ears *j* are to hold it more firm to the hub.

The regulator-plate B is fitted into the oil-reservoir, and is worked by the screw *f*, so as to bring its upright end *k* nearer to or further away from the aperture through the shoulder *b*, which forms the inner end of the reservoir.

The spindles will be right and left for the opposite wheels, fig. 1 showing a right one; the left will differ only by having the channel *g*, and thread on screw *h*, and nut, cut in the opposite direction; and the spring *e* on the opposite side of the oil-reservoir.

The whole device will be of cast-iron of the best quality, except the spring *e*, which will be of spring-steel, and the screw *f*, which may be made of steel or rod-iron.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The spindle A, provided with the oil-reservoir *c* behind its shoulder *b*, with the adjustable slide B in the reservoir, and with the spiral groove or grooves *g* in front of the shoulder, all arranged, combined, and operating substantially as herein shown and described.

JOHN GRABACH.

Witnesses:

HENRY GRABACH,
JOS. BEPERNICK.