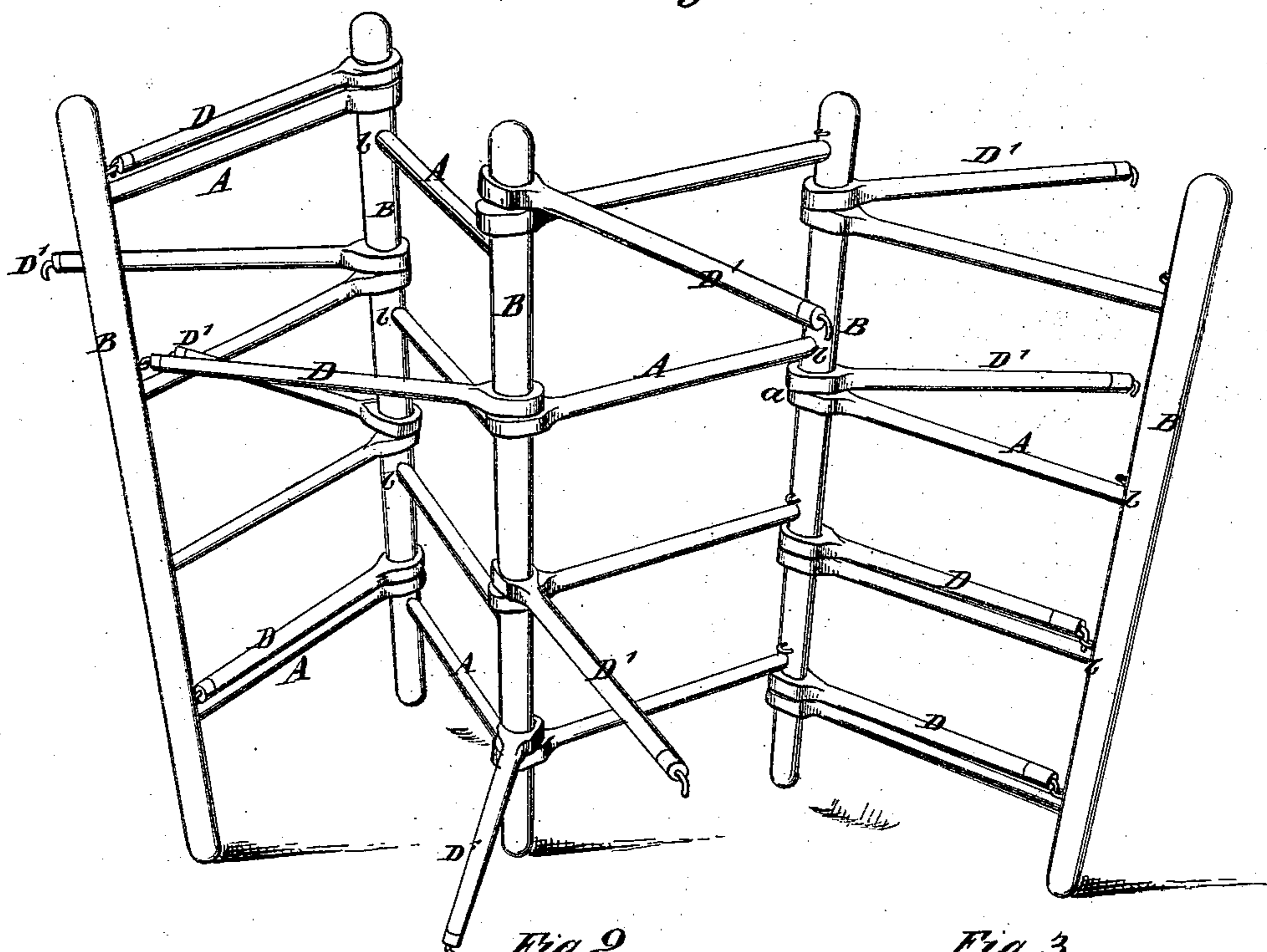


J. N. VALLEY.  
Clothes-Drier.

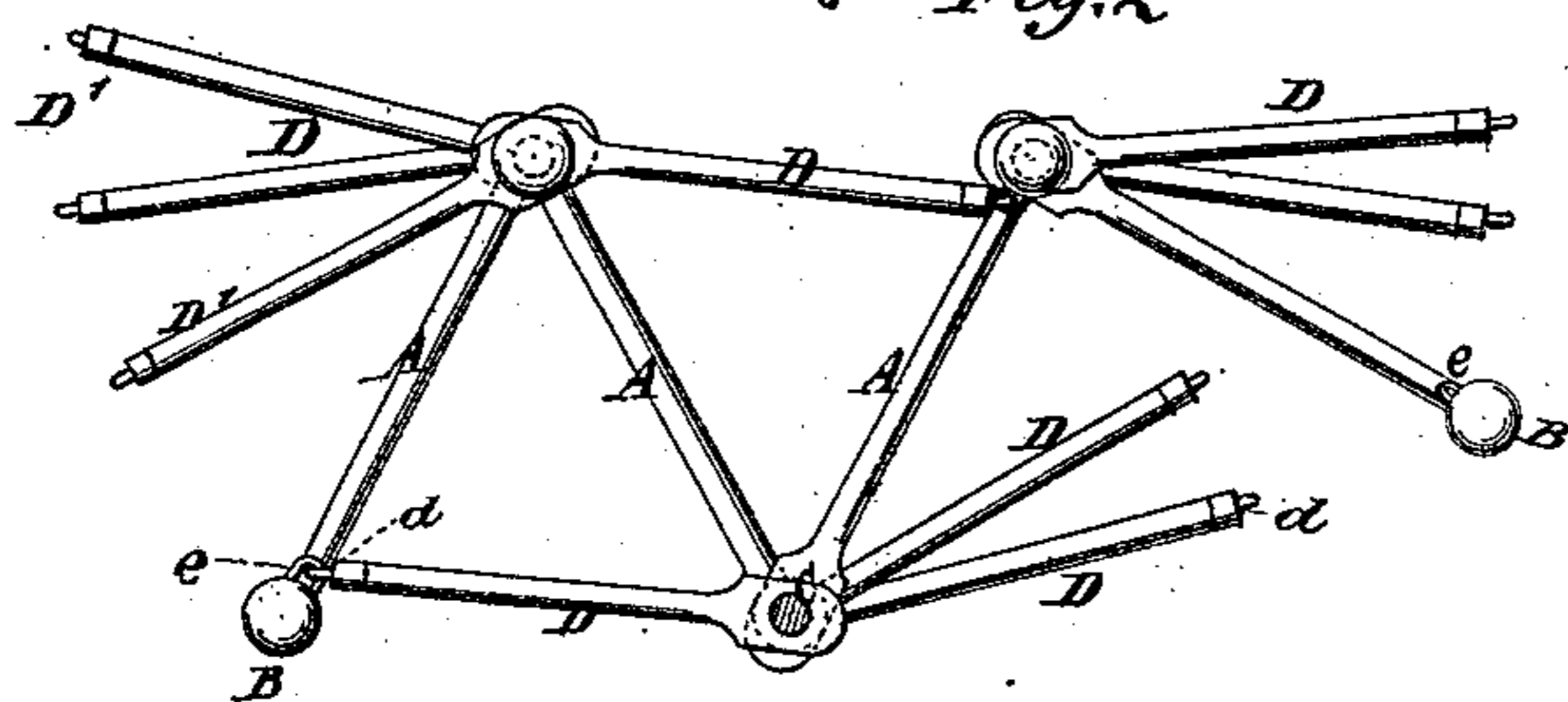
No. 211,483.

Patented Jan. 21, 1879.

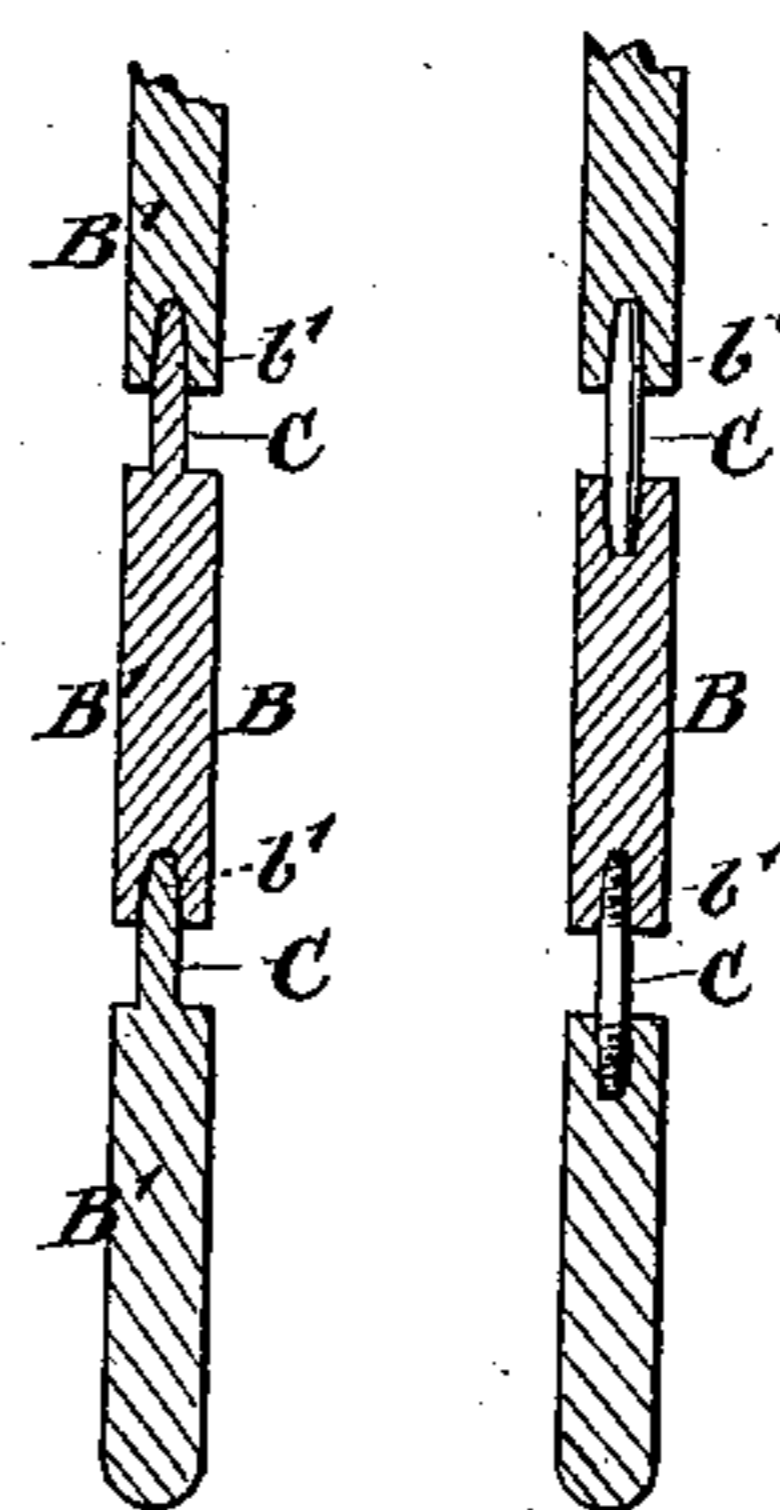
*Fig. 1*



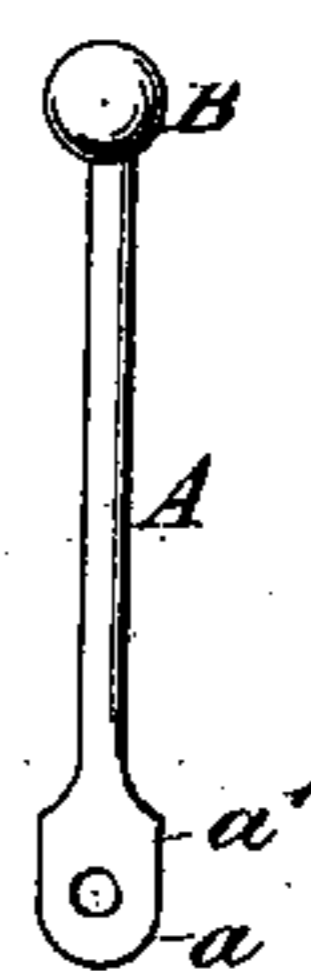
*Fig. 2*



*Fig. 3*



*Fig. 4*



Witnesses:

H. Rydquist  
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Inventor:

John N. Valley  
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Attorney.

# UNITED STATES PATENT OFFICE.

JOHN N. VALLEY, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN CLOTHES-DRIERS.

Specification forming part of Letters Patent No. **211,483**, dated January 21, 1879; application filed October 2, 1878.

*To all whom it may concern:*

Be it known that I, JOHN N. VALLEY, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Clothes-Driers, of which the following is a specification:

My invention has for its object to improve the construction and increase the stability and capacity of the clothes-drier described in the Patent No. 103,257, issued to me May 17, 1870, and reissued December 3, 1872.

The invention consists in the construction, in a clothes-drier made by hinging together rigid frames formed of horizontal bars secured to vertical posts, of the hinge-posts, made in sections, having axial end sockets, and joined together by gluing or screwing the hinge-pins into said socket, to allow of hinging the said frames together by holes through the end of the horizontal bars; and in the combination, with a clothes-drier made in hinged frame-sections, of a series of horizontal swinging arms pivoted to the vertical posts, to hook and brace together the free posts of two adjoining frame-sections, and to increase the capacity of the rack, as will be hereinafter described.

In the accompanying drawings, Figure 1 represents a true perspective view of my clothes-drier in a position inclined toward the spectator. Fig. 2 is a top view of the same braced by the horizontal swinging arms. Fig. 3 shows vertical detail sections of the hinge-posts. Fig. 4 is a detail view of one of the horizontal hinged bars.

Similar letters of reference indicate corresponding parts.

The clothes-drier is composed of frame-sections made of horizontal bars A, secured at *b* to vertical posts B. In my previous patent these separate frame-sections were flexibly joined together, for folding purposes, by cutting grooves around the circumference of a post of one frame-section and encircling the post in each of the said grooves by a wire band or strap, which is then secured in the free ferruled end of the corresponding horizontal bar of the next frame-section. The said construction I have found tedious and expensive, and the bands are liable to occasionally wear loose and slip out of the ferruled end of the horizontal bars. To overcome these ob-

jections I have cheapened and improved the construction by making the hinging-posts in sections B', and boring a tapering socket, *b'*, in the axial line of the sections B', in one or both ends of such section, and then joining the sections B' together (at a distance apart suitable to receive the thickness of the free end or eye *a'* of the bars A) by gluing or screwing a tight-fitting pin, C, into the said socket or sockets *b'*. The pin C may be formed upon one of the adjoining sections B' and secured into the socket of the next section, or it may be made separate, threaded, and screwed or glued at each end into sockets in both adjoining ends of two sections B', as shown in Fig. 3.

By this construction I can dispense with the band or strap before mentioned, and in its stead form an eye, *a'*, solidly upon the free end of the bars A, and simply drill a hole, *a*, through the said eye *a'* to fit the hinge-pin C, after which the pins C are inserted through the holes *a* before securing the sections B' upon the pins C. This mode of hinging the frame-sections together has also the advantage of giving far greater rigidity to the whole clothes-drier than can be attained by the old method.

I am aware that hinge-posts have been constructed by running a central rod or bolt through a series of tubular sections and fastened by nuts at the ends of the post, and I do not claim such construction. Besides it is not practical, being always rickety, unless the nut is tightened very hard, in which case it binds and prevents the motion of the hinge joint and the consequent flexibility and adjustability of the clothes-drier.

In order to improve the stability of the clothes-drier and increase its capacity, I provide a series of horizontal swinging arms, D, similar in construction to the arms A, and pivot them in a similar manner to the posts B directly above the bars A, as shown in Fig. 1. The posts B of the same frame-section are provided with a small lug or staple, *e*, above the secured end of the horizontal bars A, and the free end of the swinging bars D is strengthened by a ferrule, and provided with a hook, *d*, to catch into the staple *e* and hold bar D in position upon the bar A when not needed for use. By hooking one or more of the said

swinging bars D to the staples on alternate frame-sections, and thus bracing them together in parallelograms or triangles, as shown in Figs. 1 and 2, much greater rigidity and stability are attained, and by swinging the bars D out in different positions, as shown at D' in the said two figures, the capacity of the clothes-drier may be increased indefinitely to accommodate the drying of a large quantity of clothes.

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

1. In a clothes-drier made by hinging together rigid frames formed of horizontal bars secured to vertical posts, the hinge-posts B,

composed of sections B', having axial end sockets b', and joined together by gluing or screwing the hinge-pins C into said socket, to allow of hinging the said frames together by holes a through the end of the bars A, in the manner specified.

2. In combination with a clothes-drier made in hinged frame-sections, the horizontal swinging arms and hooking-braces D, pivoted to the vertical posts B, substantially as and for the purposes set forth.

JOHN N. VALLEY.

Witnesses:

A. W. ALMQVIST,  
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