

May 10, 1932.

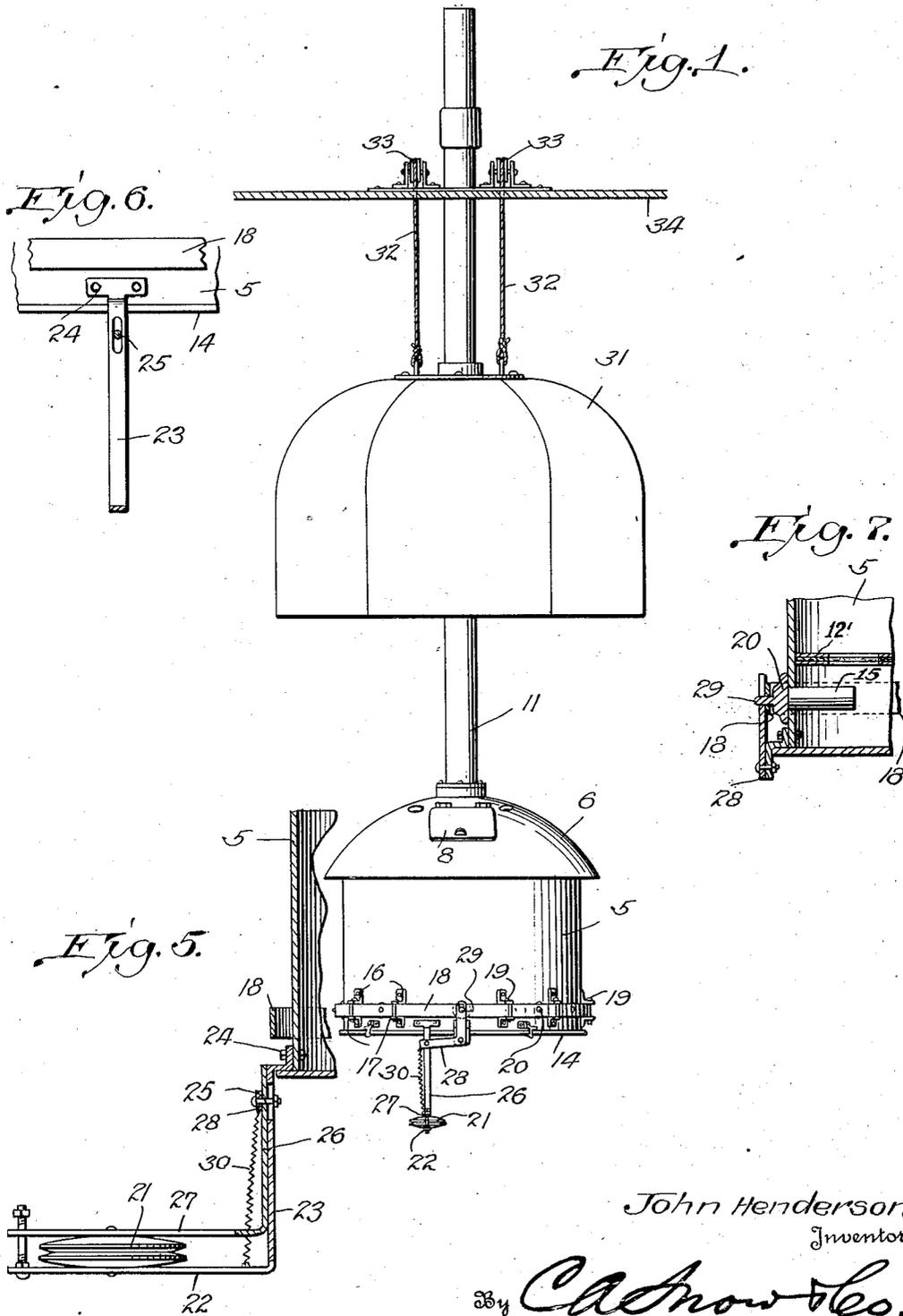
J. HENDERSON

1,857,544

BROODER STOVE

Filed April 28, 1930

2 Sheets-Sheet 1



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Fig. 2.

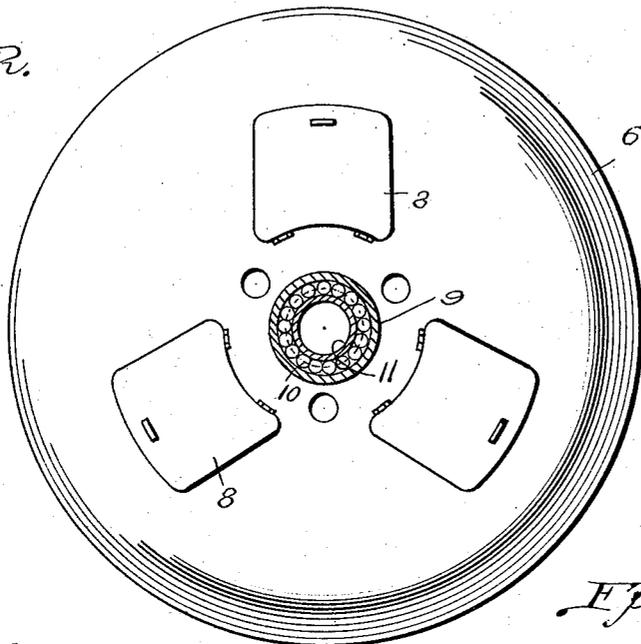


Fig. 3.

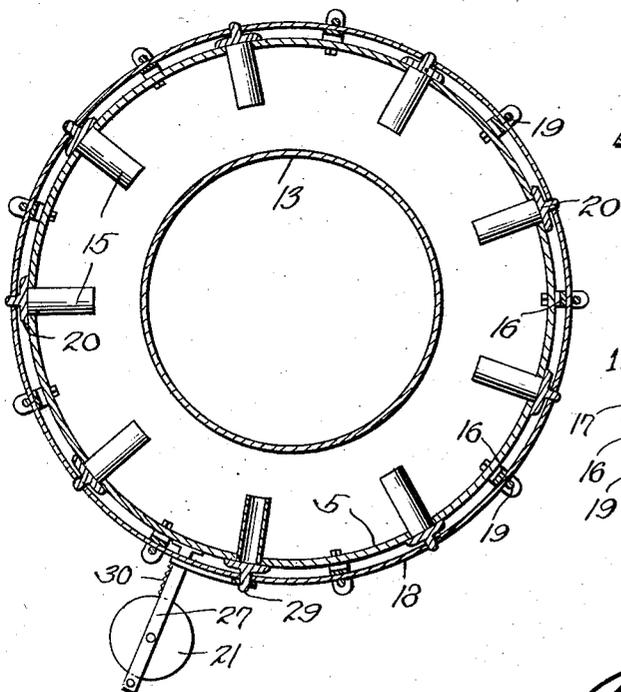
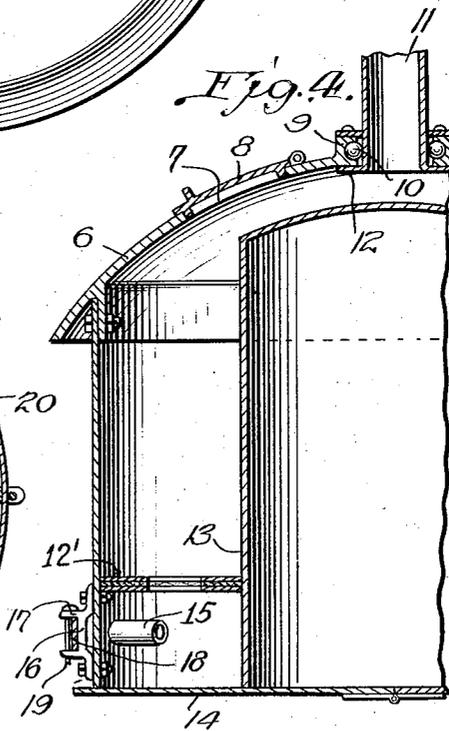


Fig. 4.



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UNITED STATES PATENT OFFICE

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BROODER STOVE

Application filed April 28, 1930. Serial No. 448,101.

This invention relates to stoves, and more particularly stoves especially designed for use in connection with brooders, chicken coops and the like, the primary object of the invention being to provide a stove of the hanging type so that an even and uniform temperature will be insured throughout the entire area of the brooder or chicken house in which the stove is used.

Another object of the invention is to improve generally the construction of the stove as shown and described in my Patent No. 1,189,691, by providing thermostatically controlled draft regulating means so that the efficiency of the stove will be increased and a predetermined temperature insured at all times.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:

Figure 1 is an elevational view of a stove constructed in accordance with the invention.

Figure 2 is a plan view thereof.

Figure 3 is a transverse sectional view through the stove.

Figure 4 is a fragmental vertical sectional view through the stove.

Figure 5 is an enlarged fragmental sectional view through the shell of the stove.

Figure 6 is a fragmental detail view of the thermostat supporting arm.

Figure 7 is an enlarged fragmental sectional view showing the air nozzles and caps for regulating the draft of air therethrough.

Referring to the drawings in detail, the shell of the body portion of the stove is indicated by the reference character 5, and as shown is connected with the top 6 of the stove, which is preferably dome-shaped, the top being provided with openings 7 normally closed by means of the hinged closures 8. The top 6 is formed with an enlargement 9 having a

groove formed therein providing a race for the balls 10 that engage the pipe 11, as clearly shown by Figure 4 of the drawings.

The lower end of the pipe 11 is flanged at 12 to provide a support for the shell and body portion. Thus it will be seen that due to this construction, the body portion may be rotated with respect to the pipe 11 to the end that the operator may attend the stove without the necessity of walking around the stove.

Positioned within the stove is a cylindrical drum 13 of smaller diameter than the shell or casing, to provide an annular space between the drum and casing providing a combustion chamber in which the grate 12' is located.

The reference character 14 designates the hinged bottom of the stove, and as shown, air nozzles 15 extend inwardly from the shell, at points directly above the bottom 14. These nozzles are in communication with the atmosphere, the same having their outer ends supported within openings of the shell.

Secured to the outer surface of the shell, are brackets 16 formed with extensions 17 providing guides for the band 18 which is slidably mounted within the guides, there being provided pins 19, extending through the extensions 17 to hold the band in position, but permit of the necessary sliding movement of the band.

Carried by the band are closures 20 arranged adjacent to the outer ends of the nozzles 15, so that by moving the closures 20 over the outer ends of the nozzles, the draft through the nozzles may be regulated.

This band 18 is thermostatically controlled, the thermostat being indicated by the reference character 21, the same being in the form of expansible disks. This thermostat is secured to the laterally extended portion 22 of the arm 23, which has its upper end bolted to the wheel of body portion, by means of the bolt 24.

An elongated opening is formed in the arm 23 and accommodates the bolt 25 which also extends through an opening in the arm 26 that is provided with a laterally extended portion 27 overlying the portion 22 of the arm 23. The thermostat is also connected with

the laterally extended portion 27 so that the thermostat is supported between the portions 22 and 27. Thus it will be seen that upon movement of the thermostat, due to expansion and contraction caused by heat and cold, the arm 26 will be moved accordingly.

Pivotaly supported adjacent to the arm 26, is a bell crank lever 28 that has one of its ends connected to the arm 26, by means of the bolt 25, the opposite end of the bell crank lever 28 being bifurcated to receive the pin 29 that extends laterally from the band 18, causing a rotary movement of the band, upon vertical movement of the arm 26. A coiled spring 30 has connection with the bell crank lever 28, the coiled spring having its lower end anchored to the laterally extended portion 22, with the result that the spring will tend to return the bell crank lever to its initial position, as the thermostat returns to its normal position.

The hood which is indicated by the reference character 31 is designed to fit over the body portion of the stove, the hood being supported by the cables 32 that pass over the pulleys 33 mounted on the supporting plate 34. The operation and construction of the hood 31 is clearly set forth in my Patent No. 1,189,691.

Thus it will be obvious that due to the construction shown and described, the draft to the stove will be regulated automatically, and an even temperature within the stove will be insured at all times.

I claim:

1. A device of the class described, a body portion having a combustion chamber and having openings establishing communication between the combustion chamber and atmosphere, brackets secured to the outer surface of the body portion, upper and lower extensions forming a part of the brackets, a band surrounding the body portion and operating between the extensions of the brackets to guide the band in its movements, closures carried by the band and adapted to move over the openings to regulate the passage of air through the openings, and thermostatically controlled means for operating the band.

2. In a device of the class described, a body portion having a combustion chamber and having openings establishing communication between the combustion chamber and atmosphere, a band surrounding the body portion and movable in a horizontal plane, closures carried by the band and adapted to move over the openings to regulate the passage of air through the openings, an arm extending downwardly from the body portion, said arm having a right angled end portion, a bell crank lever supported between the ends of the arm, said bell crank lever having connection with the band, an arm mounted on the first mentioned arm and having connection with the bell crank lever, the last mentioned

arm having a right angled end overlying the right angled end of the first mentioned arm, a thermostat spaced between the right angled ends of the arms to operate the last mentioned arm, and a spring for normally urging the bell crank lever in one direction.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

JOHN HENDERSON.

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