

L. H. DICKELMAN.
ELASTIC CRIB.
APPLICATION FILED JULY 17, 1915.

Patented Nov. 20, 1917
2 SHEETS—SHEET 1.

1,247,511.

FIG. 1.

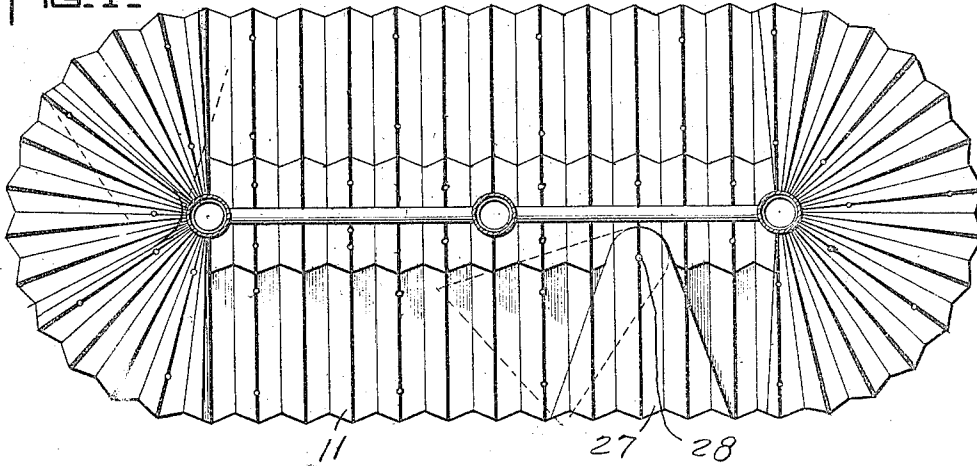


FIG. 2.

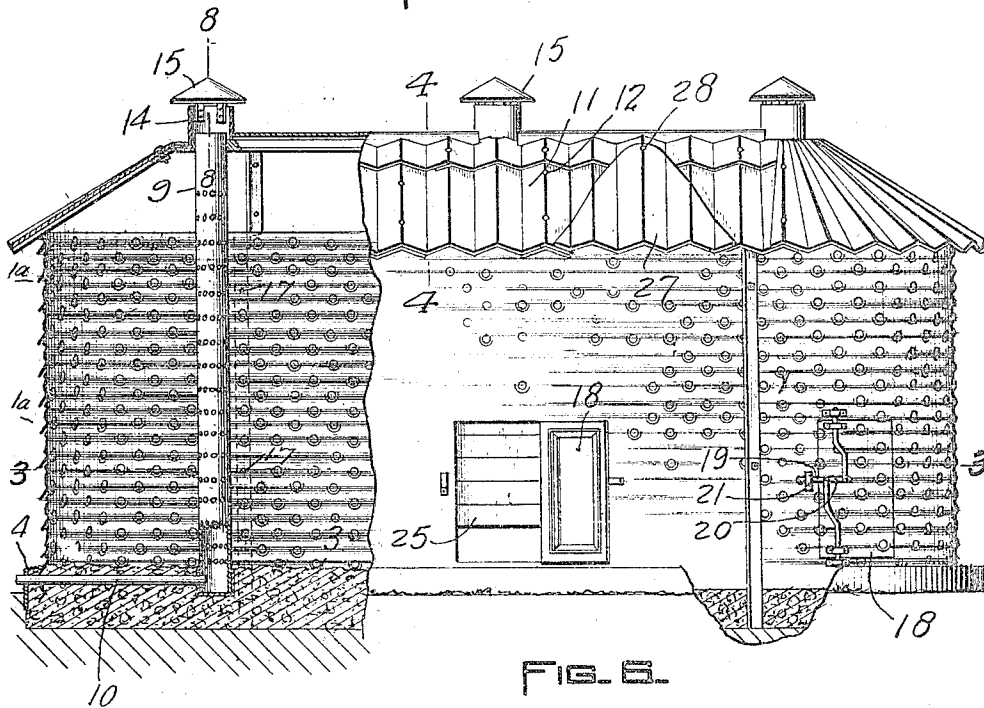
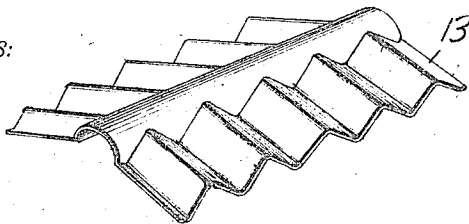


FIG. 3.

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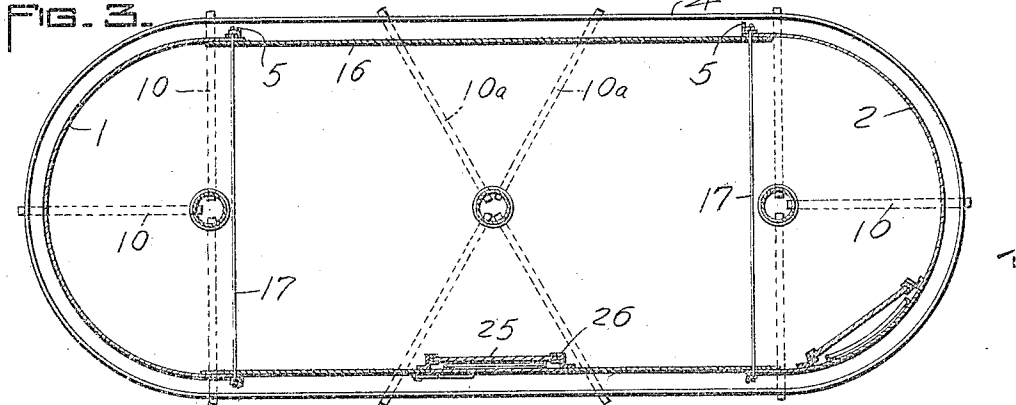
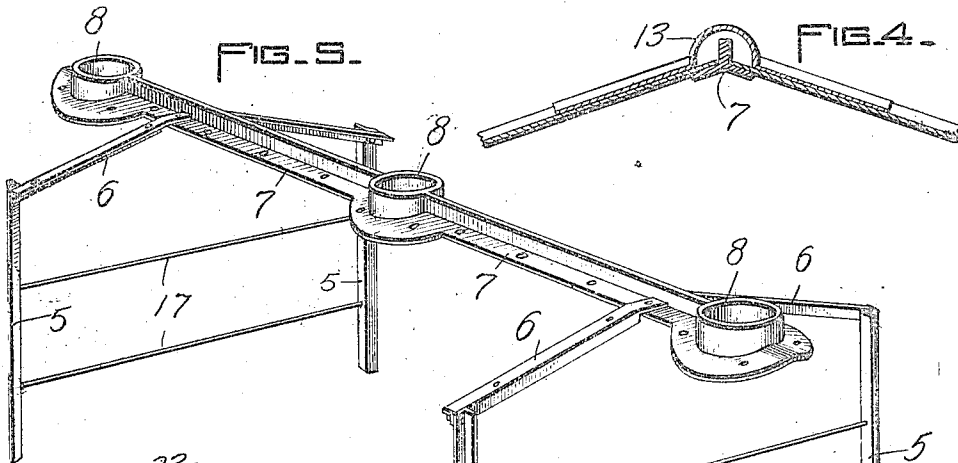
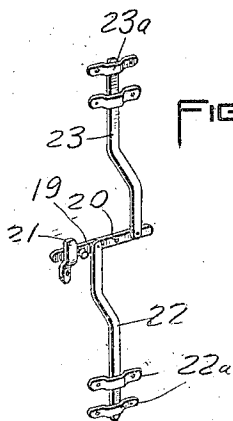
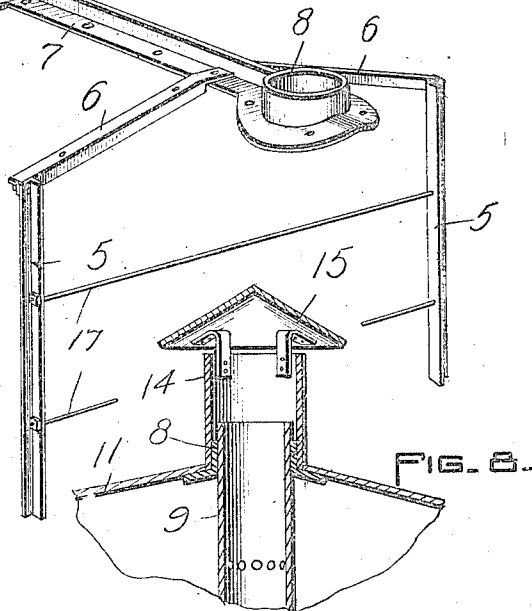
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WITNESSES:

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UNITED STATES PATENT OFFICE.

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ELASTIC CRIB.

1,247,511.

Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed July 17, 1915. Serial No. 40,424.

To all whom it may concern:

Be it known that I, LIZZIE H. DICKELMAN, a citizen of the United States, and a resident of Forest, in the county of Hardin and State of Ohio, have made certain new and useful Improvements in Elastic Crib, of which the following is a specification.

My invention relates to improvements in elastic cribs and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide an all metal crib which is rat proof and vermin proof and which affords ample facilities for proper ventilation of the grain stored therein.

A further object of my invention is to provide an all metal bin which is made up of sections so that the size of the bin may be varied by merely adding to or subtracting from the number of sections.

A further object of my invention is to provide a device of the character described having novel means for forming the roof including a metal ridge pole and means for covering the same.

A further object of my invention is to provide an elastic crib made entirely of metal which is of light weight, which may be easily set up and which is strong enough to withstand the internal pressure to which it may be subjected.

Further objects and advantages will appear in the following specification and the novel features of the invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings forming part of this application and in which,

Figure 1 is a plan view of the device.

Fig. 2 is a side view thereof, certain parts being shown in section.

Fig. 3 is a section on line 3—3 of Fig. 2.

Fig. 4 is an enlarged section along the line 4—4 of Fig. 2.

Fig. 5 is a perspective view of a portion of the framework of the structure.

Fig. 6 is a perspective view of a portion of the ridge pole covering.

Fig. 7 is a perspective view of a means for locking the door, and

Fig. 8 is an enlarged detail sectional view along the line 8—8 of Fig. 2.

In carrying out my invention I provide the semi-cylindrical ends 1 and 2, these ends consisting of perforated metal sheets bolted

or otherwise secured together. The purpose of the perforations is to permit air to enter so as to secure proper ventilation. The sheets are perforated so as to leave a lip, such as those shown at 1^a in Fig. 2, above each ventilating opening. The particular construction of the plate or sheet is set forth in a pending application Serial Number 37976, filed July 3, 1915. These end portions 1 and 2 as well as the intermediate portions which will be described later, are preferably mounted on a concrete base 3 which is bounded by a metal retaining band 4.

Between the end sections 1 and 2 I may arrange any number of intermediate sections. In the drawings, I have shown one such intermediate section. In constructing this section a framework is made consisting of a series of uprights 5. These uprights are preferably of angle iron. Secured to the tops of the uprights and extending inwardly and being inclined upwardly are metal rafters 6 which are also made of angle iron. These are joined at their inner ends to a ridge pole 7 which is substantially T-shaped and which is provided with integral collars or bushings 8 to receive the ends of ventilating shafts such as those shown at 9. The latter are perforated and are connected by means of radially extending pipes 10 with the outer atmosphere. These pipes 10 pass through the concrete base 3 and their ends extend through the retaining band 4, these ends being preferably covered with wire-screen to prevent the entrance of mice or vermin.

The roof consists of a series of plates 11 of corrugated metal, these plates being bolted to the rafters 6 by bolts 12 which pass through the top part or ridge of the corrugation thereby preventing the leaking of the roof. The edge of the roof as shown in Fig. 2 projects over the sides of the bin so as to prevent the water from running down the sides.

In order to insure the proper protection for the ridge piece I provide a covering 13 like that shown in Figs. 4 and 6. The central part of this covering consists of a semi-cylindrical portion, this portion being flanked on each side by a corrugated strip which is integral with the central portion and which conforms to the corrugations in the roof plates. As will be seen from Figs. 2 and 8 the end of the ventilating pipe 9

projects up through the collar 8. A hood is formed by a sleeve 14 which fits over the collar 8 and which is provided with a cone shaped cover 15.

5 There is one of these ventilating pipes for each section. It will be seen from Fig. 3 that the end sections have the radiating auxiliary air pipes 10 while the intermediate section is also provided with auxiliary air
10 pipes 10^a.

As will be seen from the drawings, the intermediate section is provided with wall plates 16 which are corrugated and which are provided with perforations similar to
15 those of the end sections 1 and 2. These sheets are secured to the inside of the uprights 5 and as stated before, the roof plates 11 are secured to the outside of the rafters 6. Brace rods 17 are provided which hold
20 the frame members 5 and also the sides. The pressure of the grain being from the inside outward, the vertical members 5 act as an actual support. While I have shown the uprights 5 as being placed at the ends of the
25 intermediate section, it is obvious that they may be placed closer together. Doors such as those shown at 18 may be provided. These doors are preferably locked by means of a device similar to that shown in Fig. 7.
30 In this figure the latch bar 19 is pivoted at 20 on the door frame and is arranged to enter behind the catch 21 secured to the side plates, pivoted arms 22 and 23 being arranged to enter U-shaped catches 22^a and 23^a
35 at the bottom and top of the door respectively. It will be understood that when the latch member 19 is raised the locking members 22 and 23 are simultaneously retracted. This locks the door at the top and bottom as
40 well as at the sides.

At each door is formed a spillway. Boards 25 are arranged to slide in guides 26 so that when the door is opened the corn or other grain may be shoveled out from underneath the bottom board 25, see Fig. 2.

45 I also propose to make a portion of the roof so that it will swing on a pivot. This portion is shown at 27 and the pivot at 28. This portion or section may be moved from
50 the position shown in full lines of Fig. 1 to that shown in dotted lines, thus providing means for filling the bin from the top.

From the foregoing description of the various parts of the device, the operation there-
55 of may be readily understood.

The parts are shipped from the factory "knocked down" and are easily set up since the sections are provided with bolt holes which are punched accurately before the

parts are shipped. If it is desired to have 60 more than three sections a ridge post will be supplied having four collars instead of three or as many as desired. Since the device is well ventilated and protected from rain and snow it can be made as long as desirable by adding intermediate sections. 65 The bracing of the device prevents any danger of springing the plates apart.

A corn crib or grain bin constructed in accordance with this invention has the advantage of being fire-proof, cheap, easily 70 set up or taken down rat- and vermin-proof, and perfectly ventilated. Furthermore, as stated it may be enlarged by merely providing a new ridge pole or piece and adding 75 the parts of the new intermediate section.

In the case of bins for wheat, oats, or other small grain, plain side walls could be used, but in constructing the corn crib it is preferable that the sides be perforated in 80 order to give the crib proper ventilation.

I claim:

1. An all metal crib comprising semicylindrical end sections formed of sheets of perforated corrugated metal, perforated 85 ventilating tubes disposed at the centers of said semicylindrical end sections, intermediate sections between said end sections composed of substantially flat corrugated metal sheets, exterior metal uprights for holding 90 the said flat corrugated sheets, a central ridge piece extending from one of said perforated ventilating tubes to the other, rafters connecting said ridge piece with said uprights, flat roof portions extending from 95 said ridge pole to said uprights and being supported by said rafters, and semiconical roof portions disposed above said semicylindrical end sections.

2. An all metal crib comprising semi-cylindrical end sections formed of sheets of perforated corrugated metal, perforated 100 ventilating tubes disposed at the centers of said cylindrical end sections, laterally extending air conduits communicating with 105 the bottoms of said ventilating tubes, intermediate sections between said end sections composed of substantially flat corrugated metal sheets, exterior metal uprights for holding said flat corrugated sheets, a central 110 ridge piece extending from one of said ventilated tubes to the other, rafters connecting said ridge piece with said uprights, flat roof portions extending from said ridge piece to said uprights and being supported by said 115 rafters, and semi-cylindrical roof portions.

LIZZIE H. DICKELMAN.