

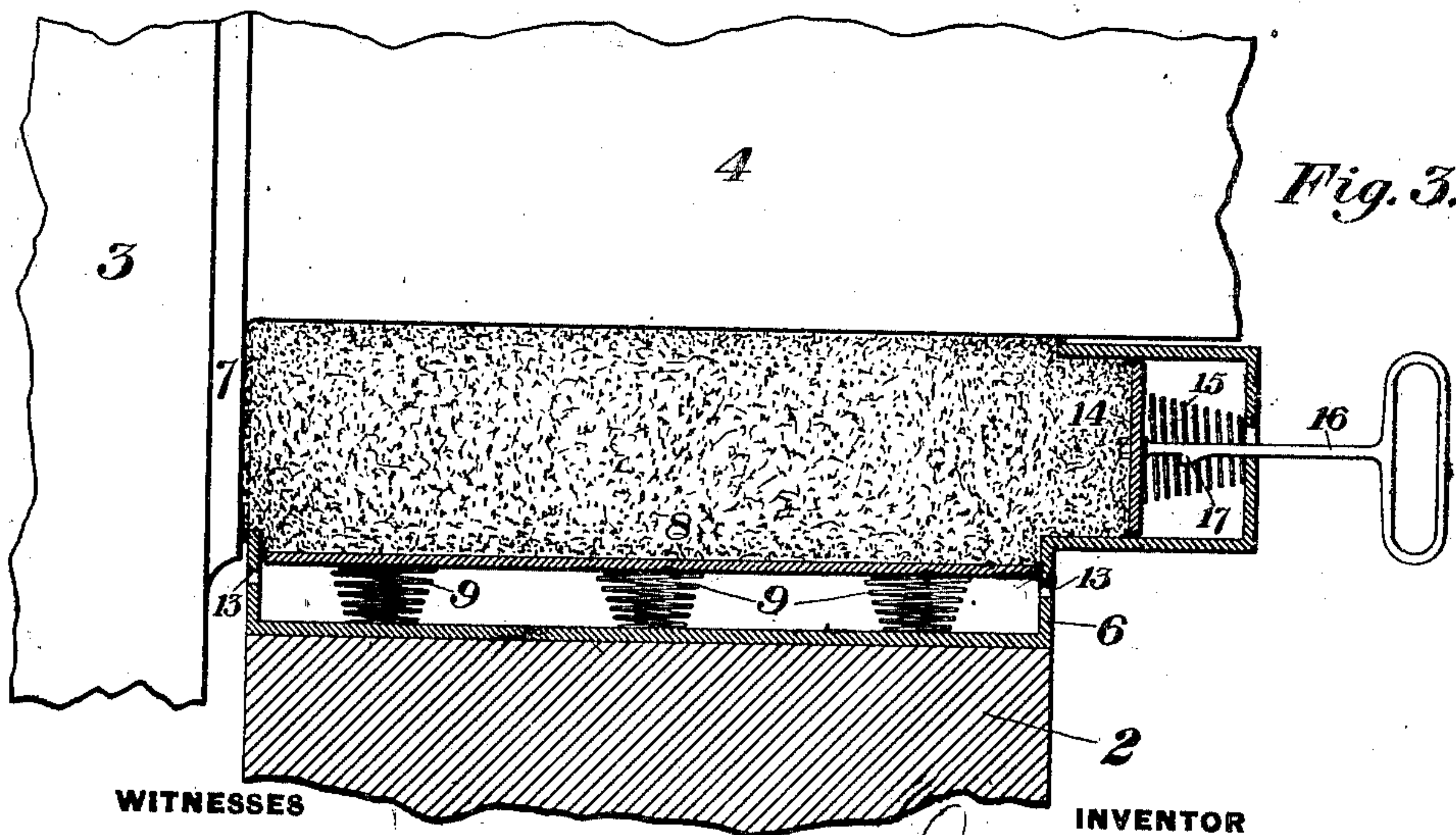
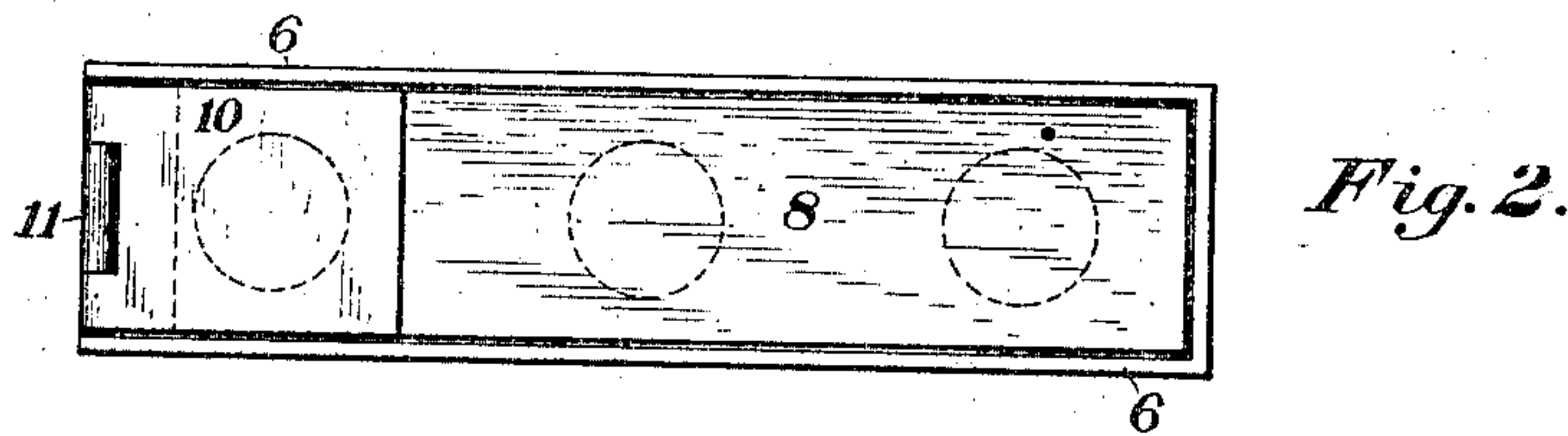
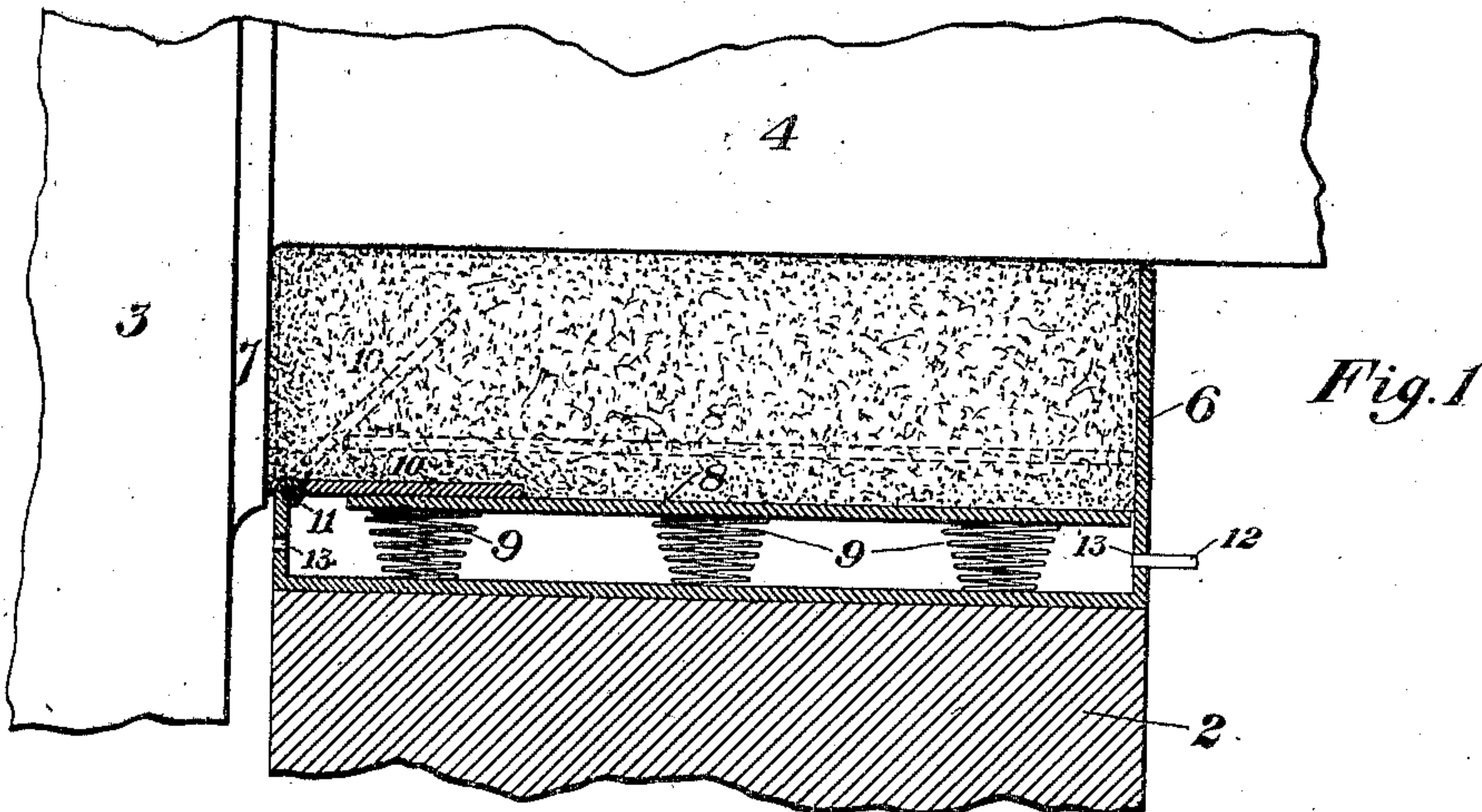
(No Model.)

2 Sheets—Sheet 1.

J. VAN DEVELDE.
GREASE BOX.

No. 436,679.

Patented Sept. 16, 1890.



WITNESSES

Thomas H. Baskett
Henry L. Gill.

INVENTOR

John Van Develde

(No Model.)

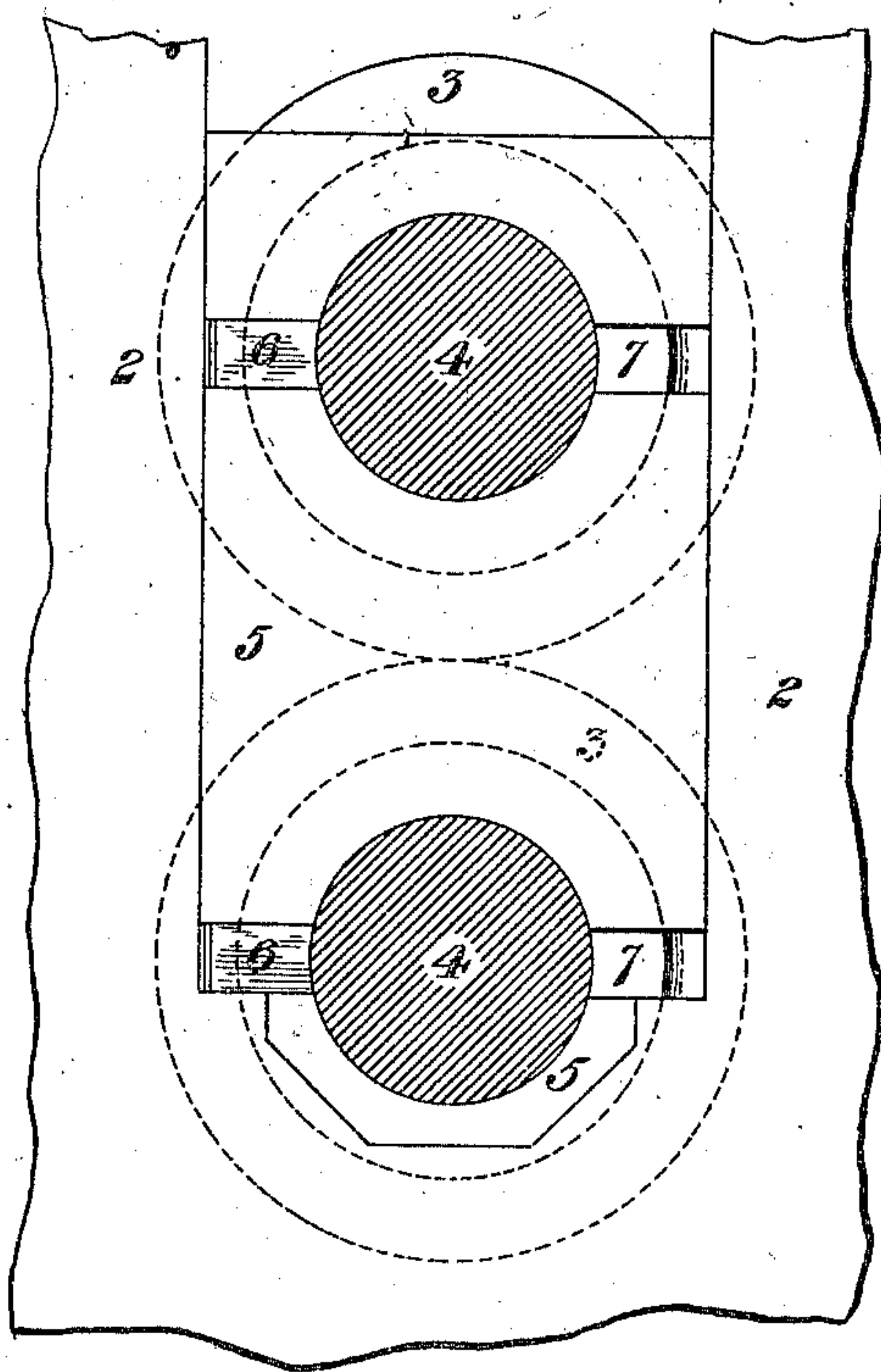
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Fig. 4.



WITNESSES

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his Attorneys

UNITED STATES PATENT OFFICE.

JOHN VAN DEVELDE, OF CLEVELAND, OHIO, ASSIGNOR TO THE STANDARD OIL COMPANY, OF OHIO.

GREASE-BOX.

SPECIFICATION forming part of Letters Patent No. 436,679, dated September 16, 1890.

Application filed March 15, 1890. Serial No. 343,939. (No model.)

To all whom it may concern:

Be it known that I, JOHN VAN DEVELDE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Grease-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a horizontal sectional view showing the application of my improved device to the neck of a roll. Fig. 2 is a plan view of the grease-box. Fig. 3 is a view similar to Fig. 1, showing a modified construction of the device. Fig. 4 is an end view of the rolls and their housings provided with my improvement.

Like symbols of reference indicate like parts in each.

The object of my invention is to provide means for lubricating the necks and bearing-surfaces of rolls and similar articles of machinery. The difficulty which attends the placing of grease on the bearings of the rolls or in special grease-boxes is that the friction soon wears away the grease from direct contact with the bearings, leaving the latter dry and necessitating constant renewal of the lubrication. According to my invention I provide a grease-box with apparatus which by positive action forces the grease against the bearing-surfaces to be lubricated and keeps it at all times in close contact therewith.

Referring to Figs. 1, 2, and 4, 2 represents the housings of a set of rolls 3 3, and 4 4 the necks of the rolls. 5 5 are the usual brasses, and 6 6 are grease-boxes, one of which is set on the brass at the side of the neck of each roll and is formed with an open side and an open end, the open side being next to the neck of the roll and the open end being next to the usual collar 7 at the base of the neck. 8 is a plate set inside the grease-box and backed by springs 9, which tend to force it toward the neck of the roll. 10 is a plate which is hinged to the box at 11, and which normally rests against the face of the plate 8, as shown in Fig. 1.

The manner of use of the device is as follows:

In charging the box with grease the plate 8 is pushed against the pressure of the springs as nearly to the back of the box as possible, and is confined in such position by any suitable means—for example, by pins 12, which may be inserted through holes 13 at the end of the box—and the plate 10 is pushed against the plate 8. The box is then filled with grease and is placed in position in the housings of the rolls, as shown in Figs. 1 and 4. The pins 12 are then withdrawn, and the tension of the springs 9 forces the plate 8 forward, pressing the grease contained in the box against the neck of the roll, and also tending to force up the plate 10, thereby pressing the grease toward the open end of the box against the collar of the roll.

With this construction it is obvious that the grease is kept constantly in contact with the bearing-surfaces, no matter to what extent the grease may wear away, and the surfaces are therefore kept constantly in lubrication until the box becomes emptied of grease, and the plates 8 and 10 are forced by the springs into their most advanced position.

It will be apparent to those skilled in the art that my invention is susceptible of modification in details of construction and arrangement in many ways. Some of such modifications I illustrate in the drawings. Thus in Fig. 3 I show a device in which the plate 10 is not used, its place being taken by another plate 14, which is set at the end of the box and is provided with an independent spring 15, which exerts on the plate a pressure and imparts to it a tendency to force the grease endwise against the collar of the roll. This plate is preferably provided with a suitable retracting-rod 16, by which it may be pulled back when the box is charged with grease, and with a shoulder 17 on the rod, by which it may be detachably held in its retracted position until the box is ready to be set in place in the housing.

Many other modifications in form and construction within the scope of my invention will suggest themselves to skilled mechanics.

What I claim is—

1. As a device for lubricating roll-necks, journals, &c., the combination, with a box

adapted to contain grease and having an open side and an open end adjacent to the surfaces to be lubricated, of spring-actuated forcing devices pressing on the grease in the box laterally and endwise, substantially as and for the purposes described.

2. As a device for lubricating roll-necks, journals, &c., the combination, with a box adapted to contain grease and having an open side and open end adjacent to the surfaces to be lubricated, of a spring-actuated plate acting on the grease to force the same toward one of the openings of the box, and a second plate movable toward the other opening, substantially as and for the purposes described.

3. As a device for lubricating roll-necks, journals, &c., the combination, with a box

adapted to contain grease and having an open side and open end adjacent to the surfaces to be lubricated, of a spring-actuated plate acting on the grease to force the same toward one of the openings of the box, and a second plate pivoted and situate on the outer side of the spring-actuated plate and movable thereby laterally to force the grease toward the other opening, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 8th day of March, A. D. 1890.

JOHN VAN DEVELDE.

Witnesses:

W. B. CORWIN,

THOMAS W. BAKEWELL.