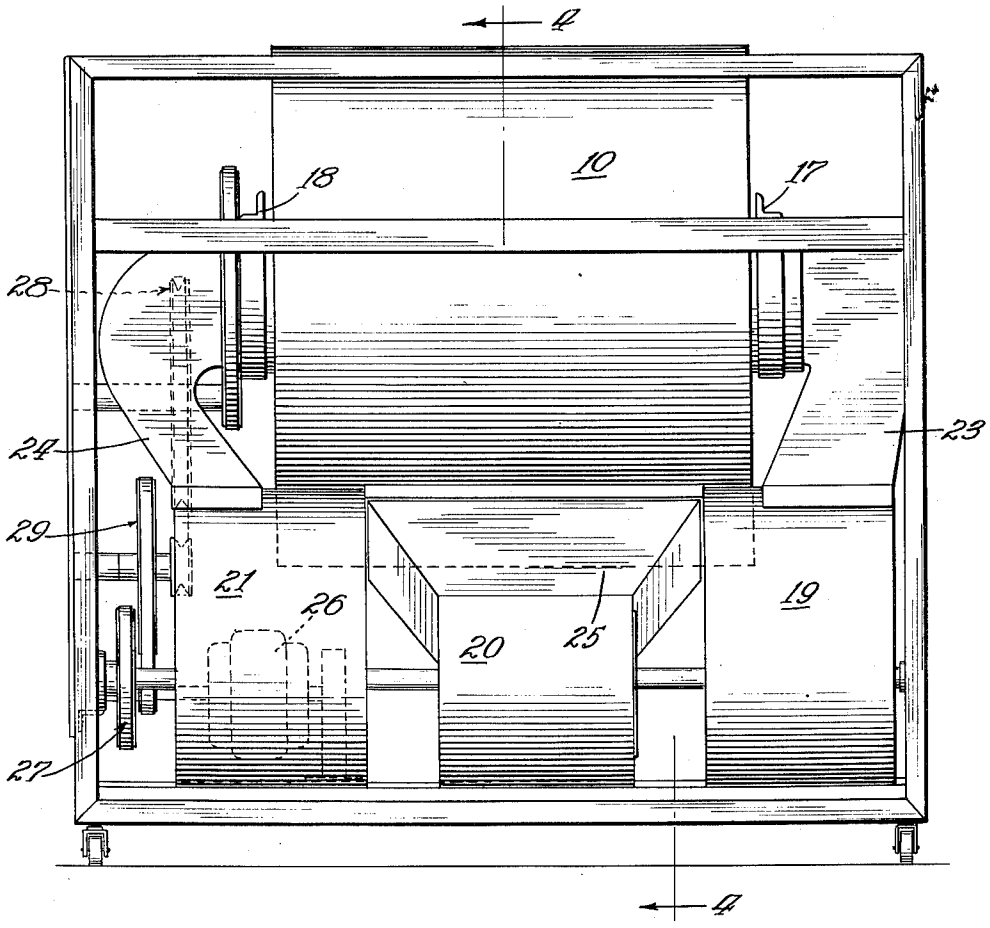
Nov. 22, 1938. H. W. ALTORFER 2,137,376

CLOTHES DRIER

Filed Dec. 27, 1937 4 Sheets-Sheet 1

Fig. 1



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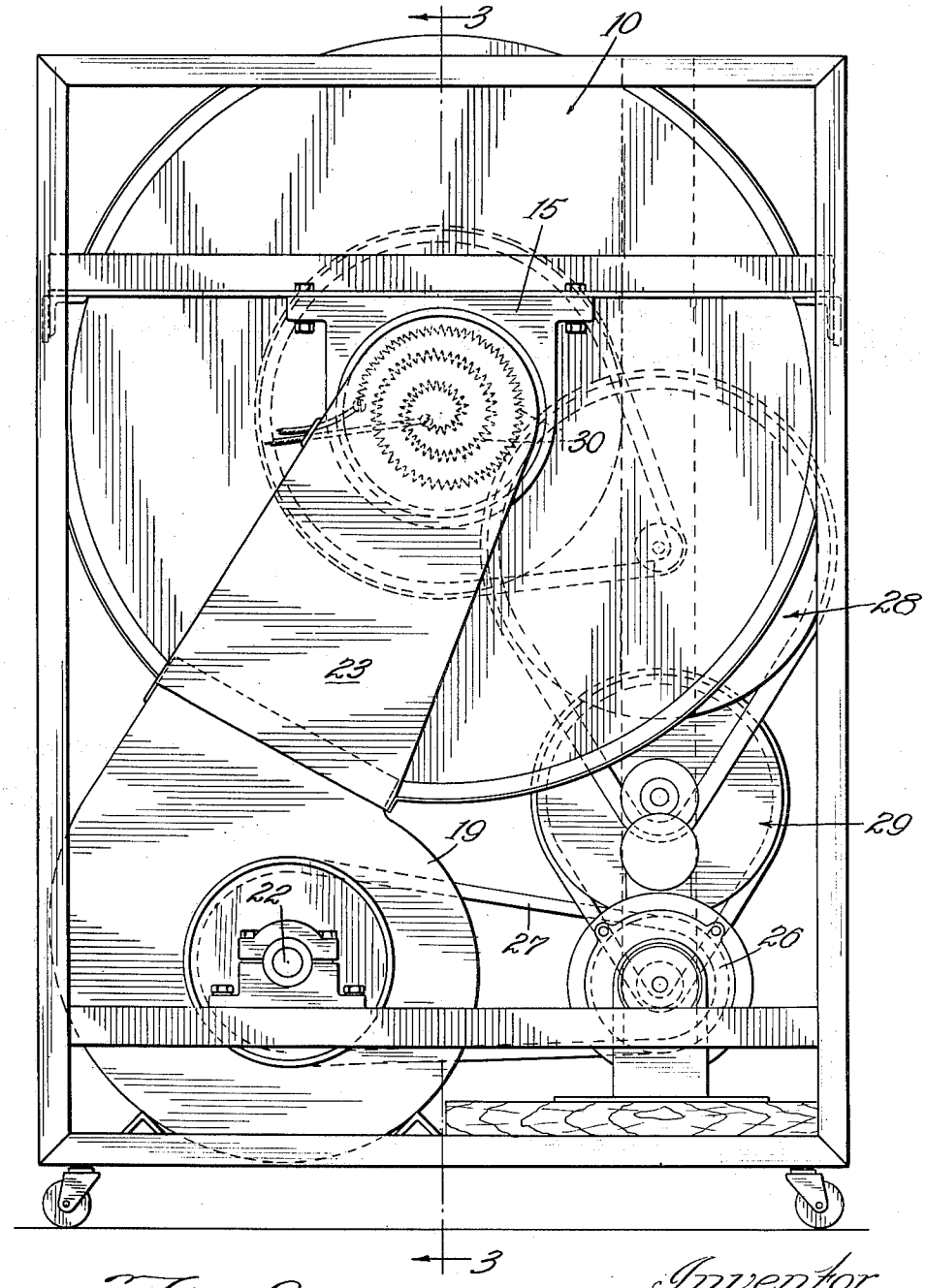

Fig. 2

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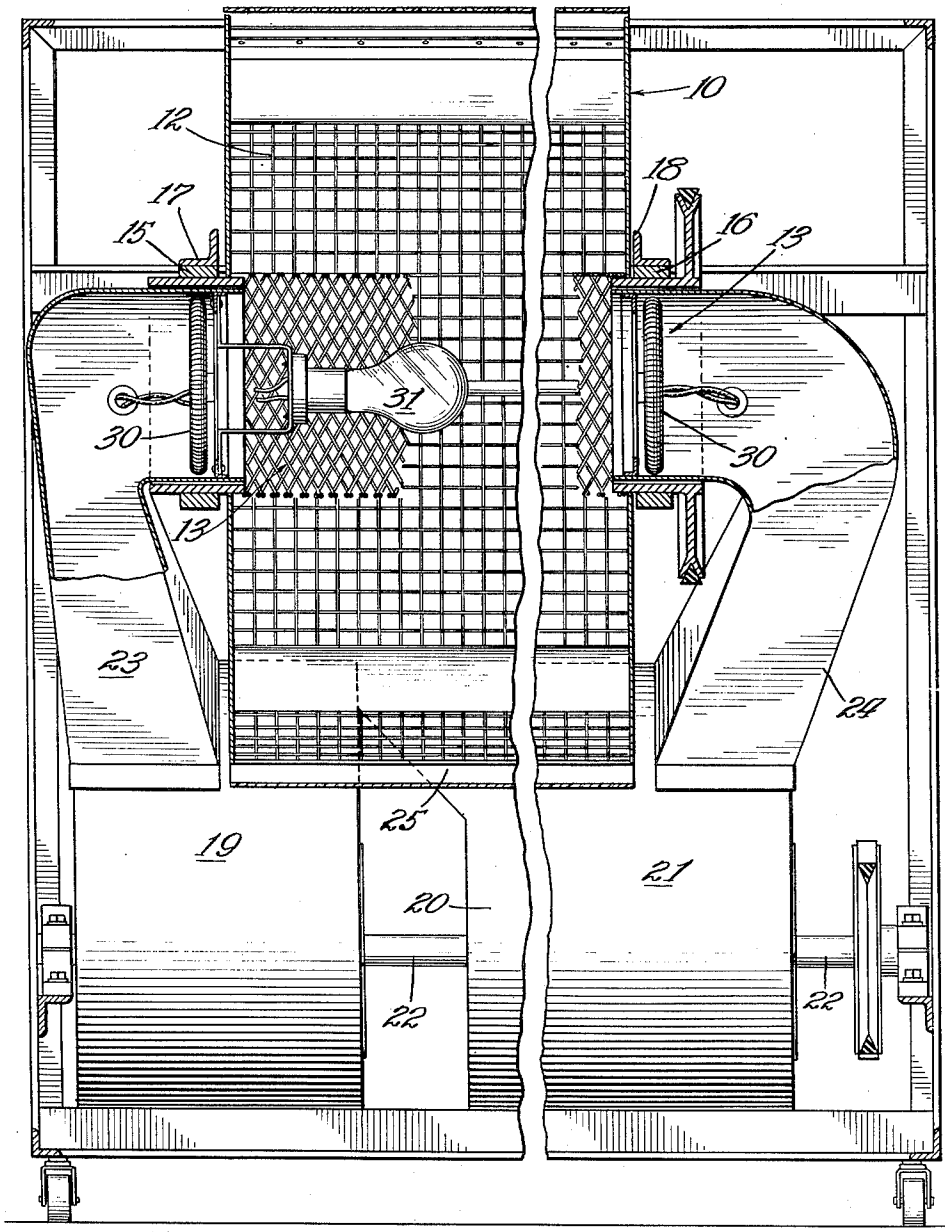

Fig. 3

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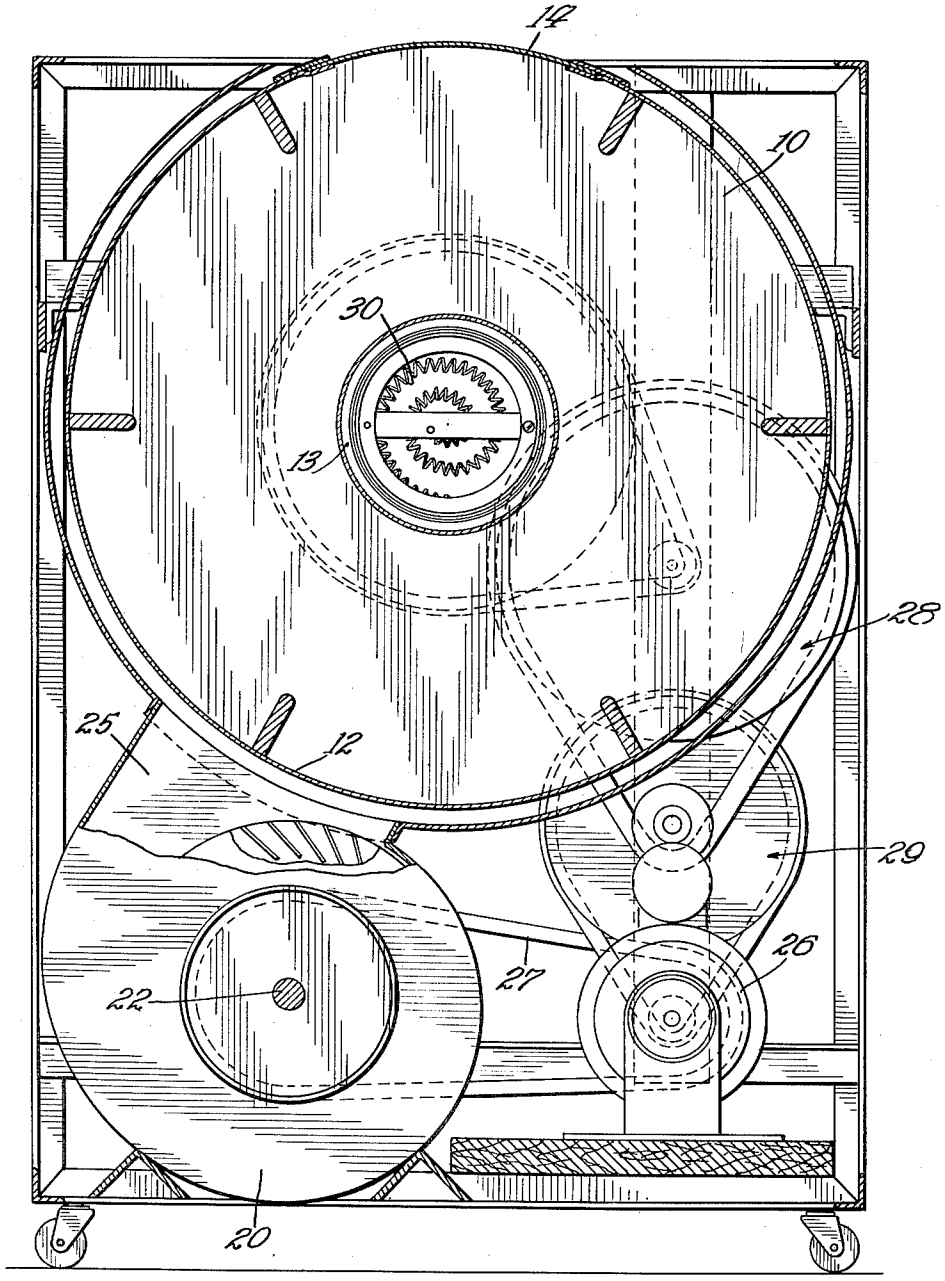

Fig. 4

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2,137,376

CLOTHES DRIER

Henry W. Altorfer, Peoria, Ill.

Application December 27, 1937, Serial No. 181,724

2 Claims. (Cl. 34—5)

This invention relates to clothes driers and more particularly to a domestic clothes drier in which the clothes from a centrifugal extractor or wringer are completely dried and ready for the ironing operation.

One of the objects of my invention is to provide a mechanical means for completely drying and aerating clothes after they have been subjected to the usual wringing or drying operation.

Another object of my invention is to provide a mechanical drier wherein the clothes content is subjected to forcible air pressure with the result that the clothes are completely dried and aerated.

Still another object of my invention is in the provision of a drier to be used in conjunction with the ordinary domestic washing machine, whereby the clothes from a wringer or centrifugal extractor may be quickly dried and aerated by forced air draft.

A further object of my invention is in the provision of a mechanical domestic clothes drier which continually moves the clothes in the path of forcible air pressure.

A still further object of my invention is in a mechanical drier structure wherein a movable perforated cylinder carrying the clothes is subjected constantly to air from a blower or series of blowers to effect quick drying and aerating of the clothes.

Other objects will appear when taken in connection with the annexed specification and drawings in which:

Fig. 1 is a front elevation with a portion of the forward casing removed;

Fig. 2 is an end elevation with a portion of the casing removed;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2; and

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 3.

Referring specifically to the drawings we find a domestic drier for use in conjunction with the standard washing machine having either a wringer or centrifugal drier attachment. The usual washing and wringing or drying operation is followed by the operator hanging the damp clothes on the line and, of course, preferably an outside line. So many circumstances such as space, weather conditions, temperature and many others, preclude this conventional manner of drying the clothes in the sun and air. Further, this conventional operation takes considerable time before the final ironing operation may be commenced.

Applicant, appreciating that the damp clothes from a wringer or the conventional centrifugal drier must first be completely dried in some manner prior to the ironing operation, now provides a mechanical domestic drier for quickly and completely drying the clothes, placing them in the proper condition for the ironing operation. This device is a separate, compact, power driven unit capable of operation in conjunction with the conventional domestic washer. The device is operable whenever the washing is done, or may we say whenever the ironing is done. In any event the damp clothes from the wringer or extractor may be placed directly in the perforate cylinder and thereafter quickly dried and aerated.

The completely dried clothes are then ready for the ironing operation, whether accomplished with the conventional hand iron or domestic mangle.

A great saving in time is obviously made, and other conditions, including that of weather, of course, have no effect upon applicant's device. As a matter of fact, the drying of one batch of clothes may take place during the washing of the second load.

Applicant's drier is housed in a casing 10 open at the top as at 11 for the insertion of damp clothes in the perforate container 12. This container in the present aspect is of the cylinder type supported and rotatable on an interiorly disposed air duct 13. A conventional perforate door 14 is provided in the cylinder 12. The cylinder is supported at either end on the bearings 15 and 16 on the outer ends of the stationary air duct 13. The framing and support mechanism for the duct 13 is shown at 17 and 18.

Below the cylinder are shown three air blowers 19, 20 and 21 respectively. They are all mounted on and driven by the common shaft 22.

These blowers might take many forms, but for convenience they have been shown as the bladed type which have been found entirely suitable to supply a large volume of air at high pressure to the clothes in the cylinder. Blower 19 is connected with one end of air duct 13 by the conduit 23. Blower 21 is connected to the other end of air duct 13 by conduit 24 and blower 20 communicates directly with the under side of the perforate cylinder 12 through conduit 25.

An electric motor 26 is connected to shaft 22 through belt 27. Means for rotating the cylin-

der 12 is provided in the pulley and belt drive 28 and connecting means 29 with the motor 27. The cylinder is rotated slowly for best drying results. Means has been provided for heating the high pressure air by placing electrical heating elements 30 within the air duct 13. The incoming high pressure air is initially heated and thus materially assists in the drying of the clothes.

The operation of the drier is quite simple. The damp clothes are placed in cylinder 12 through the conventional door. Operation of the cylinder and blower is then started. The perforate cylinder rotates slowly about the interior perforate air duct and the clothes are constantly agitated by being carried around in the cylinder. The blowers 19 and 21 now force air initially heated under high pressure through the perforations in the air duct 13. This high pressure air forces the clothes against the interior walls of the cylinder. Blower 20 constantly forces air against the exterior surface of the perforate cylinder. We thus find the clothes subjected to a constant blast of high pressure air which soon dries the clothes. The continuous passage of air through the clothes completely aerates them and any lint is blown off. The clothes are removed following the quick drying operation, ready for the ironing operation which may take place immediately. The dried clothes are soft and fluffy and in exactly the same condition that is obtained when clothes are completely dried by hanging in the open air and in the sun.

An ultraviolet ray lamp 31 is placed in the interior air duct in such manner that the drying clothes are constantly subjected to its rays with the result that the clothes when completely dried are in substantially the same condition as if they had been dried out of doors and in the sun.

Having thus disclosed the invention, I claim:

1. In a clothes drier, a perforate cylinder, a casing surrounding said cylinder having a top opening, a tubular shaft extending through said casing for supporting the cylinder for rotation and having perforations in the section interior of the cylinder, blowers for introducing air to the interior of the cylinder through the tubular shaft, a blower for introducing air through the casing to the exterior of the cylinder, a motor to drive the blowers and rotate the cylinder, and a movable cabinet enclosing this apparatus as a unit.

2. In a clothes drier, a perforate cylinder, a casing surrounding said cylinder having a top opening, a tubular shaft extending through said casing for supporting the cylinder for rotation and having perforations in the section interior of the cylinder, blowers for introducing air to the interior of the cylinder through the tubular shaft, a blower for introducing air through the casing to the exterior of the cylinder, means for heating the introduced air, means for electrically sterilizing the clothes while rotating, a movable cabinet enclosing this apparatus as a unit, and a single electric cord for supplying electricity to the unit.

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