

No. 612,322.

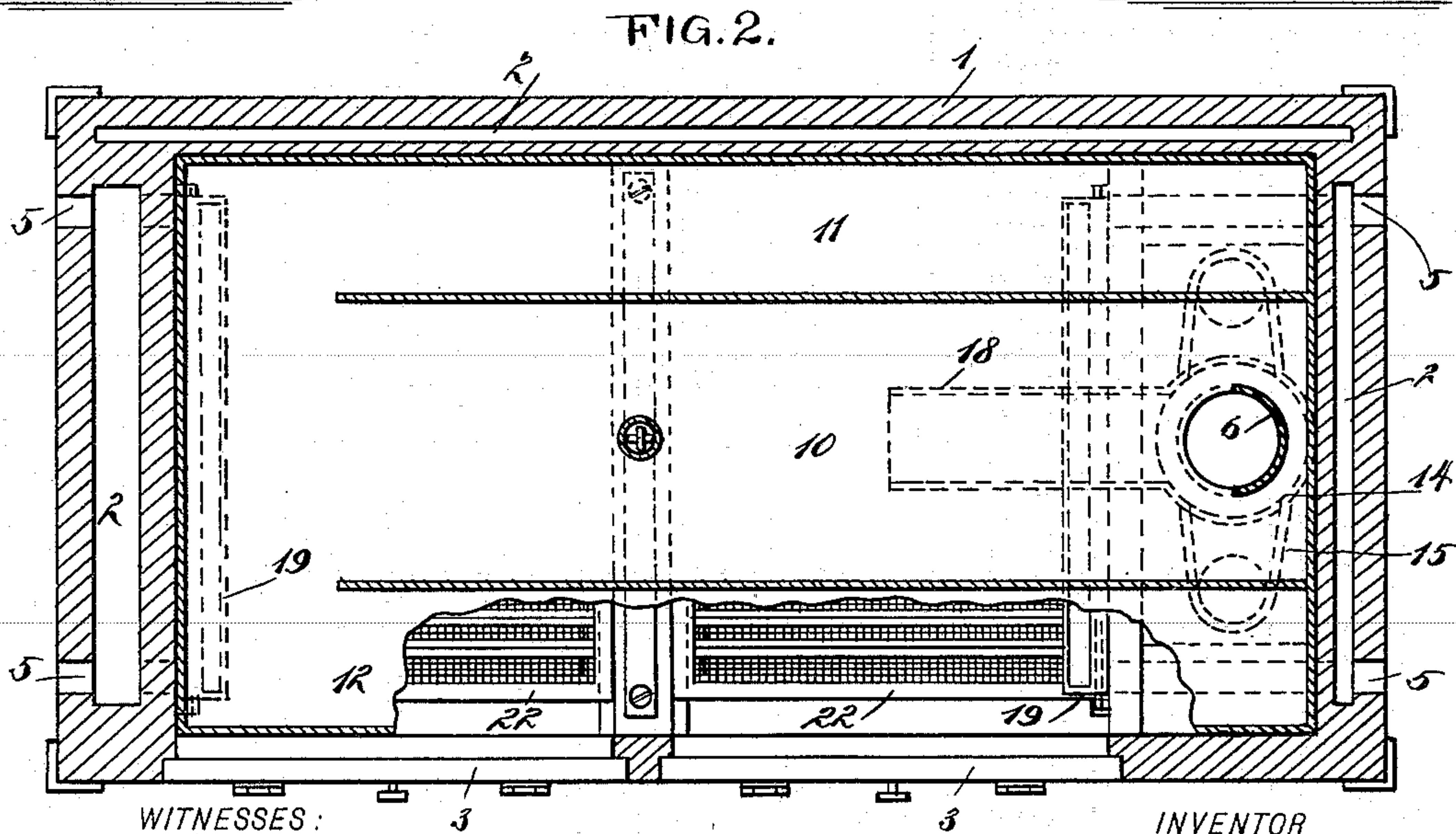
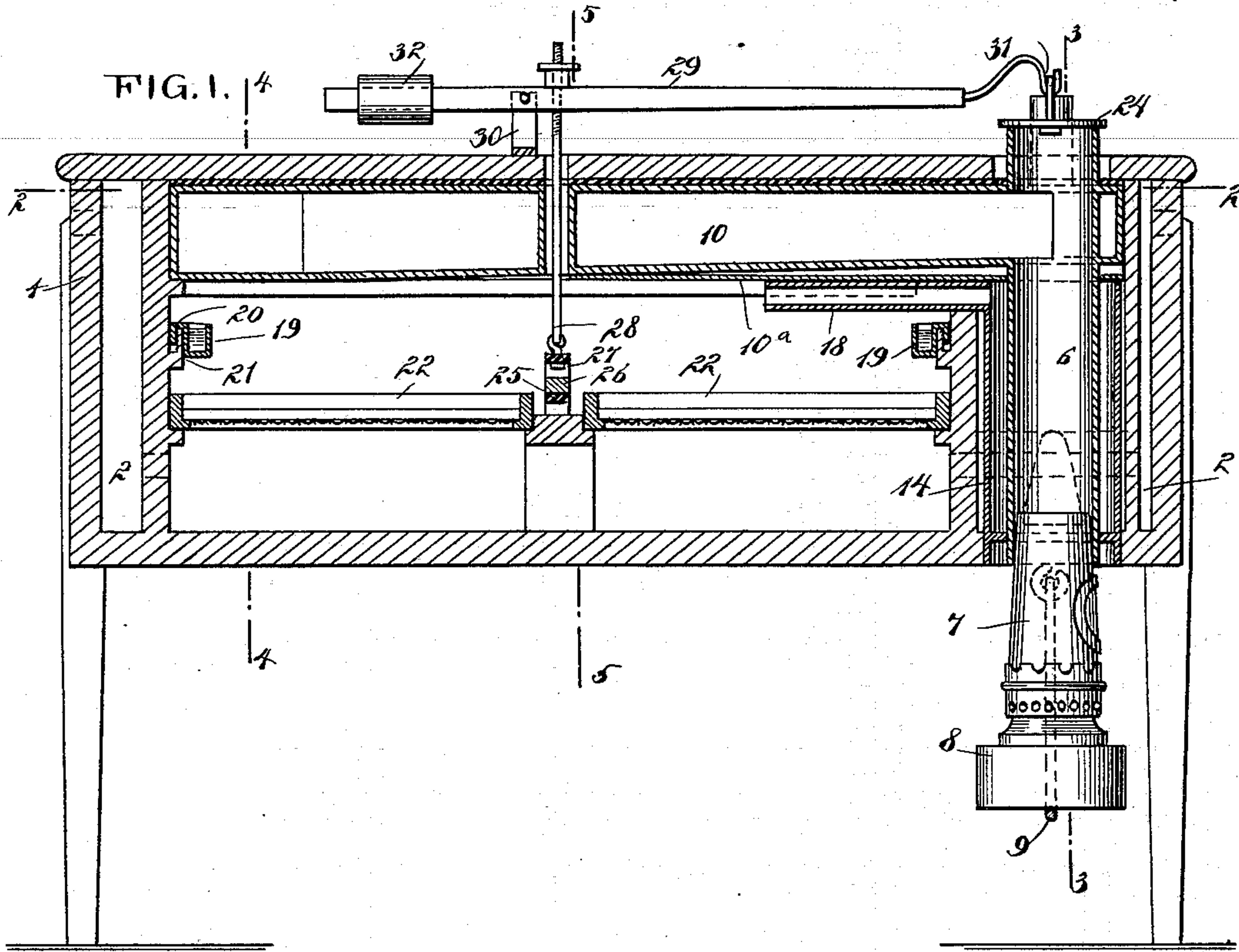
Patented Oct. 11, 1898.

E. B. FISHER.  
INCUBATOR.

(Application filed Jan. 28, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

*Donn Twitchell*  
*C. R. Ferguson*

INVENTOR

*E. B. Fisher*

BY

*Munn*

ATTORNEYS.

**No. 612,322.**

**Patented Oct. 11, 1898.**

**E. B. FISHER.**  
**INCUBATOR.**

(Application filed Jan. 28, 1898.)

(No Model.)

**2 Sheets—Sheet 2.**

FIG. 3.

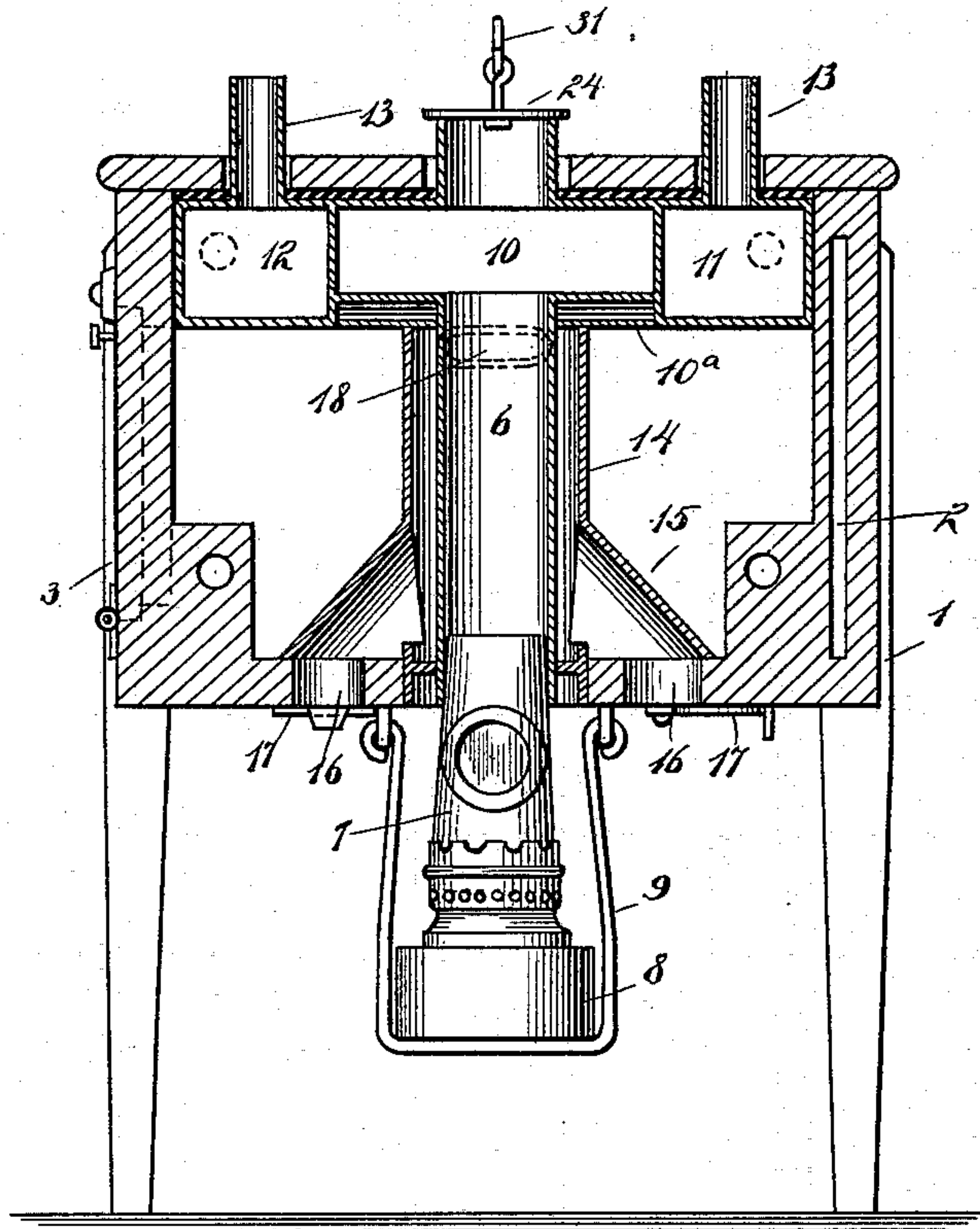


FIG.4.

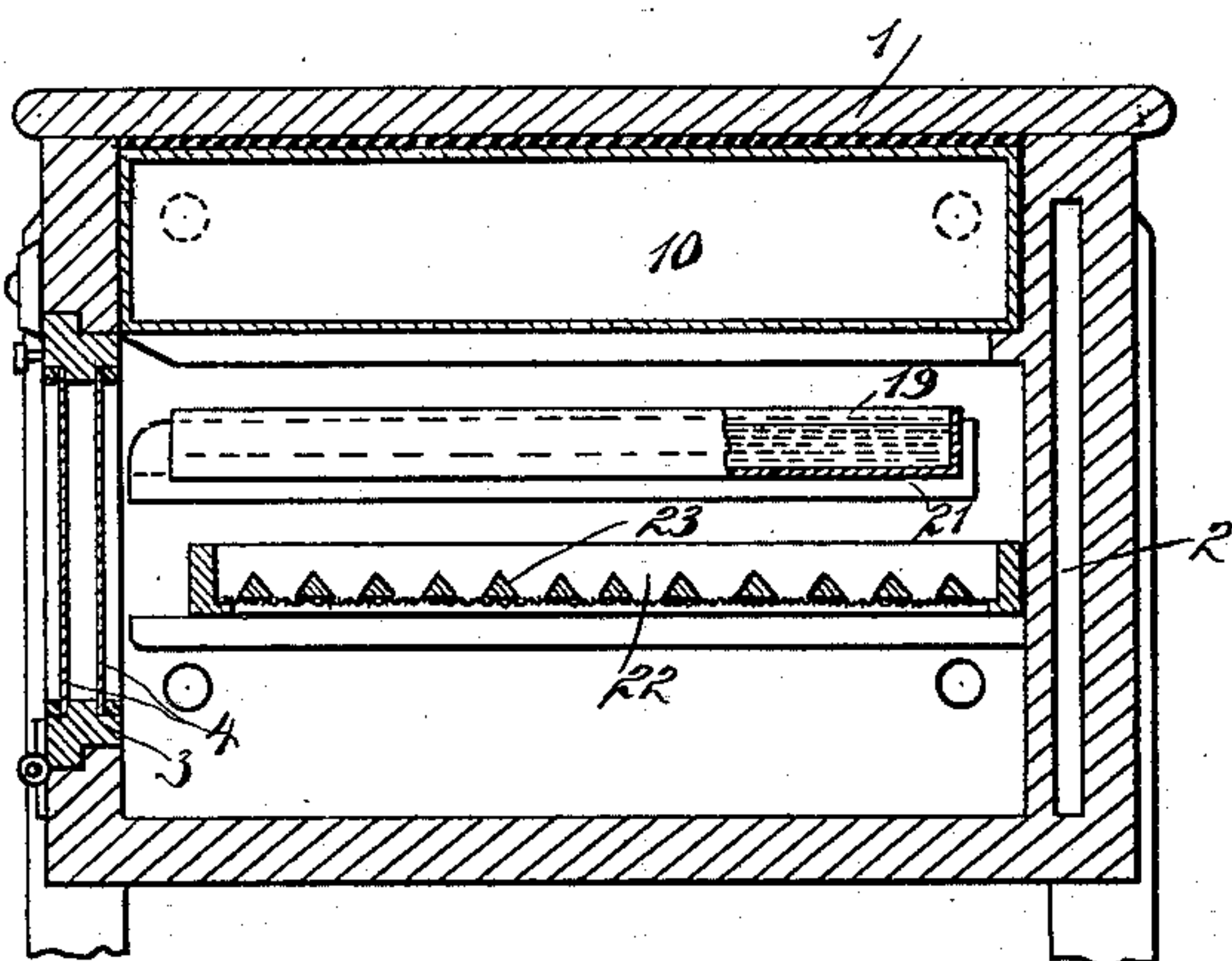
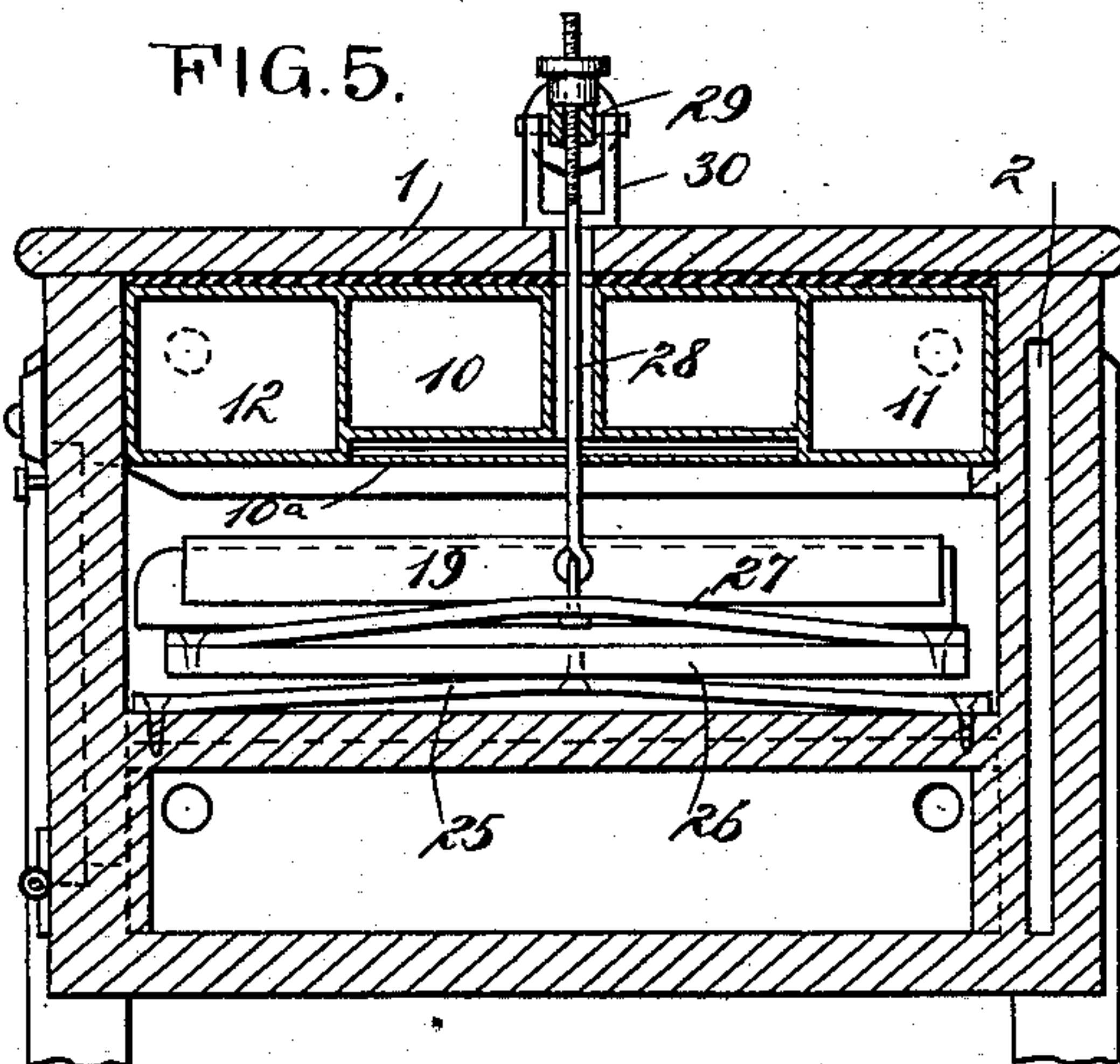


FIG. 5.



WITNESSES :

Donn Twitchell  
C. R. Ferguson

INVENTOR

*E. B. Fisher.*

BY

man/3

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

EDGAR B. FISHER, OF UNITED, PENNSYLVANIA.

## INCUBATOR.

SPECIFICATION forming part of Letters Patent No. 612,322, dated October 11, 1898.

Application filed January 28, 1898. Serial No. 668,274. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR B. FISHER, of United, in the county of Westmoreland and State of Pennsylvania, have invented a new and Improved Incubator, of which the following is a full, clear, and exact description.

This invention relates to incubators for the hatching of eggs; and the object is to provide an incubator that shall be comparatively simple in its construction and so constructed that an even temperature may be maintained therein.

I will describe an incubator embodying my invention, and then point out the novel features in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of an incubator embodying my invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 1. Fig. 4 is a section on the line 4 4 of Fig. 1, and Fig. 5 is a section on the line 5 5 of Fig. 1.

The incubator comprises a casing 1, having double walls providing a dead-air space 2, which air by becoming somewhat heated will prevent changes of temperature within the incubator, which otherwise might be caused by the changes in the surrounding atmosphere. The casing is provided at one side with swinging doors 3, which are each provided with double glass panels 4, having an air-space between them. The air-spaces at the ends of the casing have outlets 5 for foul air.

Extended upward through one end of the casing is a heat-conducting flue 6, into the lower portion of which the chimney 7 of the lamp 8 extends. This lamp 8 is supported by a hanger 9, having swinging connection with the bottom of the casing. The lower portion of this hanger is designed to engage against the under side of the lamp, as clearly indicated in Fig. 3. In the upper portion of the casing is a hot-air tank comprising a central chamber 10 and side chambers 11 12, which communicate with the central chamber. The hot-air flue 6 communicates with the central chamber, and the said central chamber is shallower at the end connecting with the hot-air

flue than at the opposite end. The object of this construction is to provide for maintaining an even temperature throughout the length of the tank—that is, the air when first admitted will be considerably hotter than when it leaves the opposite end; but as there is less hot air at the entrance end and also being a greater distance from the eggs the air below the tank will be evenly heated. Underneath the shallow portion of the central chamber is a plate 10<sup>a</sup>, which is on the same plane as the bottoms of the side chambers.

The hot air passes into the chamber 10 and then into the chambers 11 and 12 and escapes through the flues 13. Surrounding the flue 6 and spaced therefrom is a jacket 14, having a funnel-like base 15, secured to the bottom of the casing, and air is admitted to this jacket 14 through ports 16 in the bottom of the casing. These ports may be controlled by valves or gates 17. From the upper portion of the jacket 14 a flattened conduit 18 leads into the casing. This conduit 18 is designed to conduct air into the casing to absorb the moisture necessary to be circulated for the proper hatching of the eggs. The moisture is supplied from water contained in troughs 19, arranged in the ends of the casing. As here shown, these troughs 19 have downwardly-extended flanges 20, which engage against brackets 21 on the end walls of the incubator. By this construction the water-troughs may be moved outward and inward when necessary.

Removably placed in the incubator are egg-trays 22, each having a sieve-like bottom and each provided with ribs 23, between which the eggs are placed. When the trays are in position, there will be a space between their ends and the adjacent walls of the incubator, through which the hatched chickens may drop to the floor below.

To regulate the heat-supply I employ a thermostat for operating a damper 24, normally resting on the upper open end of the flue 6. This thermostat consists of a hard-rubber strip 25, secured at its ends to a suitable support, and to the center of this strip 25 a wooden strip 26 is attached, and to this wooden strip the ends of another strip 27, of hardened rubber, are attached. From the center of this strip 27 a rod 28 extends upward through the top of the incubator and con-



nects with a lever 29, fulcrumed on the up-  
right 30. The forward end of this lever 29  
has a hook connection 31 with a ring on the  
damper 24, and rearward of the fulcrum-point  
5 the lever 29 is provided with a weight 32.  
Should the heat in the incubator become ex-  
cessive, the strips 25 and 27 will be expanded,  
releasing the stress on the lever 29, so that  
the weight 32 may swing the same in a direc-  
10 tion to lift the damper 24 from the flue 6, so  
that a portion of the hot air will escape into  
the outer atmosphere. As the temperature  
lowers the rubber strips will of course con-  
tract, and thus will draw the lever 29 down-  
15 ward to seat the damper 24 on the flue 6.

The rod 28 is screw-threaded at its upper  
portion where it passes through the lever 29,  
and a nut is engaged with said screw-threaded  
portion above the lever. This nut will pro-  
20 vide for adjusting the thermostat.

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

An incubator comprising a casing, a hot-air  
tank in the upper portion of the casing, par- 25  
titions extending from the hot-air-inlet end  
of said tank nearly to the opposite end, thus  
providing three communicating chambers,  
the center chamber being shallower at the  
hot-air-inlet end than at the other end, a hot- 30  
air flue communicating with the center cham-  
ber, at its shallow end, a jacket surrounding  
the flue, a conduit leading from the jacket to  
the interior of the casing, below the hot-air  
tank, and a water vessel in the casing, sub- 35  
stantially as specified.

EDGAR B. FISHER.

Witnesses:

WM. JOHNSTON,  
C. L. MARKS.