No. 753,179. PATENTED FEB. 23, 1904.

S. TILLSON.

CLOTHES REEL.

APPLICATION FILED DEC. 23, 1901. RENEWED JAN. 7, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

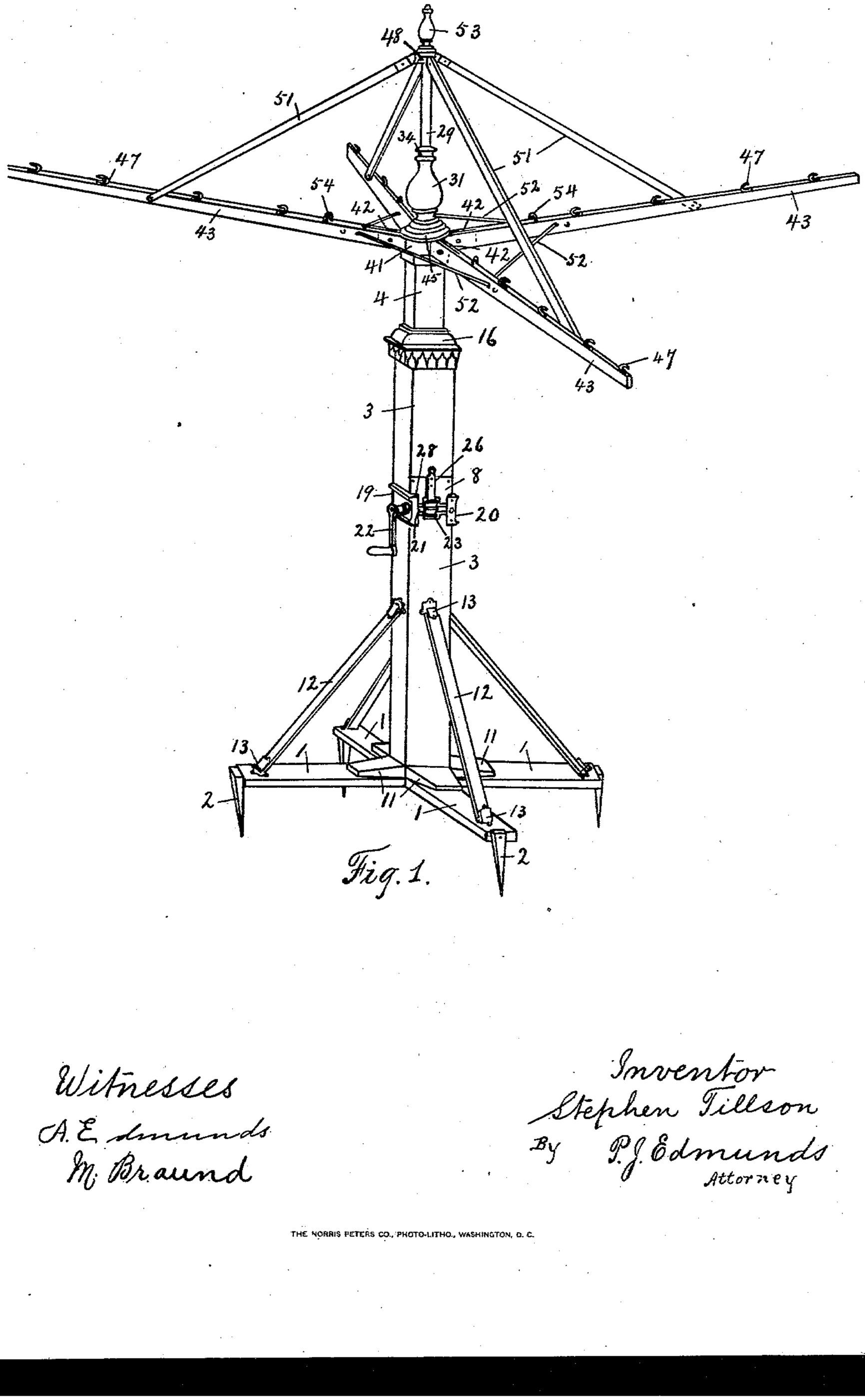

Fig. 1.

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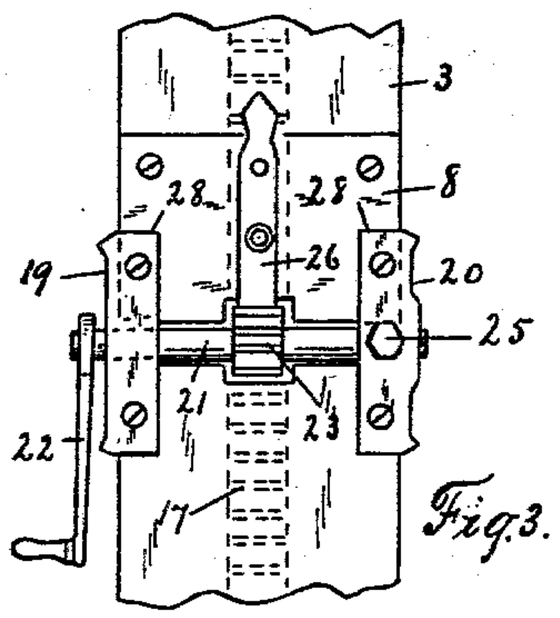

Fig. 3.

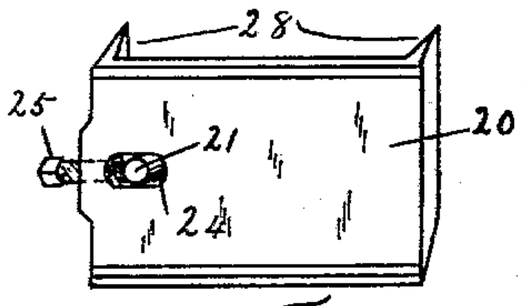

Fig. 4.

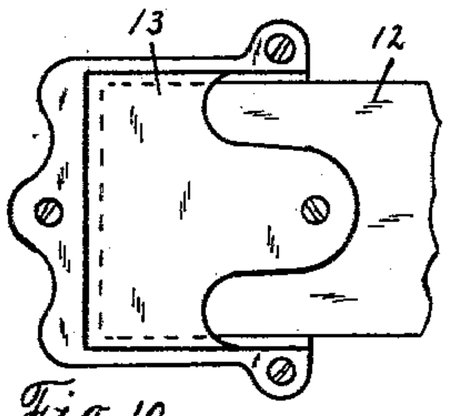

Fig. 10.

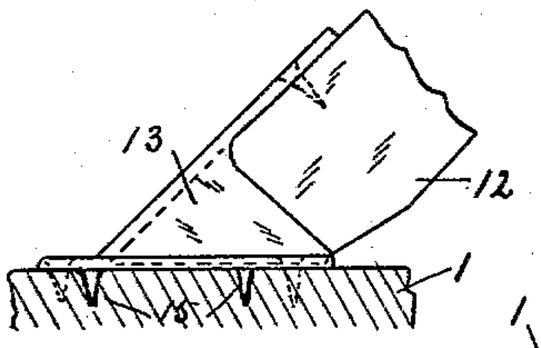

Fig. 11.

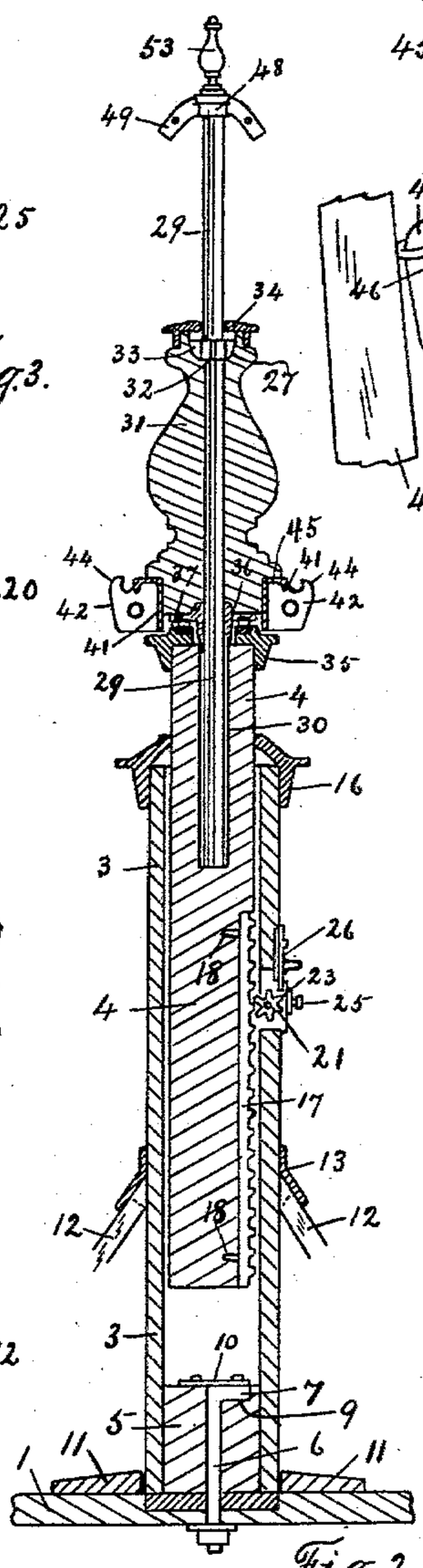

Fig. 2.

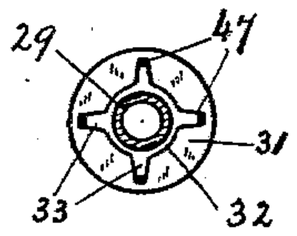

Fig. 12.

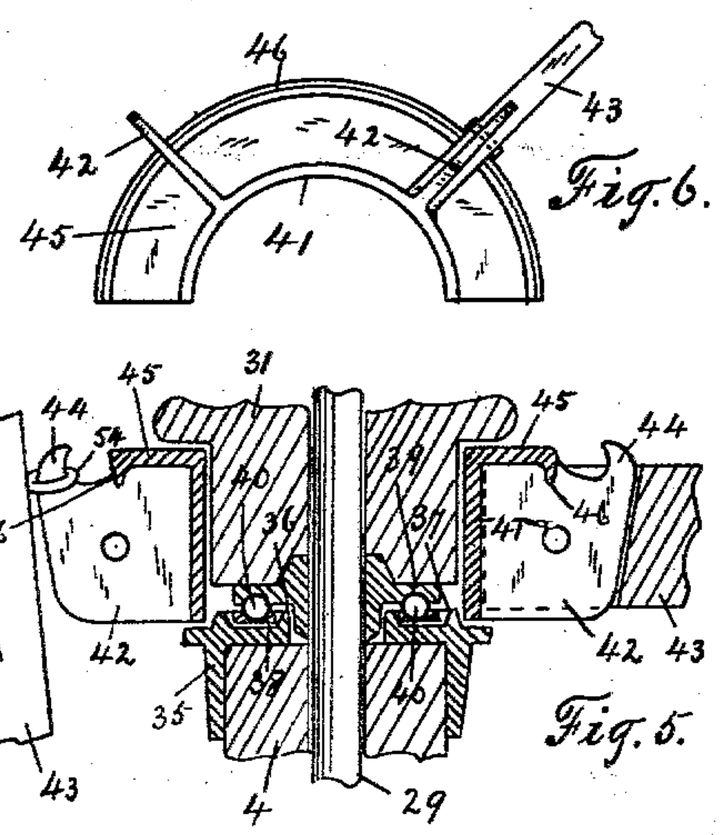

Fig. 6.

Fig. 5.

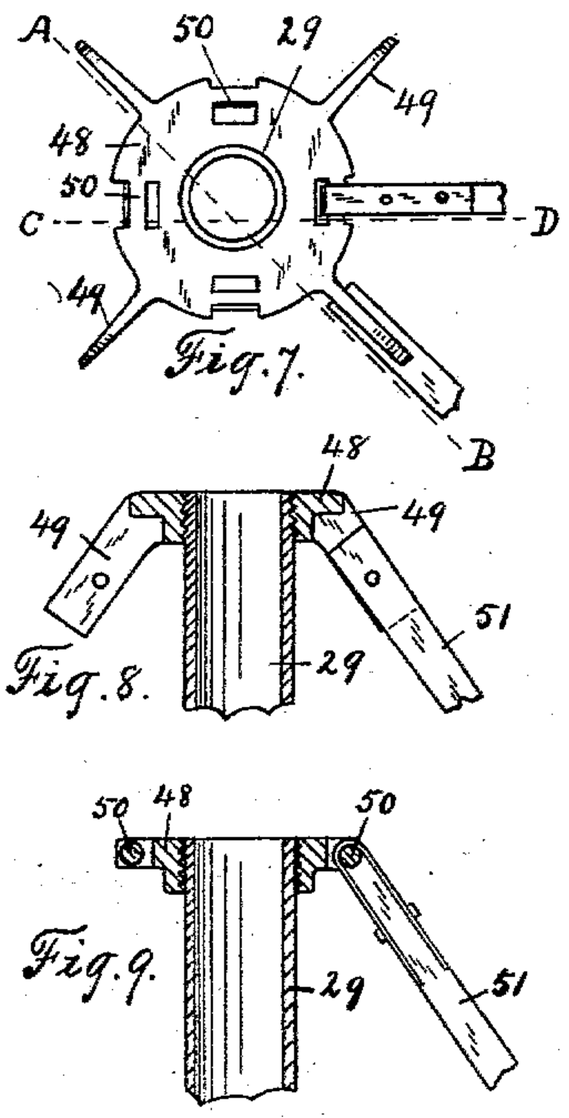

Fig. 7.

Fig. 8.

Fig. 9.

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No. 753,179. Patented February 23, 1904.

UNITED STATES PATENT OFFICE.

STEPHEN TILLSON, OF CHATHAM, CANADA, ASSIGNOR OF ONE-HALF TO HENRY B. FRY, OF BRIDGEPORT, MICHIGAN.

CLOTHES-REEL.

SPECIFICATION forming part of Letters Patent No. 753,179, dated February 23, 1904.

Application filed December 23, 1901. Renewed January 7, 1904. Serial No. 188,140. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN TILLSON, a subject of the King of Great Britain, and a resident of Chatham, in the county of Kent, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a specification.

This invention relates to improvements on an elevated revolving frame on which clothes are suspended to dry; and it consists of the improved construction and novel combination of parts, as will be hereinafter first fully set forth and described and then pointed out in the claims, reference being had to the accompanying drawings, wherein—

Figure 1 is a perspective view of a clothes-drier embodying my improvements. Fig. 2 is a central longitudinal sectional view of the body and main portion of Fig. 1. Fig. 3 is an enlarged detail front view of a portion of the body, showing the toothed pinion and adjacent parts. Fig. 4 is a perspective view of one of the side plates. Fig. 5 is an enlarged detail central sectional view of the hub-collar, ball-bearings, and the adjacent portions of the hub and adjustable standard. Fig. 6 is a view of one-half of the hub-collar looking at it from the under side. In this view one of the flanges and the inner portion of one of the line-carrying arms are shown. Fig. 7 is a plan view of the ring to which the upper ends of the supporting-bars are secured. Fig. 8 is a cross-sectional view on the line A B of Fig. 7. Fig. 9 is a cross-sectional view on the line C D of Fig. 7. Figs. 10 and 11 are plan and side views, respectively, of a cap and a portion of a brace to which said cap is secured, which base extends from the body to the base or platform, and in Fig. 11 a portion of the latter is shown in section. Fig. 12 is a plan view of the upper end of the hub and flanged band.

In the accompanying drawings, 1 designates a base or platform formed of two cross-pieces halved together at their centers, and 2 stakes which are driven into the ground at each end of and nailed or otherwise attached to the cross-pieces of which the base is formed.

3 designates a hollow body, 4 a standard longitudinally adjustable therein, and 5 a block rigidly secured in the lower end of said hollow body.

The base 1 is secured to the body 3 by a clamping-bolt 6, having a shoulder 7, passing through the block 5 and the base. The shoulder 7 rests in a recess 9 in said block 5. 10 designates a plate secured to said block 5 over said recess 9.

11 designates blocks secured to the base 1 and so placed on said base as to abut against the sides of the body 3.

12 designates inclined braces which extend from the base 1 to the body 3.

13 designates caps, one of which is secured to and over each end of the inclined braces 12, and said caps are provided with sharp projections or teeth 15. The caps 13 at one end of said braces 12 are secured to the body 3 and at the other end are secured to the base 1, and when said caps are secured in place the projections 15 are pressed into said body 3 and base 1.

16 designates a cap on the upper end of the hollow body 3, through which the adjustable standard 4 projects.

17 designates a toothed rack secured to the adjustable standard 4, and 18 designates sharp projections or teeth formed on said rack, which are pressed into said adjustable standard 4 when said toothed rack 17 is secured thereto.

19 and 20 designate side plates provided with flanges 28 at both ends, as shown in Fig. 4, which plates are secured to two opposite sides of the body 3, and when secured thereto said flanges 28 project for a short distance over on the front and back of said body. 21 designates a shaft held in place supported by and rotating perfectly free in bearings in said side plates 19 and 20, 22 a crank secured to one of the projecting ends of said shaft 21, by which the latter is operated, and 23 a toothed pinion secured to said shaft 21 and adapted to engage with the toothed rack 17, and for the purpose of permitting said toothed pinion 23 to engage with the toothed rack 17 the hollow body 3 is cut away at this point.

24 designates an elongated slot formed in

the side plate 20, in which slot one end of the shaft 21 is supported, and 25 a set-screw which extends through the end of said side plate 20 at right angles to said shaft 21 and engages with the latter to adjust it, as well as the pinion 23 secured thereto, toward and hold it in contact with the toothed rack 17.

8 designates a front plate which is secured to the front of the body 3, and said front plate projects under a portion of the flanges 28 of the side plates 19 and 20, as shown in Fig. 3.

26 designates a dog which is pivotally mounted on the front plate 8, and said dog is adapted to engage with the toothed pinion 23 to hold it, as well as the adjustable standard 4, at the elevation to which it is adjusted or to be disengaged from said pinion 23 to permit said adjustable standard 4 to be lowered.

29 designates a rotary spindle supported in a socket 30, formed in the upper end of the adjustable standard 4, and 31 a hub which encircles said spindle 29.

32 designates a band provided with flanges 33, which band is rigidly secured to the rotary spindle 29 and so placed thereon that when said spindle 29 is projected through the hub 31 and rests in the socket 30 in the adjustable standard 4, as shown in Fig. 2, said band 32 and flanges 33 will rest in a corresponding socket 27 in said hub 31, and when so secured in place said spindle 29 and hub 31 will revolve together.

34 is a cap on the upper end of the hub 31, through which the rotary spindle 29 projects.

35 is a cap on the upper end of the adjustable standard 4, and said cap is provided with inner and outer annular flanges 36 and 37, respectively. 38 is the lower half of a ball-bearing held in place between said flanges 36 and 37. 39 is the upper half of this ball-bearing, which is secured to the hub 31, and 40 represents the balls held in place, supported by, and revolving perfectly free in said bearings 38 and 39.

41 is a collar provided with the flanges 42, and the upper outer end of each of the latter is provided with a hook 44. The upper portion of said collar 41 encircles and engages with the lower end of the hub 31, and the lower portion of said collar encircles and engages with the outer annular flange 37. This holds the hub 31 on the cap 35 and in line with the standard 4 and spindle 29 and the two sections 38 and 39 of the ball-bearings in place and in line with one another, and this engagement of the collar 41 with the flange 37 prevents the ingress of snow, water, dust, sand, or other substance to these parts, and thus prevents injury thereto by the ingress of these elements.

43 designates line-carrying arms, the inner ends of which are secured to the flanges 42 by inserting one of said flanges in a slit formed in the inner end of said arm and holding them together. The collar 41 is also provided with an outwardly-projecting rim 45, and the latter is provided with a downwardly-projecting flange 46, which is bedded into the upper face of each of the line-carrying arms 43 when the latter are secured to the flanges 42.

47 designates hooks which are secured to the line-carrying arms 43, with which hooks the clothes-lines engage to hold them spaced apart.

48 designates a ring secured to the upper end of the rotary spindle 29 and provided with the flanges 49 and pivot-bars 50.

51 designates supporting-bars which extend from and are secured at one end to the flanges 49 on pivot-bars 50 of the ring 48 and at the other end to the line-carrying arms 43.

52 designates horizontal braces which extend across, bridge the space between, and are secured at their ends to the line-carrying arms 43. These horizontal braces hold said line-carrying arms in line with the flanges 42 and a uniform distance apart to prevent said arms from swinging out of line with said flanges, and thus prevent one arm straining or otherwise injuring the other or said flanges.

54 designates a loop or eye secured to the line-carrying arm 43, by which the latter may be suspended on the hook 44 parallel with the body 3 when for any reason the inner end of said arm is detached from the hub-collar 41.

The operation is as follows: By turning the crank 22 the shaft 21 and pinion 23 are rotated, and the latter engaging with the toothed rack 17, which is secured to the adjustable standard 4, the latter, as well as the hub 31 and line-carrying arms 43, are raised or lowered, according to the direction that said crank is turned. The arms 43, carrying the lines on which the clothes are to be suspended, are first lowered and the clothes placed thereon, after which the adjustable standard and line-carrying arms are raised to the desired elevation, and when at the desired elevation the dog 26 is adjusted to engage with the toothed pinion 23 to hold the latter, as well as the adjustable standard and attachments, in said elevated position. The stakes 2 and broad base 1 prevent the clothes-drier from tipping over from any cause, particularly in a high wind. Inclined braces 12, block 5, bolt 6, and blocks 11 rigidly secure and brace the body 3 to and on the base 1, prevent all twisting or turning of said body 3 on said base, and firmly hold the former in an upright position on the latter, and at the same time a simple, strong, durable, inexpensive, and efficient clothes-drier is provided, one that can be readily and easily lowered within convenient reach in order to suspend the clothes thereon, after which it may be elevated to any desired position to clear any obstruction or to be out of the reach of anything on the ground, one that may be folded, and one in which the hub 31, to which

the line-carrying arms 43 are secured, will turn smoothly and easily.

Having thus described my invention, I claim—

1. In a device of the class described, an adjustable standard and a toothed rack secured to said standard, in combination with a hollow body, side plates secured to said hollow body, flanges on said side plates extending over on the front and back of said body, bearings in said side plates one of which is in the form of a horizontal slot, a shaft supported in said bearings, a pinion mounted on said shaft, and a set-screw passing through the front edge of the plate into said slot and engaging with said shaft.

2. In a device of the class described, an adjustable standard, a cap on said standard, a hub in the upper end of which radial recesses are formed, in combination with a rotary spindle supported in said standard and extending through said hub, a band secured to said rotary spindle and provided with radial flanges, which are fitted to and inserted in the radial recesses in the upper end of said hub, a ring secured to the upper end of said rotary spindle, line-carrying arms secured to said hub, and supporting-bars secured to and extending from said ring to said line-carrying arms, substantially as and for the purpose set forth.

In testimony whereof I have signed in the presence of the two undersigned witnesses.

STEPHEN TILLSON.

Witnesses:
P. J. EDMUNDS,
M. BRAUND.