M. D. Hotchkiss,

Clothes Frame,

No. 54,727, Patented May 15, 1866.

Fig: 1

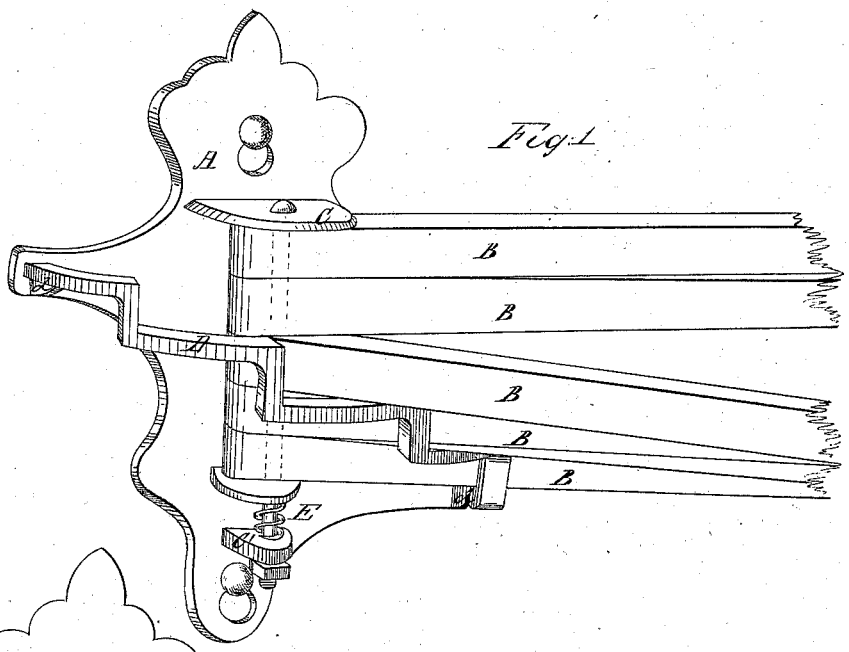
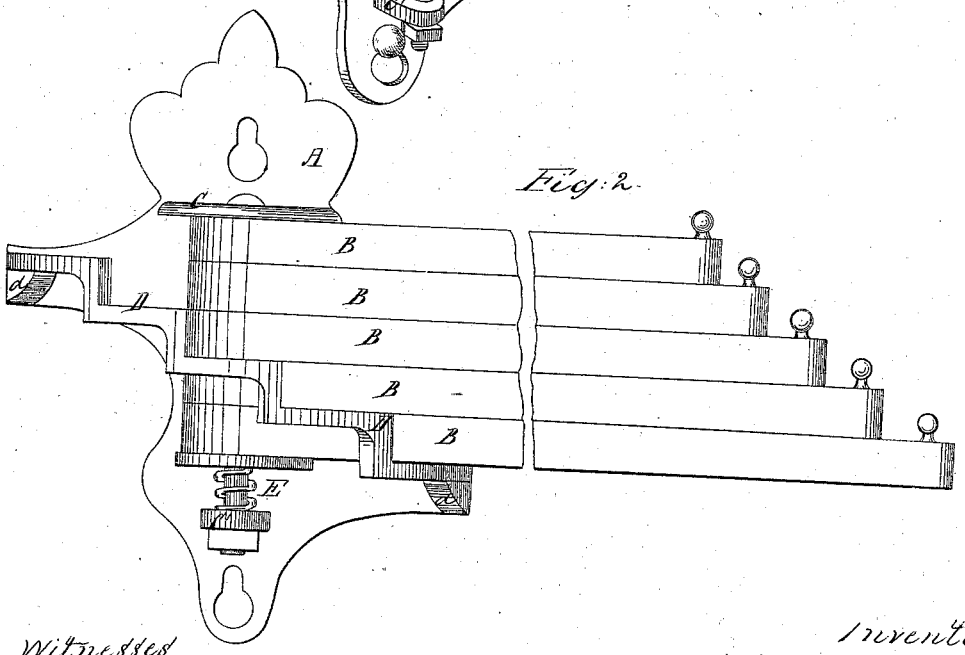


Fig: 2



Witnesses
Geo Peck
Andrew Whiteley

Inventor
M. D. Hotchkiss
By his Attorney
R. D. O. Smith

UNITED STATES PATENT OFFICE.

M. D. HOTCHKISS, OF SHEBOYGAN FALLS, WISCONSIN.

IMPROVED CLOTHES-DRIER.

Specification forming part of Letters Patent No. **54,727**, dated May 15, 1866.

To all whom it may concern

Be it known that I, M. D. HOTCHKISS, of Sheboygan Falls, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Improvement in Folding Clothes-Racks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my rack with the arms distended. Fig. 2 is a vertical elevation of the same with the arms folded.

My invention relates to that class of clothes-racks which are provided with a number of horizontal arms, folding the one above another against the wall to which they are attached, and when extended turning upon the same axial bolt and remaining at different angles to the wall upon which they are suspended; and it consists, first, in a device to prevent the said arms from yielding or sagging downward at the outer ends when weights are placed upon them; and, second, in a device to keep them always and automatically in place by forcing their connected ends upon and toward each other.

That others may understand the construction and operation of my invention, I will more particularly describe it.

A is the bed-plate, to which the arms B B are attached, and by which they are connected to the wall or other support.

C C′ are two lugs projecting horizontally from the face of the bed-plate A, and between these two lugs the arms B are secured by a bolt, which passes through said lugs and through a hole at one end of each of the arms, so that when the arms are thus connected they may move horizontally upon said bolt as a pivot.

It is evident that if the bars B receive no support while extended for use, except such as is afforded by their pivot-bolt and the small support which they afford each other, they must sag at their outer ends when any weight is placed thereon, for it is plain that each bar acts as a lever of the first order, and that the long arm is the whole length of the bar from the center of the bolt outward, and the short arm is merely the thickness of the bar at the point where traversed by the pivot-bolt. With this diversity it is apparent that the force against the pivot-bolt must be very great, and that the pivot-bolt or the bearing in the bar must suffer great wear.

My invention is designed to remedy this defect by supplying a rigid support at some little distance from the face of the bed-plate A, so that the short arm of the lever may be lengthened and all strain be removed from the pivot-bolt by transferring it to the lug C, which is better able to bear it.

The rigid support alluded to consists of an arc, D, which springs from the bed-plate A at one side, passes around to the other side, concentric to the pivot-bolt, and arranged in a series of risers and treads, like a spiral stair. These treads and risers are in number to correspond to the number of arms, and are so disposed that when the arms are all properly distended each shall rest upon one of the treads and be supported thereby, as shown in Fig. 1. This arc D then becomes the fulcrum upon which the arms B rest, and the upward tendency of the end of the short arm is entirely met by the lug C, and the office of the pivot-bolt is entirely confined to its use as a pivot.

The arc D is strengthened and supported at the ends where joined to the bed-plate by braces *d*, and other braces may be introduced to support the central or projecting portions of the arc, if found necessary.

The frequent folding and unfolding of the bars B will, by their abrasion against each other in the region of the pivot-bolt, wear so as to become loose. This may in a measure be obviated by placing metallic washers between the bars and around the pivot-bolt; but in order perfectly to obviate all looseness at that point I place the strong spring E between the lower bar and the lug C′. This spring may be made of elastic, gum, wire, or otherwise, and a washer should be interposed between it and the lower bar. Its office is simply to press the bars upward toward each other, so that they may always be in contact.

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

1. In combination with the swinging arms of a rack for holding clothes while drying, the supporting-arc D, substantially as set forth.

2. In combination with the swinging arms of a rack for holding clothes while drying, the spring E, substantially as and for the purpose set forth.

M. D. HOTCHKISS.

Witnesses:

G. S. GRAVES,

L. D. SCOTT.