Nov. 12, 1935. H. S. WOOD 2,020,392

DRYING APPARATUS

Filed May 28, 1935

Fig. 1.

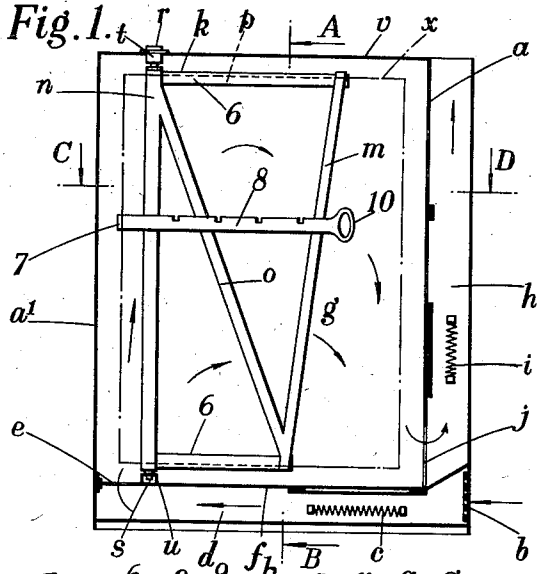
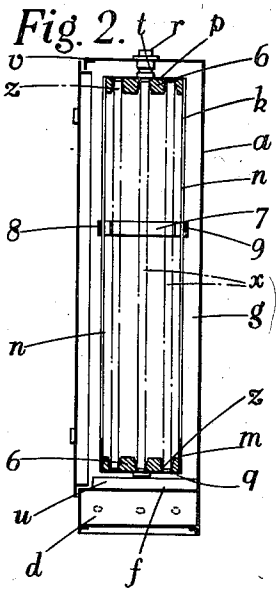


Fig. 2.



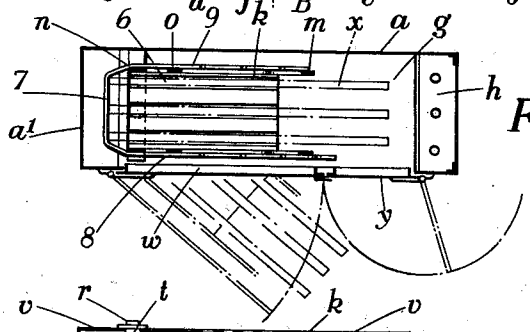


Fig. 3.

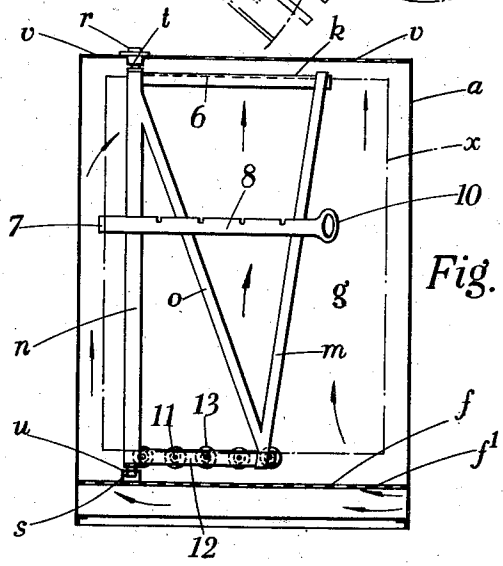
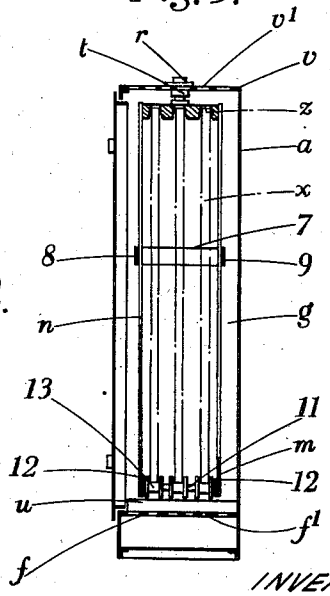


Fig. 4.

Fig. 5.



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DRYING APPARATUS

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In Great Britain May 30, 1934

3 Claims. (Cl. 34—40)

This invention relates to drying apparatus and more particularly to apparatus for drying skins pinned to boards as practiced in the furrier's art, in the manufacture of fur coats for example and in the dressing and dyeing of fur, the main object of the present invention being to provide a carrier for such boards that is swivelably mounted in a drying cabinet in such a manner as to permit of the ready insertion of the loaded boards in the carrier and of their withdrawal therefrom. A further object of the invention is to so construct the carrier guides for the boards as to permit of their insertion and withdrawal with due regard to economy in floor space. A still further object is to so position the boards in the carrier as to permit the passage of hot air currents between the same.

These and other objects and advantages of the invention will be more readily apparent from the following description when read in conjunction with the accompanying sheet of drawings, the novel features being pointed out in the claims.

In the said drawing, in which similar reference characters relate to like parts in all the figures:—

Figure 1 is a sectional elevation of one form of drying cabinet with the board carrier mounted therein.

Figure 2 is a vertical section on the line A—B of Figure 1, and

Figure 3 a cross section on the line C—D of the same figure.

Figure 4 is a similar view to that of Figure 1 but showing an alternative form of drying cabinet with a consequent modification in the carrier, and

Figure 5 a vertical section of the same.

Referring first to Figures 1 to 3 of the drawing *a* represents a drying cabinet of the kind described in the specification of my Patent No. 1,507,945 in which the air, as shown by the arrows, enters through the door *b* is heated by the heating means *c*, passes along the duct *d* and upwardly through the grating *e* in the floor *f* into the drying chamber *g*. The air in the extraction duct *h* heated by the heating means *i* rises and a suction effect is produced which draws the moisture-laden air descending in the chamber *g* through the passage *j* into the extracting duct *h* from whence it passes into the atmosphere through the top open end thereof.

Within the drying chamber *g* is mounted the board carrier *k* that is of skeleton formation being built up of the front and rear bars *m* and *n*, braced by the diagonal bars *o*, and the sheet metal top and bottom plates *p* and *q*. Trunnions *r* and *s* carried in the top plate *p* and bottom plate *q* respectively adjacent to the end wall *a'* of the cabinet *a* engage in the respective bearings *t* and *u* mounted on the top *v* and the floor *f* of the cabinet *a* which is provided with two doors *w* and *y*, the door *w* of greater width than the door *y* being hinged to the front of the cabinet adjacent the end *a'* thereof that is oppositely situated to the extraction duct *h*. The door is hinged to the front wall of the extraction duct *h*.

The boards *x*, shown in dash-dot lines, are removably mounted in the carrier *k*, sliding in the channels *z* formed between the horizontal guide bars **6** secured to the top *p* and bottom *q* of the carrier *k*. When in position they bear against a stop bar **7** which is integral with the arms **8** and **9** that embrace the carrier frame being secured to the members *n*, *o* and *m*. The front bar **8** is provided with a handle **10** that forms a convenient means for swinging the carrier *k* on its trunnions *r* and *s* into position for insertion and removal of the boards *x* as hereinafter described.

Figures 4 and 5 show the application of the invention to a drying cabinet *a* of a well known type in which the heated air passes into the drying chamber *g* through apertures *f'* over the whole area of the floor *f* of the cabinet and is discharged through apertures *r'* in the top *v*. Obviously in such a case the bottom of the carrier must be open to allow of the passage of the hot air currents between the boards *x* and in this modification the same therefore comprises a suitable number of transversely disposed and spaced rods **11** carried by the bars **12** secured to the front and rear bars *n* and *m*. Freely rotatable rollers **13** mounted on the rods **11** form the lower guides for the boards *x*, the upper ends of these boards sliding in the channels *z* as in the construction shown in Figures 1 to 3. The carrier *k* is mounted on trunnions, as shown in these figures, within the cabinet that is likewise provided with the doors *w* and *y* of unequal width.

Assuming that it is desired to dry skins for example, stretched on and pinned to the boards *x* in the usual manner, the doors *w* and *y* are opened and the carrier *k* by means of the handle **10** is swung on its trunnions *r* and *s* through the opened front into the oblique position shown in dash-dot lines in Figure 3. The operator then slides the loaded boards *x* into position in the carrier frame, engaging the top and bottom channels *z* in the employment of the cabinet of Figures 1 to 3, and the top channels *z* and the lower guide rollers **13** when the cabinet shown in Figures 4 and 5 is

employed. The carrier *k* is then swung back into the cabinet, the heating means put into operation and the doors *w* and *y* are closed. When the skins have been thoroughly dried, the doors *w* and *y* are opened, the carrier *k* is swung through the opened front into the oblique position and the boards *x* are removed.

The length of the lower guides, determined by the length of the guide bars **6** (Figures 1 to 3) or the number of guide rollers **13** mounted on the rods **11** (Figures 4 and 5), is a little more than half the width of the boards *x* which feature combined with the disposition of the carrier trunnions relatively to the end of the cabinet and to the hinges of the door *w* effects a considerable economy in floor space for the boards can be released in a less width than would otherwise be the case, it being only necessary to open the wider door *w* to the extent shown in dotted lines in Figure 3 while the narrow door *y* can be fully opened.

What I claim is:—

1. The combination of a drying cabinet divided into a heating chamber and a drying chamber with a carrier, trunnions in the top and bottom of said carrier engaging in bearings in the top and bottom of the drying chamber, and a plurality of boards slidably mounted in guides on the top and bottom of said carrier.

2. The combination of a drying cabinet divided into a heating chamber and a drying chamber with a carrier, trunnions in the top and bottom of said carrier engaging in bearings in the top and bottom of the drying chamber, and a plurality of boards slidably mounted in guides on the top and bottom of said carrier, the length of the lower guides being less than the width of the boards.

3. The combination of a drying cabinet divided into a heating chamber and a drying chamber with a carrier, trunnions in the top and bottom of said carrier engaging in bearings in the top and bottom of the drying chamber, a plurality of boards slidably mounted in guides on the top and bottom of said carrier, a pair of doors for said cabinet of unequal width and means for swinging said carrier on said trunnions into an oblique position when said doors are opened to permit of the insertion or withdrawal of the said boards.

HARRY SIDNEY WOOD.