

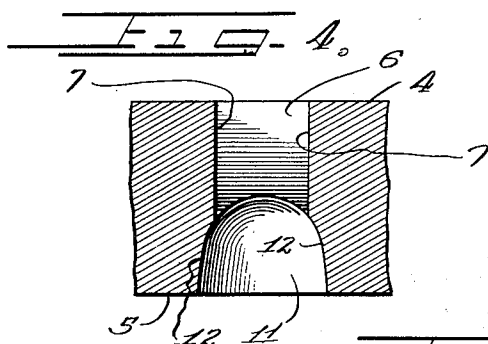
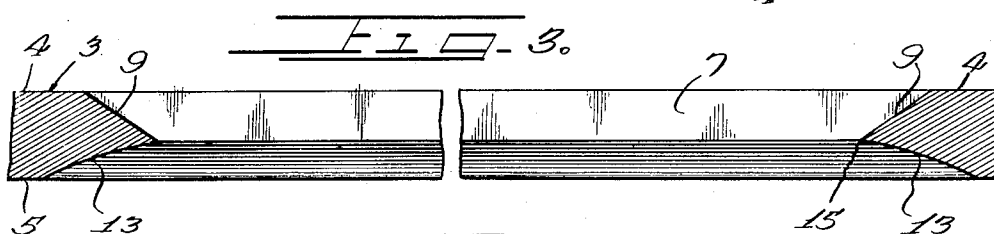
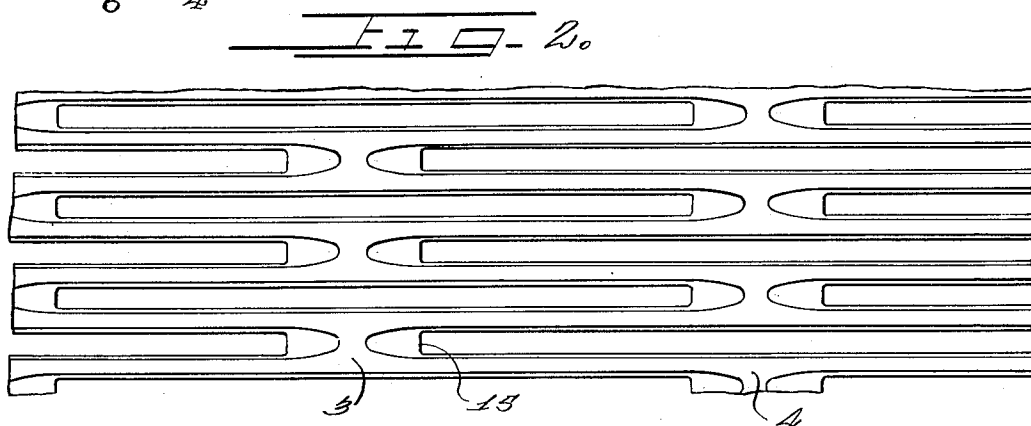
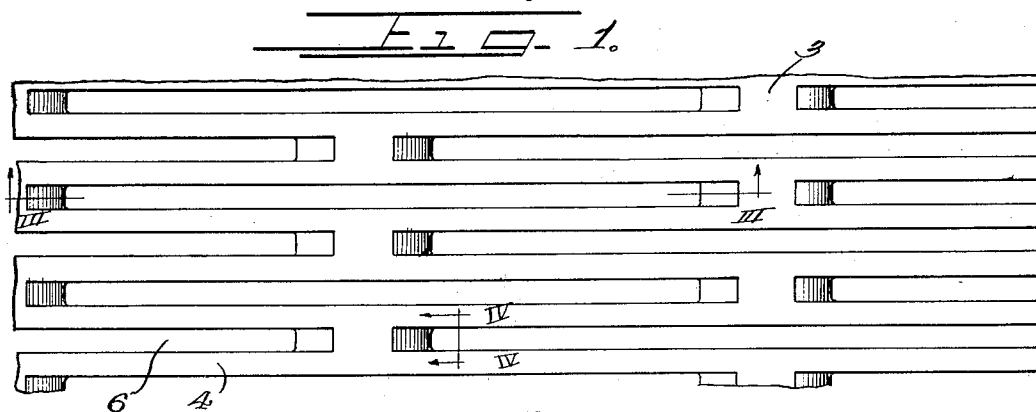
Dec. 26, 1933.

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1,940,952

SCREEN PLATE

Filed April 13, 1932



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UNITED STATES PATENT OFFICE

1,940,952

SCREEN PLATE

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Application April 13, 1932. Serial No. 604,895

2 Claims. (Cl. 210—169)

This invention relates to screen plates of the type utilized extensively in filters for sewage disposal plants, paper mills, yeast plants, breweries and the like, and the method of making such
5 plates.

An object of this invention is the provision of an improved screen plate adapted for filtering purposes, and which may be handled without causing injury to the hands by sharp edges
10 and which when brushed will not rapidly cut away and destroy the brushes as has been the disadvantage of screen plates of the prior art.

Another object is the provision of a screen plate designed so that the least resistance is offered to the screening operation with a screen
15 plate having slots with a given area of clear slot opening.

A further object is the provision of a novel method of forming screen plates, resulting in a
20 improved product hereafter set forth in detail.

Other objects and advantages will become apparent to those skilled in the art from the following detailed description with reference to the accompanying drawing:

25 On the drawing:

Figure 1 is a top plan view of a fragment of a screen plate illustrating my invention.

Figure 2 is a bottom plan of that shown in Figure 1.

30 Figure 3 is a longitudinal section of a fragment of that shown in Figure 1 and taken on the line III—III of Figure 1.

Figure 4 is an enlarged cross section of a fragment of that shown in Figure 1 and taken on the
35 line IV—IV of Figure 1.

As shown on the drawing:

The embodiment of my invention herein illustrated comprises a sheet of metal 3 having a top surface 4 and a bottom surface 5. A multiplicity
40 of slots 6 preferably in staggered relation or cut in the top of the sheet of metal preferably of brass, bronze, copper, zinc, lead or aluminum. The slots 6 have vertical sides 7, and upwardly and outwardly flared or beveled ends 9 such that
45 the surfaces 9 of the metal bounding the ends of the slots form obtuse angles with the top surface 4 of the plate.

From the reverse or bottom side of the plate a multiplicity of slots 11 are formed which are
50 preferably wider than the slots 6 and have curved lateral edges 12, the ends of which are also curved at 13 and beveled in a manner such that the surface 13 forms an obtuse angle with the bottom surface 5 of the plate.

55 The slots 11 as illustrated are longer and wider

adjacent the bottom surface of the plate, than are the slots 6 adjacent the top surface of the plate. This construction reduces the resistance to the screening operation for slots having a given clear area of opening. The clear area of opening
60 which is in a plane parallel with the top and bottom surfaces of the plate and intermediate thereof is clearly illustrated in Figure 3. This clear area is smaller than the area of the slot 6 at the top surface of a plate and smaller than the area
65 of the slot at the bottom surface of the plate.

My improved screen plate formed by my improved method results in a plate eliminating all sharp edges of metal adjacent the top and bottom surfaces of the plate so that the plate may
70 be handled with safety and may be brushed for cleaning the slots, without having a destructive effect on the cleaning brushes as was the case with the plates formed by the method of the prior art, leaving chisel edges on one side of the
75 plate. In applicant's construction as herein illustrated the beveled ends of the slots at the top and bottom of the sheet meet in a plane substantially spaced from the top and bottom surfaces of the plate and are sufficiently concealed
80 that the edges 15 do not cause deterioration or rapid wearing away of the cleaning brushes.

Although I have illustrated in the drawing relatively wide slots in staggered relation, it is within the sphere of my invention to form slots as
85 small as a few thousandths of an inch and to form them in any desired relation to each other, either staggered or otherwise, and it is not necessary that the slots should be parallel as herein shown. Also
90 it is not essential that the slots be formed of the exact relative shape and dimensions or that the sides thereof be of the exact contour herein illustrated. It will be appreciated by those skilled
95 in the art that although I have herein illustrated only one form of my invention, various forms and modifications may be made without departing from the principle of my invention, and I desire that the patent to be granted hereon shall not
100 be restricted in any manner except as necessitated by the prior art.

I claim as my invention:

1. A screen plate of the character described comprising a body of sheet metal having a plurality of slots therethrough, the side walls of these
105 slots from one surface of the plate to a point substantially beneath the surface defining parallel planes normal to the plate surfaces, the lateral walls of the slots adjacent the other surface of the plate defining curved surfaces, the innermost
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edges of the curved surfaces lying respectively in the planes of the side walls.

2. A screen plate of the character described comprising a body of sheet metal having a plurality of slots therethrough, the longitudinal walls of the slots each having a plain surface portion ex-

tending inwardly of and at right angles to one surface of the plate, and a curved surface portion extending inwardly from the other surface of said plate, said portions having a common jointure intermediate the surfaces of the plate.

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