No. 842,289. PATENTED JAN. 29, 1907.

C. D. WOOLVERTON.

DEVICE FOR TREATING GRAIN.

APPLICATION FILED JULY 6, 1905. RENEWED DEC. 15, 1906.

FIG. 1.

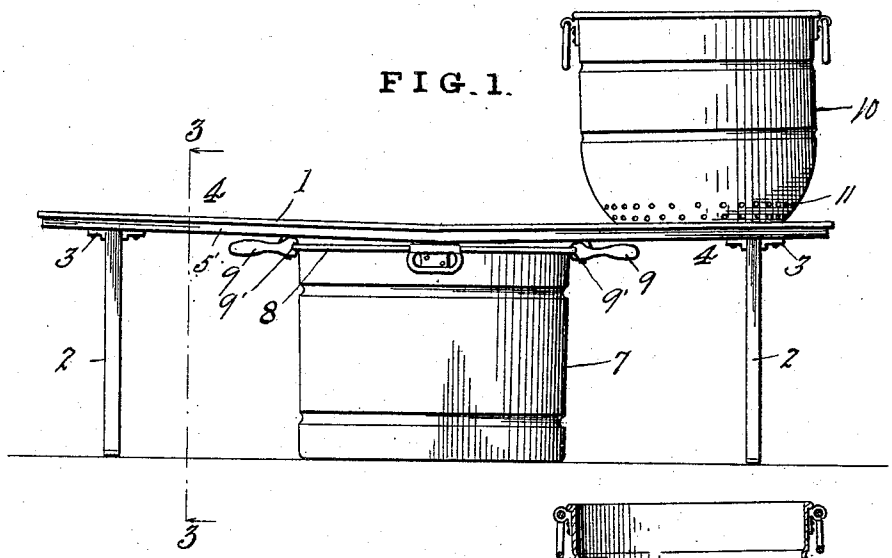
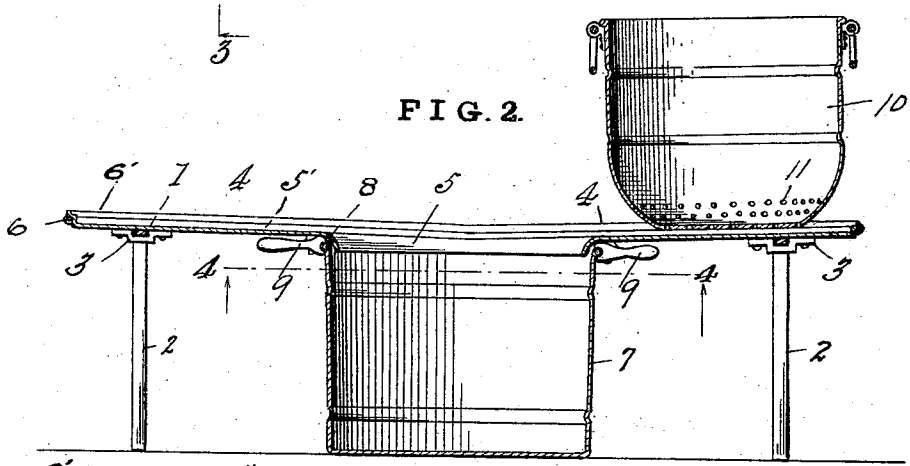


FIG. 2.



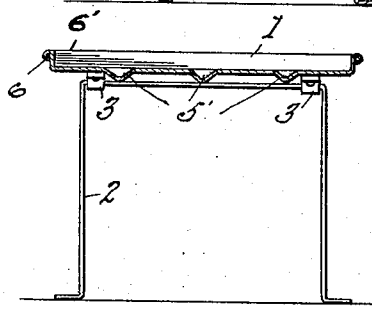


FIG. 3.

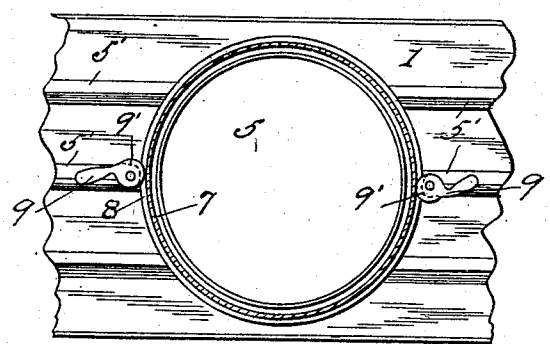


FIG. 4.

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DEVICE FOR TREATING GRAIN.

No. 842,289. Specification of Letters Patent. Patented Jan. 29, 1907.

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To all whom it may concern:

Be it known that I, CHESTER D. WOOLVERTON, a citizen of the United States, residing at Minot, in the county of Ward and State of North Dakota, have invented new and useful Improvements in Devices for Treating Grain, of which the following is a specification.

My invention relates to improvements in devices for treating grains for the purpose of cleansing the same of smut or any other undesirable substances which may be present therein.

The object of the invention is the provision of a device of this character which will be efficient in its operation, comparatively cheap in first cost, compact in its construction, so constructed that it can be easily assembled or taken down, and portable, thus rendering the same a desirable apparatus and one which will fulfil the purpose for which it is intended.

In many of the devices and apparatus now in use for the above-mentioned purpose objection is made that they are cumbersome, tedious, and slow in their operation. By my construction and operation I provide an apparatus which is simple, consisting of comparatively few parts, strong, durable, and capable of being manipulated so as to cleanse grains with much greater rapidity and efficiency than other devices of like character.

The invention consists of a table or stand preferably constructed to drain its entire area toward a common point and provided with legs or braces which are adapted to fold out of the way when the table is packed for shipment or out of use. The table is further provided with an opening at its lowest draining-point, and under this opening a receptacle containing the chemical or other liquid agent used for treating the grain may be located, and means are provided on the table for securing the receptacle temporarily in place. A further requisite is a perforated basket or tank for the reception of the grain to be treated, said basket being of a size suitable to be immersed through the opening in the table into the chemical-containing receptacle.

In the accompanying drawings I have illustrated one example of the physical embodiment of my invention, in which—

Figure 1 illustrates in elevation the complete apparatus ready for use with the basket of grain located on the table and in position to drain into the chemical-containing receptacle. Fig. 2 is a central vertical section of Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1; and Fig. 4 is a section on line 4 4, Fig. 1, looking in the direction of the arrows.

To insure strength, lightness, compactness, and easy handling, I preferably construct the entire apparatus of sheet metal, such as iron, and the table 1 is preferably of this construction. The legs or braces 2 2, as shown, are formed of one piece of metal and are secured to the lower side of the table by bearing-pieces 3 3, which pieces are riveted to the table and permit a swinging motion to the legs, in order that they may be folded for packing or transportation of the table. Each end of the table is inclined downwardly toward the center, as indicated at 4 4, and at its center the table is fashioned with a circular opening 5, toward which opening the entire area or surface of the table will be drained. To facilitate the drainage on the table, I provide a series of longitudinal grooves or corrugations 5′ 5′, formed in the metal of the table-top, and these grooves extend from the ends of the table toward the center, terminating at the circular opening 5. A reinforcing-wire 6 may be used to bind the edges of the table to strengthen the same.

The chemical-containing receptacle 7 is a metallic vessel of any suitable construction provided with handles, as usual, for manipulation. At its upper edge the rim of the vessel 7 is formed with a bead or projecting ring 8, by means of which the vessel may be secured temporarily in place under the central opening of the table. To secure the receptacle 7 in position, I provide cam-lugs 9 9, which are pivoted to the under side of the table 1 near the edge of the central opening 5, and these lugs are each adapted to bear against the ring or bead 8 of the vessel 7, grooves 9′ 9′ being provided eccentric to the pivot-point of the cams in the lugs for contact with the ring 8.

The dipping-tub 10 is of a diameter to pass through the opening 5 of the table 1 and be immersed in the chemical-containing vessel 7. This tank 10 is preferably perforated at its bottom and for a little distance up its sides, as at 11, and is intended for immersing the grain contained therein into the chemical vessel.

In operation the tank containing the

chemical treating liquid is located under the central opening 5 of the table 1 and secured temporarily in position by turning the handles of the cam-lugs 9 9 so that the faces of the grooves 9′ 9′ frictionally contact with the ring or bead 8 on the vessel 7, thus firmly holding the vessel in place. The tank 10, which has been previously filled with grain to be treated, is then passed through the opening 5 of the table and immersed bodily into the chemical-containing tank or vessel. After the tank 10 has remained in the chemical-containing receptacle long enough for the chemical treating liquid to enter the tank 10 through the perforations 11 and cover the grain the basket 10 is removed from the tank and placed in position as illustrated in Figs. 1 and 2. In this position the chemical treating liquid will drain from the basket 10, carrying with it smut and other undesirable substances, and run down the inclined top of the table toward the center and, passing through the central opening 5 therein, will again find its way to the receptacle 7. In operation the tank 7 is usually filled to about one-half its capacity and the grain-basket is filled to about one-half or two-thirds its capacity; but it will be understood the proportions may be varied to suit the conditions and option of the operator. The operation may be repeated as many times as may be found necessary until the grain is cleansed to the satisfaction of the operator.

It will be observed that the outer edges 6′ of the table are raised above the plane thereof and also that the portion of the table forming the walls of the opening 5 projects downwardly below the lower surface of the table to insure a return of all the chemical liquid to the chemical-tank.

While I have described only one example of the apparatus and its operation, it will of course be understood that changes and modifications may be incorporated without substantial departure from the invention. If desired, the device illustrated may constitute one section of a series of tables, or a second grain-containing vessel may be used, alternately dipping and draining each grain basket or vessel and placing the same at either end of the table to drain. The grain-basket may be of any construction, provided it is capable of permitting the grain to absorb the chemical liquid therethrough.

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

1. In an apparatus as described, the combination with a table having its ends inclined toward the center, an opening in the center of the table, a chemical-containing vessel located under said opening and means for detachably connecting said vessel with the table, and a grain-containing perforated tank or basket adapted to be immersed into said chemical-containing vessel and placed on the table-top to drain back into said vessel.

2. The combination with a supporting-table having an opening at its center and having its top inclined toward said opening, a vessel containing a cleansing liquid, pivoted cam-lugs on the table adapted to frictionally engage and hold said vessel below said opening, and a perforated tank containing grain adapted to be immersed into said liquid and placed on the table to drain back into said vessel.

3. The combination with a table having its top inclined from the ends toward the center, a central opening in said table having a flared downwardly-projecting edge, a series of grooves leading to the central opening and foldable legs to said table, of a vessel containing a cleansing fluid located under said flared edge, and a perforated grain-tank adapted to be immersed in said vessel and placed on the table-top to drain the liquid back into said vessel.

4. The combination with a table having its top corrugated and inclined from the ends toward the center, a central opening in the table, and a flared annular edge to said opening, of a vessel containing a cleansing liquid located under said opening, and a perforated grain-containing tank adapted to be immersed in said vessel and located on the table to drain the liquid back into the vessel.

Dated at Minot, North Dakota, this 10th day of March, 1905.

CHESTER D. WOOLVERTON.

Witnesses:
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