

(No Model.)

2 Sheets—Sheet 1.

A. V. M. SPRAGUE.  
LAUNDRY DRIER.

No. 500,625.

Patented July 4, 1893.

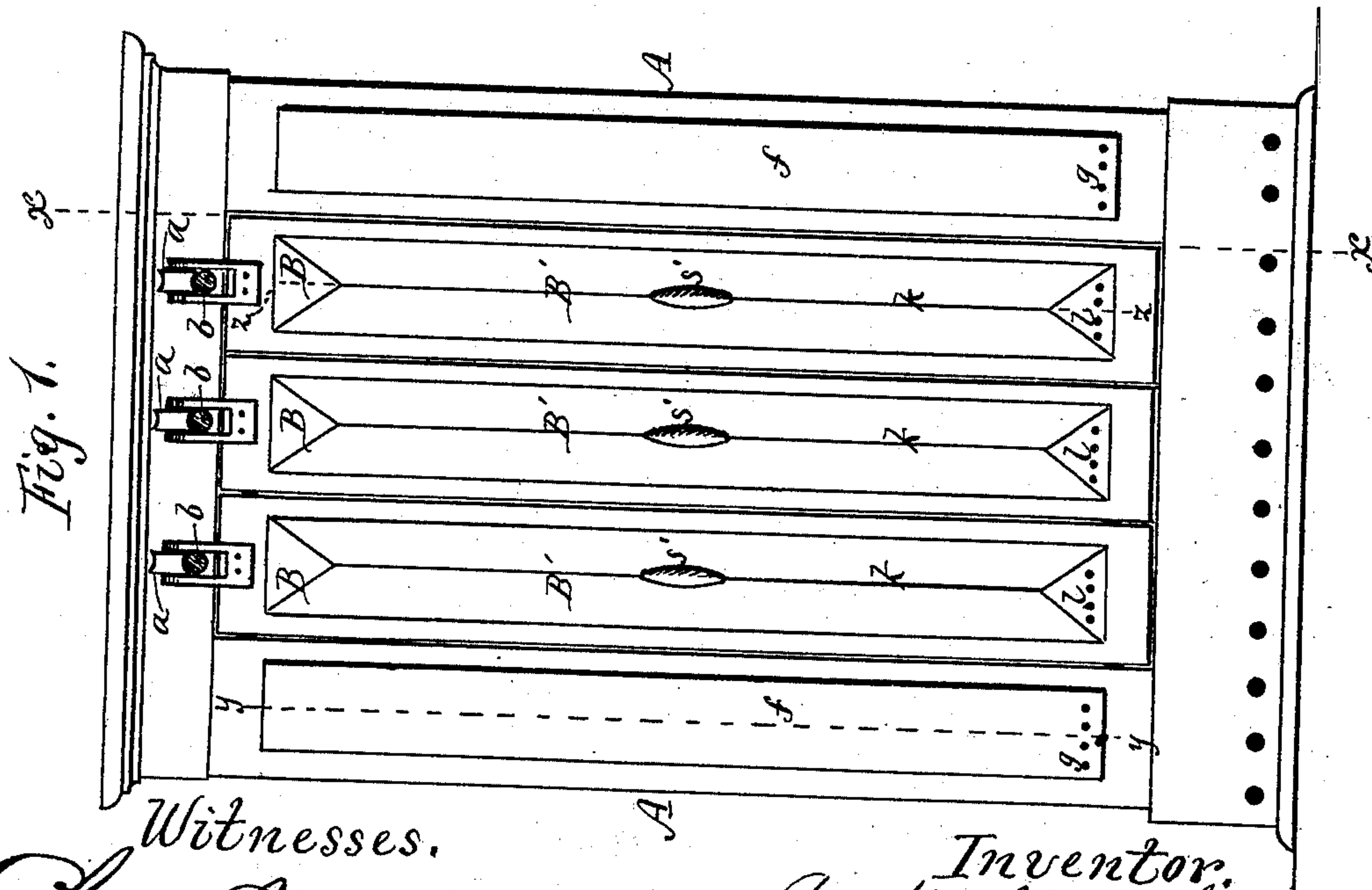


Fig. 3.

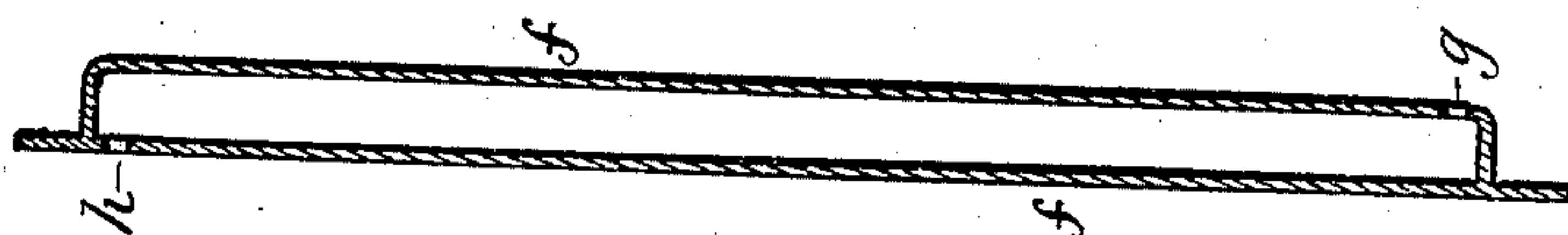


Fig. 4.

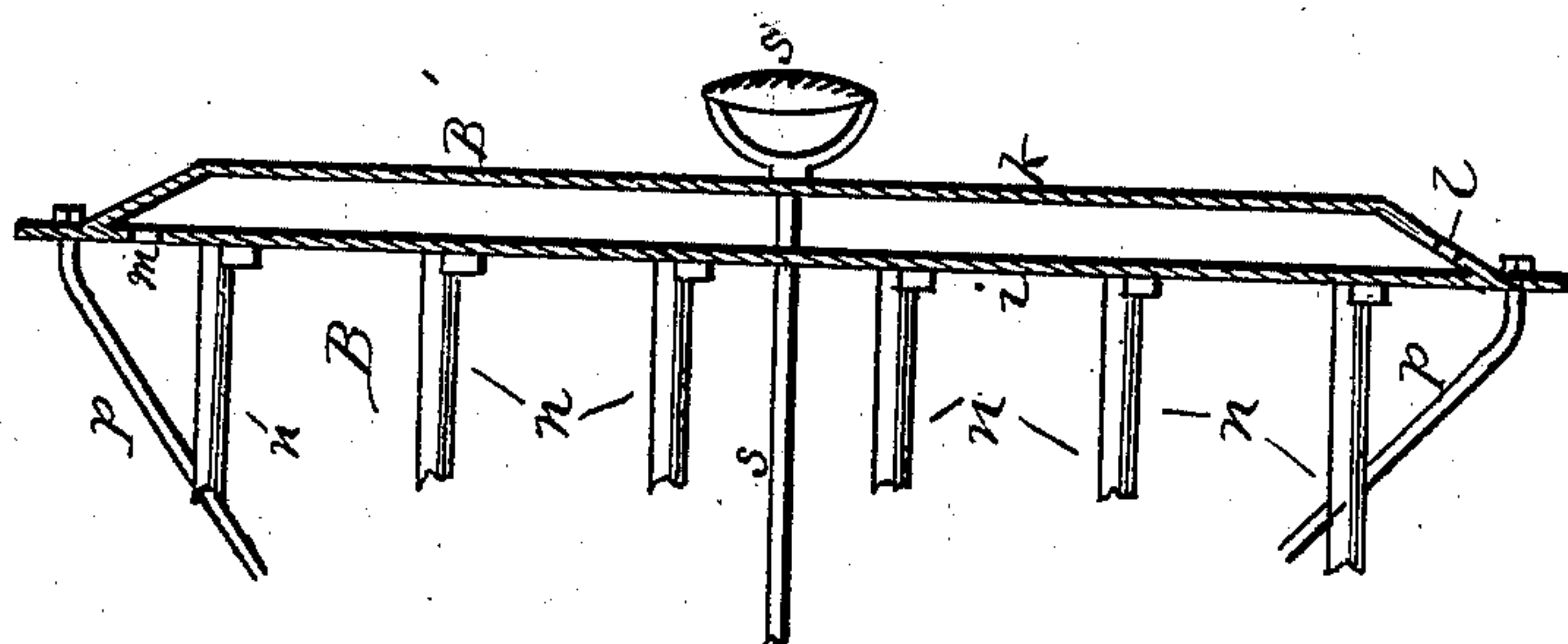


Fig. 5.

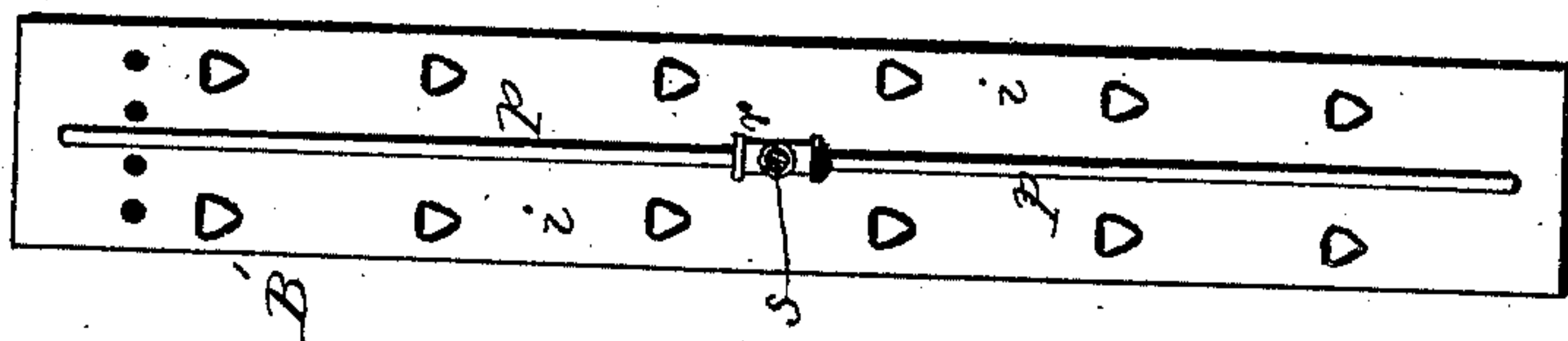
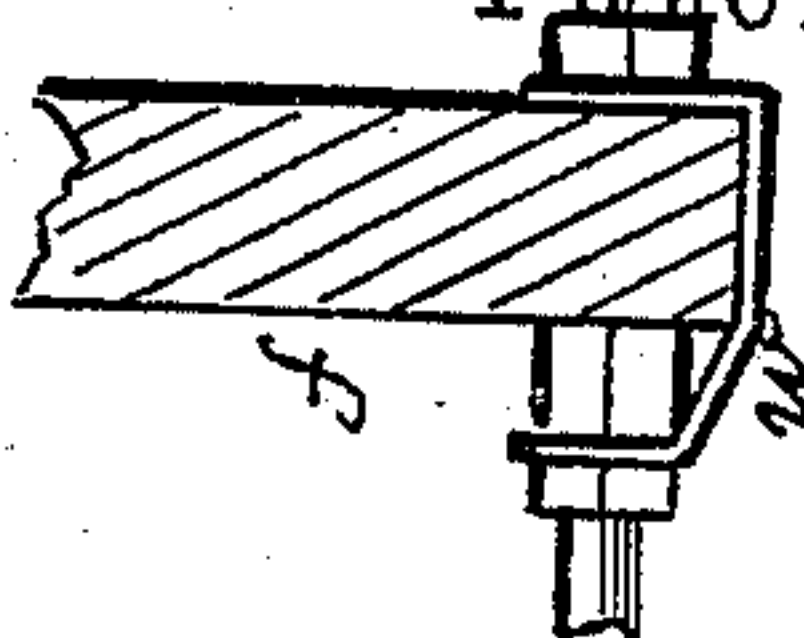


Fig. 6.



Witnesses.  
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By R. F. Osgood,  
Atty.

(No Model.)

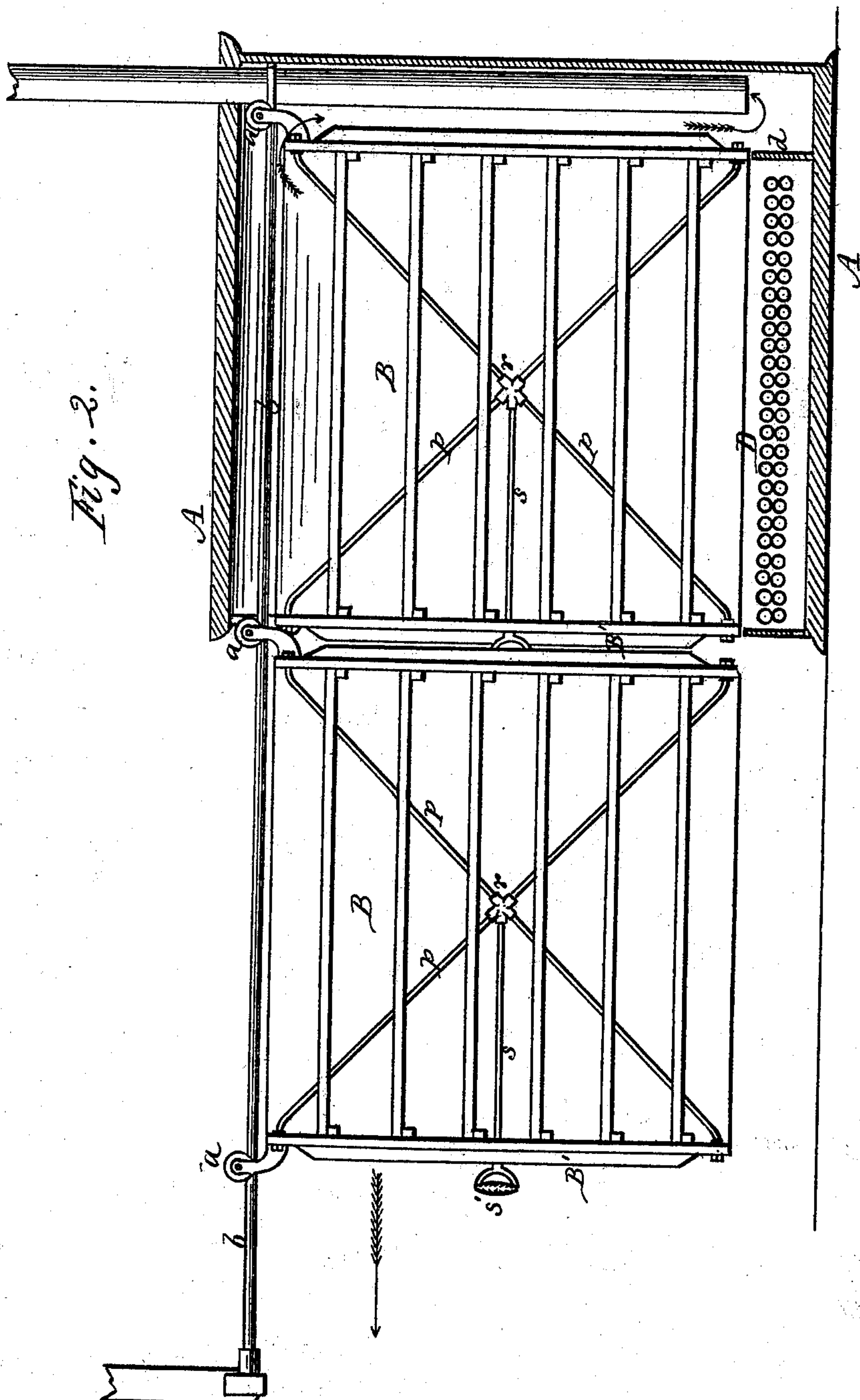
2 Sheets—Sheet 2.

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Fig. 2.



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# UNITED STATES PATENT OFFICE.

AUSTIN V. M. SPRAGUE, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE SPRAGUE-SCHUYLER MANUFACTURING COMPANY, OF NEW JERSEY.

## LAUNDRY DRIER.

SPECIFICATION forming part of Letters Patent No. 500,625, dated July 4, 1893.

Application filed June 10, 1890. Serial No. 354,888. (No model.)

*To all whom it may concern:*

Be it known that I, AUSTIN V. M. SPRAGUE, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Laundry Driers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to laundry driers in which the frames that hold the clothes are slid into and out of the drying closet on ways.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is a front elevation of the apparatus. Fig. 2 is a longitudinal vertical section of the same in line *x x* of Fig. 1, one of the frames being shown drawn out from the closet and the others in place therein. Fig. 3 is a vertical section through one of the stiles or jambs of the closet, in line *y y* of Fig. 1. Fig. 4 is a broken section on line *z z* Fig. 1. Fig. 5 is a cross section of one of the drying frames. Fig. 6 is a modification.

A indicates the closet in which the drying frames are inclosed, the ends, back and top being made of thoroughly seasoned lumber, covered externally with light corrugated iron and internally with corrugated tin plates.

B B B are the drying frames, of which any desired number may be used. These frames slide endwise into the closet, being suspended at opposite ends by grooved rollers *a a* that run on a track *b*. The track is preferably a round rod or tube that extends longitudinally through the closet near the top, and projects outward beyond the closet such a distance that the frame can be drawn out clear from the closet, as shown in Fig. 2. There are as many ways as there are frames, each frame sliding on its own way. When fully inserted the frames do not quite fill the closet, but leave in the rear an open space in which rests the ventilating pipe C for carrying off moisture. The closet is heated by coils D D of steam pipe located near the bottom, and a baffle plate, *d*, is used at the rear to direct the heated air upward so that it will pass through

the clothes. The closet at the sides and in front is provided with hollow stiles or jambs *f f*, provided with perforations *g g* at the bottom, which admit external air, and similar perforations *h h* at the top which open inward to the closet and allow such air to enter the closet after it has become heated in passing up the hollow jamb. The object is to keep the outer side of the closet cool and utilize the heat absorbed by the inflowing air to aid in drying within the closet.

Each of the drying frames B B B is provided with a hollow head B' consisting of a flat inner face *i* which fits the front of the closet, and a raised outer piece *k* offset from the face, which forms a passage for the air upward. The cold air enters at the bottom through perforations *l l* and discharges inward at the top through similar perforations *m m*. The object is similar to that in the jambs before described, to prevent the loss of heat by causing a current of air to pass upward through the head, which current, as it becomes heated, flows to the interior of the closet. Where two or more of the frames are used in a single closet, as shown in the drawings, the several heads of the frames fit closely side by side when the frames are run in, and tightly close the whole front of the closet.

*n n* are hollow bars, made of galvanized iron or other suitable material, extending longitudinally of the frame in two tiers on opposite sides, by which the clothes are suspended; and if desired hooks or other attachments may also be used for a similar purpose.

In order to brace and sustain the frames, which are sometimes made of considerable size, each of said frames is provided with diagonal braces *p p p p*, made of iron rod, attached at the four corners and extending to a central knuckle *r* forming a coupling into which the ends are screwed. These braces lie midway of the cross section of the frame, and between the clothes bars. They serve to thoroughly brace and sustain the frame and keep it in true position, so that it will slide in and out without binding, and without leaving any crack or opening at the outer end for the escape of heat. The frame is also provided with a fifth rod, *s*, screwed into the same cen-



tral knuckle or coupling *r*, and extending directly outward through the head, and provided at its outer end with a handle *s'* by which the frame is operated. The construction of these  
 5 frames as above described imparts great rigidity and the rod whereby the power is applied to move the same is centrally attached and by means of the radiating braces affects all parts in a practically equal manner where-  
 10 by the warping or distorting of the frame is obviated, and I am able to use light sheet metal without danger of the frames binding in their ways.

These closets can be made of any desired  
 15 size and with any number of sliding frames, and owing to their compact form a large quantity of clothing can be dried at once.

By the use of the straight rod *s*, attached centrally, the draw is direct upon the frame  
 20 in opening and closing; hence it will not bind or cramp, but the motion is free, and large frames can be moved in and out in a loaded condition without difficulty.

In some cases, and especially with heavy  
 25 frames, I employ fenders or guide straps *w* (Fig. 6) consisting of thin straps of metal attached to the edges of the door and extending cross wise of said edges, the inner sides being of the angular form shown. In clos-  
 30 ing the door these inclines strike the jamb and guide the door to place. They center the door at all times in closing, and obviate any difficulty in shutting the door into place.

I am aware that it is not new to provide  
 35 double walls having a space between them for various structures, and in some cases air and hot vapors have been circulated through such spaces. I am also aware that it is not  
 40 broadly new to brace doors, gates, frames and the like, and my claims to improvements in matters of this general character are limited to the structures particularly hereinafter pointed out.

By my construction practically the whole  
 45 front of the drier including the handle is kept cool and heat which would otherwise be radiated externally from said front is utilized within the drier. In respect to the braces and handle it will be noted that their central  
 50 connection in a plane between the two tiers of drying bars, by means of a solid coupling adapted to receive the ends of the five parts, four of which are attached to the frame, permits the application of power near the center  
 55 of gravity, whereby the frame can be moved

without binding or sagging and will retain its proper form at all times.

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

1. In a laundry drier the combination with a closet of a series of metallic drying frames B, B, adapted to be moved into and out of said closet, each having a hollow head provided with perforations at its foot in the outer  
 65 wall and with perforations in its inner wall opening directly into the closet near its top and whereby air passing through said heads is heated and utilized in drying and the exterior wall of the heads is kept cool to permit  
 70 their being handled; substantially as set forth.

2. In a laundry drier, the combination with a closet, a series of drying frames, B, B, each having a hollow head provided with perforations at its foot in the outer wall and with  
 75 perforations in its inner wall opening directly into the closet near its top, and the hollow jambs similarly perforated, whereby air passing through the heads and jambs of the drier is heated and utilized in drying and the whole  
 80 front is kept cool; substantially as set forth.

3. In a metallic laundry drier, the drying frames having two or more tiers of bars, the braces situated near said bars, and each attached at one of its ends to a corner of the  
 85 frame and at the other to a centrally located coupling, a rod attached to said coupling and extending through the hollow head and provided with a handle, said head having perforations for the circulation of air to cool the head  
 90 and heat the air, all combined substantially as set forth, whereby the frame may be safely handled and without danger of distortion.

4. In a metallic laundry drier, the drying frames having two or more tiers of bars, the  
 95 braces situated near said bars, and each attached at one of its ends to a corner of the frame and at the other to a centrally located coupling, a rod attached to said coupling and extended through the hollow head and pro-  
 100 vided with a handle, whereby the frame may be handled without danger of distorting the same; substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing  
 105 witnesses.

A. V. M. SPRAGUE.

Witnesses:

H. CHAPMAN,  
 R. F. OSGOOD.