Jan. 11, 1949. S. P. MIDOUHAS 2,459,110

COLLAPSIBLE CLOTHESLINE

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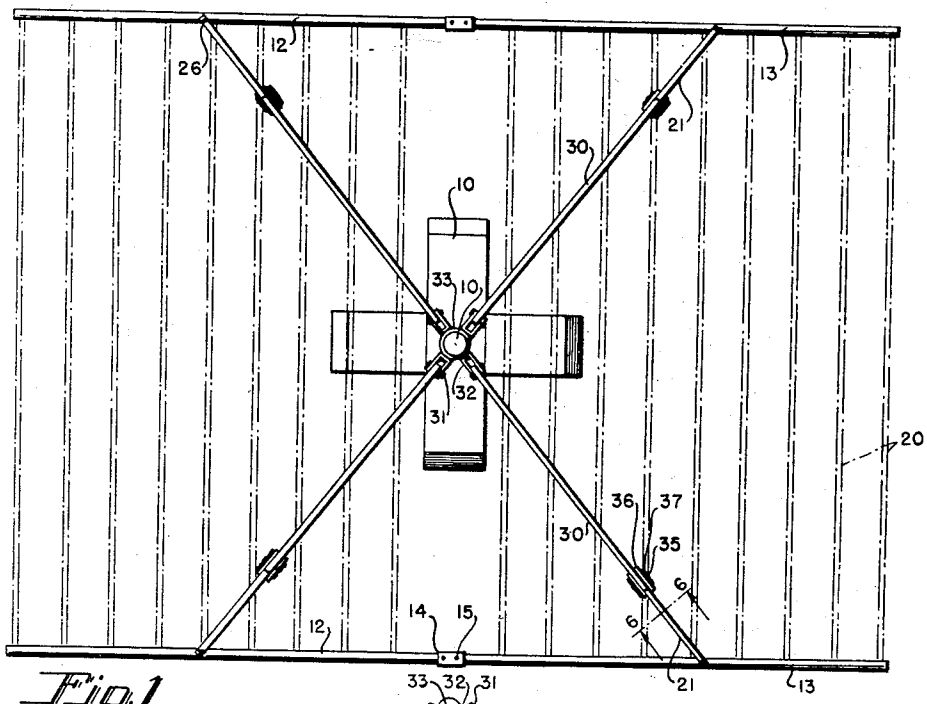


Fig. 1

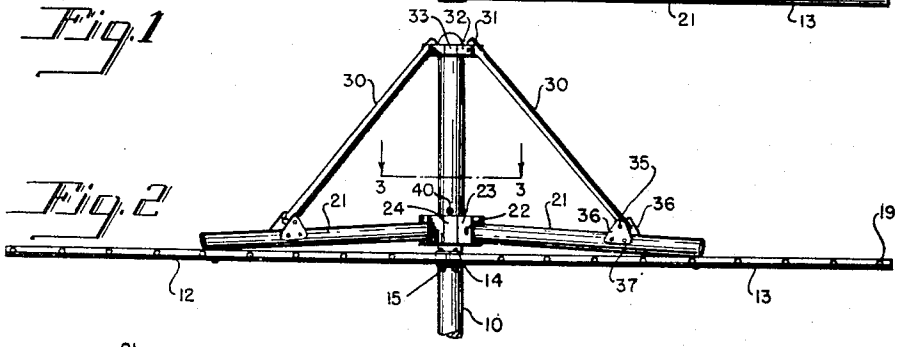


Fig. 2

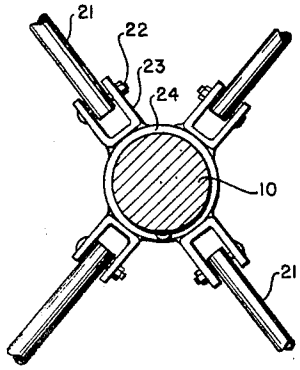


Fig. 3

INVENTOR.
Stephen P. Midouhas
BY
John P. Chandler
his Attorney

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Fig. 4

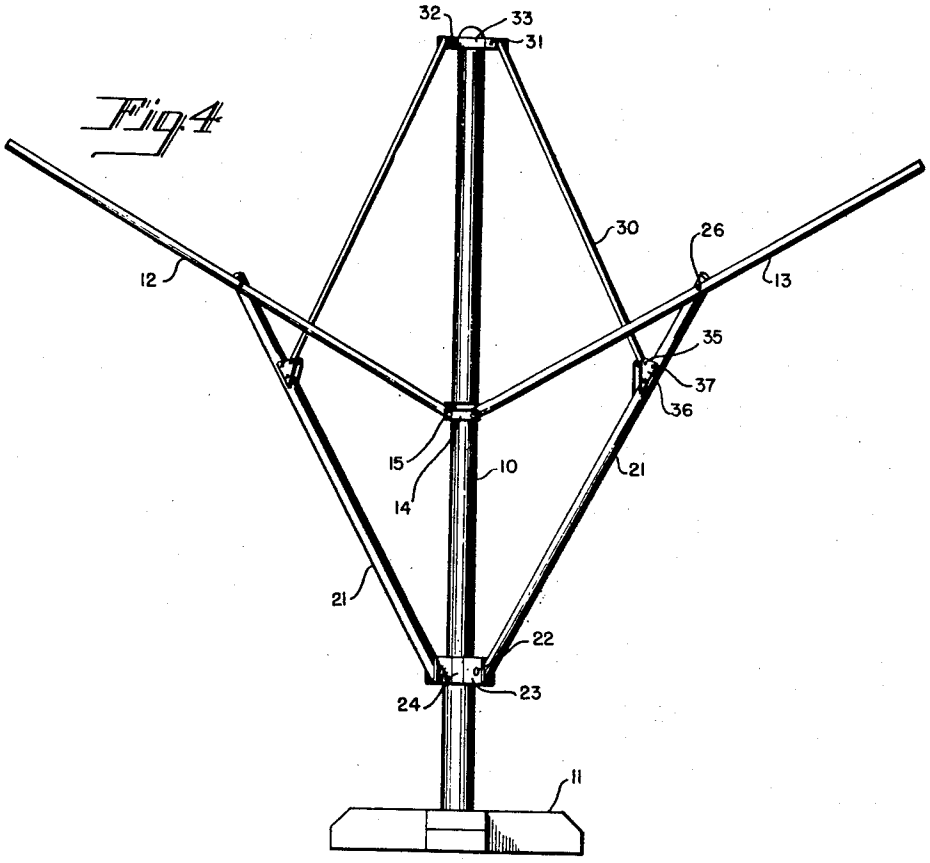


Fig. 5

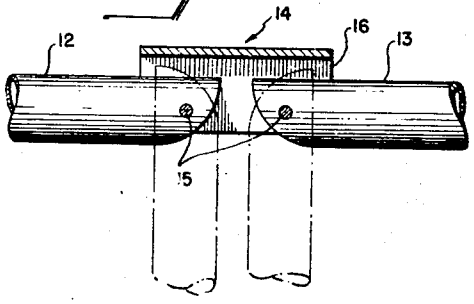
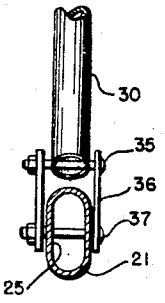


Fig. 6



INVENTOR.

Stephen P. Midouhas

BY John P. Chandler

his Attorney

Patented Jan. 11, 1949

2,459,110

UNITED STATES PATENT OFFICE

2,459,110

COLLAPSIBLE CLOTHESLINE

Stephen P. Midouhas, Bristol, Pa., assignor to Kemline Metal Products Company, Inc., Bristol, Pa., a corporation of Pennsylvania

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7 Claims. (Cl. 211—178)

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This invention relates to new and useful improvements in clothes driers, and has for its principal object the provision of a novel clothes drier which is readily collapsed into a small space but which, when fully extended, provides a pair of elongated, spaced clothes-line supporting elements with the lines running therebetween in generally parallel arrangement.

Collapsible clothes lines are generally constructed in one of several variations of a common arrangement resembling an umbrella wherein the line supporting arms, usually four in number, when extended are disposed radially of a central supporting pole. The lines extend between these arms from the inner to the outer ends thereof. There is thus provided a plurality of squares of increasing dimensions. In addition to the inconvenience of hanging clothes on lines of increasing length, these structures are characterized by a general lack of balance, requiring the user to repeatedly rotate the structure as the clothes are applied. A particular disadvantage of this type of drier occurs when used out-of-doors wherein a small proportion of the clothes can be exposed to the sunlight.

The clothes drier of the present invention has all lines in parallel relationship, which lines can be turned to a position parallel with the rays from the sun. The arrangement also facilitates the operation of hanging and removing clothes from the line, and the entire structure is well balanced at all times. Each of the spaced arms has a central pivot, and the movement from extended, horizontal, raised position to folded, vertical position is a compound movement achieved by a novel arrangement of supporting braces and links. The act of raising the arms to extended, horizontal position requires much less effort than is required in the umbrella type of line.

Another object of the invention is to provide a novel suspension arrangement for clothes-line supporting arms.

In the drawings:

Fig. 1 is a top plan view of a clothes line embodying the present invention and showing the relation of the parts when in fully extended position.

Fig. 2 is a broken side elevation of the structure shown in Fig. 1.

Fig. 3 is a vertical section taken on line 3—3 of Fig. 2.

Fig. 4 is a side elevation showing the relation of the parts when in partially collapsed position.

Fig. 5 is a broken section showing the pivotal means for joining the two sections of each horizontal arm.

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Fig. 6 is a broken vertical section taken on line 6—6 of Fig. 1.

The folding wash-line of the present invention includes a central, vertical support or post 10 mounted on a base 11. There are further provided a pair of arms, each of which is formed in plural sections 12 and 13 which are joined together by means of an elongated, generally U shaped bracket 14 having pivot pins 15 passing between the opposed walls 16. When in fully extended position, the sections comprising each arm are rigidly supported in axial alignment, and the arms are suspended in spaced, generally parallel relation. Parallel clothes lines 20 are extended taut between these arms, such lines passing through spaced apertures 19 in the arms.

The novel means for suspending the arms in this position comprise plural braces 21 of tubular construction. The inner terminal of each brace is secured by a pivot pin 22 to a U shaped bracket 23, the several brackets being supported by a collar 24 arranged to freely slide on vertical post 10. Two opposed walls of braces 21 may be flattened, as shown at 25 in Fig. 6, to facilitate the drilling of holes therein. At its outer terminal, each brace is pivotally secured, as at 26, to one of arm sections 12 and 13.

Support is afforded to braces 21 by means of links 30, each of which is pivoted at 31 in a bracket 32, the several brackets being carried by a collar 33 secured in fixed relation at the upper end of post 10. This collar with its brackets may be generally of the same construction as the lower, sliding collar 24. At its opposite end, each brace is pivotally connected by means of a pin 35 to spaced, generally triangular plates 36 rigidly secured by means of pins 37 to a point adjacent to, but spaced from, the outer end of each brace 21. In the relation shown, the distance between the axes of pivots 22 and 35 is about two times that between pivots 35 and 26. Collar 24 is movable from its lowermost support upwardly to the position shown in Fig. 2 wherein it is stopped by means of a stop pin 40. In this position the inner terminals of braces 21 have passed upwardly beyond the plane of spaced arms 12—13. When in this position, the novel arrangement of the braces and links is such as to maintain the members in elevated position without further supporting means, and also to maintain the arms in rigid, extended position.

By virtue of the foregoing linkage arrangement, the axes of pivot pins 26 and 35 change their position as the structure is moved from open to closed position. It will be noted from an exam-

ination of Fig. 1 that pivot pins 26 have their axes in a vertical position when the structure is fully opened. The same is true of pivot pins 15 in brackets 14 which interconnect the two sections of each arm 12—13. When the structure is moved from open to closed position, these axes turn approximately 90°. When it is desired to collapse the structure from the position of Fig. 1, it is merely necessary to move collar 24 downwardly by grasping the inner terminal of one of braces 21, and when in lowered position all of the parts occupy a substantially vertical position closely adjacent post 10.

It will be appreciated that arms 12 and 13 may be omitted and radial arms 21 provided with spaced openings for receiving the cords in the manner that conventional umbrella-type driers employ. This arrangement is far superior to the old type of umbrella-type driers in that it is much more easily raised and lowered, and will stay in elevated position without supporting pins.

While two forms or embodiments of the invention have been shown and described herein for illustrative purposes, and the construction and arangement incidental to two specific applications thereof have been disclosed and discussed in detail, it is to be understood that the invention is limited neither to the mere details or relative arrangement of parts, nor to its specific embodiments shown herein, but that extensive deviations from the illustrated forms of embodiments of the invention may be made without departing from the principles thereof.

What I claim is:

1. A folding clothes drier comprising a pair of spaced arms, each of which is formed in plural sections which are pivotally joined together, each of the arms being arranged to be extended to cause their sections to be axially aligned, and means for supporting the arms in horizontally spaced relation while so aligned, said means comprising a vertical post, a brace pivotally connected at one end thereof to each arm section intermediate its ends, the opposite ends of the brace being interconnected and arranged for sliding movement vertically of the post, and a link pivotally connected at one end thereof to each brace and at the other end thereof to a point adjacent the upper end of the post.

2. A folding clothes drier comprising a pair of spaced arms, each of which is formed in plural sections which are pivotally joined together, each of the arms being arranged to be extended to cause their sections to be axially aligned, and means for supporting the arms in horizontally spaced relation while so aligned, said means comprising a vertical post, a collar mounted thereon for sliding movement, a brace pivotally connected at one end thereof to each arm section at a point between its ends and at the other end thereof to the collar bracing means connecting each brace with the upper end of the post, the collar lying adjacent the lower end of the post when the arm sections and braces are in collapsed position and lying above the plane of the arms when the latter are in extended, spaced, horizontal position, and plural clothes lines extending between the arms in substantially parallel relation when the arms are so extended.

3. A folding clothes drier comprising a pair of spaced arms, each of which is formed in plural sections which are pivotally joined together, each of the arms being arranged to be extended to cause their sections to be axially aligned, and means for supporting the arms in horizontally spaced relation while so aligned and to be collapsed to vertical position, said means comprising a vertical post, a collar mounted thereon for sliding movement, a brace pivotally connected at one end thereof to each arm section intermediate its ends and at the other end thereof to the collar, a link pivotally connected at one end thereof to each brace intermediate its ends and at the other end thereof to the upper end of the post, the collar lying adjacent the lower end of the post when the arm sections, braces and links are in collapsed, generally vertical position and lying above the plane of the arms when the latter are in extended, spaced, horizontal position, and plural clothes lines extending between the arms in substantially parallel relation when the arms are so extended.

4. A folding clothes drier comprising a pair of spaced arms, each of which is formed in two sections which are pivotally joined together on a horizontal axis when in extended position, each of the arms being arranged to be extended to cause their sections to be axially aligned, and means for supporting the arms in horizontally spaced relation while so aligned and for collapsing the same to vertical position, said means comprising a vertical post, a collar mounted thereon for sliding movement, a brace pivotally connected at one end thereof on a vertical axis to each arm section intermediate its ends and at the other end thereof to the collar, a link pivotally connected at one end thereof to each brace intermediate its ends and at the other end thereof to the upper end of the post, the collar lying adjacent the lower end of th : post when the arm sections, braces and links are in collapsed, generally vertical position and lying above the plane of the arms when the latter are in extended, spaced, horizontal position, and plural clothes lines extending between the arms in substantially parallel relation when the arms are so extended.

5. A folding clothes drier including a generally vertical post, a pair of spaced arms, each of which is formed in plural sections which are pivotally joined together, each of the arms being arranged to be extended to cause their sections to be generally axially aligned, and means for supporting the arms in horizontal relation and substantially equally spaced from the post while so aligned, and means for moving the arms to a generally vertical position when the drier is collapsed, said means comprising a collar mounted on the post for sliding movement, a brace pivotally connected at one end thereof to each arm section and at the other end thereof to the collar, the collar lying adjacent the lower end of the post when the arm sections and braces are collapsed and lying adjacent the plane of the arms when the latter are in extended, spaced, horizontal position, and plural clothes lines extending between the arms when the arms are so extended.

6. A folding clothes drier including a pair of spaced arms, each of which is formed in plural sections which are pivotally joined together, and means for supporting the arms in horizontally spaced relation when a. ially aligned, said means comprising a vertical post, a brace pivotally connected at one end thereof to each arm section, the opposite ends of the braces being interconnected and arranged for sliding movement vertically of the post, and a link pivotally connected at one end thereof to each brace and at the other end thereof to a point adjacent the upper end of the post.

7. A folding clothes drier including a pair of

spaced arms, each of which is formed in plural sections which are pivotally joined together, means for supporting the arms in horizontally spaced relation when axially aligned, said means comprising a vertical post, a brace pivotally connected at its outer end to each arm section, the inner ends of the several braces being adapted for movement vertically of the post from folded to extended position of the clothes drier, means for securing such inner ends immovable relative to the post when the drier is in such latter position, and a link pivotally connected at one end thereof

to each brace and at the other end thereof to a point adjacent the upper end of the post.

STEPHEN P. MIDOUHAS.

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