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(54) WALL-MOUNTED DRIER OR AIRER

(71) I, JACQUES CHAPUIT, of French nationality, of 16 Avenue Rockefeller, 69008 Lyon, France, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to wall mounted driers or airers of the type in which one or more clothes lines are wound around a drum when not in use, and may be unwound and attached to an opposite wall for use. Such driers are known from the complete specifications of British Patent Nos. 622,335 and 1,259,375. It is a feature of such driers that rotation of the drum in an unwinding sense may be locked so as to prevent further unwinding of the line; at the same time it is desirable that the drum may be rotatable in a winding sense so as to tension the lines. Known arrangements for providing this feature consist in a ratchet wheel and pawl. Such driers often include a spring located with the drum, which is tensioned as the line or lines are unwound to rotate the drum in a winding sense so as to wind up the line or lines when so desired.

The present invention consists in a clothes drier or airer, which is mountable on a wall and in which a clothes lines is wound around a drum and may be unwound by rotation of the drum against a spring bias, having a ratchet wheel attached to said drum and a pawl which is engagable with the ratchet wheel so as to lock the drum in position against further unwinding of the clothes line and in which means is provided for bringing the pawl into and out of engagement with the ratchet wheel, which means comprises a slidable element having ramp for sliding contact with part of the pawl and which element is slidable in one direction to cause disengagement of the pawl from the ratchet wheel by means of the sliding contact and in the opposite direction to permit engagement of the pawl with the ratchet wheel.

A drier or airer embodying the invention will now be described, by way of example, with reference to the accompanying drawings, wherein:—

Fig. 1 is a sectional plan view of the drier with its drawbar;

Figure 2 is a sectional front view of the drier without the drawbar;

Figure 3 is a sectional side view showing the tensioning mechanism;

Figure 4 shows an external view of the side at which the pushbutton and the operating knob are situated;

Figure 5 is a view in section on II—II of Figure 2.

The clothes drier or airer shown in the drawings comprises a casing 1, which is open at the back. This casing comprises a front face in which a drawbar 2 fits, an upper face, a lower face and two sides. The rear is applied against the wall 3. An oblong aperture 5 is formed in the webs of each of two channel members 6 and 7. These apertures are designed to fit over the heads of screws 4 in the wall 3 so as to retain the drier or airer against the wall. Channels 8 and ribs 9 are cast moulded into the casing so as to be engagable with the sides of the channel members 6 and 7. The ribs 9 are supplemented by internally screw-threaded bosses 10 which are used for attaching the casing to the channel members 6 and 7 by means of screws 11.

The two channel members 6 and 7 are situated at and within the sides of the drier (Figures 1 and 2).

The winding drum 12 for winding the lines 13 is held at one end in a sleeve 14 which extends through the inner wall of the channel member 6. Dogs or pins 16 on the sleeve 14 co-operate with corresponding slots or notches formed in the boss or nose 17 of the ratchet wheel 15.

The shaft 18 of the ratchet wheel 15 extends through a plate 20 which supports the pivot pin of a pawl 19 which is capable of co-operating with the wheel 15. The plate 20 is supported by the outer wall of the

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channel member 6 and is attached thereto by a pin 32.

5 A knob 31 having a manipulable diametral bar is attached to the end portion 33 of the axle 18. The said knob 31 is secured to the shaft 18 of the wheel 15 by means of a square portion 33 of the said shaft 18.

10 Pawl 19 has a plate portion 29 which bears on a ramp 28 of a slide element 27 which is movable in a slideway 34 which is integral with a bottom portion of the channel member 6. The slide element has a knob 35 attached thereto extending outside the casing.

15 At its other end the drum 12 rotates in a shouldered sleeve 21 which bears against the inner wall of the channel member 7.

20 The outer end of the sleeve 21 extends through the inner wall of the channel member 7 and is located therein by bosses 23 which engage with notches 24 of the aperture shown in Figure 5, so as to prevent rotation of the sleeve, the said notches matching the shape of the bosses 23.

25 Within the drum 12 there is wound in a known manner a helical spring 25, one end of which is attached to a shaft 26 whilst the other end is attached to the drum 12.

30 This apparatus operates in a simple and practical manner.

35 When the airer or drier is not in use the drawbar 2 is held in a recess 36 in the casing 1, and only the handle 37 projects forwards (Figure 3); the lines 13 are wound about the drum 12 and the internal spring 25 is relaxed; the button 35 is flush with the casing 1; the pawl 19 is engaged in the teeth of the ratchet wheel 15.

40 The user wishing to open out the drier moves knob 35 in a direction away from the casing 1 so as to slide the slide element 27 outwards. The plate portion 29 of the pawl 19 is raised by a ramp 28 of the slide element 27 and hence the pawl 19 is disengaged from the ratchet 15. The drum 12 is thus free to rotate, permitting the lines 13 to be unwound and the drawbar 2 to be attached to a wall opposite from the drier.

50 Pulling on the drawbar and thus turning the drum tensions the spring 25.

55 The button 35 is then pushed back and the slide element allows the plate portion 29 to move down the ramp 28 again, causing the pawl 19 to engage again with the ratchet wheel 15. Engagement of the pawl 19 with ratchet wheel 15 prevents further unwinding of the drum 12; the shape of the pawl 19 and of the teeth of the ratchet wheel 15 allows rotation of the drum 12 in the opposite direction, the pawl 19 sliding over the teeth as the ratchet wheel 15 is rotated. The drum 12 may be rotated by manual rotation of the knob 31, allowing the user to tension the lines 13 to the desired extent.

65 After the drier has been used, and it is

desired to make the lines go back into the casing, it is sufficient to pull on the slide element 27 by again causing the button 35 to project further from the casing 1, thereby releasing the pawl 19 from the ratchet wheel 15 and consequently releasing the drum which, as soon as the drawbar 2 has been released from the wall, begins to rotate under the action of the spring 25 and draws in the lines 13 which wind about the drum. The drawbar 2 is again housed in its recess 36.

It will be apparent that modifications in details can be made to the construction described within the scope of the accompanying claims.

WHAT I CLAIM IS:—

1. A clothes drier or airer, which is mountable on a wall and in which a clothes line is wound around a drum and may be unwound by rotation of the drum against a spring bias, having a ratchet wheel attached to said drum and a pawl which is engageable with the ratchet wheel so as to lock the drum in position against further unwinding of the clothes line and in which means is provided for bringing the pawl into and out of engagement with the ratchet wheel, which means comprises a slidable element having a ramp for sliding contact with part of the pawl and which element is slidable in one direction to cause disengagement of the pawl from the ratchet wheel by means of the sliding contact and in the opposite direction to permit engagement of the pawl with the ratchet wheel.

2. A clothes drier or airer as claimed in claim 1, in which the drum is supported by means of two channel shaped members, said members having means whereby the airer or drier may be attached to a wall.

3. A clothes drier or airer as claimed in claim 2, in which the drum is supported at one end in a shouldered sleeve which is fitted into an aperture in one wall of a said channel member and at the other end in a sleeve which is fitted into an aperture of an opposing wall of the other said channel member.

4. A clothes drier or airer as claimed in claim 2 or 3, in which an outer casing is provided, the said casing having means for slidably locating the casing around the walls of the channel shaped members.

5. A clothes drier or airer as claimed in claim 4, in which said means comprise ribs.

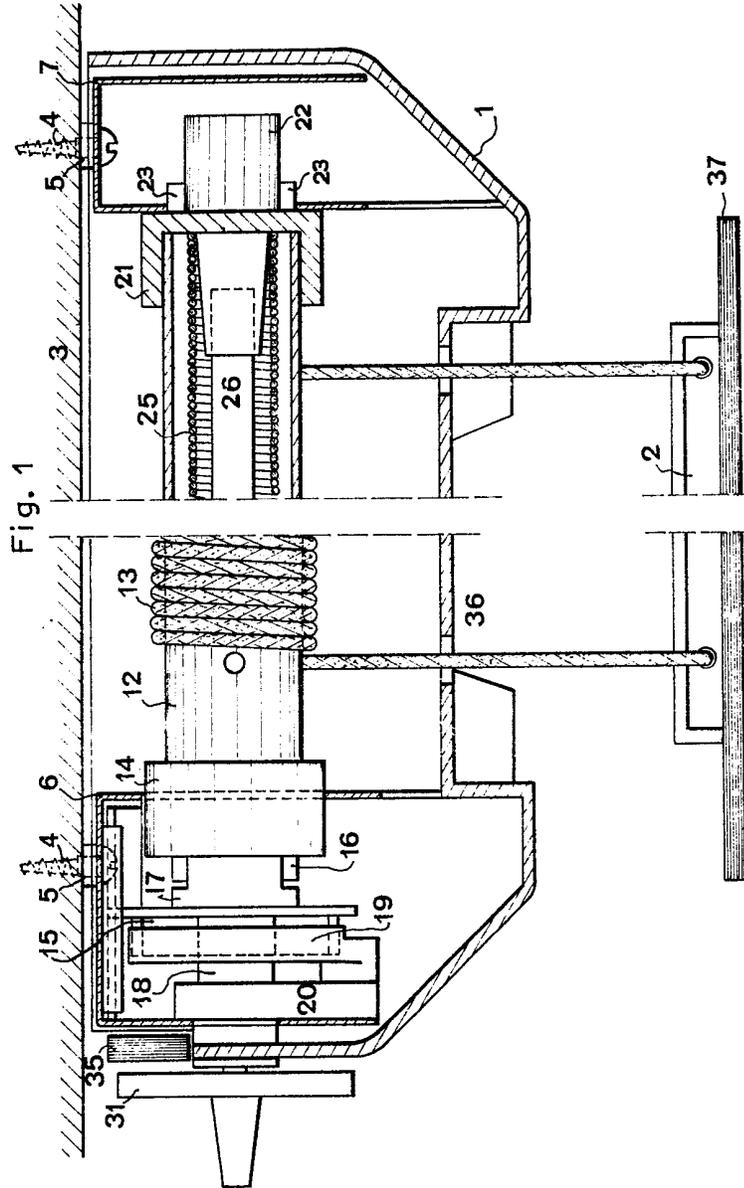
6. A clothes drier or airer as claimed in claim 5, in which the casing is held in position around the channel shaped members by screws which engage through a bottom portion of the channel shaped member into threaded bosses which are integral with the ribs.

channel member 6 and is attached thereto by a pin 32.	
5 A knob 31 having a manipulable diametral bar is attached to the end portion 33 of the axle 18. The said knob 31 is secured to the shaft 18 of the wheel 15 by means of a square portion 33 of the said shaft 18.	70
10 Pawl 19 has a plate portion 29 which bears on a ramp 28 of a slide element 27 which is movable in a slideway 34 which is integral with a bottom portion of the channel member 6. The slide element has a knob 35 attached thereto extending outside the casing.	75
15 At its other end the drum 12 rotates in a shouldered sleeve 21 which bears against the inner wall of the channel member 7.	80
20 The outer end of the sleeve 21 extends through the inner wall of the channel member 7 and is located therein by bosses 23 which engage with notches 24 of the aperture shown in Figure 5, so as to prevent rotation of the sleeve, the said notches matching the shape of the bosses 23.	
25 Within the drum 12 there is wound in a known manner a helical spring 25, one end of which is attached to a shaft 26 whilst the other end is attached to the drum 12.	90
30 This apparatus operates in a simple and practical manner.	
35 When the airer or drier is not in use the drawbar 2 is held in a recess 36 in the casing 1, and only the handle 37 projects forwards (Figure 3); the lines 13 are wound about the drum 12 and the internal spring 25 is relaxed; the button 35 is flush with the casing 1; the pawl 19 is engaged in the teeth of the ratchet wheel 15.	100
40 The user wishing to open out the drier moves knob 35 in a direction away from the casing 1 so as to slide the slide element 27 outwards. The plate portion 29 of the pawl 19 is raised by a ramp 28 of the slide element 27 and hence the pawl 19 is disengaged from the ratchet 15. The drum 12 is thus free to rotate, permitting the lines 13 to be unwound and the drawbar 2 to be attached to a wall opposite from the drier.	105
45 Pulling on the drawbar and thus turning the drum tensions the spring 25.	
50 The button 35 is then pushed back and the slide element allows the plate portion 29 to move down the ramp 28 again, causing the pawl 19 to engage again with the ratchet wheel 15. Engagement of the pawl 19 with ratchet wheel 15 prevents further unwinding of the drum 12; the shape of the pawl 19 and of the teeth of the ratchet wheel 15 allows rotation of the drum 12 in the opposite direction, the pawl 19 sliding over the teeth as the ratchet wheel 15 is rotated. The drum 12 may be rotated by manual rotation of the knob 31, allowing the user to tension the lines 13 to the desired extent.	110
55 After the drier has been used, and it is	115
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7. A clothes drier or airer as claimed in any of claims 1 to 6 in which the pawl is supported by and pivotable from a plate attached to one of the flange members.
- 5 8. A clothes drier or airer as claimed in any of claims 1 to 7, in which the slide element is slidable in a slideway which is integral with one of the channel shaped members.
- 10 9. A clothes drier or airer as claimed in any of claims 4 to 8, in which the slide element is operable by a knob attached to the slide element and projecting externally of the casing.
10. A clothes drier or airer substantially as hereinbefore described with reference to the accompanying drawings.
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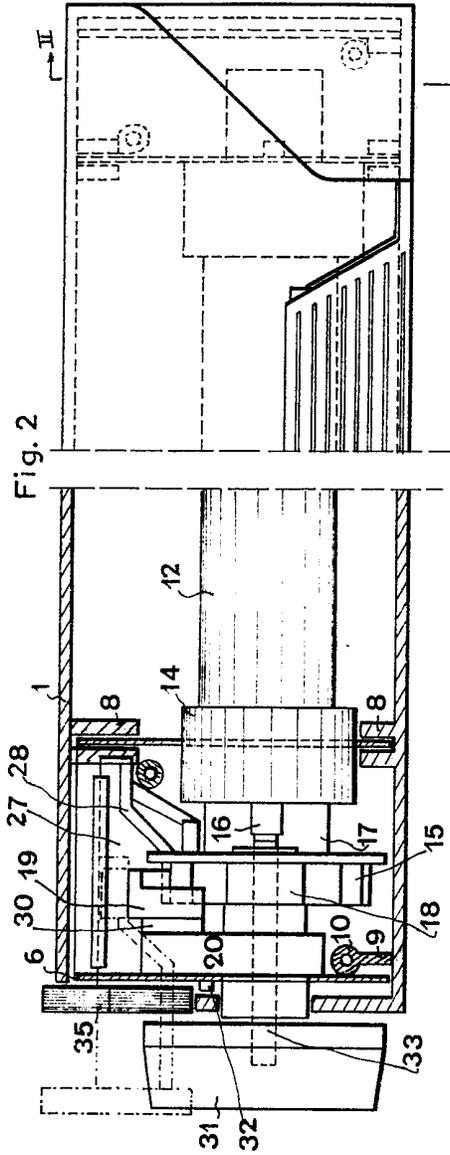


Fig. 2

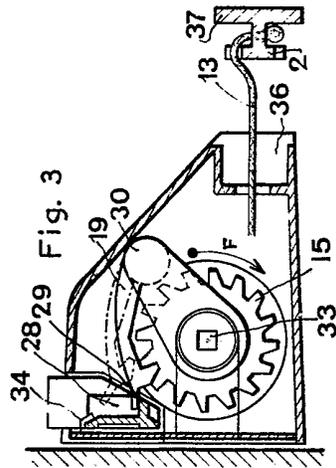


Fig. 3

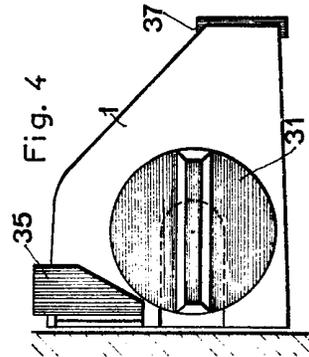


Fig. 4

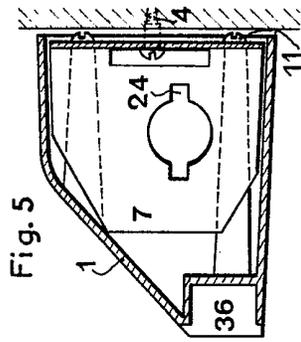


Fig. 5