

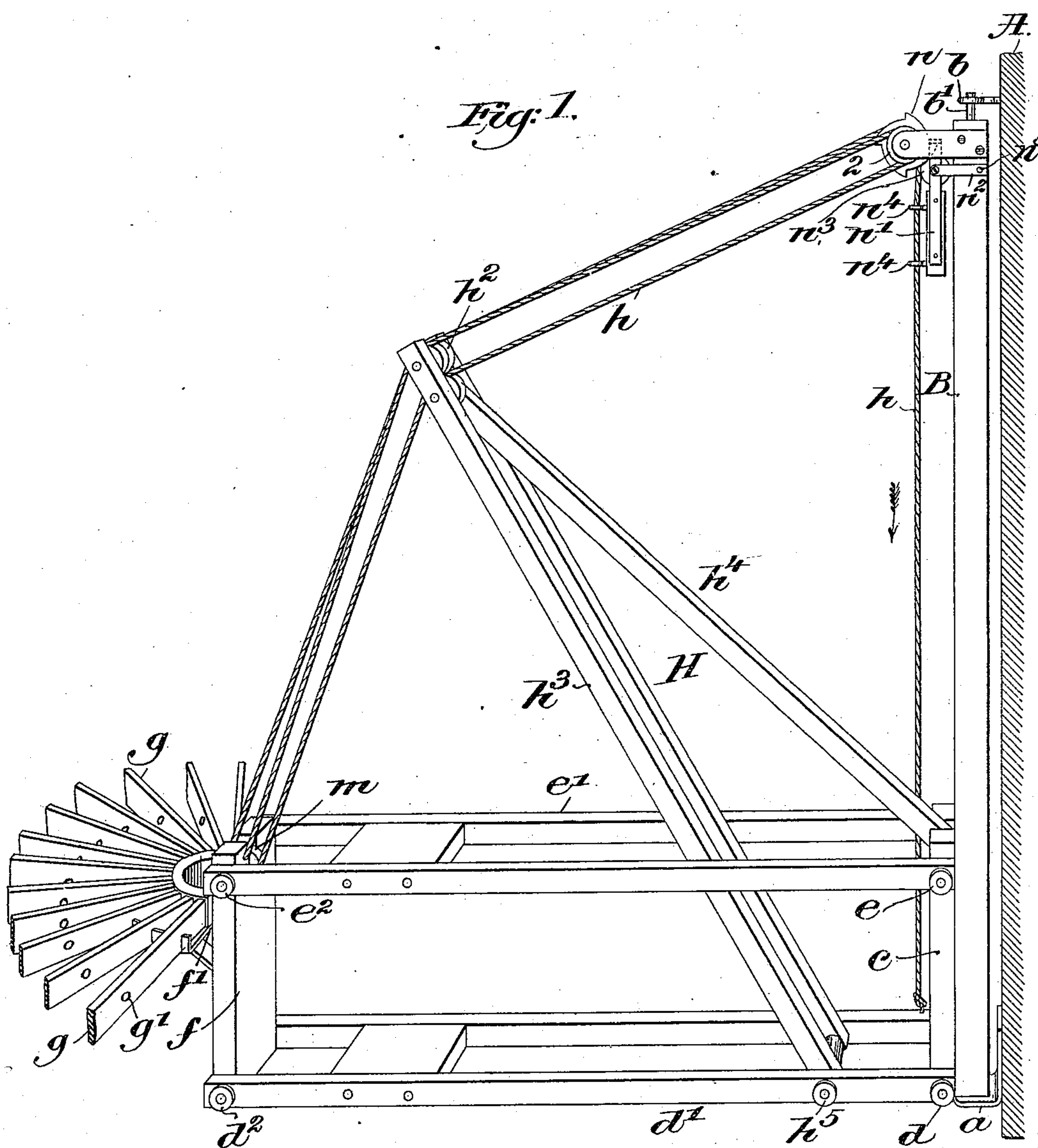
(No Model.)

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E. PRESCOTT.  
CLOTHES DRIER.

No. 545,658.

Patented Sept. 3, 1895.



Witnesses.  
Edward F. Allen.  
Thomas J. Drummond.

*Inventor:*  
*Edwin Prescott.*  
*by Crosby Gregory.*  
*attys.*

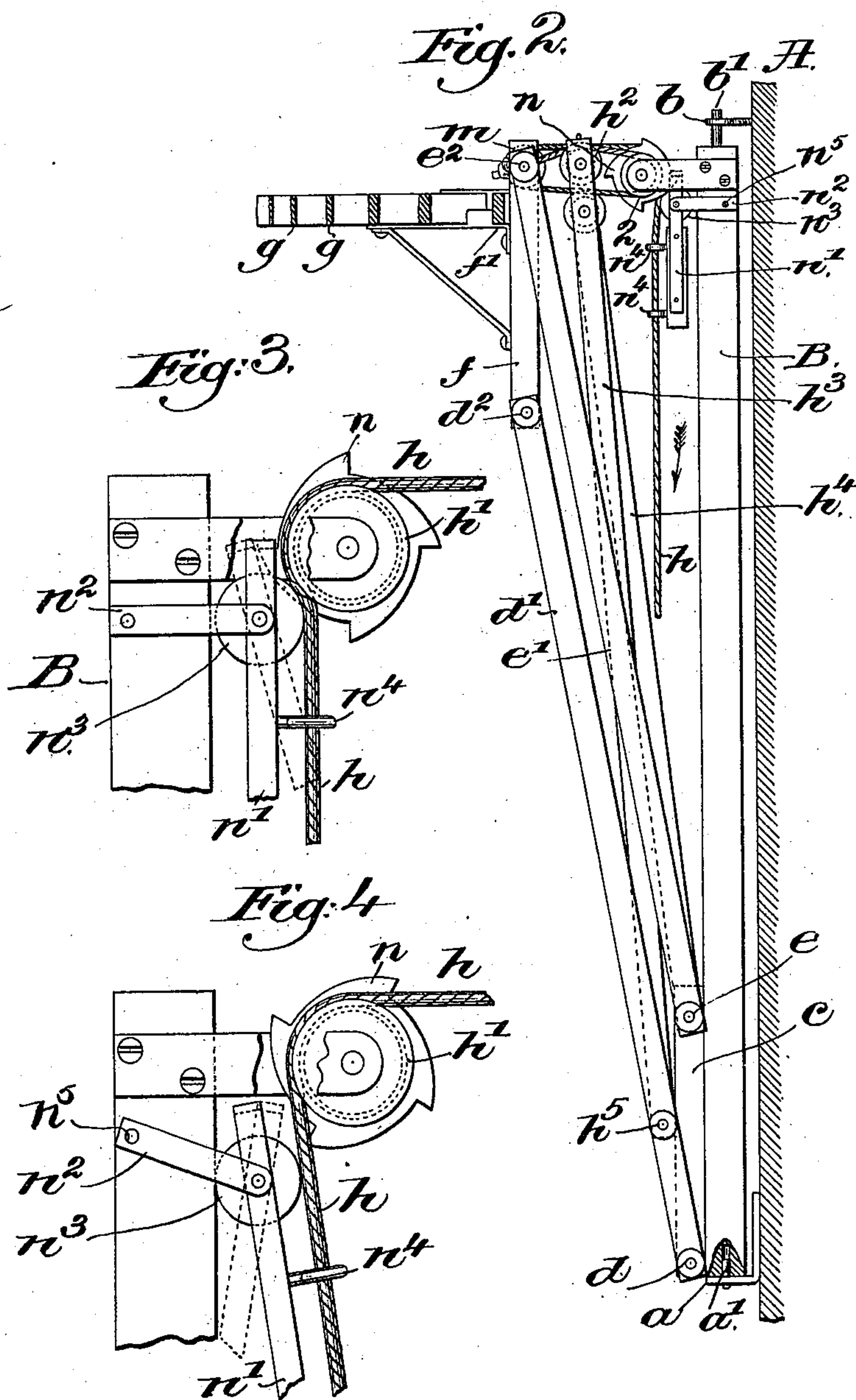
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# UNITED STATES PATENT OFFICE.

EDWIN PRESCOTT, OF ARLINGTON, MASSACHUSETTS.

## CLOTHES-DRIER.

SPECIFICATION forming part of Letters Patent No. 545,658, dated September 3, 1895.

Application filed September 10, 1894. Serial No. 522,564. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN PRESCOTT, of Arlington, county of Middlesex, State of Massachusetts, have invented an Improvement in Clothes-Driers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of an improved clothes-drier, more especially adapted for house use, either on an internal or an external wall or other suitable support.

In my invention a series of slats or arms are arranged preferably radial in a partial hub secured in suitable manner on a head mounted on parallel arms, whereby said head may be moved up or down, the head maintaining its vertical position to thus insure the presentation of the slats or arms in substantially horizontal position. The lowermost parallel arm has jointed to it a suitable lever, which may be and preferably is, as hereinafter shown, double, to secure rigidity, and said lever at its upper end has jointed to it a controlling-bar, one end of which is pivoted at or near the joint of the inner end of the upper one of the parallel bars, said lever and controlling-bar constituting what I shall designate as a "jointed boom," said boom supporting suitable sheaves, over which runs the rope, to be described, for raising or lowering the head that carries the slats or arms referred to. The use of the boom, especially when the device is being operated (by lowering or raising it) through the lower half of its arc of movement, is to properly apply the power through the rope to the parallel arms carrying the head by sustaining the rope at a proper angle to the parallel arms. The rear ends of the parallel bars are preferably jointed to a foot which may be fixed to any vertical wall or post; but preferably for greatest convenience for room use said foot will be secured to a vertically-arranged post pivoted in such manner as to enable the head and its slats or bars to be swung about horizontally, the rope enabling the head and bars to be lowered, so that a person may readily apply to the slats or bars the clothes to be dried, and then lift the head with the clothes into a higher position out of the way to dry.

I have combined with the main hoisting-sheave a peculiar mechanism whereby the head may be readily locked in any desired position, one part of the locking device being under the control of the rope used in raising or lowering the head, as will be described.

Figure 1 is an isometric view of a clothes-drier embodying my invention, the same being half-way down to enable the slats or bars to be easily accessible. Fig. 2 shows the apparatus represented in Fig. 1 in its elevated position, and Figs. 3 and 4 are details showing the main pulley and its locking mechanism.

In the drawings, A represents a wall, either an interior or an exterior wall, of a house or building or a suitable upright. The upright is provided with suitable steps *ab*, with which co-operate suitable pins or studs *a' b'*, so as to form pivotal points for a post B. The post B may be turned about a vertical axis and carry with it its attached parts. The post has suitably attached to it a foot *c*, to which are jointed at *d e* parallel bars *d' e'* of suitable shape, preferably double, as herein shown, though said bars may be single or of other suitable construction to insure the necessary rigidity, said bars being in turn jointed at their opposite ends by suitable pivots *d<sup>2</sup> e<sup>2</sup>*, with a suitable head *f*, said head having attached to it in suitable manner the hub *f'*, preferably of metal, suitably shaped to receive and hold a series of slats or bars *g*, preferably of wood and of any desired or suitable cross-section and length, said bars being spaced at proper distances apart by or through entering notches in the hub, and provided with holes *g'*, through which, if desired, a suitable rope may be passed, the rope being convenient if the drier is to be made on a large scale and used out of doors, a less number of arms being then required.

By reason of supporting the head and hub by parallel arms it is possible to raise and lower the head and keep the slats or bars in substantially horizontal position, and when the bars are down more or less close to the floor a person may readily put upon them the clothes to be dried, and then by or through the rope *h*, to be described, may lift the hub containing the bars more or less high, according to the position where it is desired to leave



the clothes to dry. The rope  $h$  has one end hanging down, so as to be readily reached by the operator, the said rope passing over the main sheave  $h'$ , and then over one of a pair of suitable sheaves  $h^2$  at or near the pivotal connection of a double lever  $h^3$  with a controlling-bar  $h^4$ , the lever  $h^3$  being jointed at  $h^5$  to the lower parallel arm  $d'$ , while the controlling-bar is jointed at  $e$  to the foot  $c$ . The rope  $h$  is then passed down and suitably connected with the head  $f$ , so that the operator pulling upon the rope in the direction of the arrow in Fig. 2 will raise the slats or bars of the drier.

For the greatest ease of manipulation, durability, &c., I prefer that the boom composed of the lever  $h^3$  and the bar  $h^4$  carry three pulleys, two of them, as  $h^2$ , being supported side by side on a suitable pivot, the third pulley being shown as mounted on the pivot connecting the lever  $h^3$  and controlling-bar  $h^4$ , and that the head be supplied with a suitable pulley  $m$ , the rope  $h$  being passed up over the main pulley  $h'$ , over one of the pulleys  $h^2$ , down, under, and about the pulley  $m$ , thence back over one of the three pulleys of the boom  $H$ , and again over an auxiliary main pulley 2, (shown best in Fig. 2,) and back again over one of the topmost of the pulleys of the boom, the end of the rope being connected to the head  $f$ . When raising the head from a horizontal position, the rope  $h$  might pass directly from the said head to the main sheave  $h'$  but it is preferable to sustain the rope intermediate the head and main sheave, the sustaining-point being arranged to always occupy a position substantially half-way between the head and main sheave, whatever the position of the head. If, however, the head is lowered below the position shown in Fig. 1, the lower its position the more the power which would have to be applied to the rope  $h$  to elevate it were it not for the intermediate sustaining device, which is herein shown as the pulleys carried at the outer end of the boom. It will be evident from the construction shown and described that the outer end of the boom will move at half the speed of the head  $f$ , and consequently it will retain its intermediate position equidistant from said head and the main sheave, no matter what the elevation or depression of the head, and the rope is so prevented from swinging in and approaching a vertical line as the head is lowered. Were the intermediate sheaves carried by a single arm or lever pivoted at either  $e$  or  $h^5$ , there would be nothing whatever to position such intermediate support and it would fall by its own weight; but the boom herein shown, composed of two members pivoted together at their outer ends, and the inner end of one mounted on a fixed pivot and the inner end of the other on a movable pivot, as  $h^5$ , retains the intermediate supporting-sheaves in proper position, and as the arm  $d'$  is raised or lowered, the movable pivot  $h^5$  of the boom must also be raised or lowered. This invention is not, however, limited to the

exact number of runs of the rope between the main pulley and the head, nor is this invention limited to the rope being attached at or to the head, for it will be obvious that should the rope be extended about the main pulley  $h'$  and then about the pulleys of the boom and brought back again the parallel arms might be raised and lowered through strain directly upon the boom; but such construction, although operable, would not be as strong and durable as the plan in which I have illustrated my invention in Figs. 1 and 2.

The pulley  $h'$  has suitably fixed to and so as to rotate with it a ratchet, herein represented as having four teeth; but it may in practice have any suitable number of teeth. These teeth are adapted to be engaged by a locking device composed, essentially, of a bar  $n'$ , (best shown in Figs. 3 and 4,) so bent or recessed at its upper end as when in its normal position to receive and engage a tooth of the ratchet, and jointed to a suitable link-like support  $n^2$  in such manner that the bar may be supported firmly against slipping or side strains during its motions. The links  $n^2$  are loosely pivoted at  $n^5$  on the post B, and have at their junction with the bar  $n'$  a friction-roll  $n^3$ , which bears with a variable pressure against one side of the rope  $h$ , said rope passing through a suitable eye or eyes  $n^4$  of the bar. Normally, as shown in Figs. 1, 2, and 3, the engagement of a tooth of the ratchet  $n$  with the head of the bar  $n'$  raises bar, links, and friction-roll in such a manner as to jam the rope between the friction-roll and pulley  $h'$ , preventing freedom of upward and outward movement in the rope, and consequently supporting the attached system of arms and levers at any desired point in its arc of movement, the outward strain on the rope, exerted by the weight of the attached parts, tending to rotate the ratchet  $n$  in such direction as to maintain the bar  $n'$  lifted. If the operator pulls directly down upon the rope  $h$ , the friction thereof upon the pulley  $h'$  rotates the latter in the reverse direction, thereby depriving the bar  $n'$  of the support of the ratchet-tooth and permitting said bar to fall of its own weight down and out of engagement with the ratchet, guided and controlled in its fall by the links  $n^2$ , an outward pull upon the rope away from the post B aiding in this disengagement by tipping the bar  $n'$  through the medium of the eyes  $n^4$ , so that the operator may raise or lower, as desired, the parallel arms and the slats or bars; and when in proper position the operator has only to push or incline the rope toward the post B and to slightly slacken it to thus cause the upper end of the locking device to engage one of the ratchet teeth, and thereafter the slats or bars will remain in the position where left. In fact, the mere weight of the rope in most instances is sufficient to, when the rope is released, effect turning of the locking device to hold the parallel bars in a defined position.

As stated, the foot  $c$  may, if desired, be con-



nected directly to an upright wall, especially if it is not desired to swing the head carrying the slats or bars horizontally.

5 This device may be used in a house and may be suitably raised to get it out of the way while the clothes are being dried, or it may be attached to the outside of a house where space is very limited, as where occu-  
10 pants of a house have only an alley or driveway in which to temporarily hang their clothes to be dried.

In practice I have found it very advantageous to make the lower arm of the parallel arms a little longer than the upper arm, as  
15 thereby I am enabled to compensate for the required looseness of the joints and always keep the lower end of the head out in such a position as to prevent any downward sagging of the outer ends of the slats or bars.

20 The hub is herein shown as a separate piece attached to the foot, the latter serving the purpose of supporting the hub and connecting the upper and lower parallel bars; but this invention is not limited to the exact  
25 shape shown for the hub or the head, and they might, if desired, be made as an integral casting.

Having described my invention, what I claim, and desire to secure by Letters Patent,  
30 is—

1. In a clothes drier, a hub adapted to receive and support slats or bars, and a head to support said hub, parallel arms to sustain said head, a foot to which the opposite ends  
35 of said arms are jointed, and means to raise and lower said parallel arms, substantially as described.

2. In a clothes drier, a foot, parallel arms

jointed to said foot one above the other, a head pivotally connected to the outer ends 40 of the arms, and horizontal slats or bars supported in a part of the head, combined with an operating rope to raise and lower the head, the parallel arms during such movement maintaining the slats or bars horizontal, a 45 boom to sustain the rope above the head, and means to move the sustaining portion of the boom at substantially one-half the speed of the head, substantially as described.

3. In a clothes drier, a pivoted post, a foot 50 secured thereto, parallel arms jointed to said foot, a head carried by said arms, and a hub attached to said head and provided with slats or bars, combined with a rope, sheaves over which the same is passed to raise and 55 lower said parallel arms, a ratchet wheel, and a locking device co-operating therewith and under the control of the rope, substantially as described.

4. In a clothes drier, a hub adapted to re- 60 ceive and support slats or bars, and a head to support said hub, parallel arms to sustain said head, a foot to which the opposite ends of said arms are jointed, combined with means to raise and lower said parallel arms, 65 and a locking device co-operating with said means, to maintain said arms at any desired angle, substantially as described.

In witness whereof I have signed my name to this specification in the presence of two 70 subscribing witnesses.

EDWIN PRESCOTT.

Witnesses:

GEO. W. GREGORY,  
LAURA T. MANIX.