

**No. 712,496.**

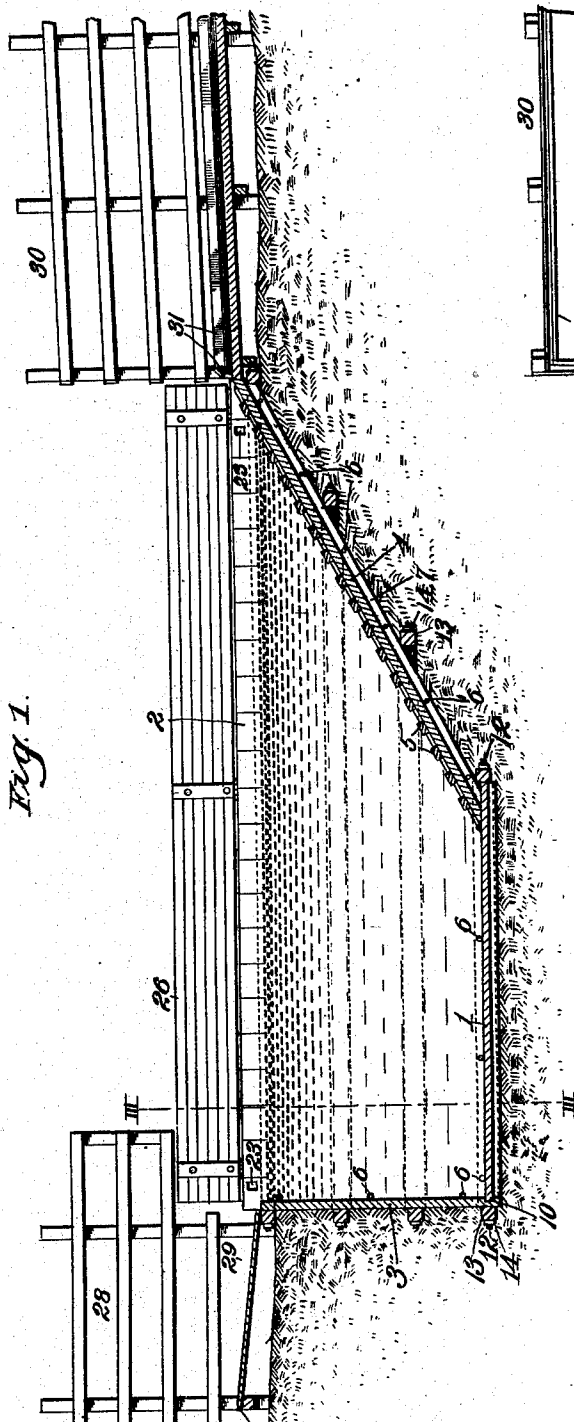
**Patented Nov. 4, 1902.**

**G. W. CLARK.**  
**DIPPING VAT.**

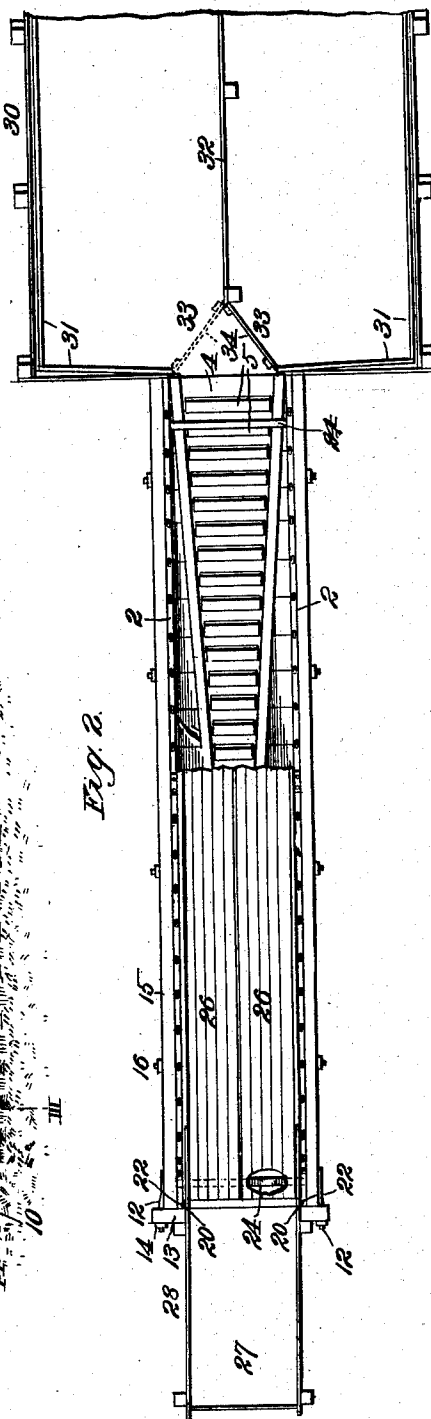
(Application filed Feb. 24, 1902.)

**2 Sheets—Sheet 1.**

(No Model.)



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No. 712,496.

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(No Model.)

2 Sheets—Sheet 2.

Fig. 4.

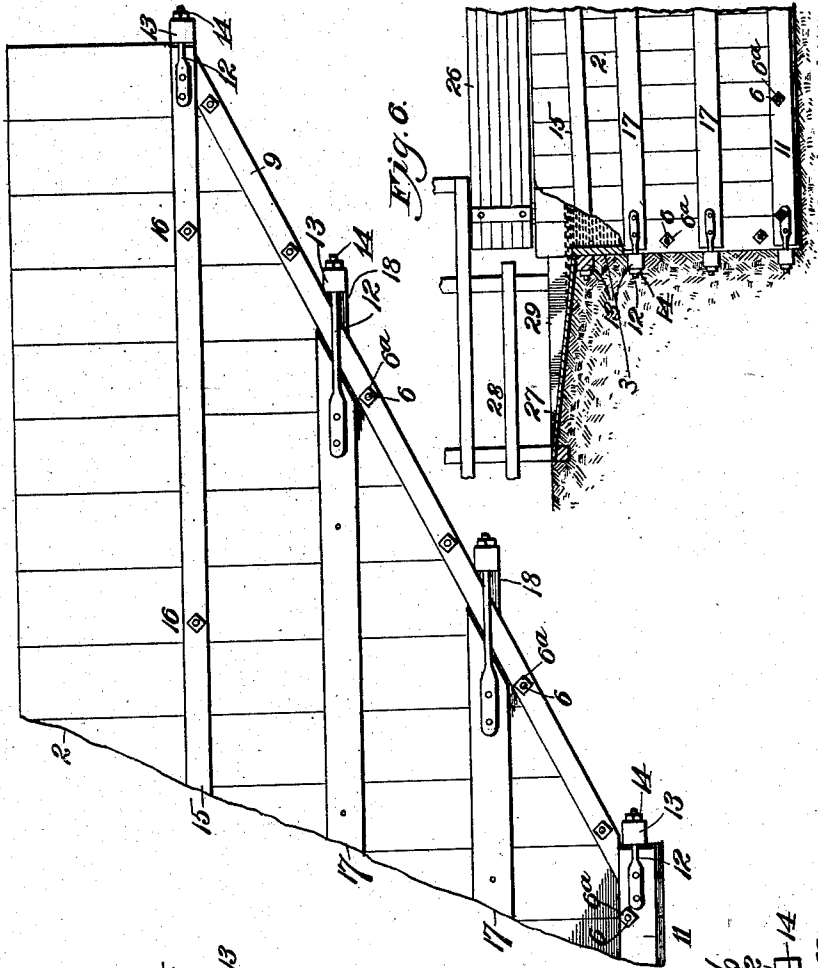


Fig. 5.

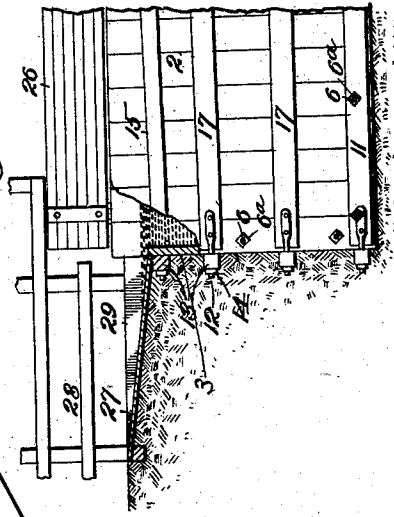
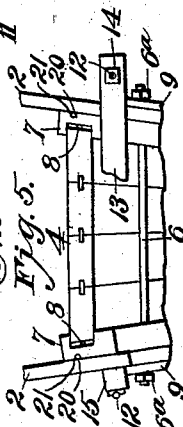
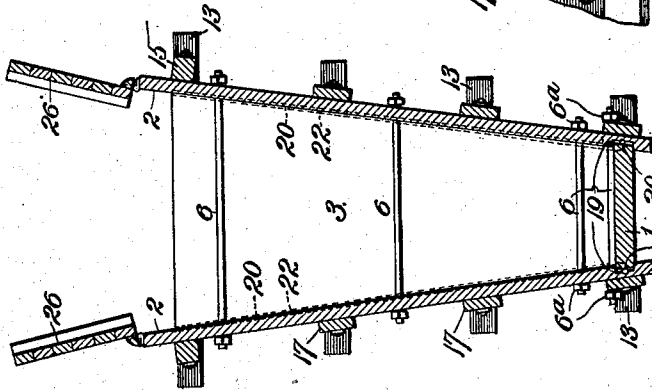


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## DIPPING-VAT.

SPECIFICATION forming part of Letters Patent No. 712,496, dated November 4, 1902.

Application filed February 24, 1902. Serial No. 95,172. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. CLARK, a citizen of the United States, residing at Alliance, in the county of Boxbutte and State of Nebraska, have invented certain new and useful Improvements in Dipping-Vats, of which the following is a specification.

My invention relates to dipping-vats for cattle and other animals; and my object is to produce a vat of this character which is portable and of simple, strong, and durable water-tight construction.

With this general object in view the invention consists in certain novel and peculiar features of construction and organization, as hereinafter described and claimed, and in order that the invention may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section of a dipping-vat embodying my invention. Fig. 2 is a plan view with the doors broken away. Fig. 3 is a vertical cross-section taken on the line III III of Fig. 1. Fig. 4 is an enlarged side elevation of the ladder end of the vat as constructed without doors. Fig. 5 is an end view of the upper portion of the ladder end of the vat. Fig. 6 is a side elevation, partly broken away, of a vat of slightly-modified construction.

By reference to Fig. 1 it will be noticed that the vat is of trapezoidal form in side view and by reference to Fig. 3 that the side walls converge downwardly, the width of the vat being such that a steer or other animal compelled to plunge therein at the intake end cannot turn around and must, therefore, make his exit at the ladder end, as hereinafter explained.

1 designates the bottom of the vat; 2, the side walls, constructed of upright boards tongue-and-grooved together; 3, the substantially upright or vertical wall at the intake end, and 4 the sloping wall at the exit end, said sloping wall constituting a ladder, because upon its upper side are secured cross slats or cleats 5 to enable the animal to easily walk up the incline. The bottom and end walls fit between the side walls, the latter being clamped rigidly in place by the cross-bolts 6, the bolts 6 contiguous to the bottom and

end wall 3 being at the inner sides of said parts, while the bolts 6 contiguous to the wall 4 are below the latter, and thereby assist the same in supporting the weight of the animals. The sloping wall or ladder is preferably composed of a series of strips secured together so as to be water-tight, the series fitting in the inner grooved sides of grooved strips 7, the joints between the series and said grooved strips being occupied by ropes 8 or equivalent packing material, so as to form a water-tight joint by the underlying cross-bolts 6 and the nuts 6<sup>a</sup> engaging their ends, said nuts bearing against the outer faces of sloping ribs 9 at the lower edge of the sloping portion of the vat.

One end of the bottom 1 is stepped into the end wall 3, as at 10, while its opposite end underlies the lower end of the ladder-wall 4, as shown in Fig. 1, said parts being secured rigidly in this relation by the following parts:

11 designates horizontal ribs extending along the outer sides of the bottom and below the lowest end of ribs 9, through which ribs 11 the bottom bolts 6 extend, nuts 6<sup>a</sup> engaging the bolts and bearing against the outer faces of said ribs, similar nuts, of course, engaging the bolts at the intake end of the vat and bearing against the outer face of the side wall at such end.

The ribs 11 carry at each end bolts 12, which project beyond the ribs and through cross-bars 13 at opposite ends of the bottom, nuts 14 engaging said bolts for the purpose of clamping the bottom in place and incidentally the parts forming the side walls of the vat.

At the top of the intake end of the vat longitudinal ribs 15, which may be horizontal, as in Fig. 4, or sloping upward toward the exit end of the vat, as in Fig. 6, are bolted at suitable intervals, as at 16, to the side walls and overlie the upper ends of ribs 9, as shown in Fig. 4. These ribs 15 carry bolts 12, extending through cross-bars 13, engaged by clamping-nuts 14 for the purpose of clamping the boards of the side walls tightly together. Interposed between ribs 11 and 15 are a pair of rods 17, which are preferably nailed or otherwise secured at suitable intervals to the boards of the side walls and terminate slightly short of

ribs 9, so that when tension is applied on bolts 12, extending through cross-bars 13 and bearing against the side walls extended down for the purpose, as at 18, they may assist in clamping said parts so tightly together that an absolutely water-tight joint is effected.

As the timbers shrink from drought or other cause the slack may be taken up by the proper manipulation of nuts 14, so as to keep the vat water-tight and in proper working condition.

To make the joint between the side walls and the bottom and ladder-wall 4 liquid-tight, the bottom is stepped into grooves 19 in the said walls, (see Fig. 3,) and the ropes or packing 20 are secured therein, which ropes or packing also extend upwardly into the grooves 21, formed in the outer sides of grooved strips 7, as shown clearly in Fig. 5. The opposite ends of said ropes also extend up between the end wall 3 and the sides, being clamped tightly in the shallow grooves 22, formed in the edges of the end wall.

Near the ends of the vat the side walls are provided with alined openings 23, in which cross-bars 24 may be secured to act as a support for the hinged doors 26, which when closed down form a cover for the vat.

When the tank provided with doors is to be used, they are opened to the position shown in Fig. 1, and the cross-bars are withdrawn from openings 23, so as to not obstruct the path of the cattle or other animals which walk down the inclined platform 27 of the chute or passage 28, said walk having side walls 29 to guide the liquid, which wells or is splashed upon the platform back into the vat, and thereby avoid wasting the same.

At the exit end of the vat is a cattle-pen 30, which has its bottom flanged, as at 31, and sloping inward and downward toward the vat, so that the liquor which drains off the cattle shall flow back into the vat. This pen is provided with a central longitudinal partition 32, so as to provide two gateways 33, either of which may be closed by a swinging gate 34, so that the drainage of the cattle in one pen may take place while the cattle are passing into the other pen. By the time the second pen is filled the cattle in the first pen are drained and are driven out, so that the gate 34 may be shifted to permit succeeding cattle to pass therein. By this arrangement it is obvious the cattle may pass through the dipping-vat in a continuous stream, so as to avoid loss of time.

In Fig. 6 it will be noticed that the platform 27 fits down into a notch in the upper edge of the end wall 3, so that the surface of the liquid shall lap the lower edge of said platform. In consequence it will be necessary to have the top ribs 15 extend at an angle and perhaps rod 17, it being necessary for ribs 15 to occupy such angle in order that they may register with the topmost cross-bar 13 at the intake end of the vat, which cross-bar is nec-

essarily below the notch above referred to. By thus lowering the inner end of the platform 27 to about or a trifle below the plane of the surface of the liquid the cattle will enter the vat with less fear than where they have to step down from the platform to the surface of the liquid, as shown in Fig. 1. The principle of construction, however, is the same in both places.

A dipping-vat of this character can be set up and loaded onto a wagon without difficulty for the purpose of transportation to a farm or ranch, and such vat will be far more serviceable and durable and at the same time much cheaper than a home-made vat. Furthermore, being portable, it can be readily transported from one place to another, if necessary, whereas it is impracticable to move the home-made structures with which I am familiar.

From the above description it will be apparent that the invention is susceptible of modification in various particulars without departing from its spirit and scope or sacrificing any of its advantages.

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

1. In a portable dipping-vat of trapezoidal form in side view, the combination with a bottom, side walls, a substantially upright end wall, and an inclined end wall, the upright end wall and the side walls being grooved on their inner faces to receive the edges of the bottom; of grooved strips receiving the edges of the inclined end wall, cleats across the outside of both end walls, ribs along the outside of both side walls, bolts attached to the ribs near their extremities and projecting beyond the latter through the cleats, and nuts on the bolts.

2. In a portable dipping-vat of trapezoidal form in side view, the combination with a bottom, side walls, a substantially upright end wall, and an inclined end wall, the upright end wall and the side walls being grooved on their inner faces to receive the edges of the bottom and said end wall being also grooved on its inner face to receive the ends of the side walls; of grooved strips receiving the edges of the inclined end wall and also grooved on their opposite faces, packing in all said grooves, sloping ribs along the outer side of said grooved strips, substantially horizontal ribs along the outer sides of the said walls terminating short of said sloping ribs, cross-strips along the outside of both end walls, and bolts connecting the strips with the substantially horizontal ribs.

3. In a dipping-vat, the combination with a bottom, side and end walls, and means for clamping these parts together, the side walls having alined openings near their upper edges; of doors hinged to said side walls, and cross-bars removably inserted through said openings to support the doors when closed

but capable of being withdrawn to give free access to the interior of the vat.

4. The combination with a dipping-vat having a bottom and side and end walls, one of the end walls having a notch in its upper edge, cross-bars outside its end walls of which one stands just beneath said notch, longitudinal ribs outside the side walls, the upper rib inclining from said upper cross-bar upward toward the other end wall of the vat, and connections between the ribs and cross-bars; of a chute having a platform or floor resting in said notch.

5. The combination with a dipping-vat of trapezoidal form in side view comprising a bottom, upright and inclined end walls, and sides, its upright end wall having a notch in its upper edge, and a draining-pen registering with the upper end of its inclined end wall; of a chute registering with the opposite end of the vat and having a sloping platform or floor fitting in said notch so that its

lower edge is adapted to stand slightly under the surface of the liquid.

6. A dipping-vat of trapezoidal form in side view, doors hinged to the sides of said walls of the vat and adapted to occupy an upright position or a horizontal position, means for supporting said doors in their horizontal position, a chute registering with the end of the vat, a sloping platform connecting said chute and vat and adapted to stand at its lower edge slightly under the level of the liquid, and a pen registering with the opposite end of the vat, and having its bottom flanged at its outer sides and sloping so as to drain back into the vat.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE W. CLARK.

Witnesses:

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SMITH P. TUTTLE.