Feb. 21, 1939. F. T. POWERS 2,148,276

COOLER TOP

Filed Aug. 23, 1937

Fig. 1.

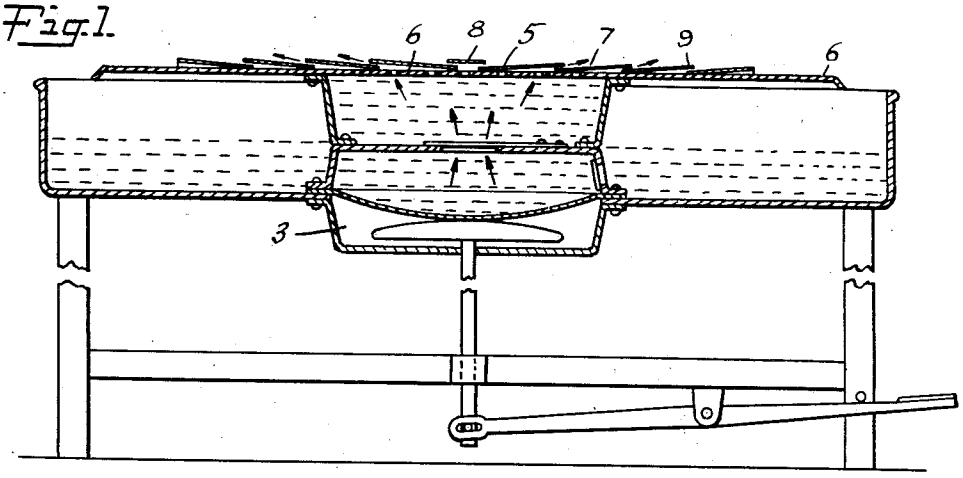


Fig. 2.

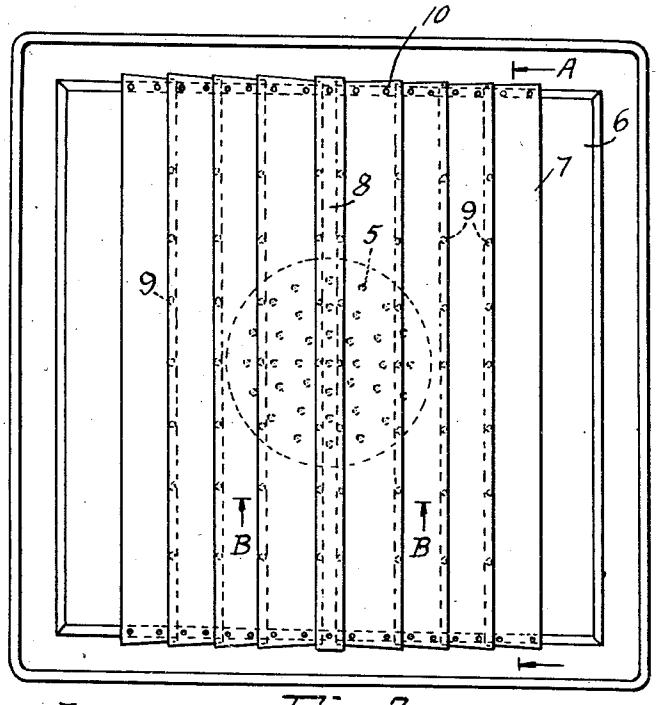


Fig. 3.

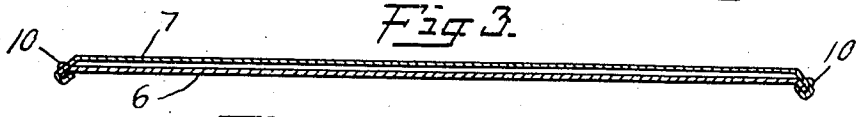
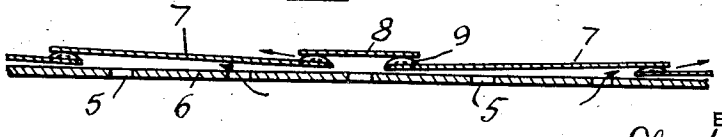


Fig. 4.



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COOLER TOP

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Application August 23, 1937, Serial No. 160,387

3 Claims. (Cl. 62—11)

My invention relates to coolers used in the art of photo engraving for cooling line and halftone plates and more particularly to improvements in the tops of wet coolers of the type exemplified by that shown and described in Patent No. 1,373,909, issued April 5, 1921, to Frank T. Powers.

The objects of my invention are to provide a more durable surface upon which to support the plate during the cooling process and a surface free from openings or obstructions, a surface in which the corners of the plate cannot be caught, and also to provide a guided flow of cooling fluid to more evenly and more quickly cool the plate.

Other advantages will be obvious from the description herein or may be learned by one skilled in the art while using the invention.

I attain these and other objects and advantages by the construction shown in the accompanying drawing and hereinafter described.

In the drawing—

Fig. 1 is a vertical section of a cooler showing the top in place.

Fig. 2 is a plan view of the top, and

Fig. 3 is a section on the line AA of Fig. 2.

Fig. 4 is an enlarged detail of the top on the line BB of Fig. 2.

In coolers of the type to which the present invention is adaptable there are commonly a tray or receptacle for the cooling fluid, up through holes **5** in a plate **6** and thence through a filamentous covering over the plate.

These parts are common to coolers generally used in the art and it is to an improvement of the cover over plate **6** that the present invention is aimed.

Over the plate I place a cover made up of strips **7** of thin hard material, such, for example, as stainless steel which is highly resistant to the action of liquids and chemicals used in the art of photo engraving. I arrange these strips of metal in a particular manner with a median strip **8** and on either side of it a plurality of parallel strips **7**. Those immediately adjacent the median strip have their near edges underlying and underlapping the edges of the median strip and with their farther edges overlapping the next adjacent strip and so on out to the near edges of the plate **6**. Along the underlapping edges of each strip I provide small embossed circular areas **9** which project upwardly a short distance from the surface of the plate and upon which the edge of the overlapping adjacent plate may rest. These embossed or die-pressed areas serve to keep the adjacent strips apart to permit the free passage of cooling fluid therebetween in the direction indicated by the arrows in Figs. 1 and 4. The strips **7** are held in place by means of screws or rivets **10** or the entire top may preferably be assembled as one piece by spot welding the adjacent strips together at the points where the embossed areas **9** contact adjacent strips. The thus assembled top is then attached to the plate **6** by a suitable smaller number of screws or rivets **10**.

In operation the action of the pumping device **3** forces cooling water through perforations **5** in plate **6** and is deflected laterally in the directions indicated by the arrows and passes, through the slots between the strips which are maintained in spaced relationship one with another by the embossed areas **9** and thence into contact with the under side or back of a hot plate previously placed thereon by the operator for cooling.

Having described my invention and the manner of its construction and use I now state what I believe to be new and novel and for which I pray that Letters Patent be granted.

I claim:

1. A top for a wet cooler for photo mechanical printing plates comprising a plate having perforations therein, and having secured thereto along the periphery thereof and supported thereby, a layer of thin, hard, flexible, durable material having transverse narrow openings therein directed away from the mid-portion of the top of the cooler.

2. A top for a wet cooler for photo mechanical printing plates comprising a plate having perforations in the mid-portion thereof and having secured thereto along the periphery thereof and supported thereby, a plurality of thin strips of hard, flexible, durable material assembled with overlapping edges, spaced apart, permitting egress of cooling fluid.

3. A top for a wet cooler for photo mechanical printing plates comprising a plate having openings in the mid-portion thereof and a plurality of strips of thin, hard, flexible, durable material secured thereto and supported thereby, extending transversely of the said plate with edges overlapping and spaced apart, forming channels for permitting egress of cooling fluid and directing its flow away from the mid-portion of the top of the cooler.

FRANK T. POWERS.