

(No Model.)

E. L. CLEVELAND.  
CAR AXLE LUBRICATOR.

No. 315,002.

Patented Apr. 7, 1885.

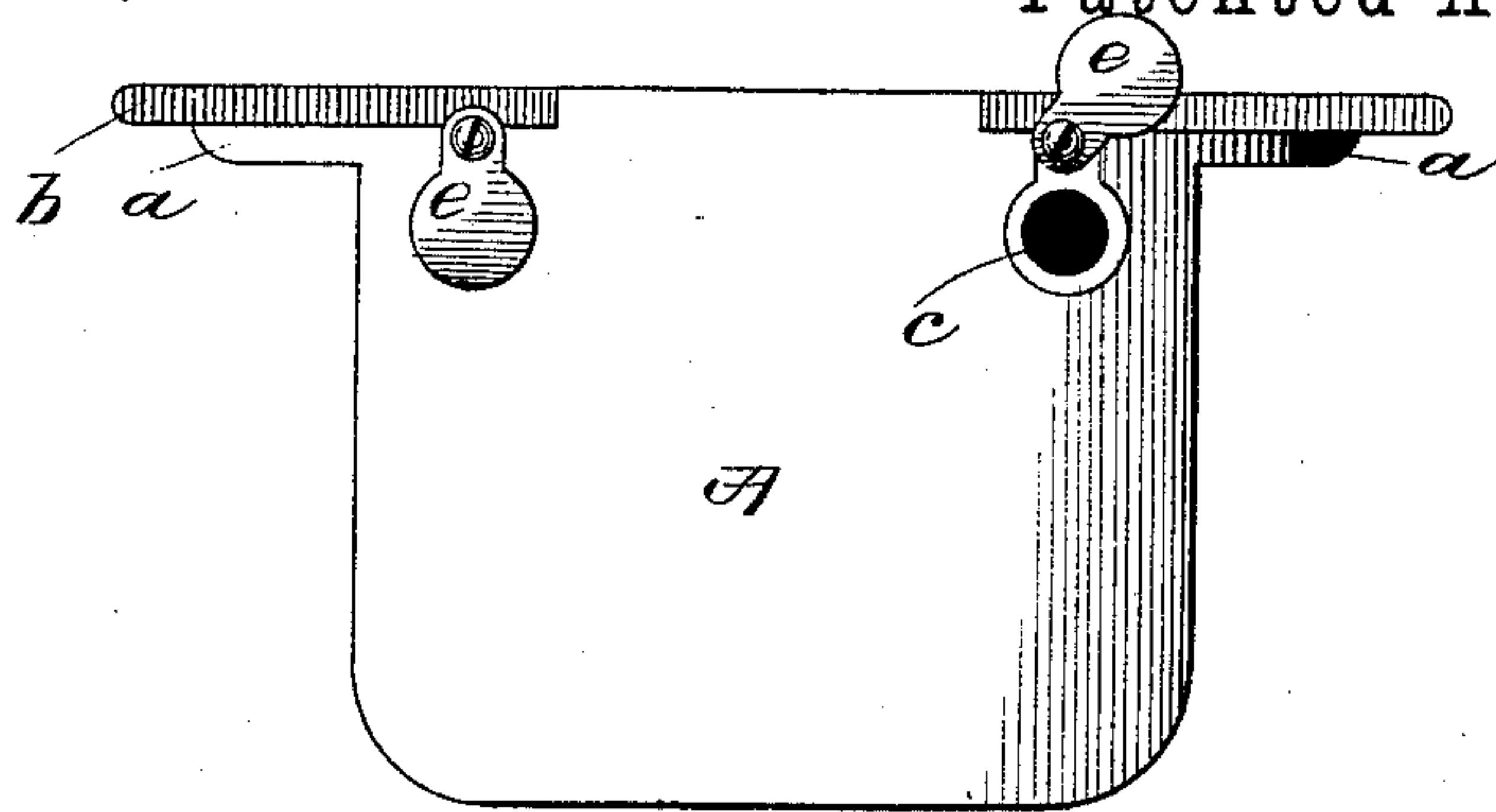


Fig. 1.

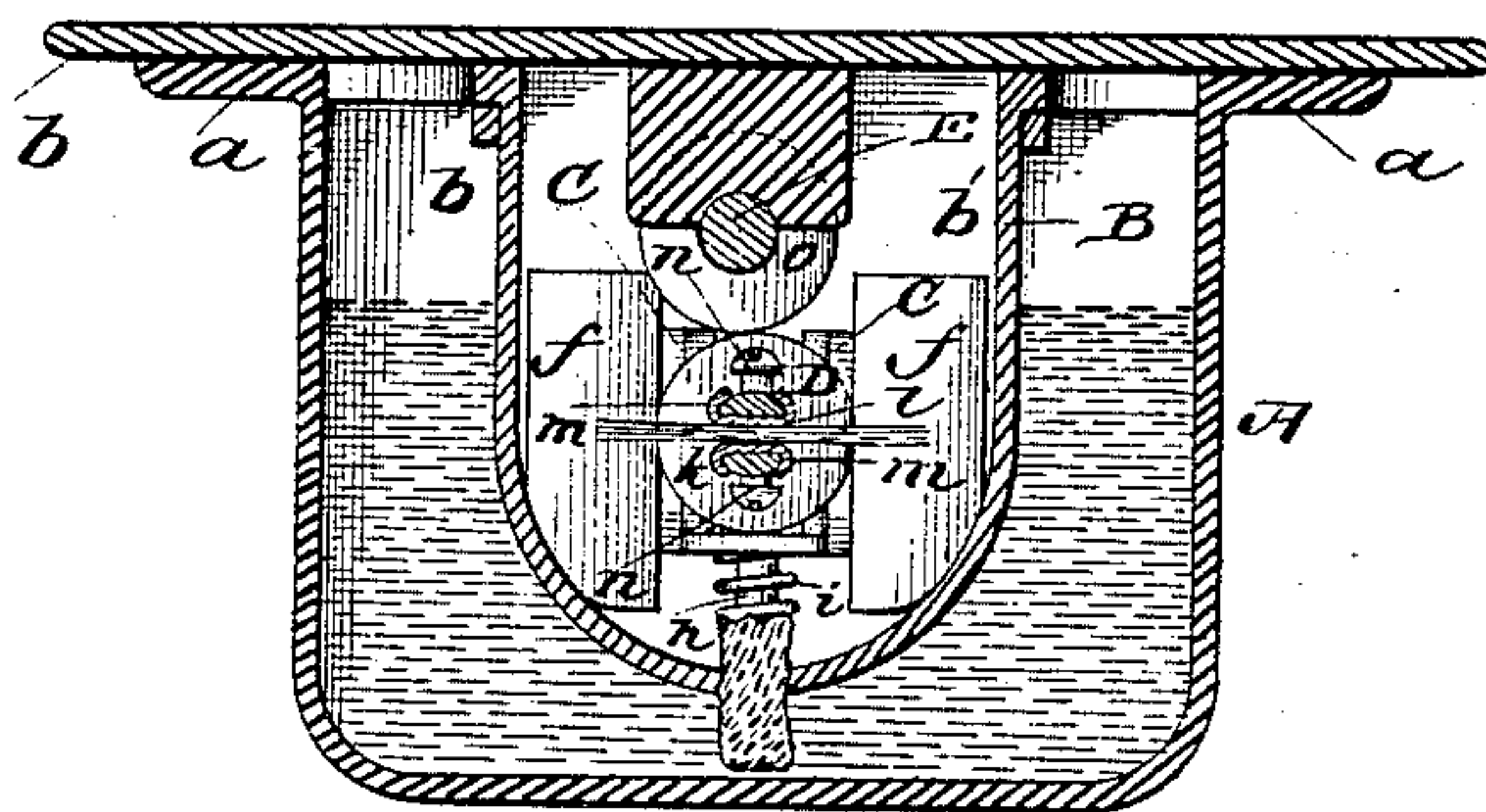


Fig. 2.

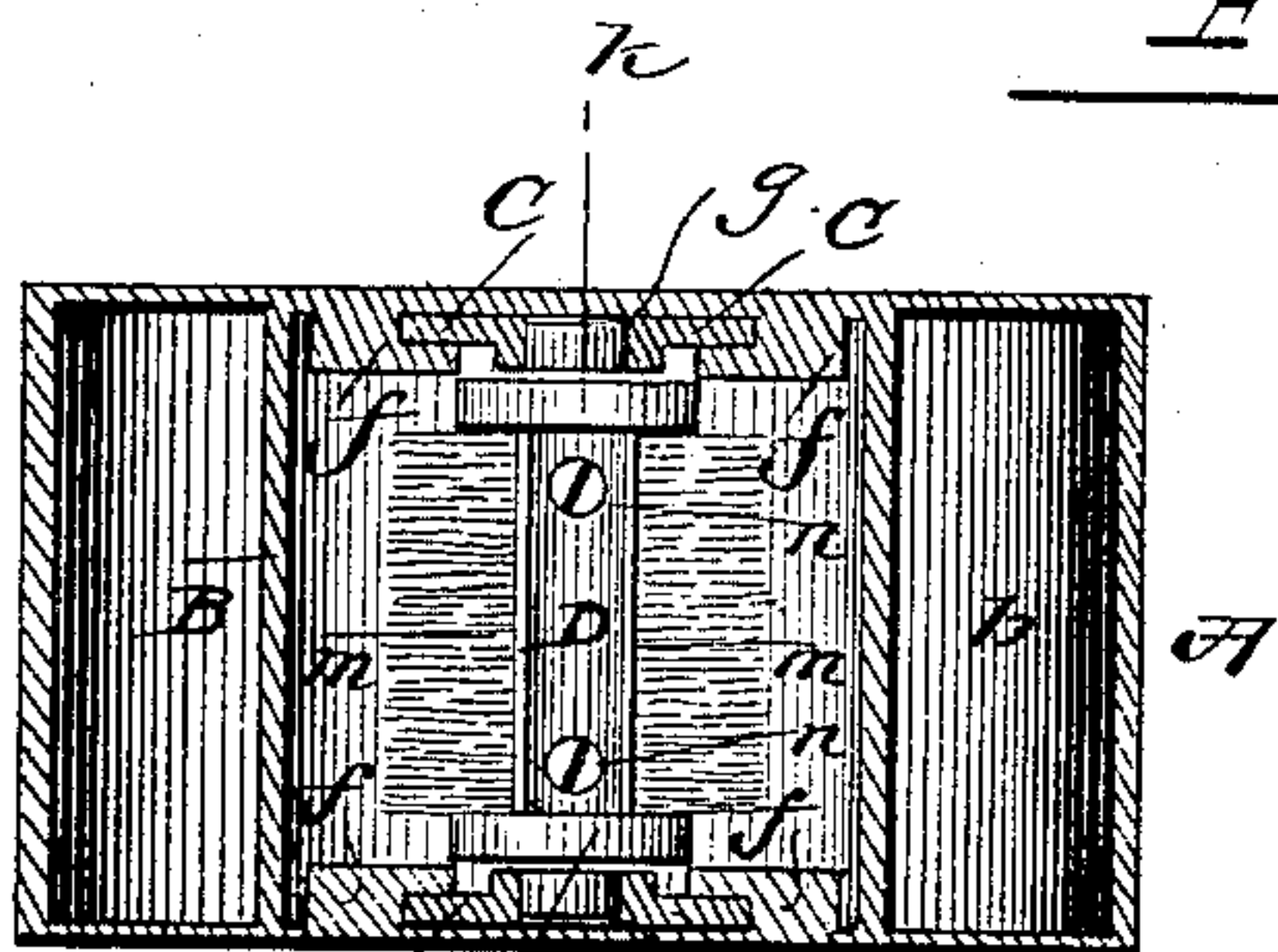


Fig. 3.

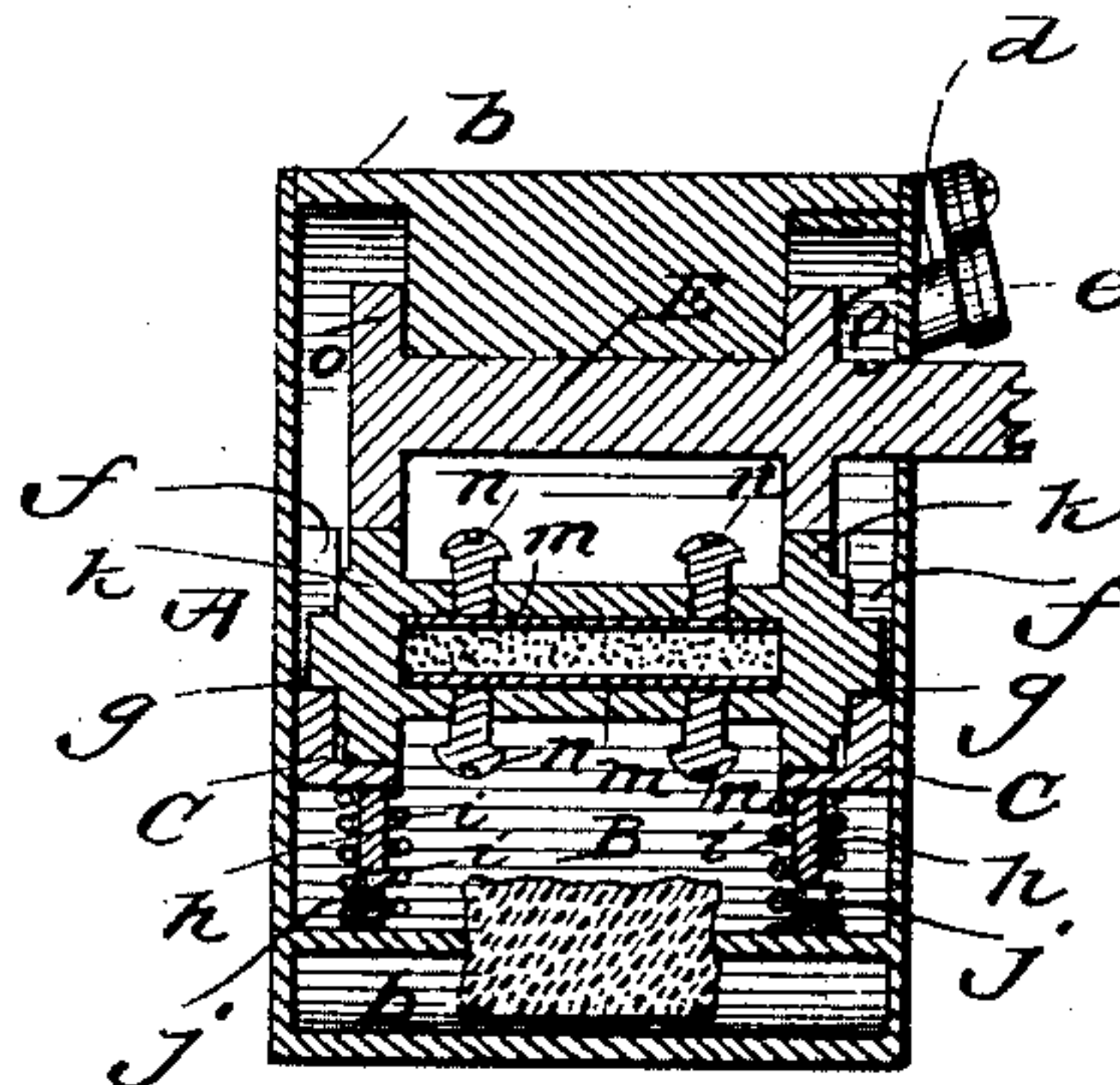


Fig. 4.

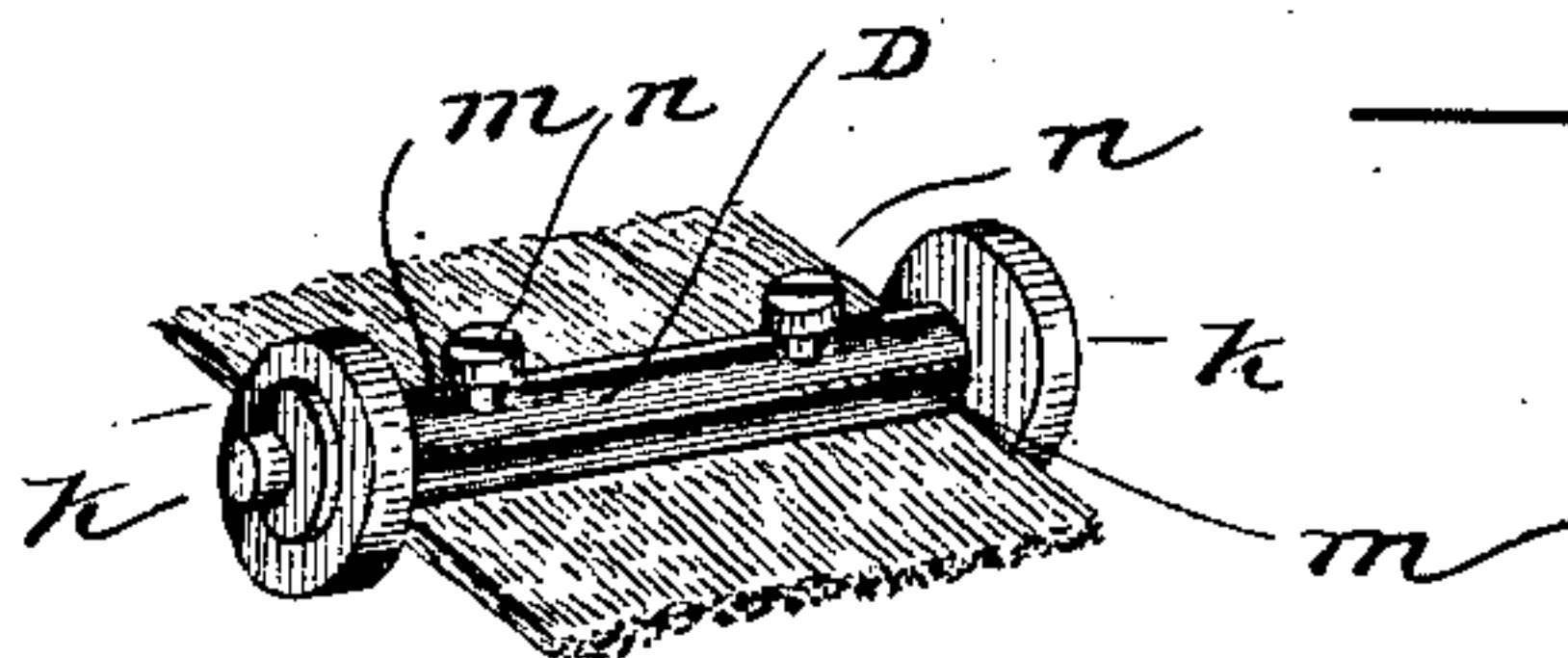


Fig. 5.

WITNESSES

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# UNITED STATES PATENT OFFICE

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## CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 315,002, dated April 7, 1885.

Application filed February 6, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ERASTUS L. CLEVELAND, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Axle Lubricators, of which the following is a specification, reference being had to the accompanying drawings.

10 My invention relates to lubricators for bearings, shafting, axles, &c.; and it has for its object to provide improved means for supplying the lubricant to the shaft or axle.

15 A further object of the invention is to provide a lubricator which shall be cheap and simple in its construction, effective in its operation, and one that will not be likely to get out of order.

20 With these ends in view the invention consists in the improved construction and combinations of parts, hereinafter fully described, and pointed out in the claims.

25 In the drawings, Figure 1 is a side elevation of a lubricator constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a horizontal section, Fig. 4 is a central vertical transverse section, and Fig. 5 is a detail view, of the brush-shaft and brush.

30 In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents a box or casing, which is preferably constructed of metal, said casing being substantially rectangular in form, and having at its upper end oppositely-extending flanges *a*, provided with holes or openings for the passage of screws or their equivalent, for securing a cap or cover, *b*, in place. The said box or casing A is divided  
40 into two compartments or chambers by a wall, B, which extends from side to side, said wall being of any suitable form, in the present case substantially U shape, the outer chamber, *b*, serving as the oil-chamber, while the chamber  
45 *b'* contains the brush for lubricating the shaft or axle, said chamber *b* being open at its upper end.

50 Upon one side of the box or casing A are formed holes or openings *c*, which communicate with the oil-chamber *b*, and in said holes

or openings are fitted short pipes or tubes *d*, having on their upper sides, at the outer ends thereof, upwardly-extending ears, to which are pivoted caps or covers *e*, adapted to close said openings and be thrown to one side, so that oil may be supplied to said chamber *b*. 55

In the lower end of the partition-wall B is provided a slot or opening in which is fitted wicking or waste which projects into both the chambers *b b'*. 60

Upon the inner faces of the side walls of the chambers *b'* are provided guides or ways *f*, in which slide plates C, having circular recesses or openings *g*.

65 At the lower ends of the plates C are provided downwardly-extending pins *h*, which fit in spiral springs *i*, held in place on the bottom of chamber *b'* by upwardly-extending pins *j* located thereon.

D represents the brush-shaft, which is provided near each end with a friction-disk, *k*. The said shaft D is provided between the friction-disks *k* with an opening extending entirely through the same, and holes or openings are made in said shaft, which openings communicate with the longitudinal openings *l*. 75

In the opening *l* are plates *m*, having side flanges, which bear against the sides of the brush-shaft, and between said plates is fitted the brush, which may be of bristles, wire, or other material, and said brush is clamped in the hole or opening *l* by means of screws *n*, which work in the openings mentioned and bear against the plates *m*. The brush-shaft is located in the recesses or openings in the plates C, and as there are springs located beneath the same, it will be seen that a yielding bearing is afforded said brush-shaft. 80

E represents a shaft or axle, which is formed with friction-disks *o*, adapted to engage the friction-disks *k* on the brush-shaft, and said shaft is held in place and in engagement with said friction-disks by means of a box or bearing-bracket extending downwardly from the under side of the top or cover and having a recess to receive the shaft. 85

The operation is as follows: The axle or shaft E, in revolving through the medium of the friction-disks, imparts motion to the brush-shaft, which revolves, and the ends of the 100



brush run against the wicking and take therefrom a quantity of oil, the oil being drawn to the top of the wicking by capillary attraction. The ends of the brush bear or rub against the  
5 axle or shaft E in revolving, and thus lubricate the same.

The above-described lubricator is simple in its construction, effective in its operation, strong and durable, and not likely to get out  
10 of order.

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

1. The brush-shaft having an elongated opening, and plates having side flanges located in  
15 said opening, in combination with a brush located between said plates, and set-screws adapted to bear against the latter, substantially as set forth.

2. The brush-shaft having an opening and clamping-plates located in said opening, in  
20 combination with a brush located between said plates, substantially as set forth.

3. The lubricator consisting of a box divided by a partition-wall into two chambers,  
25 the outer chamber surrounding the lower end and sides of the inner compartment, an opening in the partition-wall, and a wick located in said opening, in combination with a brush  
30 and shaft located in the inner chamber, substantially as set forth.

4. The brush-shaft and brush, in combination with a lubricating box or casing divided  
35 into two compartments and a wicking establishing communication between the same, substantially as set forth.

5. The combination, with the box or casing divided into two compartments, of yielding  
40 bearings within the inner compartments, a brush-shaft and brush, and a wicking located

in a slot in the partition-wall, substantially as set forth.

6. The combination, with the box or casing divided into two compartments, of the  
brush-shaft and brush mounted in yielding 45 bearings located within the inner casing, said brush-shaft being adapted to be revolved by the shaft or axle to be lubricated, substantially as set forth.

7. The combination, with the box or casing divided into two compartments, and a  
wick located in the slot of the partition-wall, of the brush-shaft located in yielding 50 bearings, the brush, and friction-disks on said brush-shaft adapted to engage friction-disks 55 on the axle or shaft to be lubricated, substantially as set forth.

8. In a lubricator, the combination, with a box or casing, of a brush-shaft and brush, said  
brush-shaft being mounted in yielding bear- 60 ings within the casing, and friction-disks on said brush-shaft adapted to be revolved by disks on the shaft to be lubricated, substantially as set forth.

9. The combination, in a lubricator, with a  
box or casing divided into two compartments, 65 and a wick establishing communication between the same, of a brush-shaft carrying a brush, and located in yielding bearings within the inner compartment of the box or casing, 70 friction-disks on said brush-shaft, and an axle having disks to engage the same, substantially as set forth.

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

ERASTUS LARNARD CLEVELAND.

Witnesses:

P. M. CUSHING,  
W. P. HATCH.