3 Sheets—Sheet 1.

J. SCHATER.

Clothes-Driers.

No. 198,049. Patented Dec. 11, 1877

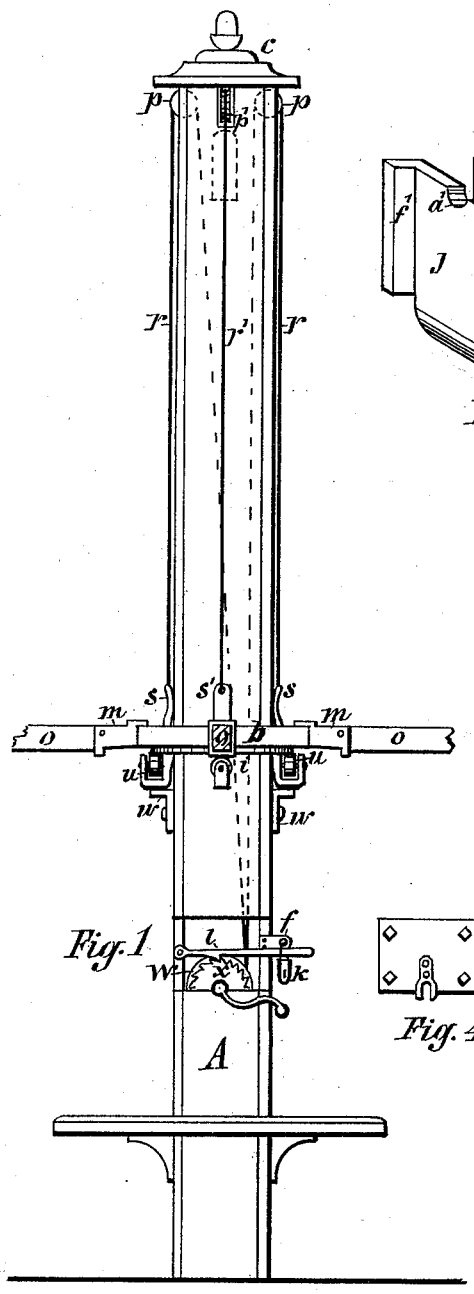

Fig. 1

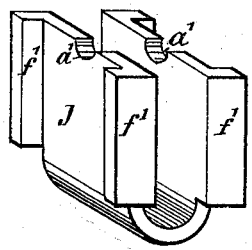

Fig. 5

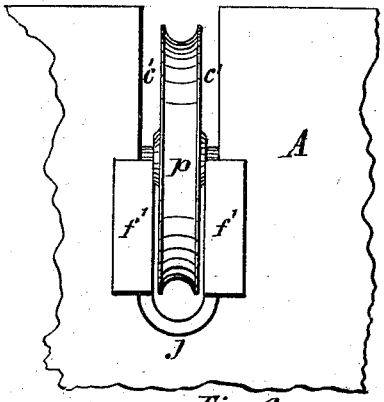

Fig. 6

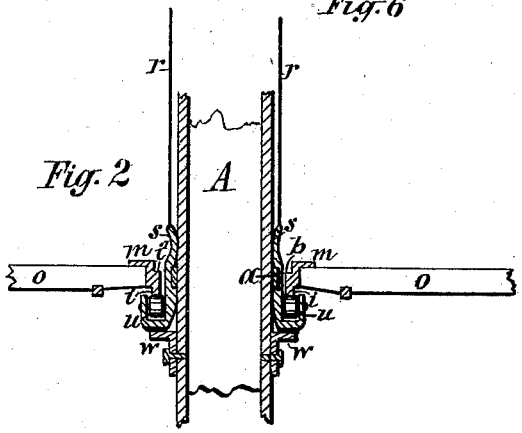

Fig. 2

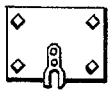

Fig. 4

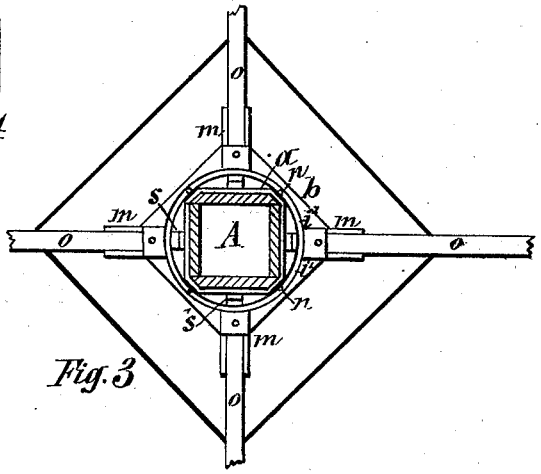

Fig. 3

Witnesses:
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John Winter

Inventor:
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Jr. E. Laass atty

3 Sheets—Sheet 2.

J. SCHATER.

Clothes-Driers.

No. 198,049. Patented Dec. 11, 1877.

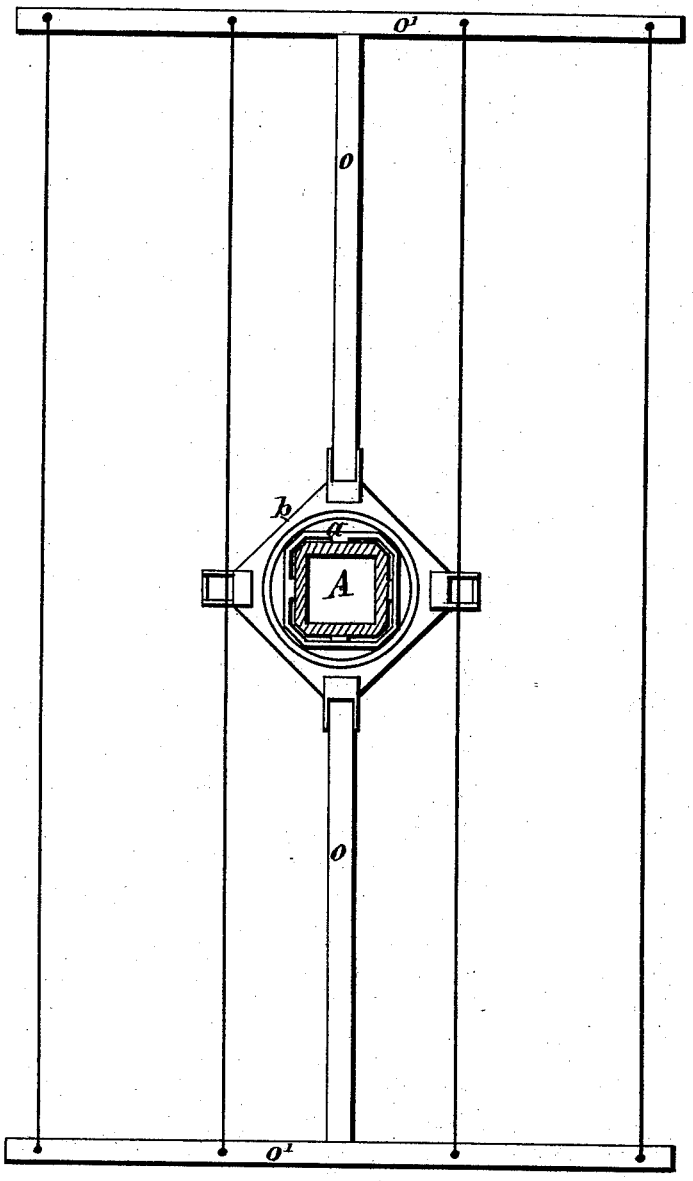

Fig. 7

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per E. Laass Atty.

3 Sheets—Sheet 3.

J. SCHATER.

Clothes-Driers.

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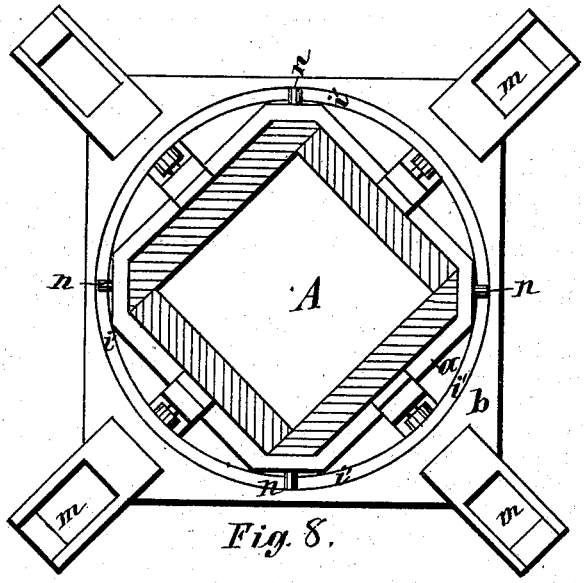

Fig. 8.

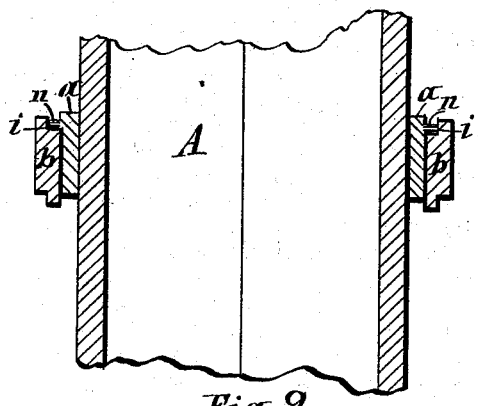

Fig. 9.

Witnesses:
A.W. Smith
Chilly. Schaller

Inventor:
Joseph Schater
per E. Laass Atty.

UNITED STATES PATENT OFFICE.

JOSEPH SCHATER, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO PHILLIP SCHELLER, OF SAME PLACE.

IMPROVEMENT IN CLOTHES-DRIERS.

Specification forming part of Letters Patent No. **198,049**, dated December 11, 1877; application filed February 28, 1877.

To all whom it may concern:

Be it known that I, JOSEPH SCHATER, of the city of Syracuse, in the State of New York, have invented new and u eful Improvements in Clothes-Driers, of which the following, taken in connection with the accompanying drawing, is a full, clear, and exact description.

This invention relates to improvements in that class of clothes-driers in which the clothes-line is applied to a reel having both a rotary and vertical sliding movement on a central post; and it consists, first, in a novel construction of the post, whereby the hoisting apparatus is completely inclosed and protected from the weather, and from tampering with its mechanism, and which gives access to said apparatus when required, and renders the post light and easily erected and taken down; second, in the combination and arrangement, with the sliding collar which supports the reel, of two ropes, connected, respectively, at one end to opposite sides of said collar, passing over pulleys at opposite sides, at or near the top of the post, down the interior of the same, and attached at the other end to and wound in the same direction upon a windlass inclosed by said post, by which arrangement the sliding collar is lifted at two opposite sides to maintain it in a horizontal position and prevent its binding on the post during the operation, and which also renders the hoisting apparatus safe and durable; third, in a novel construction of the sliding collar and reel or revolving spider, by which friction and clogging by ice and corrosion of the two parts are nearly entirely prevented; fourth, in the combination, with two opposite radial arms of the reel, of bars connected centrally at right angles to the end of said arms, and clothes-lines extended from one of said bars to the other, by which device the apparatus is adapted for narrow long localities; fifth, in a novel, simple, and cheap construction of boxes, which are readily attached to and detached from the post, and have bearings for pulleys which admit of a ready application and removal of same, all constructed, combined, and arranged substantially in the manner hereinafter fully described.

In the accompanying drawing, Figure 1 is an elevation of my improved clothes-drier, with the cover at the windlass removed to show the latter with its connections. Fig. 2 is a vertical section of the sliding collar and the revolving spider, to which the clothes-line bars are attached; Fig. 3, a plan view of the same; Fig. 4, a view of the cover for the opening at the windlass. Figs. 5 and 6 are enlarged detail views of the pulleys and their bearings or boxes, and Fig. 7 is a plan view of the clothes-line bars arranged for a narrow locality. Fig. 8 is an enlarged top view of the sliding collar and revolving spider, and Fig. 9 a vertical section of same.

Similar letters of reference indicate corresponding parts.

A is the center post constructed so as to form a complete box or inclosure for the hoisting apparatus, provided with the cap *c* on top and a door or removable cover (shown in Fig. 4 of the drawing) at the windlass W, so as to have access to the hoisting apparatus when required. This post, being hollow, is rendered light and easily erected, and secured in its vertical position by sliding its lower portion over a solid post set firmly in the ground and projecting sufficiently to give the required support to the hollow post, which may be further strengthened and secured in its position by bolts passing transversely to each other through the two posts. *a* is a collar or sleeve fitted to slide vertically on the exterior of the post A. It is provided at opposite sides with straps or hangers, *s*, each of which is connected at its upper end with one end of one of the hoisting-ropes, *r*. These ropes pass over pulleys *p p*, at opposite sides, at or near the top of the post, down the interior of the latter, and are, at the other end, wound in one direction around and attached to the windlass W. By applying two ropes the strain incident from hoisting the reel is divided between the said ropes and their respective pulleys. Consequently the wear upon the same is diminished and the apparatus rendered durable, and in case of breakage of one, the reel is prevented from falling by means of the other.

It will also be observed that by thus lifting the reel at opposite sides and lowering it by its gravity it is maintained in a horizontal position, and the sliding collar is prevented

from binding and cutting the post during the said operation. *b* is a spider or skeleton casting, having a central orifice of a diameter to form an open space between it and the collar *a* about which it revolves, and a circumferential tread or flange, *i*, on its under side, with which it rides upon and is supported by a bearing on the lower extremity of the hangers *s*. Thus no pockets or receptacles are formed in which water can accumulate and corrode the castings, or by its freezing clog or break the spider. For the purpose of further reducing friction the said bearings on the hanger *s* may be provided with friction-rollers, *u*, and the spider mounted upon the same.

The spider is held on its lower bearings and maintained in a horizontal position by pins *n* on the collar *a* engaging a circumferential recess, *i'*, around the top edge of the central circular orifice of the spider. *m m* are sockets on the exterior of the spider, to which are attached the radial clothes-line bars *o o*. In order to adapt the clothes-drier for long narrow localities, two opposite radial arms, *o o*, of the reel may be dispensed with, and to the end of each of the remaining two a bar, *o'*, may be attached at its center, at right angles to the arm *o*, and the clothes-lines extended from one bar *o'* to that at the opposite end of the reel, as illustrated in Fig. 7 of the drawing.

w w are stops attached to the post A, for limiting the descent of the sliding apparatus and supporting the same while attaching the clothes to the lines. They are placed at such relative position that the bottom of the hanger *s* is caused to rest upon them, and the spider allowed to be revolved. W is a windlass placed at a convenient height inside the post A, and having connected with it the hoisting-ropes *r*, and provided with a handle on the outside for raising and lowering the sliding apparatus. X is a ratchet-wheel likewise inclosed and attached to the end of the windlass-drum, and *l* is a dog engaging the same, and having a handle protruding at the side of the post, by means of which the dog is lifted off the ratchet-wheel whenever the sliding apparatus is to be lowered. *f* is a staple attached to the post immediately above the handle of the dog when at rest, and having an eye at the outer end, in which is attached the padlock *k*, embracing with its latch the lever of the dog *l*, so as to prevent its being raised. Thus the apparatus can be locked in an elevated position to render the access to the clothes more difficult. J are the boxes in which the pulleys have their bearings. They are constructed with the view to economy in cost, and convenience in the attachment and detachment of the same, and in the application and removal of the pulley. Their construction is clearly shown in Figs. 5 and 6, consisting of a U-shaped casting having open bearings *a'* in the upper end, and provided on the outside of each vertical limb with two parallel flanges, *f'*, a distance apart to allow of sliding the box endwise into the seat *c'* formed in the upper end of the post A, and brace the box when attached.

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

1. The combination and arrangement with the sliding collar *a* of the two ropes *r r*, connected, respectively, at one end to opposite sides of said collar, passing over pulleys *p p* at opposite sides at or near the top of the post, and connected at the other end with the windlass W, all arranged with the hollow post A, substantially in the manner described, for the purpose set forth.

2. The sliding collar *a*, provided with hangers *s s* and pins *n*, and the spider *b*, having an enlarged central orifice and the circumferential recess *i'* around the top thereof, and provided on its under side with the circumferential tread *i*, constructed and combined, substantially as described and shown, for the purpose specified.

3. The combination with the radial arms *o o* of the bars *o' o'*, attached at the center to the end of and at right angles to said bars or arms, substantially as and for the purpose specified.

4. The combination and arrangement of the hollow or box-post A, closed on all sides, provided with a removable cover at the windlass W, and with the pulleys *p p* at opposite sides at or near the top, the collar *a* having hangers *s*, provided with friction-rollers *u*, and pins *n*; the spider *b* having an enlarged central orifice and the circumferential recess *i'* around the top thereof, and provided on its under side with the circumferential tread *i*, the ropes *r r*, attached respectively at one end to opposite sides of the collar *a*, passing over pulleys *p p*, to the interior of the post A, and connected at the opposite end to the windlass *w*, all constructed and arranged substantially in the manner specified and shown, for the purpose set forth.

5. The combination, with the herein-described hoisting apparatus, of counterpoises placed inside the post A, and connected with the sliding collar *a* by ropes *r'*, or their equivalents, passing over pulleys *p'* at or near the top of the post, as and for the purpose set forth.

6. The boxes J in the form of a U, having open bearings *a'* for pulleys in their upper ends, and provided on the outside of the vertical limbs with parallel flanges *f'*, constructed substantially as and for the purpose specified.

In testimony whereof I have signed my name and affixed my seal in the presence of two attesting witnesses at Syracuse, in the county of Onondaga, and State of New York, this 20th day of February, 1877.

JOSEPH SCHATER. [L. S.]

Witnesses:
JOHN L. TAUKE,
JOHN WINTER.