No. 875,635. PATENTED DEC. 31, 1907.

C. P. THOMPSON.

GRAIN TREATING APPARATUS.

APPLICATION FILED OCT. 16, 1907.

2 SHEETS—SHEET 1.

Fig. 1

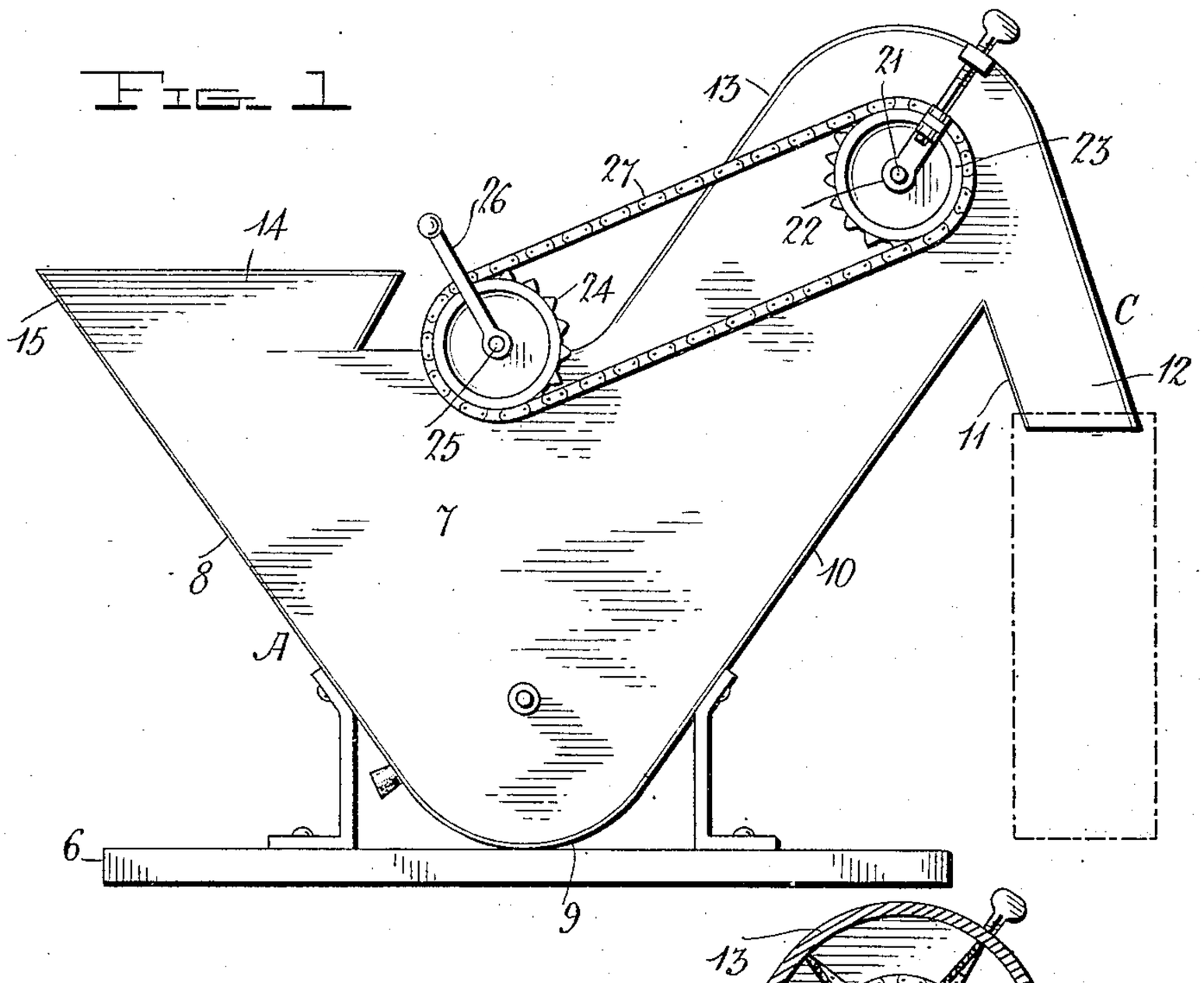
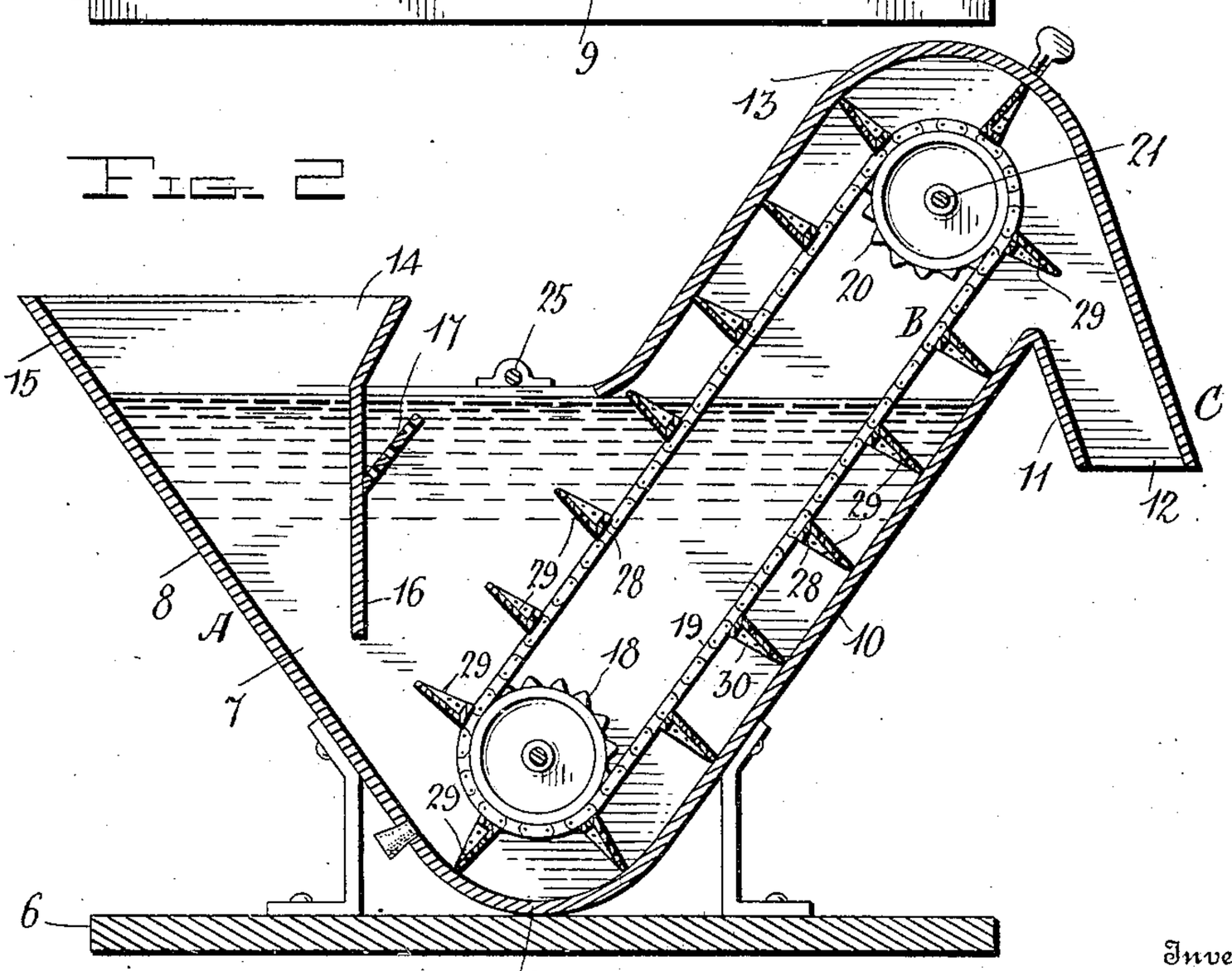


Fig. 2



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2 SHEETS—SHEET 2.

FIG. 3

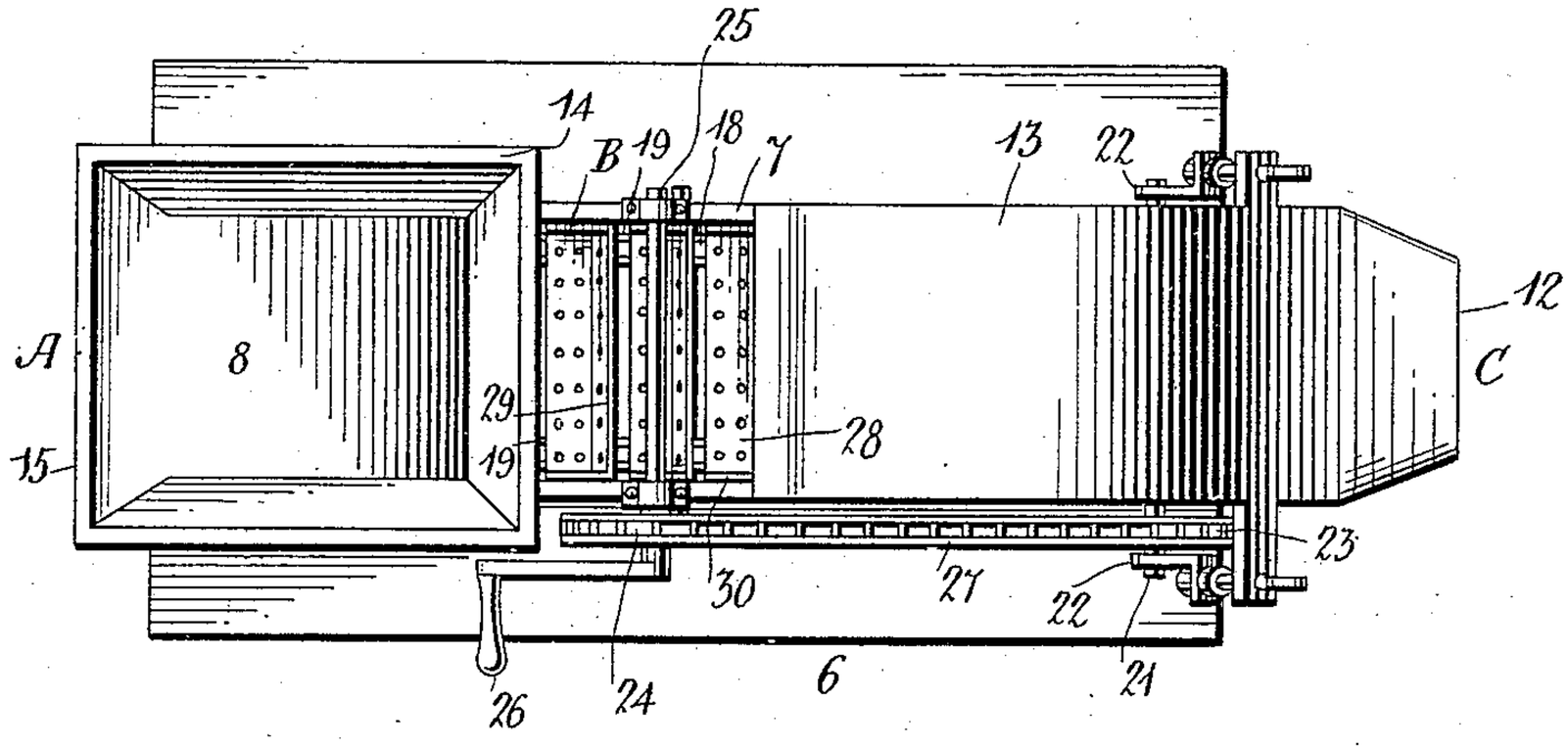


FIG. 4

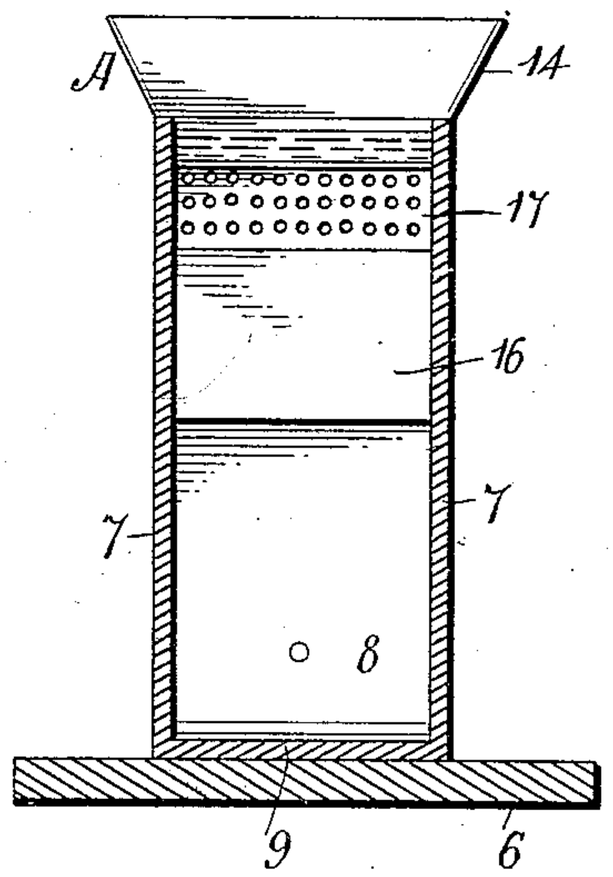
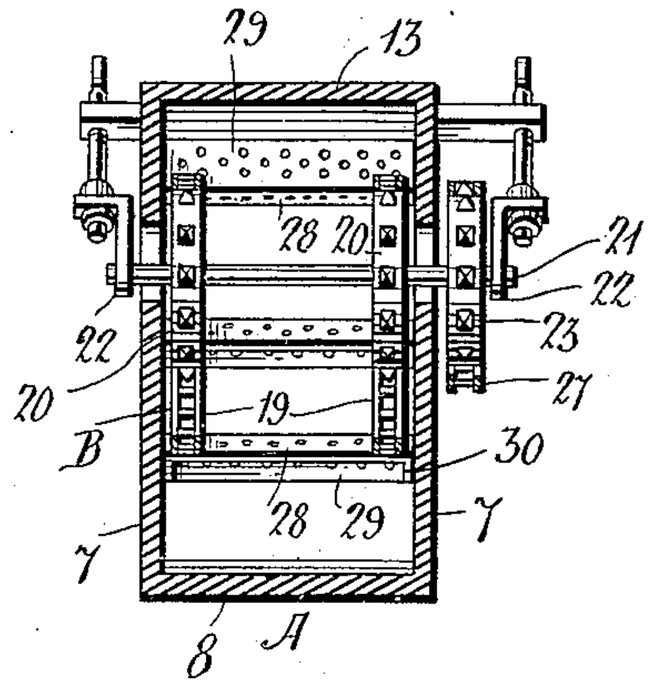


FIG. 5



Witnesses

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UNITED STATES PATENT OFFICE.

CARL P. THOMPSON, OF SALEM, OREGON, ASSIGNOR OF ONE-FOURTH TO W. E. KEYES, ONE-FOURTH TO F. L. BUCKIO, AND ONE-FOURTH TO J. C. SMITH, ALL OF SALEM, OREGON.

GRAIN-TREATING APPARATUS.

No. 875,635. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed October 16, 1907. Serial No. 397,746.

To all whom it may concern:

Be it known that I, CARL P. THOMPSON, a citizen of the United States, residing at Salem, in the county of Marion, State of Oregon, have invented certain new and useful Improvements in Grain-Treating Apparatuses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a grain treating apparatus and more particularly to that class used in treating grain with blue vitriol.

One object of the invention is to provide a very simple machine of this character and one which may be easily operated by hand.

A further object of the invention is to provide a novel form of container for the vitriol crystals, the container being located below the water level of the machine thereby allowing the vitriol to dissolve. This method of supporting the vitriol crystals within the machine prevents the crystals from becoming mingled with the grain and remaining therein after the grain has been cleaned of smut.

In the accompanying drawings, Figure 1 is a side elevation of the machine, Fig. 2 is a vertical longitudinal sectional view therethrough, Fig. 3 is a top plan view, Fig. 4 is a vertical transverse sectional view taken in advance of the vitriol container, and, Fig. 5 is a similar view taken through one of the conveyer shafts.

As shown in the drawings, the machine is mounted upon a base 6 and consists of a sheel metal body consisting of sides 7, a front wall 8, a curved bottom 9 which is formed as a continuation of the front wall, and a rear wall 10 formed as a continuation of the bottom, the said rear wall having its upper end portion turned downwardly at an acute angle as at 11 to form one wall of a spout which is completed by extensions 12 formed integral with the sides 7 and a top 13 which extends from the lower end of the spout upwardly and is curved forwardly and thence inclined downwardly, conforming to the upper edges of the sides 7. In other words the body of the machine is made up of a tank indicated in general by the reference character A, a housing for a portion of the conveyer which will presently be described and indicated by the reference character B and a spout which is indicated by the reference character C.

At the forward end of the machine the sides 7 are formed with extensions 14 which are directed upwardly and diverge from each other and secured at its side edges to the forward edges of these extensions is an extension 15 which is formed integral with the inclined front 8 of the tank portion of the machine. The extensions 14 and 15 form substantially a hopper and this hopper is completed by a wall or partition which is of sheet metal and which is indicated by the numeral 16, this wall being, of course, located rearwardly of the wall 8 and being disposed vertically within the tank portion A of the machine and terminating considerably above the bottom of the said tank portion. A foraminous metal sheet 17 is disposed at an angle within the tank portion A and is secured at its side edges to the sides 7 of the said tank portion and at its lower edge to the partition 16 and forms in conjunction with the said partition and the said sides 7 a box for containing the crystals of blue vitriol, it being understood that water is introduced into the tank portion A preparatory to cleaning the grain, and that the crystals are dissolved by the water.

Journaled within the concavity formed from the curved bottom 9 of the tank A is a pair of sprockets 18 over which conveyer chains 19 are trained, these chains being also trained over similar gears 20 fixed upon a shaft 21 which is journaled in adjustable bearings 22 upon that portion of the sides 7 which constitute the side walls of the housing B. Outwardly of one of the bearings 22 the shaft 21 has fixed upon it a sprocket 23 and a similar sprocket 24 is mounted upon a shaft 25 journaled in suitable bearings at the upper edges of the sides 7 in the rear of the wall 16 of the hopper. A crank handle 26 is fixed upon this shaft 25 and trained over the gears 23 and 24 is a sprocket chain 27, it being understood that by rotating the shaft 25 the gears 18 and 20 will be likewise rotated and the sprocket chains 19 caused to travel in the manner of a conveyer chain. In order that the grain which is introduced into the tank portion A of the machine through the hopper at the upper forward end thereof may be carried up through the solution of copper sulfate and discharged through the spout C into a sack which is to be supported at the lower end of

the spout, buckets are provided upon the chains 19 and these buckets include each perforated bottom walls 28 and 29 which are disposed at right angles with respect to each other, and perforated side walls 30 which are substantially triangular in shape, the bottom walls 28 of the buckets being secured at their ends upon the chains.

From the foregoing description of the invention it will be understood as previously stated, that a sack is supported at the lower end of the spout C, the tank A filled with the solution of copper sulfate and the grain gradually introduced into the tank through the hopper, the crank handle 26 being at the same time turned. Rotation of this crank handle will result in a downward travel of the under stretch of the conveyer and an upward travel of the upward stretch and as the buckets travel in the concavity of the bottom 9, they will scoop up the grain which has been treated by the solution and will carry it up through the solution and above the same, the solution draining off after the water level is passed and the grain then dumped by the buckets into the spout C as the buckets pass the sprockets 20. By adjusting the bearings 22 the sprocket chains may be loosened or tightened as may be desired.

What is claimed, is—

A grain treating apparatus comprising a tank body, a housing formed as an extension of the body, a spout formed as an extension of the housing, a conveyer mounted for travel within the tank and within the housing, a hopper located at one of the upper ends of the tank body and formed in part by a partition which extends across the said body and depends within the same, and a foraminous plate secured at its side edges to the sides of the tank body and at its lower edge to the partition, said plate being disposed at an angle to the partition and forming, in conjunction with the partition and the sides of the tank, a vitriol container.

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

CARL P. THOMPSON.

Witnesses:
ELLA SCHULTZ,
W. E. KEYES.