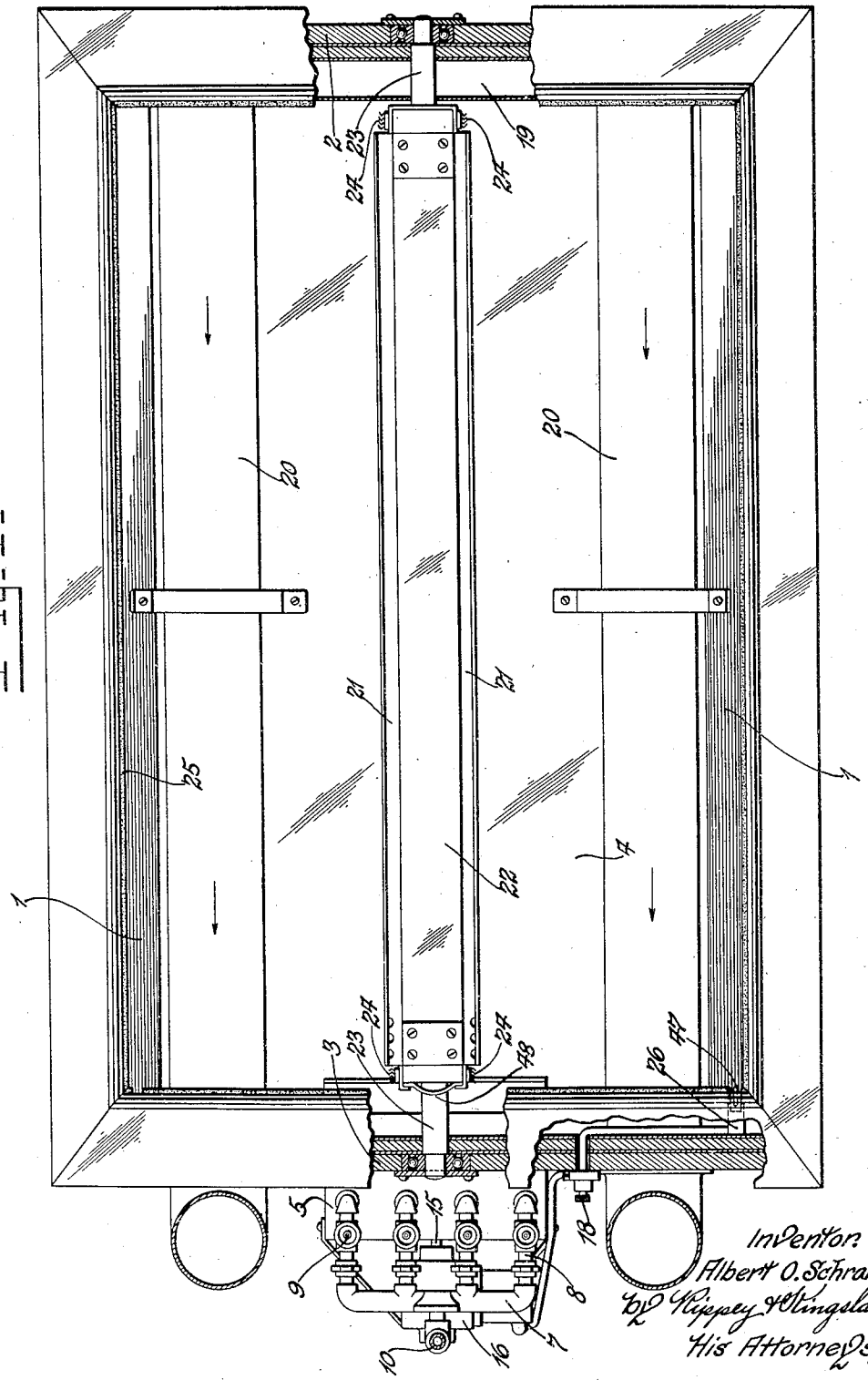
Feb. 11, 1930. A. O. SCHRAMM 1,746,799

LAUNDRY DRIER

Filed Dec. 17, 1928 3 Sheets-Sheet 1

Fig. 1.



Inventor:
Albert O. Schramm,
by Kippey & Klingsland
His Attorneys.

Feb. 11, 1930. A. O. SCHRAMM 1,746,799

LAUNDRY DRIER

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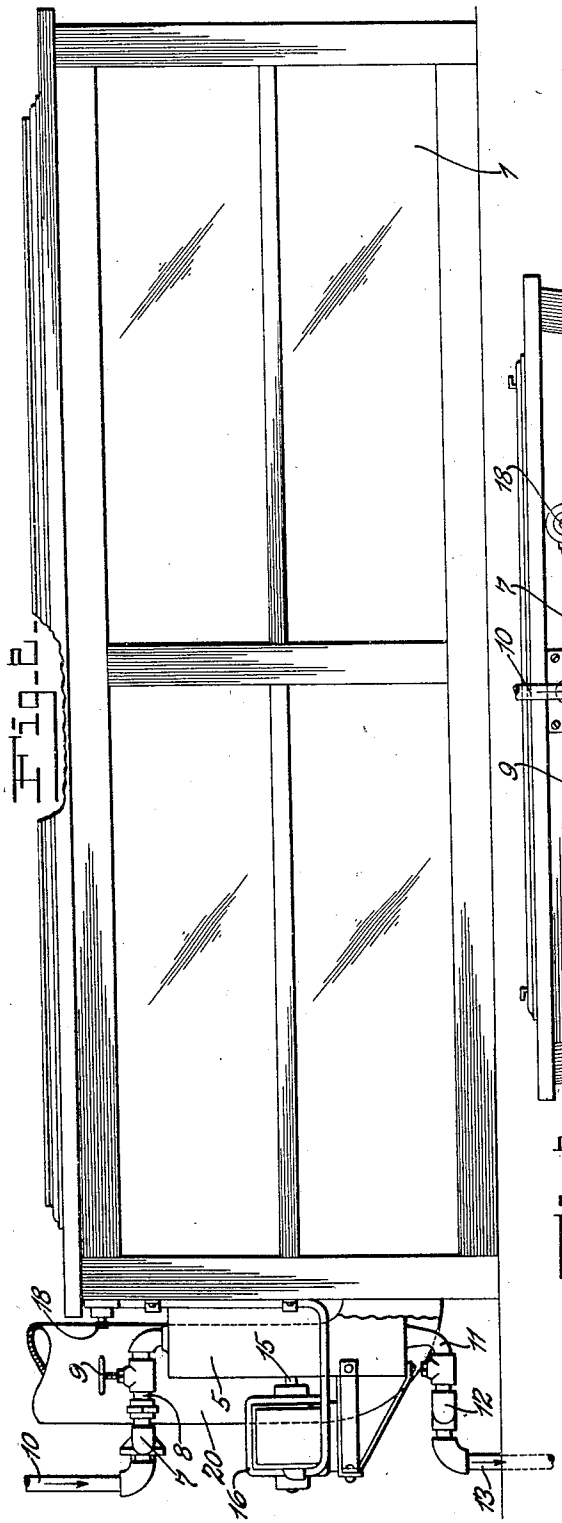


Fig. 2.

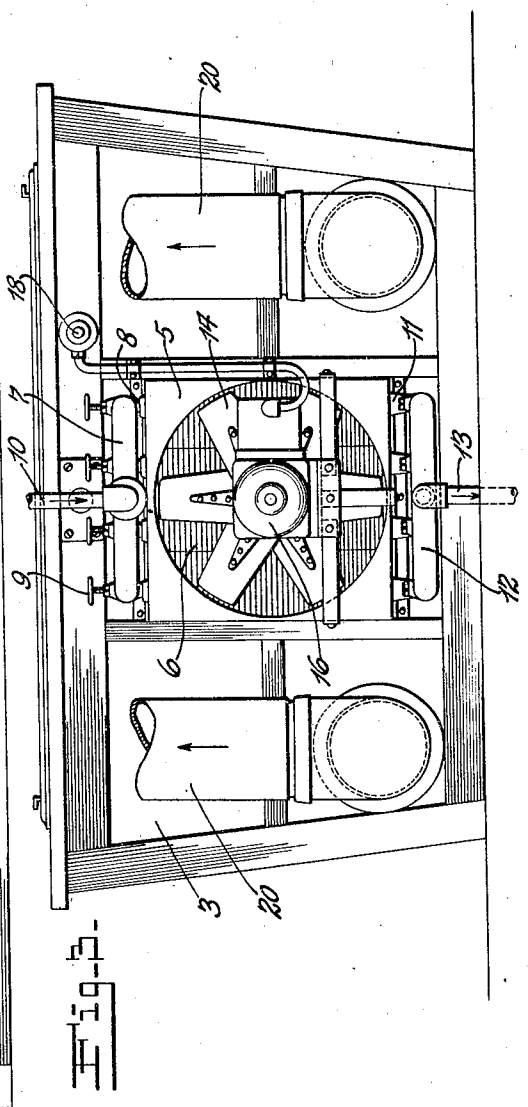


Fig. 1.

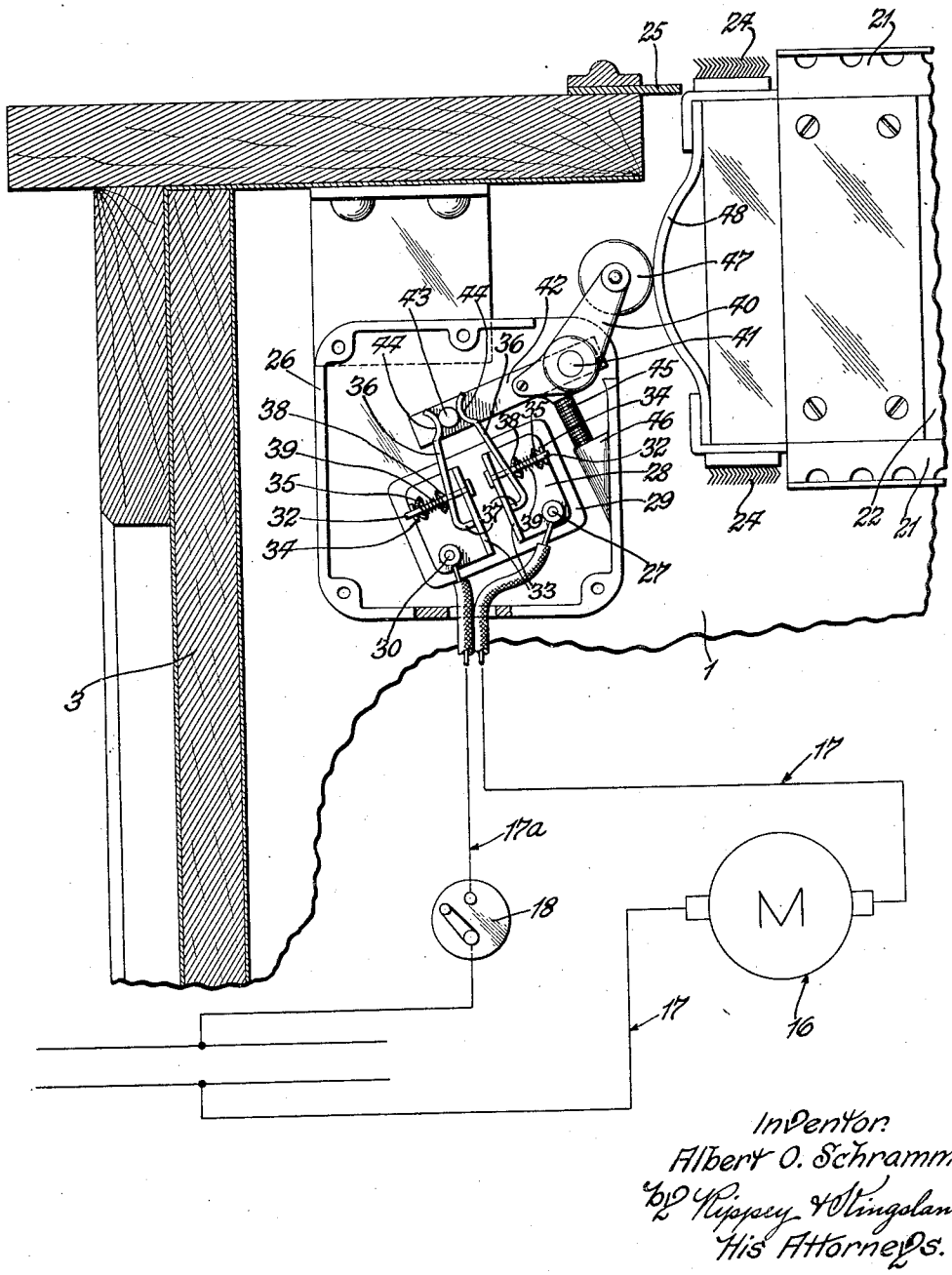
Inventor:
Albert O. Schramm,
by Kippey & Kingsland.
His Attorneys.

Feb. 11, 1930. A. O. SCHRAMM 1,746,799

LAUNDRY DRIER

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Fig. 4.



Inventor:
Albert O. Schramm,
by Kipper & Klingsland
His Attorneys.

Patented Feb. 11, 1930 1,746,799

UNITED STATES PATENT OFFICE

ALBERT O. SCHRAMM, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE AMERICAN LAUNDRY MACHINERY COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

LAUNDRY DRIER

Application filed December 17, 1928. Serial No. 326,523.

This invention relates to laundry driers.

An object of the invention is to provide a laundry drier comprising a cabinet for containing the laundry to be dried, mechanism for forcing hot air into the cabinet, and automatic means for stopping operation of said mechanism when the cabinet is opened in order to remove dried fabrics therefrom or to place fabrics in the cabinet to be dried.

Another object of the invention is to provide an improved laundry drier comprising a movable support for the laundry to be dried, mechanism for forcing hot air across and into contact with the laundry to dry the same, and automatic means for stopping operation of said mechanism when said support is moved from operative position.

Another object of the invention is to provide a laundry drier for obtaining all of the advantages and embodying the useful features and elements herein disclosed, reference being made to the accompanying drawings in which

Fig. 1 is a top plan view of my improved laundry drier, the support for the laundry being out of operative position and parts of the cabinet wall being in section.

Fig. 2 is a side elevation of my improved laundry drier.

Fig. 3 is an end elevation showing the mechanism for forcing hot air into the cabinet.

Fig. 4 is an enlarged sectional view showing the devices for controlling operation of the mechanism that forces hot air across and into contact with the laundry to be dried.

The cabinet of the laundry drier comprises side walls 1, an end wall 2, an end wall 3 and a bottom 4. The end wall 3 has therethrough an opening which is surrounded by a frame 5 in which is mounted a device 6 constructed and arranged on the principle of an automobile radiator so that water or steam may pass freely therethrough. This radiator 6 being constructed and arranged on the principle of an automobile radiator, as stated, has a large number of openings through which air may be forced from the outside to the inside of the drying cabinet.

A manifold 7 has a number of tube or pipe connections 8 opening into the upper side of the radiator 6 and controlled respectively by valves 9 whereby the amount of steam passing into and through the radiator 6 may be controlled and regulated. The manifold 7 receives steam from a steam supply pipe 10 leading from some suitable boiler or source of steam supply.

A number of pipes 11 open from the under side of the radiator 6 into an exhaust manifold 12 from which the steam is conducted to waste or discharge or returned to its source through a pipe 13. A blower 14 is supported within the frame 5 adjacent to the outer side of the radiator 6. This blower is attached to a rotary shaft 15 driven by an electric motor 16, the wiring 17 of which is controlled by a switch 18. The hot air driven into the cabinet through the radiator 6 passes from the cabinet into a confined space 19 opening into outlet pipes 20.

The support for the laundry constitutes a closure for the upper end of the cabinet and includes a pair of spaced walls 21 forming opposite sides of a frame 22 which is rotatively supported near the top of the cabinet by axial extensions 23 mounted in bearings in the walls 2 and 3, respectively. On each side of the frame 22 fabric engaging devices 24 are secured and these may be made or composed of carding brushes. Thus, it is apparent that when either side of the closure is toward the inside of the cabinet a fabric may be secured to the outside of the closure while the fabric on the inside is being dried. To the upper edge of each of the cabinet walls a flexible and elastic strip 25 is secured which permits free opening and closing movements of the closure and laundry support and which cooperates with said closure and support to form a joint (Fig. 4) restricting escape of heated air from the cabinet about the closure.

Within the wall 3 a housing 26 for a circuit make and break device is mounted and this circuit make and break device is utilized as means for automatically stopping operation of the mechanism for forcing hot air into the cabinet when the closure and fabric supporting device is moved to open position and

for automatically starting operation of said mechanism when the closure and fabric supporting device is moved to closed position. The wire 17 from one side of the motor leads to connection 27 in the housing 26. The connection 27 projects from a bracket 28 on a block 29 of insulating material secured within the housing 26. The wire 17ª from the switch 18 leads to the connection 30 projecting from a bracket 31 on the block 29 within the housing 26 and spaced from the bracket 28. Each of the brackets 28 and 31 supports a pin 32, said pins being solely supported by the laterally extended ears 33 of said brackets 28 and 31. Each pin 32 has near its outer end an abutment 34 for a spring seat 35. Each pin 32 also supports for sliding movements thereon a resilient contact member. Each of said contact members comprises a metallic strip 36 having a hole through which the corresponding pin 32 extends and having a laterally bent end 37 designed and adapted to abut against the corresponding ear 33. Spring seats 38 on the pins 32 are pressed against the contact members 36 by springs 39, but the projecting ends of said contact members are prevented from making direct contact with each other by the upper portions of the ears 33. A lever 40 is mounted on a pivot 41 in the housing 26 and supports an arm 42 of insulating material from which projects a metallic element 43. When the parts are in the position shown in Fig. 4 the metallic element 43 is between and in contact with the curved ends 44 of the contact members, thus completing the circuit between the wires 17 and 17ª. When the element 43 is out of contact with the contact members the circuit is open and the motor will not operate. A spring 45 has one end abutting against a support 46 in the housing 26 and the opposite end abutting against the lever 40 between the pivot 41 and the member 43, and the power of said spring is utilized to actuate the lever 40 in a direction and to an extent to move the metallic element 43 from between and out of contact with the curved ends 44 of the contact members in order to open the circuit. A roller 47 is supported on the end of the lever 40 in position to be engaged by bowed members 48 on the closure and fabric supporting device so that when said closure is moved to closed position the circuit to the motor will be closed and the mechanism for driving hot air into the cabinet and across and into contact with the fabrics to be dried will be operated.

In operation the fabrics to be dried are applied to the fabric engaging devices 24 and the closure is moved to closed position. Automatically and as an incident to the movement of the closure and fabric support to closed position the lever 44 is operated in a direction and to an extent to close the circuit between the wires 17 and 17ª so that the motor will operate if the switch 18 is closed. So, too, when the cabinet closure and fabric supporting device are moved from closed position the spring 45 operates automatically and as an incident to such movement to move the lever 40 in a direction and to an extent to carry the circuit closing device 43 from between the contact members 44 and thereby open the circuit. This stops operation of the device that drives hot air into the cabinet so that the workman or operator will not be subjected to blasts of hot air while attending to the attachment and removal of the fabrics to be dried. This is a matter of high importance, for these blasts of hot air will become highly uncomfortable and ultimately injurious to the workmen. Accordingly the importance of this device and its automatic operation cannot be easily over-emphasized. The problem solved by this device has been generally known but, so far as I am aware, no satisfactory provision has been made for its solution.

I am aware that the construction, arrangement and relationship of the parts may be widely varied without departure from the nature and principle of the invention. I do not restrict myself unessentially, but what I claim and desire to secure by Letters Patent is:—

1. A laundry drier comprising walls forming a cabinet and one of which walls has an opening therethrough, a heater mounted in said opening, a device adjacent to the outer side of said heater for forcing air through said heater and said opening into said cabinet, a machine for operating said device, an element movable to and from position to support fabrics in said cabinet, and mechanism under control of said element causing said machine to operate when said element is in position to support fabrics in said cabinet and causing said machine to stop when said element is moved from said last named position.

2. A laundry drier having walls forming a cabinet having an open top and one of which walls has an opening therethrough, a heater mounted in said opening, mechanism adjacent to the outer side of said heater and said opening into said cabinet, an element movable to positions to open and close the top of said cabinet, means in connection with said element for supporting a fabric within the cabinet when said element is in position to close the top of said cabinet, and means controlled by said element causing said mechanism to stop when said element is out of position to close the top of said cabinet and causing said mechanism to operate when said element is in position to close the top of said cabinet.

3. A laundry drier comprising walls forming a cabinet having an open top and one of which walls has an opening therethrough,

a heater mounted in said opening, mechanism for forcing air through said heater and said opening into said cabinet, a support pivoted to said walls and movable to and from positions to close the top of said cabinet, means in connection with said support for supporting fabrics within said cabinet, a device controlling operation of said mechanism, means in connection with said support for operating said device to position to cause said mechanism to operate when said support is in position to close the top of said cabinet, and means for operating said device to cause said mechanism to stop when said support is moved out of position to close the top of said cabinet.

4. A laundry drier comprising walls forming a cabinet having an open top and one of which walls has an opening therethrough, a heater mounted in said opening, mechanism for forcing air through said heater and said opening into said cabinet, a closure for the top of said cabinet movable from and to closed position, a device controlled by said closure causing said mechanism to operate when said closure is in closed position, and means for operating said device to cause said mechanism to stop when said closure is out of closed position.

5. A laundry drier comprising walls forming a cabinet and one of which walls has an opening therethrough, a heater mounted in said opening, mechanism adjacent to the outer side of said heater for forcing air through said heater and said opening into said cabinet, a support for supporting in the cabinet articles to be dried and being movable to move the articles out of the cabinet, and means controlled by said support for causing said mechanism to operate when said support is in the position it occupies when supporting an article to be dried in the cabinet and for causing said mechanism to stop when said support is out of said position.

ALBERT O. SCHRAMM.