Aug. 9, 1927. 1,638,651

B. L. BAIN

SEED CORN DRYING RACK

Filed Dec. 1, 1926

Fig. 1.

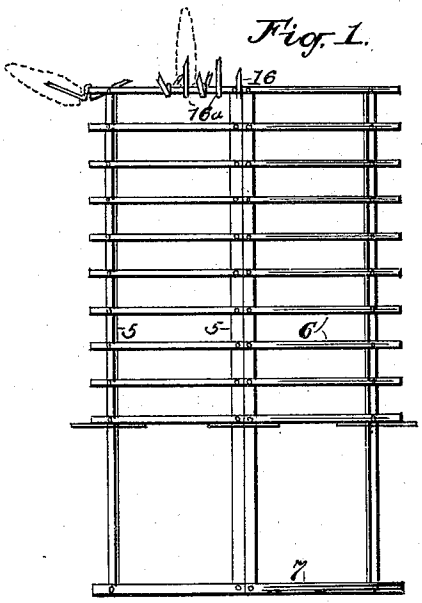


Fig. 2.

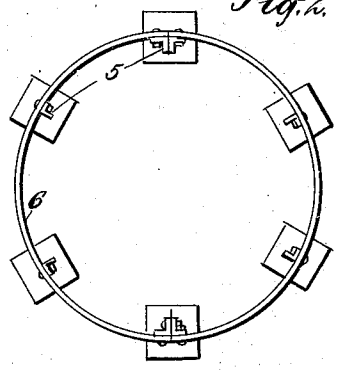


Fig. 4.

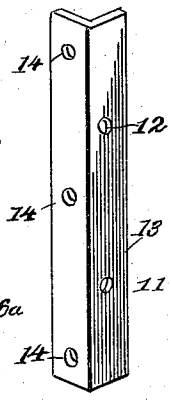


Fig. 3.

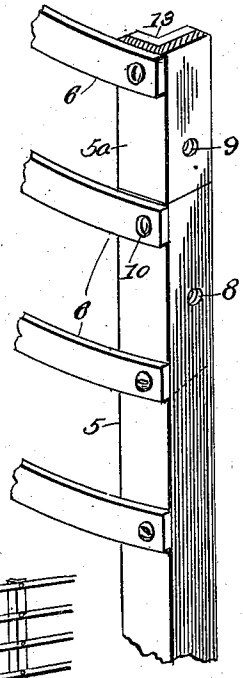


Fig. 6.

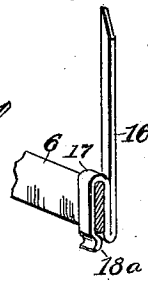


Fig. 5.

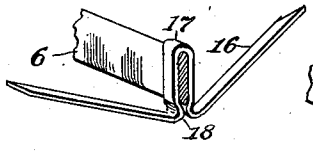


Fig. 7.

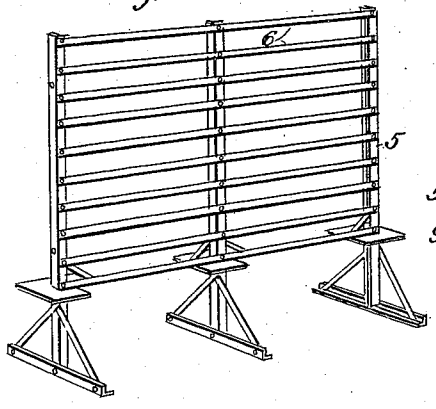
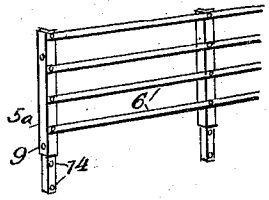


Fig. 8.



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UNITED STATES PATENT OFFICE.

BENJAMIN L. BAIN, OF CEDAR RAPIDS, IOWA.

SEED-CORN DRYING RACK.

Application filed December 1, 1926. Serial No. 152,038.

This invention relates to the storage and drying of seed-corn; and the object of the invention is to produce a seed-corn drying rack more perfectly adapted than hitherto to the requirements of mounting and drying the ears of corn, and especially designed for convenience in shipping and of assembling at its final destination.

The invention embodies certain improvements in the type of corn drier illustrated and described in patents to Joseph S. Bain and Benjamin L. Bain, numbered respectively 1,026,550 and 1,089,810, and respectively dated May 14, 1912 and March 10, 1914. The improvement relates in part to the rack structure and in part to the ear-carrying spur attached to the rack, as will more fully appear hereafter.

In the manufacture of the rack one of the prime difficulties has been in connection with the great variation in sizes required by different users.

Another difficulty has had to do with the distribution of the racks. If shipped in bundles knocked down there were constant losses of parts in transit. To box the larger sizes made the shipments costly, and the same objection applied to shipping them crated and all assembled.

Another difficulty was connected with the ear-carrying spurs. The double-pointed spur shown in both of said patents has but one serious objection, and that is the ease with which it could be tipped to one side or the other, especially in the ear-supporting position. This is not only troublesome, but detrimental to the ears of corn, if not righted, as they should be kept from touching each other.

The invention is designed to remove the difficulties above noted, and will now be described in detail.

In the accompanying drawing, forming a part of this specification, Fig. 1 is a side elevation of my improved drying rack of the circular type. Fig. 2 is a plan view of the same. Fig. 3 is a fragmentary view in perspective, showing means for increasing the height of the rack. Fig. 4 shows one of the splicing members used in adding height to the rack. Fig. 5 illustrates the improvement in the ear-holding spur. Fig. 6 shows a modification in the construction of the spur. Fig. 7 shows a straight rack in perspective. Fig. 8 is a partial view of a top extension for the straight rack.

The circular rack is herein shown as composed of six uprights 5, two of which are double, and a series of semi-circular bands 6 bolted to the standards of each half of the rack. The standards are of angle-steel, and the bands are of flat steel and uniform in width. The terminal standards of each half rack are bolted together, thus forming a stable, circular structure. A base ring 7 of much wider material, also semi-circular, connects the feet of the standards of each half rack, and serves as a substantial support for the rack.

In the Patent No. 1,026,550 above referred to the rack is shown considerably larger at the base than at the top. This made it practically necessary to ship the rack in halves, or wholly assembled, as the differences in the length of the rails would greatly complicate its assembling at its destination. One improvement therefore consists in making the structure perfectly parallel vertically so that the rails are all duplicates and may be attached at any point to the standards. This also makes it possible to extend the rack vertically, as will be explained presently, since the straight splices will fit perfectly on the abutting and parallel standards.

Referring to Figs. 3 and 4 it will be seen that the terminal standards 5 of the main rack, and 5^a of the supplemental rack are pierced at 8 and 9, respectively, for fastening bolts 10, stove bolts being used throughout the structure. Corresponding holes 11 and 12 are made in the splicer 13, which is a short piece of angle steel to connect the two standards in the abutting position shown. Correspondingly the other side of the splice is pierced at 14, the holes registering with corresponding holes in the standards, and taking the bolts which connect the rails thereto. It is thus a very simple matter to add another section or "story" to the rack by detaching seven bolts at each meeting point, applying the splice, with the bolts replaced, and inserting an aditional bolt at 9 for greater stability. In practice the supplemental units are made in varying heights, according to the user's requirements, but standardized for economic manufacture, such as one foot, two feet, or greater height as conditions may require.

The straight rack shown in Figs. 7 and 8 is enlarged in the same way, vertically. In practice it is extended endwise by bolting on another rack, the initial racks being all of one standard size.

This construction makes it possible to meet all the requirements of users, but with greatly simplified manufacturing methods, and with a minimum of different sorts. It also removed all the former annoyance and losses in shipping since the racks, which are bolted at every joint, may be shipped knocked down in boxes of moderate size, and with no danger of losses in transit.

In Figs. 5 and 6 are shown improvements in the construction of the ear-carrying spurs 16. These are in practice made of flat wire, angled at the ends so as to be easily thrust into the corn-cob, and looped at 17 so as to hang on the rails 6. The only objection to the spur hitherto has been its tendency to tip sidewise. To prevent this action, the improved loop is contracted at 18, so as to hug the lower edge of the rail. The elasticity of the material of the spur makes it possible to force it on the rail, and once in position the attached ears are supported in proper position.

For the very top row of ears on the rack it is desirable to alternate inclined ears, leaning inwardly and outward, with ears standing upright. For this purpose the spur is modified to have a single tang 16^a standing erect. The loop in this case may be offset only on one side, if desired, at shown at 18^a.

Having thus described my invention, I claim:

1. A corn-drying rack having parallel upright standards and uniform, connecting, horizontal rails, a supplemental rack adapted to abut on the top of the main rack, and having corresponding standards, the terminal standards being pierced for lateral connection with adjacent racks, laterally extending supplemental racks with corresponding standards, and splices to connect the main and suplemental standards, said splices being pierced to coincide with both the lateral extension holes and the rail connection holes of the standards.

2. An improved corn-drying rack composed of upright standards and horizontal cross-rails bolted thereto, the standards pierced for attachment laterally to a duplicate rack, a top-extension rack having horizontal rails and upright standards, said standards being aligned with those of the first named rack, and splices internally disposed in the standards, and pierced with holes registering with rail and standard holes in said racks.

3. In combination with the ear-supporting rail of a corn-drying rack, an ear-carrying spur, looped to hang on said rail, the loop being contacted to pinch the under side of the rail, and thus hold the ears from tipping sidewise.

4. In combination with the ear-supporting rail of a corn-drying rack, an ear-carrying spur, having an upright tang to pierce the cob, and a looped base to hang on said rail, the loop being contracted to pinch the under side of said rail.

In testimony whereof I affix my signature.

BENJAMIN L. BAIN.