(No Model.)

F. J. FERRELL.

CLOTHES DRIER.

No. 299,769. Patented June 3, 1884.

Fig. 1.

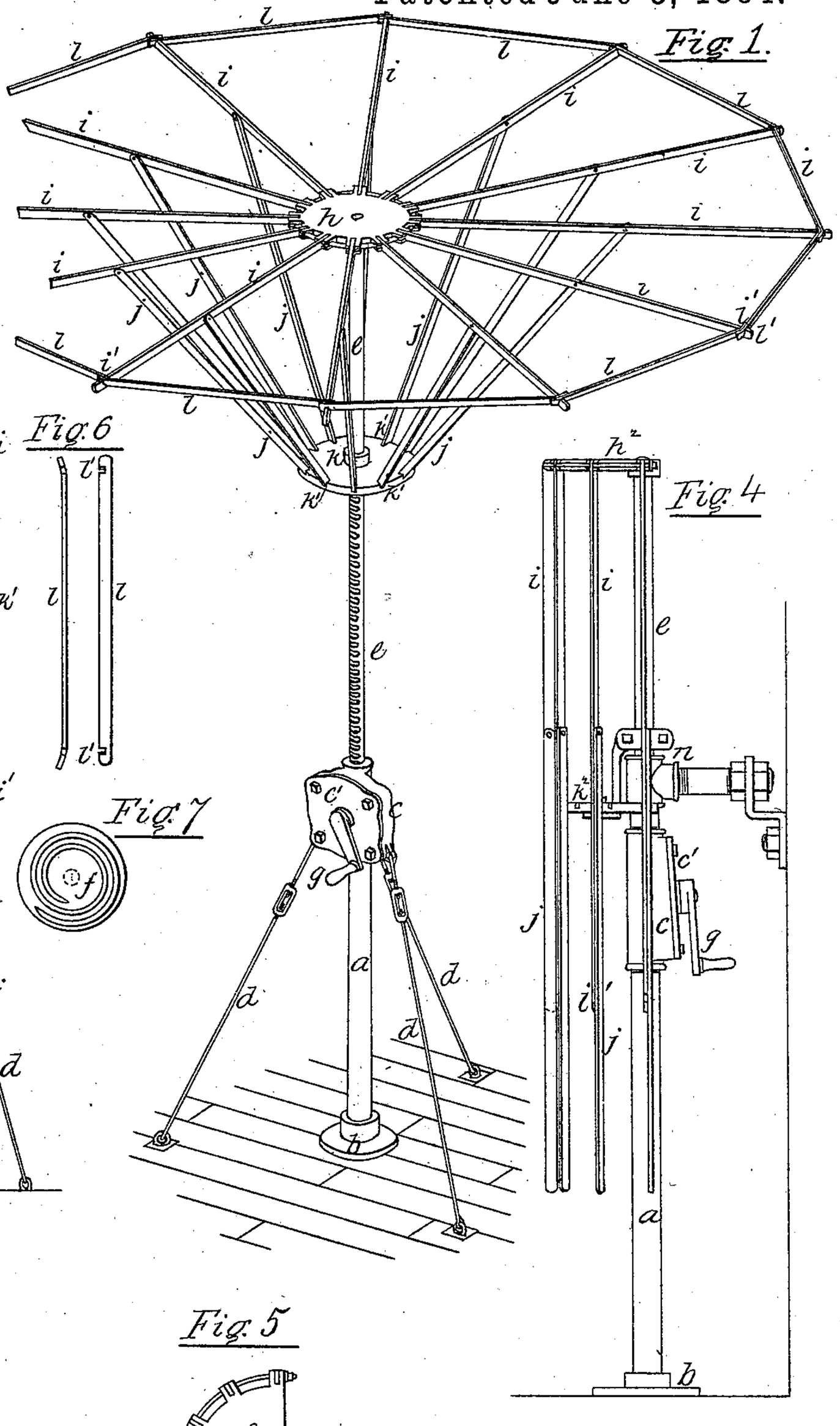


Fig. 2

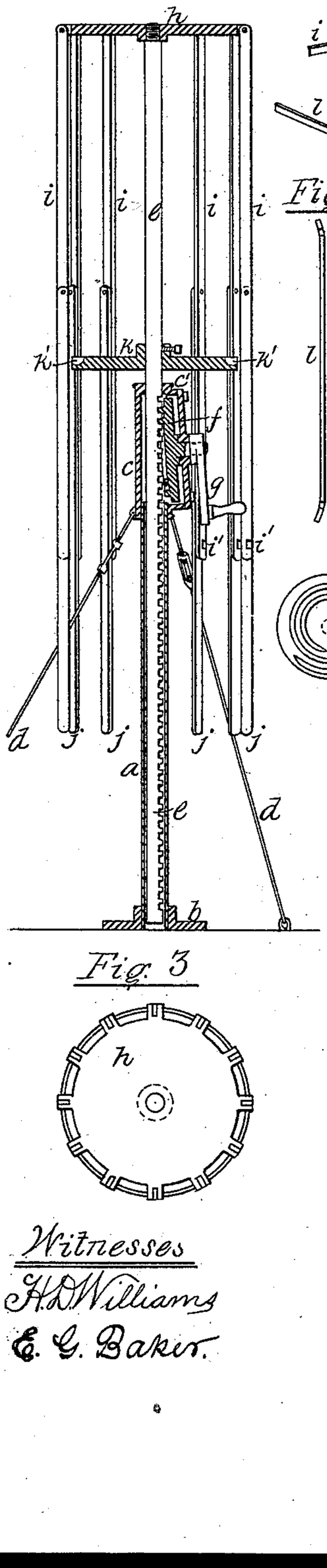


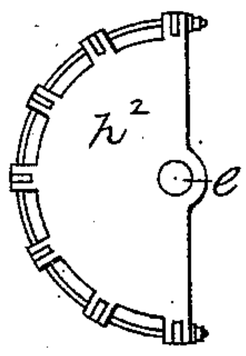
Fig. 6

Fig. 7

Fig. 4

Fig. 3

Fig. 5



Witnesses

H. D. Williams

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Atty.

UNITED STATES PATENT OFFICE.

FRANK J. FERRELL, OF NEW YORK, N. Y.

CLOTHES-DRIER.

SPECIFICATION forming part of Letters Patent No. 299,769, dated June 3, 1884.

Application filed February 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. FERRELL, a citizen of the United States, residing at New York, county and State of New York, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a specification.

This invention relates to that class of clothes-driers having arms adapted to be spread when in use, and to fold down against a central post or standard when out of use; and it consists of certain improvements in the construction of the expanding arms, and in the combination therewith of detachable bars constructed to hold the free ends of the arms in position, and also increase the holding capacity of the device.

In the accompanying drawings, Figure 1 represents my improved clothes-drier opened and ready for use. Fig. 2 represents the same folded, partly in section. Fig. 3 is a plan of the head-piece of Fig. 2. Fig. 4 is a modification. Fig. 5 is a plan of the head-piece of the same. Fig. 6 shows two views of one of the detachable bars; and Fig. 7 is a face view of the raising-gear.

The lower part, *a*, of the standard is hollow and provided with a base-plate, *b*, by which it may be secured to the floor, and a case or box, *c*, at its upper end, in which the raising-gear is placed.

To large machines I propose to apply braces *d d d*, to more securely hold the hollow standard in position. One end of each of these braces is fastened to the case or box *c*, and their other ends to eyes set into the floor.

In the hollow lower part, *a*, of the standard is fitted to slide freely the rod *e*, which is provided with rack-teeth, as shown, and in the rack-teeth meshes the face scroll-gear *f*, having a short shaft on its rear side fitted to rotate in a bearing in the cap *c'* of the box *c*, to which shaft is secured the crank-handle *g*. The scroll-gear *f* is set at an angle, as shown at Fig. 2, which is partly in section, so that only the part of the scroll above the center meshes into the rack-teeth of the rod *e*. By this arrangement it will be seen that the rod *e* is raised and lowered by means of the scroll of the gear *f* working in the rack-teeth of rod *e* when the crank-handle *g* is rotated, according to the direction of rotation, and that said rod *e* is firmly held at any elevation, whatever may be the load carried by it, by reason of the slight angularity of the scroll.

Secured to the top of the rod *e* is the circular head-piece *h*, having a peripheral groove and radial slots, and in said slots are placed and secured the ends of the arms *i i*, in a similar manner to the method employed in securing the ribs of umbrellas to the crown-ring. Each of the arms *i* has pivoted to it near the center a supporting-rod or truss-bar, *j*, the lower ends of which are adapted to fit into notches *k'*, formed on the edge of the flange or plate *k*, which is secured to the rod *e* by means of a set-screw. When the rod *e* is in its lowest position, (see Fig. 2,) the arms *i* are successively raised, and held in a horizontal position by the lower end of the truss-bars *j* *j* being placed in the notches of the disk *k*, and the clothes to be dried placed over the arms. The detachable bars *l l*, provided with slots *l' l'* at their ends, are then set over the ends of the arms *i i*, which are also slotted, as at *i' i'*, said bars *l l* thereby holding the arms in position, and at the same time adding to the capacity of the device, as clothes may also be hung over them. When the arms are spread out and covered with clothes, as described, the central rod, *e*, is raised and securely held by simply turning the scroll-gear *f* through the medium of the crank-handle *g*, and the scroll-gear retains the rod at any elevation. The clothes are thus moved up out of the way into the warmer atmosphere in the upper part of the room, and are also in position to receive a freer circulation of air among them than if they were low down. When the clothes are to be removed, the rod *e* is lowered by a reverse action on the handle *g*.

In the modifications, Figs. 4 and 5, the hollow standard *a* is shown secured in close proximity to a wall, *m*, by means of the connecting-bracket *n*, the head-piece *h'* and flange or plate k^2 being in this case semicircular, and the plate k^2 held by a dependent arm from the rod *e*, to provide room for the connection of the bracket *n* to the standard *a*. The standard *a*, at its lower end, and the bracket *n*, may be pivoted, so as to allow the device to be placed close against the wall when not in use.

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

The combination of the detachable bars *l l* with the arms *i i*, the head *h*, the rod *e*, the truss-bars *j j*, pivoted to the arms *i i*, and the notched flange *k*, substantially as set forth.

In witness whereof I have hereunto set my hand, at New York, county and State of New York, this 27th day of February, 1883.

FRANK J. FERRELL.

Witnesses:

E. G. BAKER,

H. D. WILLIAMS.