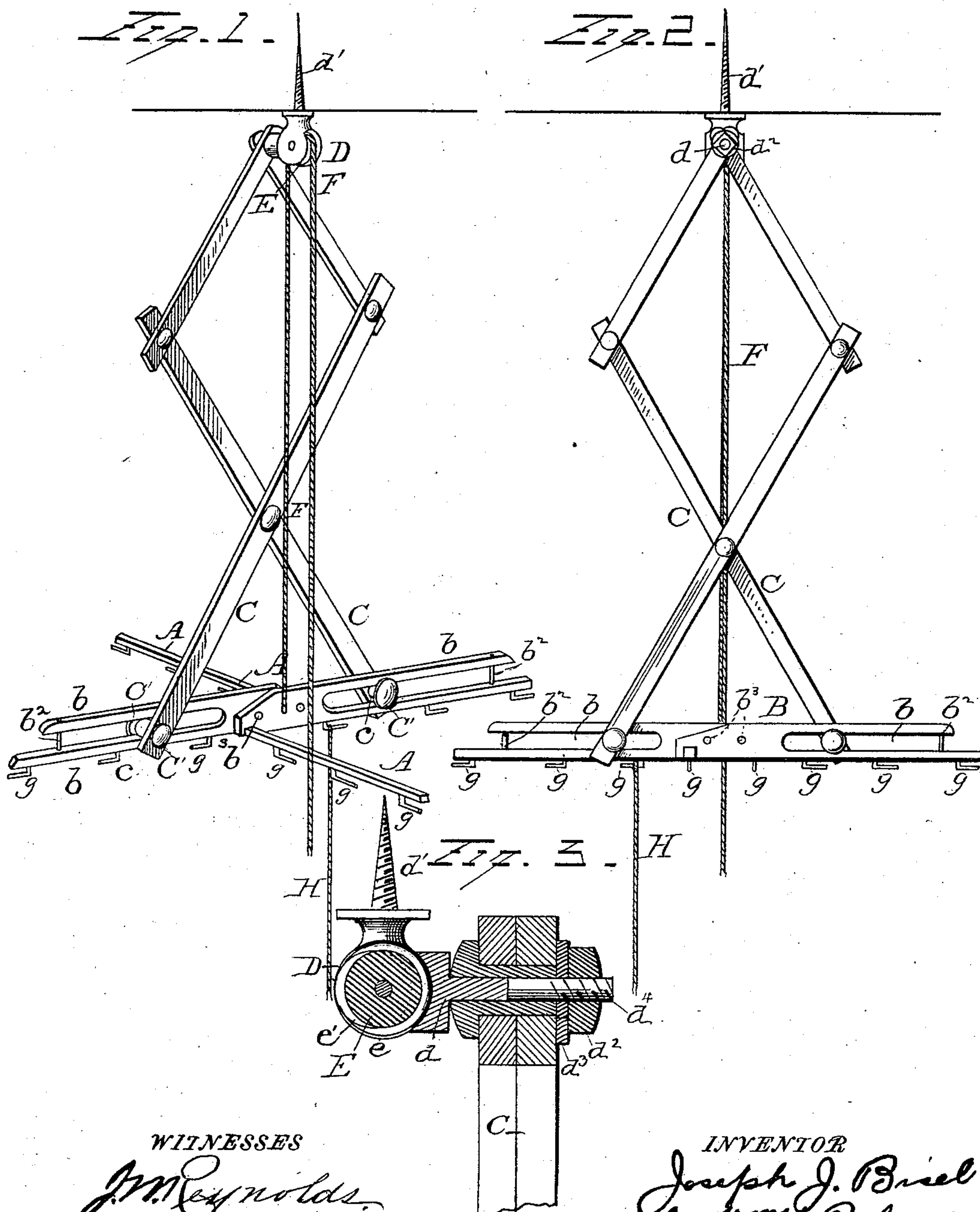


(No Model.)

J. J. BISEL.  
CLOTHES DRIER.

No. 455,301.

Patented July 7, 1891.



*WITNESSES*

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# UNITED STATES PATENT OFFICE.

JOSEPH JACKSON BISEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR  
TO EDWARD H. CLAPP, ADELBERT E. STOCKWELL, AND WILLIAM  
HASLAM, ALL OF SAME PLACE.

## CLOTHES-DRIER.

SPECIFICATION forming part of Letters Patent No. 455,301, dated July 7, 1891.

Application filed October 1, 1890. Serial No. 366,712. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH JACKSON BISEL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Clothes-Driers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to clothes-driers of the kind having clothes-supporting arms or equivalent devices attached to a frame which is movable upward and downward.

The said invention consists, chiefly, in the combination of such a frame and arms with extensible and contractible suspending arms or levers for said frame. These arms or levers are preferably of the lazy-tong construction hereinafter described and shown.

The said invention further consists in certain improvements in the construction and combination of details hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 represents a perspective front view of a clothes-drier embodying my invention. Fig. 2 represents a rear elevation of the same, and Fig. 3 represents a detail view of the locking-pulley, the pulley-block, and the short spindle extending out from the latter.

A designates the clothes-supporting arms which extend out horizontally from a vertically-movable frame B. In the present instance this frame consists of two horizontal bars overlapping at their inner ends and rigidly secured together. These may of course be in one piece, and the form may vary greatly. This frame is provided with slots *b*, extending longitudinally of said rods and receiving rollers *c* on the lower ends of a set of lazy-tong arms or levers C. These arms or levers are hung at their upper ends on a short spindle *d*, extending outward from a pulley-block D, which is fastened to a ceiling or other support by its screw-stem *d'*. In said block is mounted a locking-pulley E, having a circular middle groove *e* and two cam-grooves *e'*

arranged one on each side of said middle groove, but communicating therewith. This locking-pulley is substantially identical in construction and operation with the one described and shown in several of my previous patents—for example, in Patent No. 342,317, granted May 25, 1886, to which reference is hereby made for a fuller description and illustration thereof. A raising and lowering cord F is attached at one end to the middle part of the frame B and passes over said pulley. So long as this cord remains in the middle groove *e* the frame is free to fall when the cord is released by hand. When the cord is shifted to one or the other of the cam-grooves *e'* the frame will be held against such downward motion by the action of the cam-surface, which binds the said cord between it and the pulley-block D. There is nothing new in this operation of the locking-pulley; but it forms a very serviceable part of my clothes-drier.

The clothes-supporting arms A and the frame B are provided with hooks *g*, which extend downward and may be turned laterally, as shown, for convenience in suspending small articles. The spindle *d* is screw-threaded on its outer end at *d'* and provided there with a nut *d''* and washer *d'''*, making it a fastening-nut also. These devices allow the easy attachment and detachment of the lazy-tong arms. The said washer prevents the face of the outer arm from grinding against the said nut. The rollers *c* are provided with heads C' to prevent them from separating from said frame. The outer ends of slots *b* extend to the ends of said frame, allowing the convenient separation of the latter from the lazy-tong levers at will; but removable pins or rods *b''* pass downward through the material of said frame near said ends, crossing the said slots and preventing the rollers from passing out of them terminally when this is not intended. An additional cord H may be attached to said frame for convenience in pulling it down from its highest position; but this is not necessary.

The operation of the clothes-drier above described is as follows: The cord F being shifted to groove *e* to allow the descent of frame B



and the cord H slightly pulled on to overcome friction, the said frame will descend until the clothes-supporting arms A are at the desired level. The cord F is then shifted to one of  
 5 the cam-grooves *c'* to hold the cord and frame, as stated. The clothes are then hung over arms A, or in the case of small articles on the hooks *g*. When the drier is no longer needed, the cord F is shifted back to groove *c*, and  
 10 continued pulling on said cord causes the said frame to ascend, folding the lazy-tong levers above it, and when said cord is shifted to one of the cam-grooves *c'* to hold the lazy-tong levers thus folded the drier occupies but a very  
 15 small space, indeed. During the upward motion of the frame B the rollers *c* run outward in slots *b*. When the frame moves downward, the said rollers run backward along said slots, allowing the downward extension of said  
 20 lazy-tong levers.

The drier as a whole is light, cheaply made, reliable in operation, and easily packed in small compass for shipment. To facilitate this latter operation, the arms A may be made  
 25 detachable, each one of them being furnished with a cylindrical tenon which fits into a corresponding socket or mortise *b<sup>3</sup>* of the frame B. The number, length, and shape of these arms may be varied as desired.

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

1. A set of lazy-tong levers or bars provided with rollers, in combination with a  
 35 frame which is slotted to receive said rollers for facilitating the extension and contraction of said lazy-tong levers, and the clothes-supporting arms attached to said frame.

40 2. A set of clothes-supporting arms and the slotted frame to which they are attached, in

combination with a set of lazy-tong arms or levers having at the lower end attachments which run in the slots of said frame, a raising and lowering cord attached to the latter, and  
 45 a locking-pulley over which said cord passes, substantially as set forth.

3. A set of clothes-supporting arms and the frame to which they are attached, in combination with extensible and contractible suspending-arms connected to said frame, a pul-  
 50 ley-block having a projecting spindle on which said arms are hung, a pulley mounted within said block, and a raising and lowering cord for said frame passing over said pulley, substantially as set forth. 55

4. A pulley and its block, the latter having a spindle extending outward therefrom and screw-threaded at its end, in combination with a set of lazy-tong arms or levers hung  
 60 on said spindle, a nut and washer for keeping them in place, a frame hung on the lower end of said set of lazy-tong arms or levers, and a set of clothes-supporting arms attached to said frame, substantially for the purpose  
 65 set forth. 65

5. In a clothes-drier, a vertically-slotted bar or frame, in combination with lazy-tong arms or levers provided with attachments enter-  
 70 ing the slots of said frame, and a cord and locking devices for raising and lowering said frame and holding it in any position to which it may thus be adjusted, substantially as set forth. 70

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH JACKSON BISEL.

Witnesses:

THOS. W. HANCOCKS,  
 CAL. W. C. SANDERS.