H. H. HORTON.

PORTABLE FILM DRYING DRUM.

APPLICATION FILED APR. 18, 1921.

1,411,098.

Patented Mar. 28, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

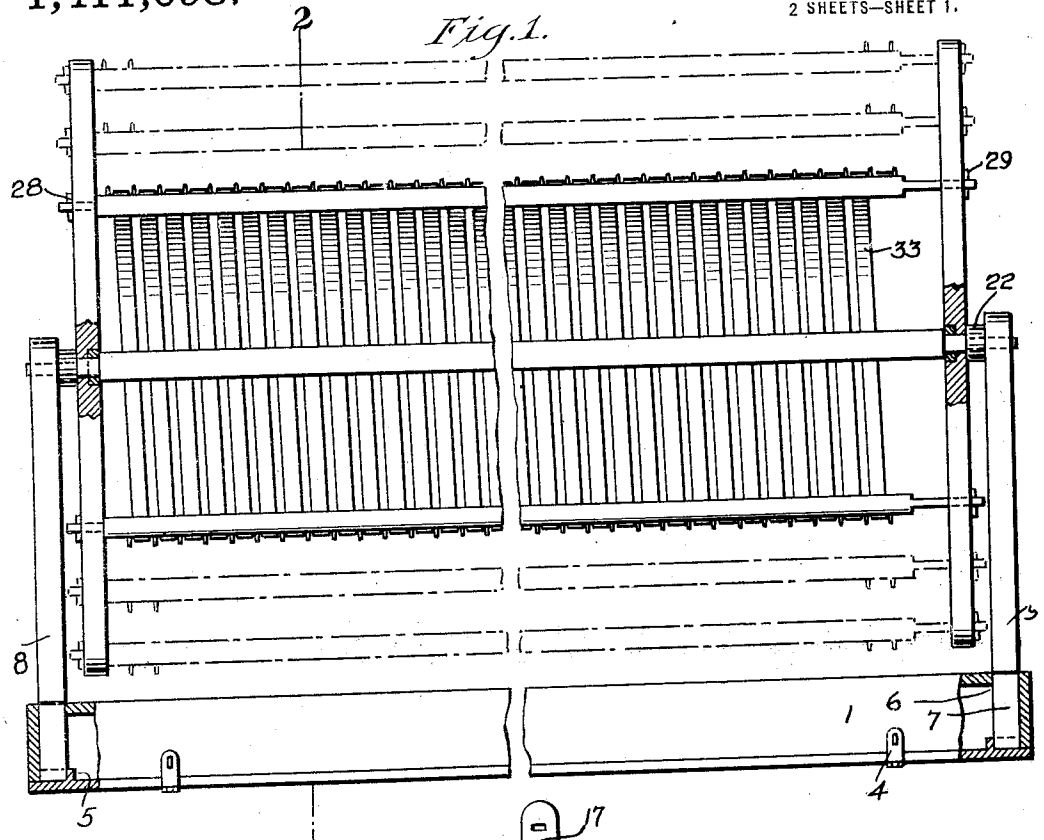
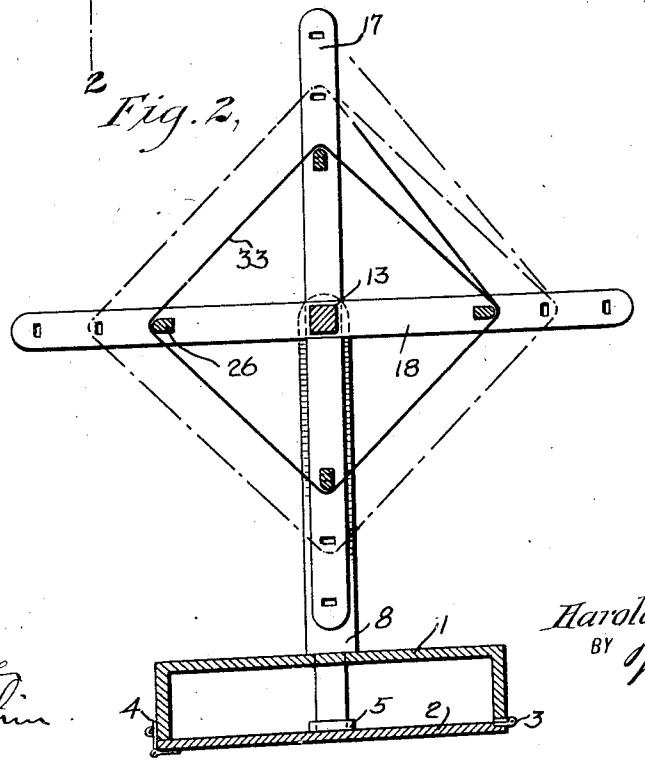


Fig. 2.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3,

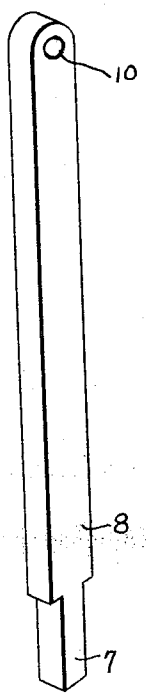


Fig. 4,

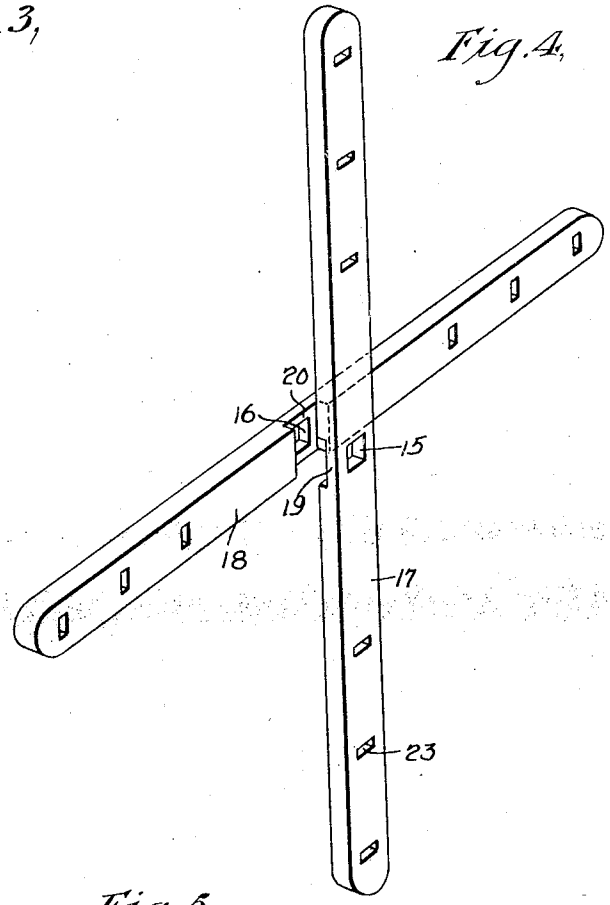


Fig. 5,

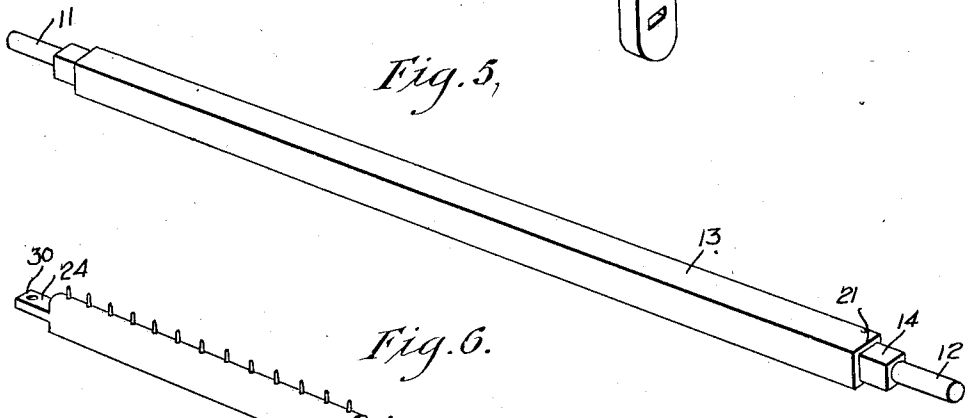
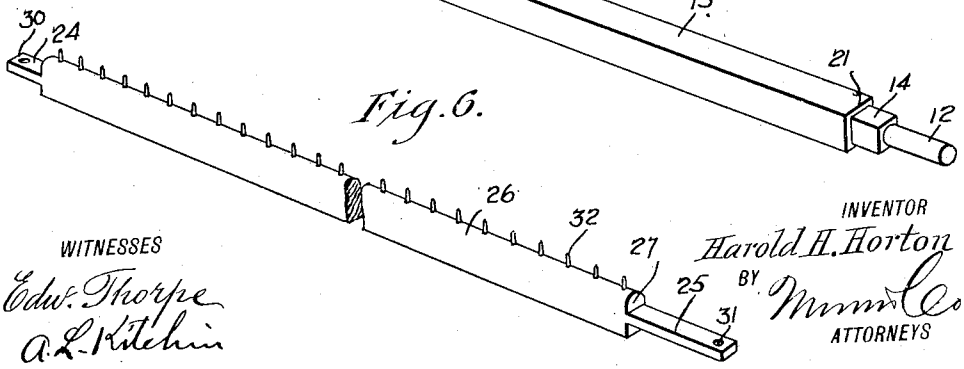


Fig. 6.



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UNITED STATES PATENT OFFICE.

HAROLD H. HORTON, OF NEW YORK, N. Y.

PORTABLE FILM-DRYING DRUM.

1,411,098. Specification of Letters Patent. Patented Mar. 28, 1922.

Application filed April 18, 1921. Serial No. 462,188.

To all whom it may concern:

Be it known that I, HAROLD H. HORTON, a subject of the King of Great Britain, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Portable Film-Drying Drum, of which the following is a full, clear, and exact description.

This invention relates to film drying devices and particularly to an improved portable film drying drum and has for an object to provide a construction which may be quickly assembled and disassembled so that at one time it will act in the desired manner for supporting a film and another to be arranged in a small body for transportation or storage.

Another object of the invention is to provide a portable drying drum in which various parts are formed so as to be quickly assembled and disassembled and by their shape to be held rigidly in place when assembled.

In the accompanying drawings—

Figure 1 is a longitudinal vertical section through a drying drum disclosing an embodiment of the invention.

Figure 2 is a transverse sectional view through Figure 1 approximately on line 2—2.

Figure 3 is a perspective view of a supporting standard embodying certain features of the invention.

Figure 4 is a perspective view showing the cross bars forming one end of the drum shown in Figure 1.

Figure 5 is the central or main shaft shown in Figure 1.

Figure 6 is a perspective view of one of the film carrying bars.

Referring to the accompanying drawings by numeral, 1 indicates a box provided with a lid 2 hinged to box 1 with suitable hinges 3 normally held closed by a hasp 4. The box 1 acts as a container for receiving the reel when disassembled and acts as a base for supporting a rail when assembled as shown in Figures 1 and 2. In order to properly support the reel when assembled the lid 2 is provided with cleats 5 at each end arranged opposite the openings 6 at each end through which a rectangular reduced extension 7 of the respective posts 8 and 9 extend.

As shown in Figure 1, when the extension 7 of the respective posts is inserted through the opening 6, the end of said extension will fit between the end of the box and the lug or projection 5 whereby it is held firmly in position. The upper end of each of the posts 8 is provided with an aperture 10 for receiving the rounded ends 11 and 12 of the central shaft 13 whereby said shaft may freely rotate in said supports. Each end of the shaft 13 is provided with a squared reduced section 14 which projects through the squared openings 15 and 16 of the respective bars 17 and 18 at each end of the reel. Bars 17 and 18 form the ends of the drum and are notched at 19 and 20 so that they may interlock as shown in Figure 1 and the squared section 14 properly fit in the apertures 15 and 16. By this arrangement, bar 18 presses against the shoulder 21 while the bar 17 frictionally engages a spacing washer 22 which is arranged between bar 17 and the respective standards 8 and 9 is illustrated in Figure 1. In this way, the end pieces or bars are properly interlocked and held rigidly together without the use of direct fastening means. Each of the bars 17 and 18 at the respective ends of the drum is provided with a series of rectangular openings 23 for receiving the rectangular ends 24 and 25 of the film carrying bars 26. When any of these parts are placed in position, the end 25 is first inserted until the shoulder 27 has engaged the end supporting bars 17 and 18. In the opposite portion 24 it is forced into the opposite bar 17 or 18 as the case may be, which forcing action will partially withdraw the rectangular section 25. Suitable pins 28 and 29 are then inserted through the respective apertures 30 and 31 in sections 24 and 25. This will lock the bar in position and against independent rotation. Each of the supporting bars 26 is provided with spaced pins 32, said pins extending preferably radially of the drum and acting to hold the various layers of film 33 apart.

It will be noted in Figure 6 that the edge of the bearing 26 carrying the pins 32 is rounded and, consequently, presents a nice easy support for the film. Preferably, when the drum is first assembled as shown in Figure 1 the inner series of bars 26 is inserted and the film rolled thereon until these bars have been filled, after which a second row of bars are provided and finally the outer or third row. It is evident that more or

even less rows of bars could be used than shown in the drawing without departing from the spirit of the invention.

What I claim is:—

1. A portable film drying drum comprising a container acting as a supporting base at one time and as a container another time, a pair of uprights interlocking with said container when the container is acting as a base, a shaft rotatably mounted in said uprights, a plurality of end bars carried by said shaft but removable therefrom and a plurality of removable film supporting bars carried by the end bars, said end bars, shaft and film supporting bars being made of a size to fit in said container when disassembled.

2. A portable film drying drum comprising a shaft having squared portions, at each end and a round portion projecting from the squared portion, a pair of end members having notched portions interlocking and squared openings at the point of interlocking, said squared openings accommodating the squared portions of said shaft whereby the end bars are supported by said shaft, a pair of supporting members for receiving the rounded end of said shaft, said supporting members acting in the double capacity of supporting means and means for holding the end bars on said squared portions, each of said end bars having a plurality of rectangular openings and a plurality of film supporting bars having rectangular end sections fitting into the rectangular openings of said end bars.

3. In a portable film drying drum, a pair of end members, each of said end members having a plurality of rectangular openings and a plurality of film supporting bars, each of said film supporting bars having a rectangular section at each end, one section being several times longer than the thickness of said end members so that it may be thrust through one of said rectangular openings for permitting the opposite rectangular end sections to come opposite the opening in the opposite end member and be moved over into said opposite end member without removing the first rectangular end member, a pin arranged at each end of each of said bars for locking the same in place and a plurality of spacing pins arranged along one edge of each of said bars for spacing films mounted thereon.

4. A knock-down portable film drying drum comprising a knock-down drum structure, a pair of supports for supporting the drum structure when the drum structure is assembled, a base for the drum structure formed with openings for receiving said supports when the drum structure is assembled, said base being hollow and formed with a lid whereby said supports and drum structure when knocked down may be stored in said base.

HAROLD H. HORTON.