

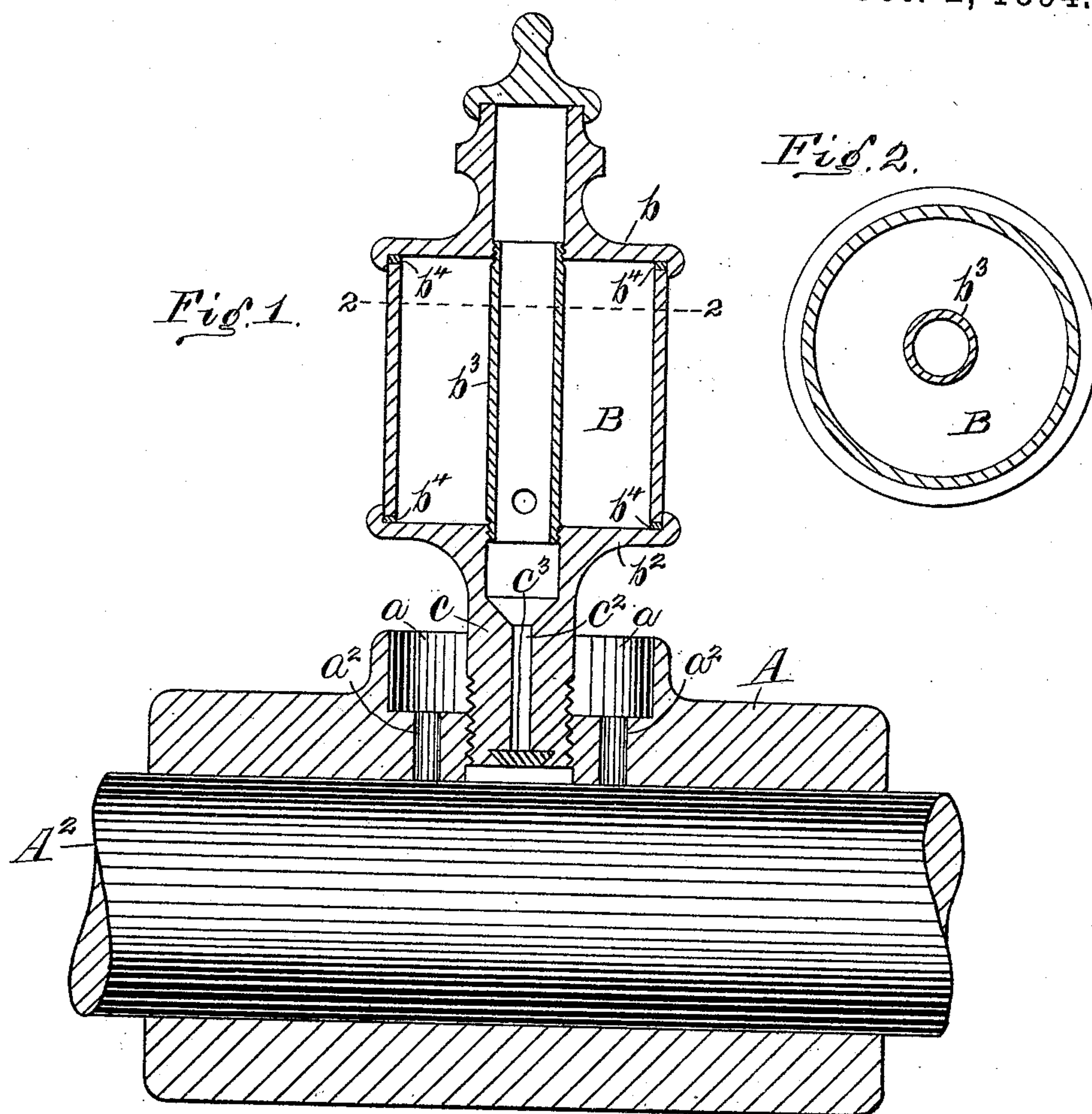
(No Model.)

2 Sheets—Sheet 1.

A. F. GREGG.
HOT BOX INDICATOR AND OILER.

No. 526,921.

Patented Oct. 2, 1894.



Witnesses

J. C. Thomas
Chas. J. Ruffin.

Inventor

Andrew F. Gregg
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Attorney

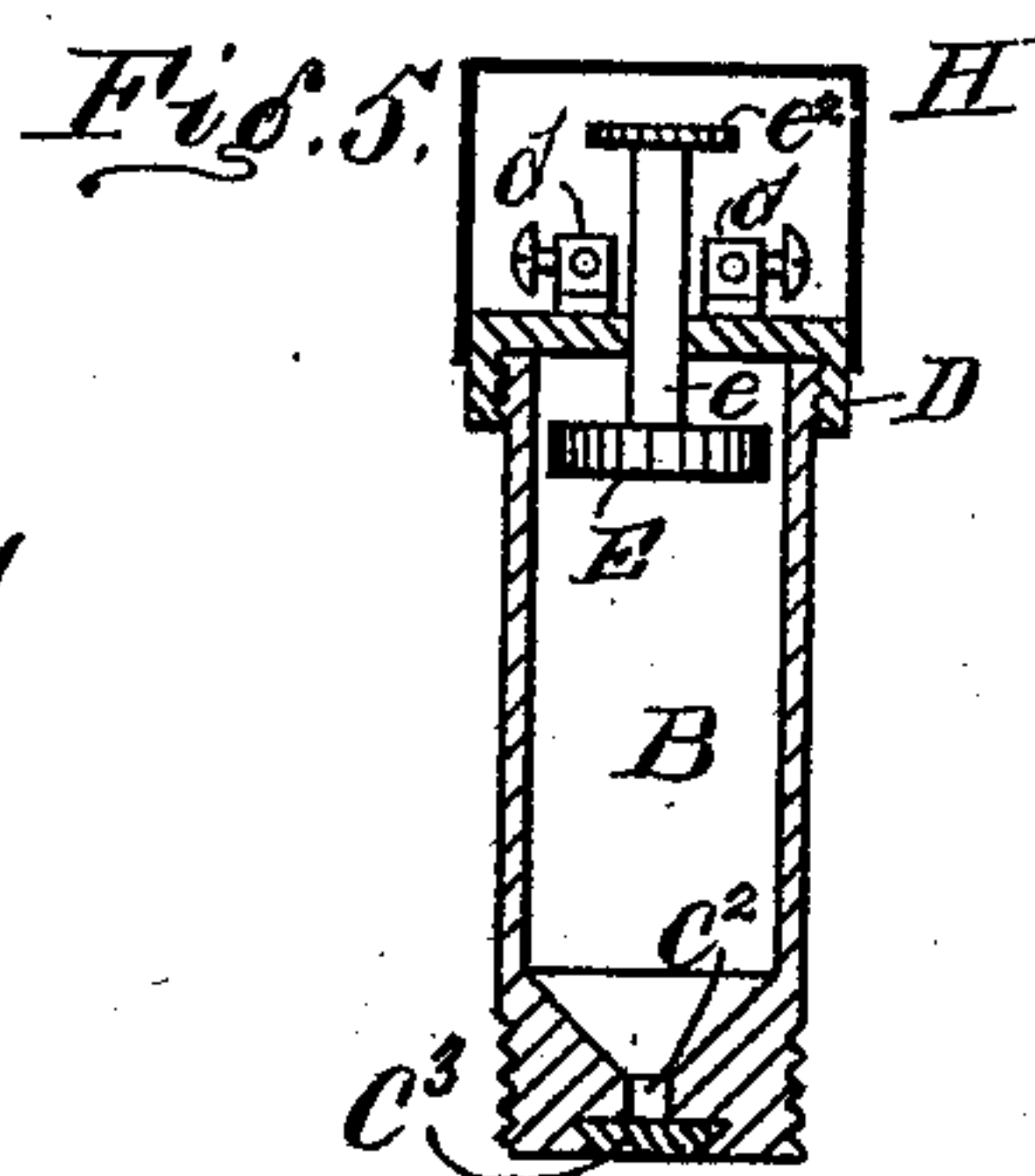
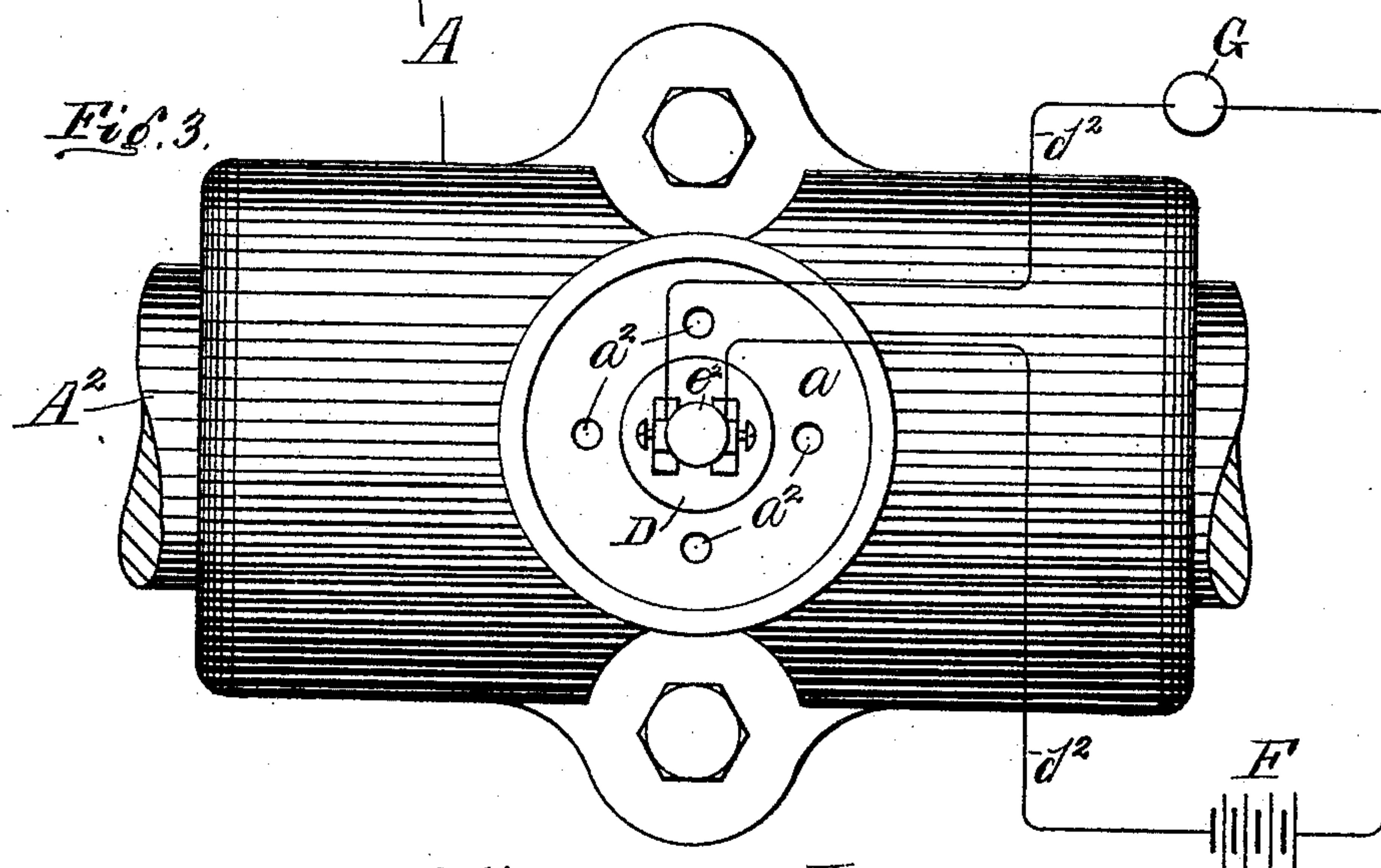
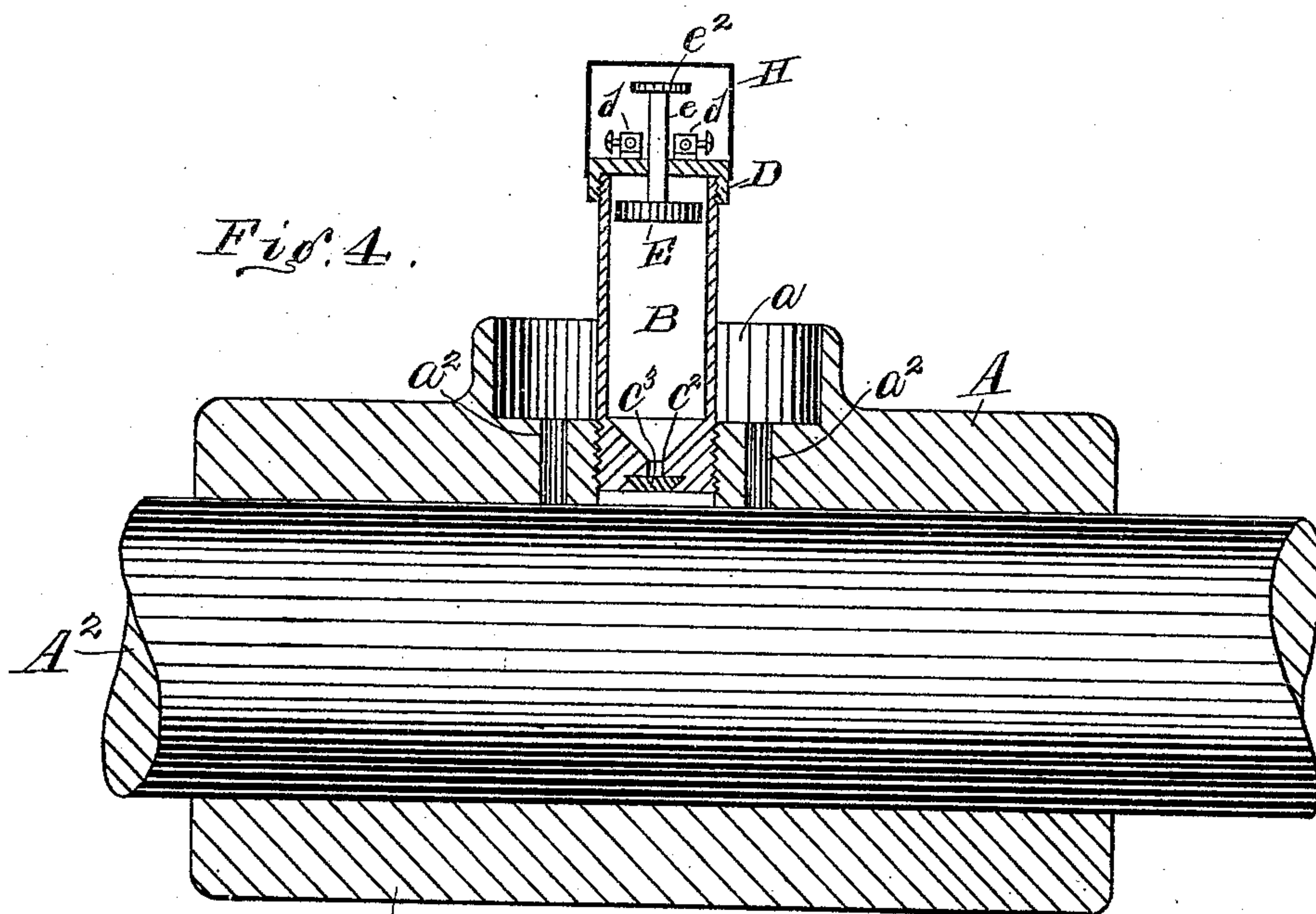
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UNITED STATES PATENT OFFICE.

ANDREW F. GREGG, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
EDWIN S. HAVENS, OF SAME PLACE.

HOT-BOX INDICATOR AND OILER.

SPECIFICATION forming part of Letters Patent No. 526,921, dated October 2, 1894.

Application filed April 25, 1894. Serial No. 508,951. (No model.)

To all whom it may concern:

Be it known that I, ANDREW F. GREGG, a citizen of the United States, residing at Cincinnati, Hamilton county, State of Ohio, have
5 invented certain new and useful Improvements in Hot-Box Indicators and Oilers, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide a
10 suitable device which may be attached to the journal-box of a shaft, which device shall act as an indicator and automatic oiler so soon as said box becomes overheated and heated to a
15 predetermined degree of heat, as will more fully hereinafter appear.

In the accompanying drawings:—Figure 1, is a vertical section through a journal-box provided with my invention in an operative position, and Fig. 2, is a transverse section on
20 dotted line 2, 2, of Fig. 1. Fig. 3, is a top view of a journal-box provided with my invention in an operative position to automatically give an alarm or signal when the box has become
25 overheated, and Fig. 4, is a vertical section through the device shown in Fig. 3. Fig. 5, is a vertical section through the automatic oiler and signaling device shown in Figs. 3 and 4, detached from the journal-box.

In the accompanying drawings, A, represents a journal-box; *a*, represents the ordinary oil-chamber within which the waste or
30 other packing is placed, and *a*² represents the oil vents for lubricating the shaft A². The construction just described is old and well-known.

The primary feature of my invention consists in attaching to some convenient point on the journal-box, an oil-receptacle having a hollow shank or support screwed or otherwise
40 suitably connected to said box, said hollow shank having a plug of fusible metal or material therein, which latter will melt at a predetermined degree of heat, and permit the oil in the receptacle to run down through said
45 shank for the purposes of cooling and lubricating said box and its shaft.

When constructed as shown in Fig. 1, the outer wall of the oil-receptacle, B, is preferably formed of glass with a top casting *b* and
50 a bottom casting *b*², the latter having an integral hollow shank, C, said castings being con-

nected together and to said glass casing by means of the screw-threaded tube *b*³,—a suitable packing *b*⁴ being interposed between said glass casing and the end castings to render
55 the receptacle thus formed oil-tight. The tube, *b*³, is perforated or slotted to permit the oil to pass through it. The top of the casting *b* is preferably provided with a cap or cover, *b*⁵. While the aforescribed construction of an oil-receptacle is preferred, in certain cases, yet I do not limit my invention to any specific form or construction of an oil chamber.

Within the passage, C², of shank C, is
65 packed the plug of fusible metal or material, C³, which latter is preferably secured therein near the lower end portion of said shank. In the drawings I have illustrated the passage C² as being enlarged at its mouth, of a dove-
70 tail configuration in cross-section, which construction of opening is well adapted to receive and retain the fusible metal packed therein.

It will be readily understood that, so soon
75 as the journal-box becomes heated up to a degree sufficient to melt the fusible material, C³, the oil within the receptacle B will run down through the passage C² onto the shaft and thus automatically oil the latter and its
80 boxing; and, so soon as the oil is run out of the glass receptacle, the engineer, or other person in charge of the machinery will see at a glance that the box, to which this oiler and indicator is attached, has become heated
85 in excess of a normal degree, and can at once remedy the defect before the box has become burned out or any damage incurred.

In the construction afore described, the overheating of the box is detected by sight.
90 In Figs. 3, 4 and 5, I have shown my improved oiler and indicator as being provided with an electrical device to operate an annunciator or alarm, or both if so desired. When constructed as shown in the aforesaid Figs.
95 3, 4 and 5, the oil-receptacle, B, consists of a hollow tube, the opening within said tube being contracted at its lower end portion, said contracted passage opening, C², having the fusible metal, C³, therein same as in the
100 construction shown in Fig. 1.

D, represents a cap which is screwed or

otherwise suitably connected to the top of tube, B, said cap having a central opening through which the stem *e* of float E passes, said stem having a top metal cap or projecting lug *e*². Upon the cap D are mounted the two metallic poles, *d*, to which the electric wires *d*² are connected, said wires leading off to a suitable battery, F, and an alarm or indicator, G, in the manner usually incident to such an electrical device. If the cap D be a metallic one, the poles *d* will be suitably insulated therefrom, in any desired manner.

H, represents a cap for covering and protecting the electrical connections just described, which cap is shown removed in Fig. 3.

The operation of the device shown in Figs. 3 and 4, is as follows: So soon as the box, A, becomes heated to a degree sufficient to melt the fusible material, C³, the oil within tube B will run out in the manner aforestated; and, the lowering of the volume of oil within its receptacle will cause the float E to descend, and with it will descend the metal cap *e*² until the latter comes into contact with the two electric poles *d*, at which instant the electric current will operate to start the signal or annunciator connected to said electrical circuit. A single annunciator may be arranged for each journal-box, or a number of such boxes may be connected with one annunciator, as desired.

The advantages of my invention are apparent, being automatic and reliable in operation and cheap of manufacture. The device may be readily attached to any box by simply tapping the latter at any desired point and screwing the shank of the oil receptacle therein. The primary advantage of my invention consists in the means afforded for detecting and oiling a heated journal-box before it becomes heated to such a degree as to render it worthless. In addition to the saving of expense which would otherwise have to be incurred in

re-babbitting the box, if burned out, I am enabled, by the aid of my invention, to save much valuable time which has heretofore been lost by the shutting down of machinery which is necessarily incurred every time a box is burned out.

My invention is applicable for use in all factories or other places where machinery is used, and is especially applicable to railroad cars for detecting heated boxes, in the manner aforestated.

I am aware that it is not new to employ fusible metal for the purpose of retaining a liquid within a receptacle to be discharged therefrom by heating said fusible material sufficiently to melt it; but

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

1. In combination with a journal-box, an oil receptacle having a hollow shank with a fusible plug therein, said shank being secured within said box, an electrical alarm device, and a float within said oil receptacle, said parts being so located and constructed with reference to each other as that said alarm will be operated by the lowering of the float, as set forth.

2. The combination of journal-box A, oil receptacle B attached to and within the shell of said box, said receptacle having discharge passage C² with fusible material C³ therein, cap D, float E having a stem *e* projecting through an opening in said cap, metallic flange *e*² attached to the opposite end of said stem, electric poles *d* supported in a vertical plane beneath said flange, and wires leading off from said poles to a suitable battery and annunciator, substantially as set forth.

ANDREW F. GREGG.

Witnesses:

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