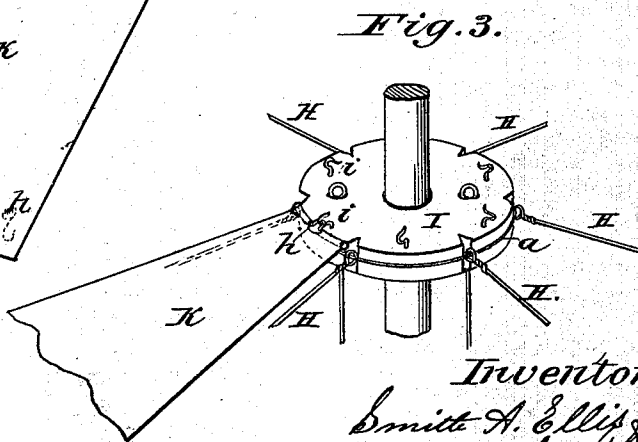
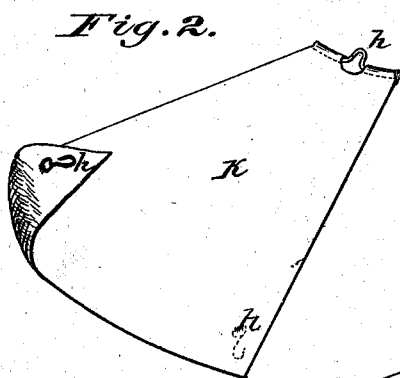
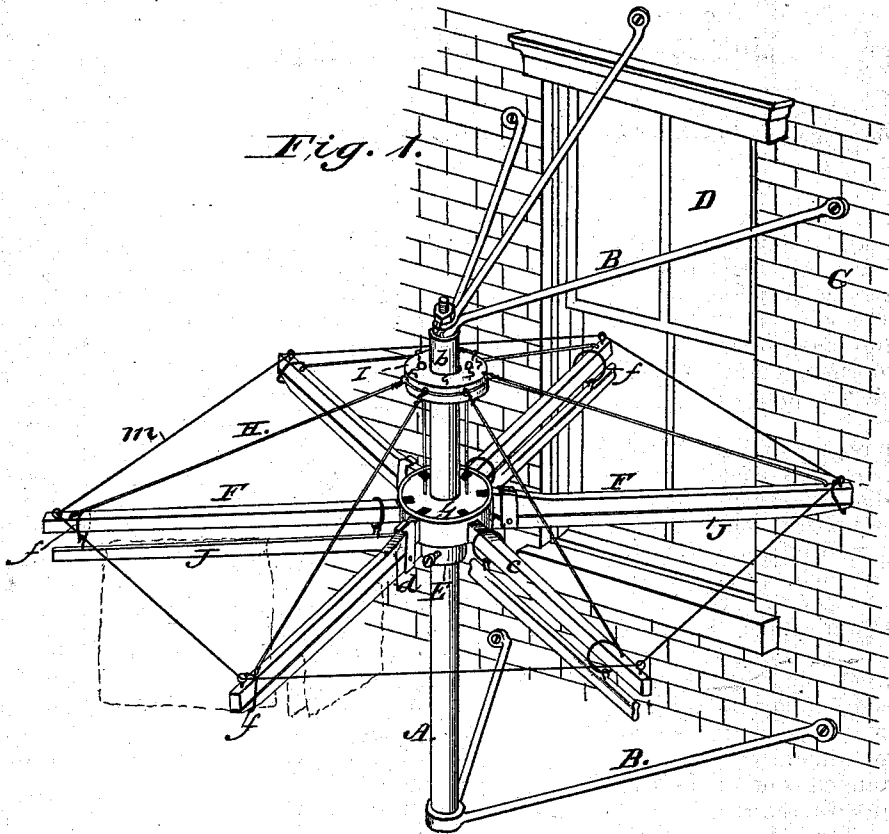


S. A. ELLIS & A. SUMMER.
Clothes-Driers.

No. 146,584.

Patented Jan. 20, 1874.



Witnesses.

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UNITED STATES PATENT OFFICE

SMITH A. ELLIS, OF OTTAWA, AND ANTHONY SUMMER, OF GLANDORF, OHIO.

IMPROVEMENT IN CLOTHES-DRIERS.

Specification forming part of Letters Patent No. 146,584, dated January 20, 1874; application filed August 19, 1873.

To all whom it may concern:

Be it known that we, SMITH A. ELLIS, of Ottawa, Putnam county, Ohio, and ANTHONY SUMMER, of Glandorf, in the county of Putnam and State of Ohio, have invented certain new and useful Improvements in Revolving Clothes-Driers, of which the following is a specification:

Our invention relates to that class of clothes-driers in which are employed a series of arms or supports, radiating from a common center mounted upon a vertical spindle, so as to be rotated in order to bring into requisition any particular arm, or each arm in succession, for the purpose of suspending the clothes to be dried. To improve upon such revolving clothes-driers is the object of our present invention; and it, among other things, consists in combining, with each main radiating arm of a clothes-drier, a movable or detachable supplemental or secondary arm, upon which the clothes to be dried are arranged, said supplemental arm being connected with the main arm through the medium of suitable fastening devices, such as slides, spring-jaws, hooks or rings, or their equivalents, in such a manner that the main and supplemental arm may be brought in contact or close to each other, for the purpose of confining and retaining firmly in place the clothes which are interposed between the two. The invention also consists in arranging above the supporting-arms a protector or awning, which is made in sections, and provided with devices for connecting it with a plate on the vertical shaft, and hooks or eyes on the main supporting-arms, in such a manner that the same can be attached or detached with ease and facility, for the purpose of protecting the clothes from rain or snow, and, further, to protect that class of apparel upon which the rays of the sun have a damaging effect.

In the drawings, Figure 1 is a vertical side elevation of our improved clothes-drier as attached to the wall of a building by brackets in front of a window, some of the supplemental arms being secured in position, and a section of the awning in place. Fig. 2 is a detached view of a section of the awning and its hooks on an enlarged scale; Fig. 3, a detached view of the plate for holding the awning and the braces of the main arms.

The letter A designates a vertical shaft, which may be supported and retained in such position by any suitable frame-work, in the present instance being arranged in top and bottom brackets B B, secured upon the outside wall C in front of a window, D. Upon this shaft is secured a jam-nut or collar, E, for the purpose of adjusting upon the shaft vertically a loose hub, carrying a series of arms, which serve as a direct or indirect medium for supporting the clothes to be dried. From this hub or center extend a series of main radiating arms, F, which are rigidly secured upon the hub by any well-known means, preferably by a tenon and socket. Braces or connections H extend from the front end of the main arms back to a plate or disk, I, where the ends are firmly connected with openings in said plate, or with a wire band or rod, *a*, arranged upon its edge, in such a manner that the main arms are equally braced and supported against a downward pressure, and thus retained at a proper angle with respect to the shaft A. The hub G is provided with an extended tube or sleeve, *b*, so as to act in conjunction with the hub and braces in sustaining the arms in a true horizontal plane, whether the weight upon the opposite arms be about equal or not. A further office of this extended tube or sleeve is to afford an elevated bearing-surface for the plate I, so that a proper pitch can be imparted to the braces and to an awning or protector, as hereinafter mentioned. The main arms F are made of wood or metal, as is likewise the hub, and said arms are made with a smooth top surface, as indicated by the letter *c*, or with an incline, as at *d*. With these main arms are combined movable supplemental arms J, upon which the articles to be dried are arranged, said arms being connected with the main supporting-arms F by any suitable means, such, for instance, as slides, spring-jaws, rings, hooks, or clasps, *f*, so that when the bar J is supplied with articles to be dried, and is connected, as aforesaid, with the main arms, a clamping action will be exerted upon the interposed clothes, and the same will be held firmly in position without the aid of other fastenings, and all liability of accidental detachment avoided. The supplemental arms will be made either with a plain or flat top surface their en-

tire length, or with a part flat and part inclined surface, as shown by letters *c d*, and in either instance they are connected to the main arms by fastenings *f*, or their equivalents.

By the use of the supplemental arms or bars and rendering them capable of attachment and detachment, the labor of suspending clothes to be dried is much lessened, since the apparel is placed upon the supplemental bar or arm *J* while it is detached and arranged upon trestles, stands, or otherwise, in close proximity to the launder, so that when said bar is supplied with its amount of clothing, it is attached to the arm *F*, as before stated, and another arm, *J*, brought into requisition, and so on in succession.

In order to protect the clothes during the drying process from dust, rain, or snow, I arrange above the bars an awning or covering, *K*, made up of sectional pieces, in a circular form, as shown. This awning is connected, by suitable fastenings *h i*, with the runner or plate *I*, and with the main supporting-arm *F*, in such a manner as to assume an inclined position with respect to the vertical shaft *A*, for the purpose of running off rain, &c. A cord, wire,

or rope, *m*, is connected with the outer ends of the main arms, for the purpose of strengthening the same, and retaining them at equal distances apart, and, further, to prevent that portion of the awning between the arms from sagging, and also to attach supplemental arms with hooks, &c.

We claim as our invention—

1. The movable supplemental arms *J*, for supporting the material to be dried, in combination with the main arms *F*, substantially as described, for the purpose specified.

2. The segmental awning *K* and runner-plate *I*, having fastening devices, as described, in combination with the clothes-supporting arms, their hub *G*, and shaft *A*, substantially as described.

In testimony that we claim the foregoing we have hereunto set our hands this 14th day of August, 1873.

SMITH A. ELLIS.
ANTHONY SUMMER.

Witnesses:

JOHN HERMAN ALBRIGHT,
FRANK ELLIS.