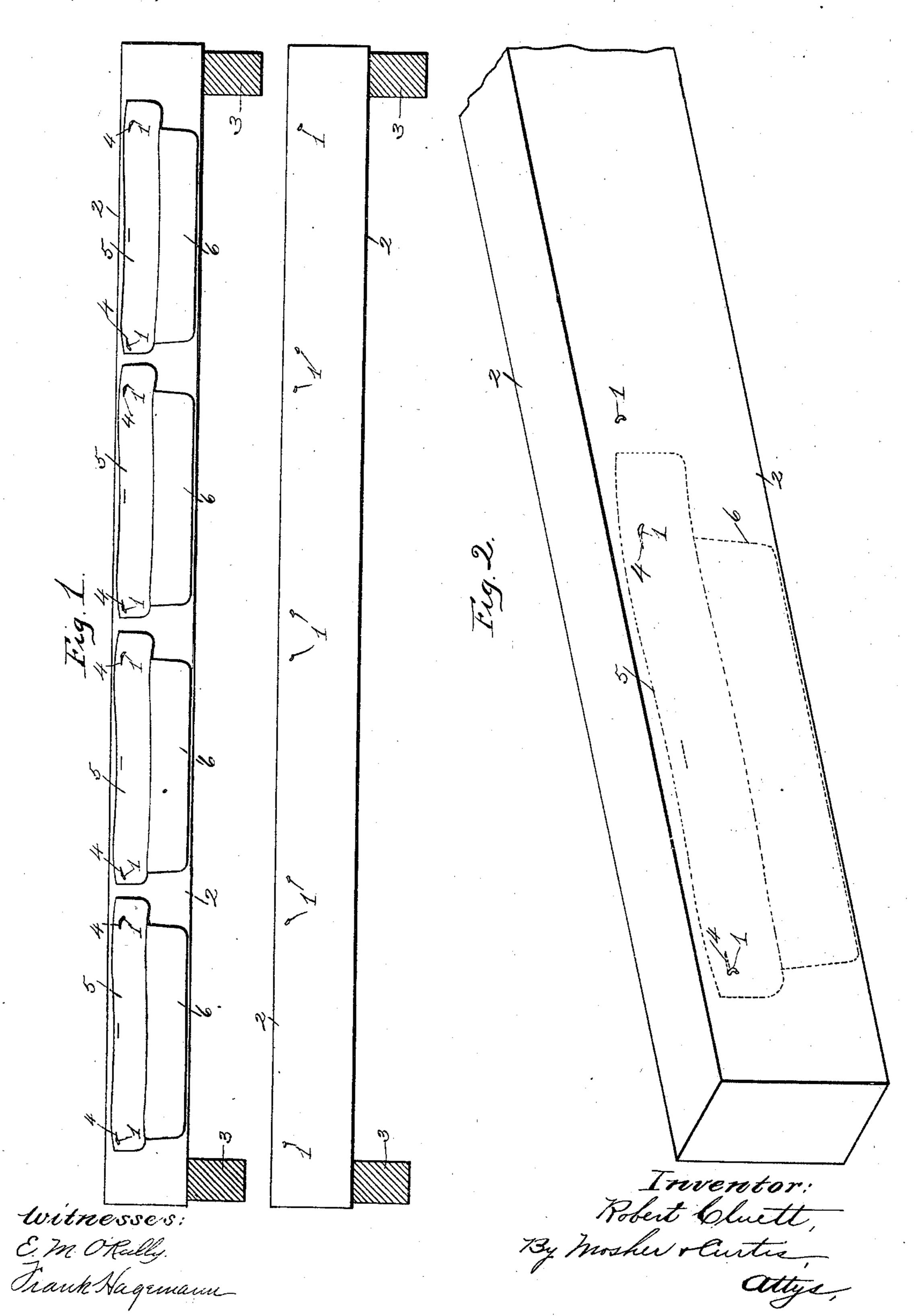
## R. CLUETT.

## METHOD OF DRYING COLLARS.

(Application filed Mar. 31, 1902.)

(No Model.)



## United States Patent Office.

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## METHOD OF DRYING COLLARS.

SPECIFICATION forming part of Letters Patent No. 707,823, dated August 26, 1902.

Application filed March 31, 1902. Serial No. 100,723. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CLUETT, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Drying Collars, &c., of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described, and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in both figures.

Figure 1 of the drawings is a view, partly in side elevation partly in section, of a dry20 ing-rack adapted for use in laundering collars by my improved method. Fig. 2 is a view in perspective, on a larger scale, of one of the drying-bars removed.

The object of my invention is to secure accuracy in size and accuracy and symmetry in form of laundered collars and the like.

It is well known to those skilled in the art of making collars and cuffs that by methods heretofore employed great difficulty has been 30 found in securing even approximate accuracy in the sizes of the laundered product. Articles cut from the same pattern are frequently found to vary materially in size after undergoing the laundering operation. This varia-35 tion is due largely to differences in shrinkage which the articles undergo in laundering, fabric from different webs having different coefficients of shrinkage, while fabric from different parts of the same web is frequently 40 found to shrink unequally. In laundering such articles by my improved method I limit the shrinkage of each article to such a degree only as shall locate the end buttonholes of the article the exact distance apart required 45 for the size of the article. The product of laundering methods heretofore employed is also found to be more or less inaccurate in form due largely to the position in which the articles are supported while drying. Thus 50 when an article like a high-fold collar is sat-

urated with wet starch and hung over a rod to dry the more or less liquid starch may gravitate longitudinally of the collar away from the higher middle portion and tend to accumulate in the lower ends of the collar. Also 55 when such a collar is suspended by one end of the collar-band to hang vertically while drying the weight of the offsetting collar-top will cause the outer lower corner of the top to sag materially, causing a noticeable and 60 objectionable bulging of the edge of the top on the lower end adjacent to said corner and causing said edge to form a different angle with the band from that formed by the corresponding edge on the other or upper end of 65 the top. By my improved method whereby the collars are supported in a horizontal position in a vertical plane while drying little opportunity or distance is afforded for a gravity movement of the wet starch, and the 70 weight of the collar is so distributed that there is no tendency to distort the ends of the top. For the reasons above stated it is necessary to most carefully inspect the work during and after laundering.

The defects above referred to can in some measure be corrected at the expense of much time and labor, but many articles have to be relaundered to make them salable.

In carrying out my improved method the 80 articles are washed and starched in the usual manner, the novel features of my method pertaining more particularly to the manner of drying the articles preparatory to ironing the same. While yet wet each article is applied 85 to a suitable support upon which its buttonholed ends are secured by retaining devices at a definite distance apart and so maintained while drying, whereby the shrinkage is limited to that degree only which shall locate the 90 buttonholed ends the distance apart permitted by said retaining devices. By properly locating the retaining devices the buttonholed ends can be located precisely at any distance apart within the limits of shrinkage 95 of the article, and all articles dried in connection with the same retaining devices will be uniform in size, as determined by the distance between the end buttonholes. I prefer to place said retaining devices in the same hori- 100

zontal plane, and in such a position that when the band is suspended therefrom in a horizontal position the top shall depend from the band in the same vertical plane there-5 with.

As a means for carrying out my improved method I have shown the retaining devices in the form of hooks 1, projecting laterally from the supporting-bars 2, whereon they are arro ranged in pairs, the members of each pair being separated by a distance corresponding with the length size of the collars to be dried thereon. The collars are applied to the bar 2 by inserting a pair of such hooks through the 15 respective end buttonholes of each collar, which is left thereon until dry. After the articles have become dry they are removed from the retaining-hooks and are ironed in the usual manner. One or both sides of the bar 20 may be provided with such retaining-hooks for simultaneous or successive use. The bars 2 are preferably made of a length sufficient to accommodate a plurality of collars so supported in line thereupon. The articles 25 so supported may be dried in any known manner.

A plurality of bars 2 may be removably mounted upon cross-bars 3 to form a dryingrack, which may be subjected to currents of 30 warm air in a drying-room in the usual manner.

Any known form of retaining device may be employed adapted to maintain the buttonholed ends of the article a definite distance 35 apart while drying.

The retaining-hooks 1 serve as a gage for detecting such inaccuracy in size of the articles as cannot be corrected by controlling the shrinkage. Thus if the collar when wet is 40 too long to be supported upon the hooks indicated for its size or too short to be applied thereto the defect is too great to be corrected by controlled shrinkage, and the collar must be marked and shrunk for a different size or 45 disposed of as a "second" or as waste. The retaining-hooks also serve to keep the but-

of starch, which upon hardening therein |

tonholes open by partly filling the same, and Witnesses: thereby preventing the accumulation therein

would cement together the edges of the but- 50 tonhole.

My improved method is applicable to the laundering of collars, cuffs, shirt-neckbands, and similar articles where a definite size of article is desired.

What I claim as new, and desire to secure

by Letters Patent, is—

1. That improvement in the art of drying, preparatory to ironing, previously-starched collars, and like articles, each having button- 60 holes arranged to be a predetermined distance apart, which consists in arranging each of such articles with the buttonholes thereof fixed at said predetermined distance apart, and then drying the article and at the same 65 time maintaining the buttonholes thereof in said fixed relation to each other, until the article is dried, substantially as described.

2. That improvement in the art of drying, preparatory to ironing previously-starched 70 collars and like articles having buttonholes arranged at a predetermined distance apart, which consists in suspending the article while wet upon supports inserted through said buttonholes and spaced a distance apart 75 equal to the predetermined distance apart of the buttonholes and drying the article while

so suspended.

3. That improvement in the art of drying, preparatory to ironing, previously-starched 80 collars and like articles having end buttonholes arranged at a predetermined distance apart which consists in suspending the article while wet upon supports inserted through said buttonholes and spaced to equal the pre- 85 determined distance apart of the buttonholes and located substantially in the same horizontal plane, whereby the extremities below the supports are caused to gravitate to a relatively uniform shape and position and dry- 90 ing the article while so suspended.

In testimony whereof I have hereunto set my hand this 27th day of March, 1902.

ROBERT CLUETT.

FRANK C. CURTIS, E. M. O'REILLY.