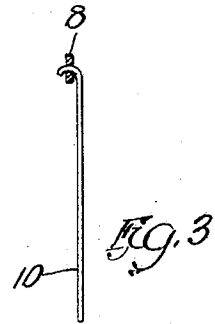
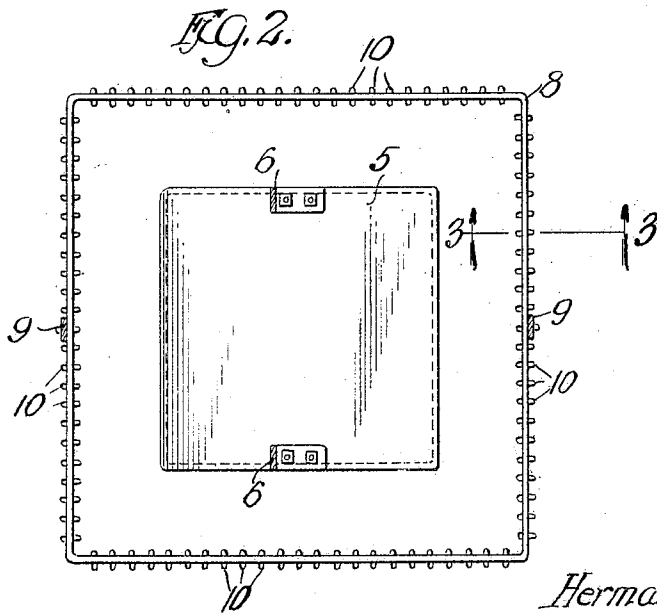
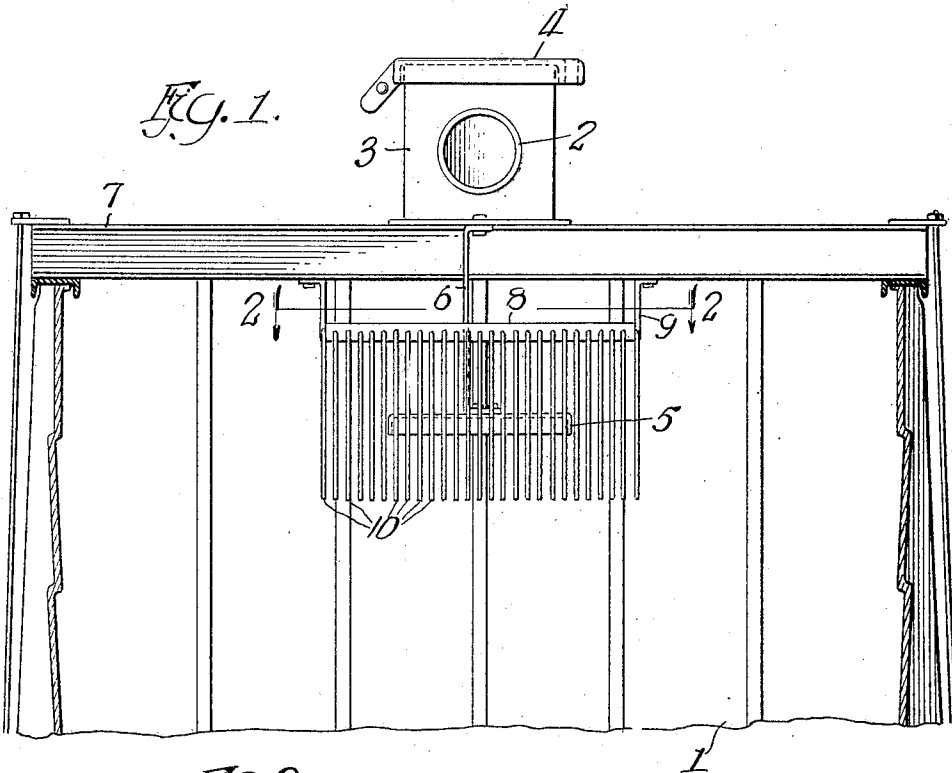


H. A. POPPENHUSEN.
BAFFLE CURTAIN FOR ASH TANKS.
APPLICATION FILED JULY 28, 1920.

1,380,413.

Patented June 7, 1921.



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UNITED STATES PATENT OFFICE.

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BAFFLE-CURTAIN FOR ASH-TANKS.

1,380,413.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERMAN A. POPPENHUSEN, a citizen of the United States, residing at Hammond, in the county of Lake and State of Indiana, have invented new and useful Improvements in Baffle-Curtains for Ash-Tanks, of which the following is a specification.

The object of this invention is to provide means, in connection with a splash plate in a storage or collecting tank or hopper of an ash conveying system, for reducing the velocity of the ash after splashing from the plate to prevent the ash from packing in the tank.

The invention consists also in the form of means employed for accomplishing this purpose, and in the accompanying drawings illustrating one form of that means.

Figure 1 is a vertical sectional view, with parts in elevation, taken through the upper portion of a storage tank or hopper and showing a form of said means surrounding the splash plate in said hopper;

Fig. 2 is a horizontal sectional view taken on line 2—2 of Fig. 1; and

Fig. 3 is a vertical sectional view taken on line 3—3 of Fig. 2 and showing in elevation one of the hanging members of said means.

In ash conveying systems, wherein the ash or material being handled is moved through the pipe line pneumatically, as by injecting jets of steam into the pipe line for that purpose, the ash or material is discharged at the end of the pipe line into a storage tank or hopper, indicated by 1 in the drawings, and oftentimes located outside of the building and supported in an elevated position to enable a wagon or car to be backed or moved under the tank for disposal of the ash collected thereby. As shown in Fig. 1, the pipe line 2 discharges into the tank through a tank box 3 on top of the tank, this box having a movable cover 4, as usual in the type of tank illustrated. The ash falls or drops with force on a substantially flat splash plate 5 arranged horizontal, in the instance shown, and located below the tank box and in proper position to have the ash discharged thereon. This plate is supported by hangers 6, 6 secured to the top or upper structure 7 of the tank, as shown.

The ash enters the tank at a rather high

velocity and on striking the plate 5 glances or splashes off of the same toward the sides of the tank. The velocity with which the ash glances off of the plate 5 is at times quite high, and the ash, being moist due to steam used in creating a flow through the pipe line, strikes the walls of the tank or the ash already in the tank with considerable impact and packs in the tank. This produces a somewhat solid mass and hinders the free flow of the ash from the tank when the occasion demands for emptying the same into the wagon or car beneath the tank.

To overcome the packing of the ash in the tank, I provide means associated with the splash plate 5 and against which the ash strikes after glancing from the plate to reduce the velocity of the ash and thus allow it to fall in the tank with little or no velocity. In the drawings, I have shown one form of this means, which is as follows.

Arranged above and surrounding the splash plate 5 is an open frame 8 suspended in place by hangers or brackets 9 secured to the top structure 7 of the tank. Hanging from this frame around all sides thereof are a plurality of members 10, 10, pivotally connected at their upper ends with the frame and being free to move or swing independently of each other. In the structure shown, these members 10, 10 are in the form of metal rods or bars having their upper ends hooked into holes in the frame from the outside thereof, so that the rods may swing outward from the frame without interference, but will be prevented from striking the splash plate on their return movement by the frame. The members 10 hang below the plate 5 and are laterally spaced apart so that they will be free to swing with little likelihood of contacting with each other.

The ash, being discharged on the plate 5 with force, will splash off of the plate from all sides thereof and strike against the members 10, as they form in effect a continuous curtain about the plate. The members 10, being independently movable, and being free to swing away from the plate in the direction in which the ash is projected, and being relatively heavy as compared to the impacting ash particles, will absorb the momentum of the ash and move at a much slower rate of speed and thus reduce the velocity of the ash and allow it to drop into

the tank. This prevents the ash packing in the tank and thus maintains it in that relatively loose condition required to permit a ready and free discharge from the tank when the latter is to be emptied. The rods or members 10, being close together and being independently movable, are thus free to swing past each other to break up any mass or crust of ash likely to form on the rods, and thus keeps the rods clear to function properly.

The structure shown and described may be variously changed and modified without departing from the spirit and scope of my invention.

I claim as my invention:

1. The combination with an ash tank, of a pipe opening into the tank for discharging ash into the same, a splash plate supported in said tank in position to have the ash discharged thereon, and means associated with said plate and against which the ash strikes after splashing from said plate for reducing the velocity of the ash.

2. The combination with an ash tank, of a pipe opening into said tank for discharging ash into the same, a splash plate supported in said tank below the discharge end of said pipe and in position to have the ash discharged thereon, and a plurality of laterally spaced members arranged about and extending above said plate and being free to swing independently of each other and against which the ash strikes after splashing from said plate for reducing the velocity of the ash.

3. The combination with an ash tank, of a pipe opening into said tank for discharging ash into the same, a splash plate supported in said tank below the discharge end

of said pipe and in position to have the ash discharged thereon, and a plurality of laterally spaced rods pivotally mounted at their upper ends in said tank and arranged about and extending above said plate and being free to swing independently of each other and against which the ash strikes after splashing from said plate for reducing the velocity of the ash.

4. The combination with an ash tank, of a pipe opening into said tank for discharging ash into the same, a splash plate supported in said tank below the discharge end of said pipe and in position to have the ash discharged thereon, an open frame supported in said tank above and surrounding said plate and spaced outward therefrom, and a plurality of rods, laterally spaced apart and pivotally connected at their upper ends with said frame and hanging below said plate and against which the ash strikes after splashing from said plate.

5. The combination with an ash tank, of a pipe opening into said tank for discharging ash into the same, a splash plate supported in said tank below the discharge end of said pipe and in position to have the ash discharged thereon, an open frame supported in said tank above and surrounding said plate and spaced outward therefrom, and a plurality of rods, laterally spaced apart and having their upper ends hooked into holes in said frame from the outside thereof and hanging below said plate and against which the ash strikes after splashing from said plate.

In testimony that I claim the foregoing as my invention, I affix my signature, this 14th day of July, A. D. 1920.

HERMAN A. POPPENHUSEN.