(No Model.)

A. M. McLERAN.

CLOTHES DRIER.

No. 493,596. Patented Mar. 14, 1893.

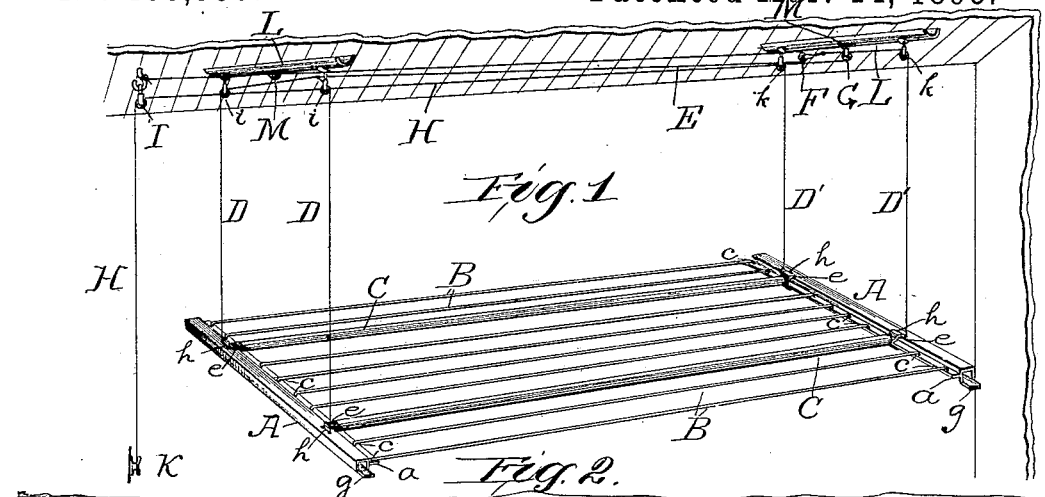


Fig. 1.

Fig. 2.

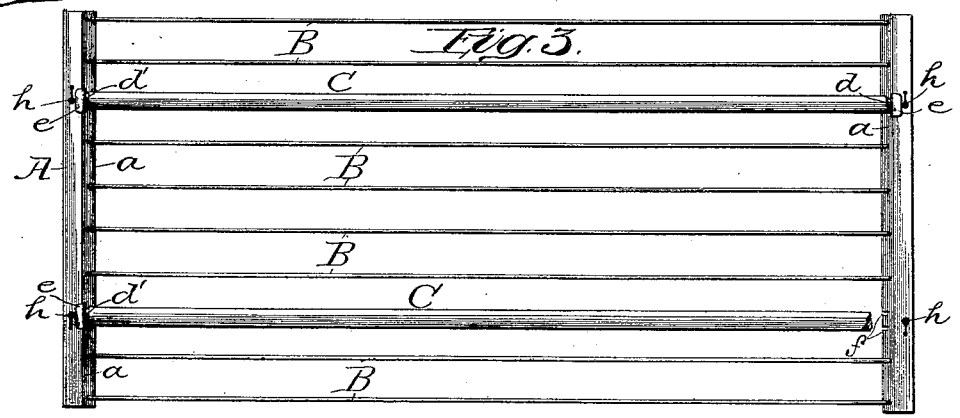


Fig. 3.

Fig. 4.

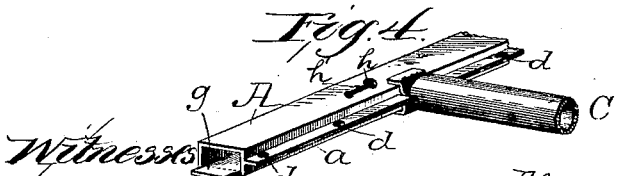
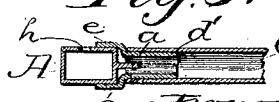


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALVORD M. McLERAN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO ORVILLE J. HOGUE, OF SAME PLACE.

CLOTHES-DRIER.

SPECIFICATION forming part of Letters Patent No. 493,596, dated March 14, 1893.

Application filed February 11, 1892. Serial No. 421,224. (No model.)

To all whom it may concern:

Be it known that I, ALVORD MARCUS McLERAN, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Clothes-Driers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to produce a clothes drying device, which will furnish the greatest possible clothes hanging facilities and drying surface within the least possible square area, and which is especially adapted for use in dwellings or other buildings, where it can be conveniently raised to or lowered from the ceiling from which it is suspended. It also possesses the qualities of a "knock down" device, whereby it can be easily and quickly put up, or, in like manner, be taken to pieces and packed, either for transportation or storage, within the least possible space; and which, in addition to these qualifications, contains the elements of simplicity of parts with strength and durability of construction, in such manner as to render it a highly useful and practical article of domestic economy; substantially as hereinafter fully described, and as illustrated in the drawings, in which:—

Figure 1 is a perspective view of my improved clothes drier, showing it suspended from the ceiling. Fig. 2 is a plan view of the rigging for suspending and raising and lowering said clothes drier. Fig. 3 is a plan view of the clothes drier. Fig. 4 is a detail view showing, in perspective, the construction of the end of one of the longitudinal bars of the clothes drier, and, Fig. 5 shows a longitudinal section through the end cross frames, and a portion of the said bar.

Referring to the drawings A represents the end cross bars of my improved clothes drier. These end bars may be made of light metal tubing, but I prefer to construct them of a skelp of zinc or other sheet metal, formed into a suitable tube, preferably, rectangular in cross sections, with the side edges turned parallel outward and connected so as to form a suitable longitudinal flange *a*. These flanges *a* of the end bars are provided with a corresponding series of holes *d*, *d*, therein, arranged longitudinally and at equal distances apart, into which the down turned or hook ends *c* of the clothes wires or rods B enter. These rods B are not intended to have their ends permanently secured in the holes *d*, *d*, of the end bars, therefore, it is necessary to provide some means for separating and holding said end bars apart, to such an extent that the rods B will not easily become dislodged from the end bars. This I accomplish by the longitudinal bars C, C, which are, preferably, tubular, and, either have their annular end edges provided with suitable longitudinal recesses so as to fit over the flange *a* of the end-frames, or, have separately constructed plugs *d'* which can be inserted in the ends of said bars whereby the same result is accomplished. The part of plug *d'* inserted within the bore of the said bars C conform to the shape thereof, be it cylindrical or otherwise. The outer end of the plugs are divided longitudinally so as to form the lips *e*, *e*, which are flattened horizontally and bent as shown, so as to embrace the flange *a* and the sides of the said end bars adjacent thereto. The object of providing plug *d'*, for forming the connection between the end bars and bars C, is that they can be cast without great expense and need comparatively no finishing, whereas the recessing of the ends of the bars would have to be done by hand and would be more expensive. If desired the length of the bifurcations of the outer ends of the plugs may be made longer so that the annular edges of the bars C may bear against the outer edge of the flange *a* of the end bars, or, so that said annular edges may enter the lateral recesses *f*, *f*, made in said flange with reference to said annular edges, so as to form a better joint between the end bar and the bar C.

In setting up the clothes drier thus described, I first connect the bars C, C, with the end bars in the manner described, and then secure the rods B in position so as to tie said

end bars and bars C together, and to serve as a means for hanging the articles of clothing or fabric to be dried thereon.

When it is desired to "knock down" the dryer the rods B are first disconnected from the end bars, and then said end bars move laterally away from said bars, whereupon the several parts of the drier can be laid side by side and packed in a very small space.

The end bars may be of such lateral dimensions that the bore thereof could, when it was desired to pack the drier for storage or transportation, receive the plugs *d* and the cord or rope for suspending the drier, as will hereinafter be more fully explained. When this is done it would be desirable to provide the skelp out of which said end bars were made, with tongues *g*, *g*, projecting from its end edges, which when the plugs *d* and the other fixtures of the drier are stored in the bore of said end bars, could be turned down so as to close the end openings of the bars. This forms a convenient receptacle for the smaller parts of my improved drier when the same was packed and would avoid the necessity of providing envelopes for the same, the bulk and shape of which would interfere with the symmetry and compactness of the package inclosing said drier.

The drier is suspended from the ceiling or roof by means of two pairs of cords or ropes D, D, and D′, D′. Two of these ropes are connected to each end bar, one at one end and the other at the other. The said cords are fastened to the end bars by having their ends knotted and slipped through the hole *h*, in the upper surface of the end bars, and are then pushed longitudinally into the longitudinal slot *h′* leading therefrom, which is of less width so that the knotted end of said cord cannot be withdrawn. It will thus be seen that the drier is suspended by means of four cords secured to each of its four corners. The cords D, D, which support one end of the drier extend up to and through the pulleys *i*, *i*, and the cords D′, D′, supporting the other end of the drier extend to and through the pulleys *k*, *k*. Each pair of cords D, and D′ after passing through their respective pulleys are united at the point midway between the pulleys. From the point at which cords D′, D′, are united, I secure the end of another cord E, which passes around the pulley F, then back to the point midway between the pulleys *k*, where it passes around the pulley G, and, doubling on itself, has its other end secured to the cords D, at the point where they are united.

To elevate the drier in a practicable manner it is necessary to pull the points at which cords D, D, are united, and the point where cords D′, D′, are united, together. I, therefore, secure a cord H to the wall or ceiling just beyond the end of the drier, when it is in its elevated position, and opposite the end thereof where D′ D′ are secured. I then pass it to and around the pulley F, and, then doubling it, pass it back to the side wall over a suitable pulley I, and then down said side wall to a belaying block K, located within easy reach of the operator. With a rigging for elevating the drier, thus constructed, the connecting points of cords D, and D′, are drawn toward each other in the space immediately over the drier when the pull-rope H is pulled downward and the drier elevated. Thus no more additional space is necessary than could be covered by the square area of the drier. Each pulley of each pair of pulleys *i*, *i*, and *k*, *k*, are, respectively, secured to one end of a transverse strip of wood or sheet metal L, which is secured to the ceiling by a single screw or bolt M passing up through its center of length. This means of securing the overhead support for the rigging of the drier, avoids considerable disfigurement of the ceiling, especially when the ceiling is plastered, and also makes it considerably easier to put up, because of the fact that it is much easier to find one wood beam or rafter, to which the two bolts securing said strip could be fastened, than to find two rafters or beams just the proper distance apart, to which the four bolts could be fastened, which it would be necessary to use were said pulleys fastened directly to the ceiling.

What I claim as new is—

1. In a clothes drier the combination with the transverse tubular end-bars having longitudinal flanges on their inner sides which are provided with a series of holes therein, and the longitudinal tubular bars having their ends removably connected to and holding said end-bars apart, of the rods or wires connecting said end-frames, having their ends pass through the holes in said flanges and by their tension holding said end-bars and longitudinal bars together, as set forth.

2. In a clothes drier, the combination with the tubular end bars, the longitudinal tubular bars arranged between said end bars, and plugs inserted in the ends of the said longitudinal bars the outer ends of which are divided and embrace said end bars, of the rods or wires connecting said end bars.

3. In a clothes drier, the combination with the tubular end bars having longitudinal flanges on their inner side, which are provided with a series of holes, longitudinal bars arranged between said end bars, and the plugs inserted in the ends of said bars having the outer end thereof divided longitudinally and bent so as to embrace said flange and end bars as described, of the rods or wires connecting each said end bars and having their ends passed through the holes in the flanges thereof, as set forth.

4. The combination with a clothes drier consisting of a transverse end bar, longitudinal bars, and rods or wires connecting the

same, of the cords D, D, and D′, D′, suspending the said drier, and pulleys *i*, *i*, and *k*, *k*, through which the upper ends of said cords pass, the transverse strips L, L, to the ends of each of which said pulleys are respectively secured, the bolts M, and the pull rope H; said cords D, D, and D′, D′, being united midway between their respective pulleys, and said pull rope being connected to said cords D, and D′ at the points at which they are united, as set forth.

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