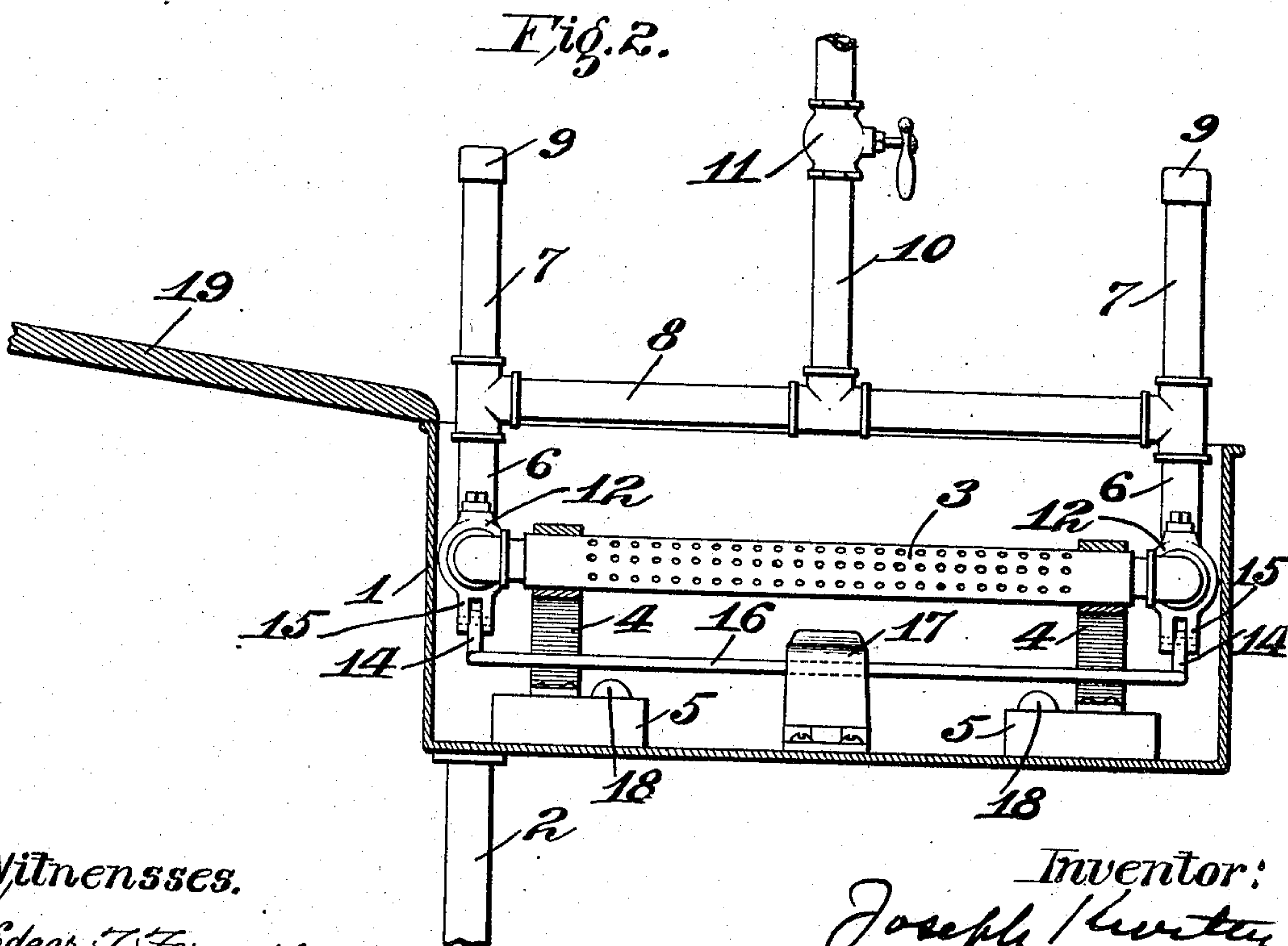
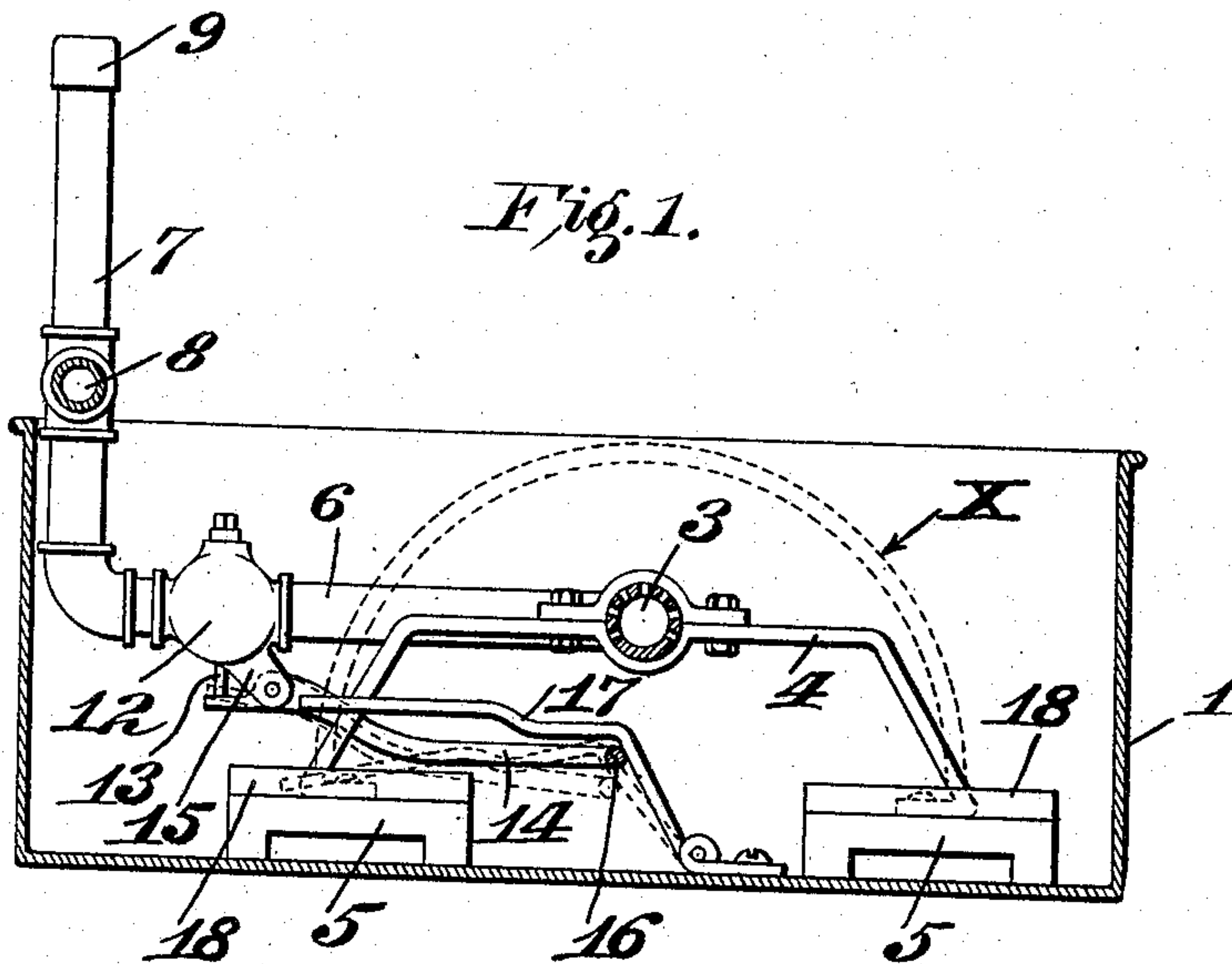


J. KURTEN.
 DEVICE FOR COOLING STEREOTYPE PRINTING PLATES.
 APPLICATION FILED AUG. 31, 1908.

907,820.

Patented Dec. 29, 1908.



Witnesses.

Edgar T. Farmer
 G. A. Pennington

Inventor:
 Joseph Kurten,
 By Robert D. Damm,
 Attys.

UNITED STATES PATENT OFFICE.

JOSEPH KURTEN, OF ST. LOUIS, MISSOURI.

DEVICE FOR COOLING STEREOTYPE PRINTING-PLATES.

No. 907,820.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed August 31, 1908. Serial No. 451,074.

To all whom it may concern:

Be it known that I, JOSEPH KURTEN, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Device for Cooling Stereotype Printing-Plates, of which the following is a specification.

This invention relates to devices for cooling stereotype printing plates.

In practice, and especially in daily newspaper work, the stereotype plates are usually received in the press-room in a heated state, due to the rapidity of the work necessary in the stereotyping-room, and considerable time is lost before the plates have become sufficiently cooled to be handled and placed on the press.

The principal objects of my invention, therefore, are to facilitate the rapid cooling of such plates after removal from the casting machine, to provide for cooling the plates with water without wetting the printing faces thereof, and to attain certain advantages hereinafter more fully appearing.

The invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawing forming part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a vertical section, partly in elevation, of a plate-cooling device embodying my invention; and, Fig. 2 is a vertical section, partly in elevation, taken at right angles to the line of section of Fig. 1.

The device comprises a trough or sink 1 having a suitable drain pipe 2. Mounted some distance above the bottom of the sink 1 is a perforated pipe 3 which extends across said sink near the middle thereof. This perforated pipe 3 is supported near its ends upon frames 4 which are preferably mounted on blocks 5 located on the bottom of the sink near the corner thereof.

Connected to each end of the perforated pipe 3 are rearwardly extending branch pipes 6 having upturned portions 7 which are connected to a cross-pipe 8. The upper ends of the upturned portions 7 of the branch pipes 6 are closed by suitable plugs or caps 9, so that the portions of said branch pipes above where the cross-pipe 8 joins them constitute ordinary air chambers. A supply-pipe 10 having a suitable cut-off valve 11 is connected to the cross-pipe 8. This supply pipe

may be connected to any suitable source of water supply.

In each of the branch pipes 6 is a cut-off valve 12. These valves may be ordinary automatic or self-closing valves whose stems 13 project outside of the casing. Preferably, the stems project downward in coöperative relation to the ends of rock-arms or levers 14 which are pivotally mounted on lugs 15 on the valve casings. The opposite ends of the rock-arms or levers 14 are connected by a cross-member 16. Preferably, the rock-arms and connecting cross-member are an integral substantially U-shaped structure or bail, as shown. Pivotaly mounted on the bottom of the sink or trough 1 is a lever 17 having an upwardly extending portion and a substantially horizontal portion or angular extension which is arranged to overhang the cross-member 16 of the rock-arms 14. The rock-arms 14 and lever 17 may be resiliently held and restored to normal position by the usual springs employed within the valve casings to close the valves 12, or, if desired, separate springs may be employed for the purpose and located at any convenient place. In some cases, the valves 12 are arranged to be normally closed by the pressure of the water.

On the blocks 5, or bottom of the sink, are placed rests 18 for the usual semi-circular stereotype printing plates. These rests may be rounded strips, as shown, or of any other desirable form, just so that the edges of the plate are raised from the bottom of the sink when placed therein to be cooled.

In the operation of the device, an ordinary semi-circular stereotype plate, as indicated in cross-section by dotted lines at X in Fig. 1, is placed over the perforated pipe 3 so that one edge of the plate will bear down upon the horizontal portion of the lever 17. When the lever 17 is thus depressed the rock arms 14 are in turn rocked by said lever bearing upon the cross-member 16, thereby opening the valves 12 so that the water will enter the perforated pipe 3 from each end. The water is directed in a multiplicity of jets from the perforations in said pipe 3 upon the inner face of the semi-circular stereotype plate. The water flowing from the inner face of the plate will be drained off through the drain pipe 2. When the plate has become cooled, it may be removed from the sink and placed upon an inclined drain-board 19 to further

dry the wetted inner face thereof, if so desired.

It is noted that by having the perforated portion of the pipe 3 shorter than the length 5 of the stereotype printing plate, the water will not be discharged upon the outer or printing face thereof.

The device may be conveniently placed in the stereotyping-room or press-room, as 10 desired.

In some cases, instead of using water as the cooling agent, a cold air blast may be utilized.

Obviously, the device admits of considerable modification without departing from my invention, and, therefore, I do not wish 15 to be limited to the exact construction and arrangement shown.

What I claim as my invention and desire 20 to secure by Letters Patent is:

1. A cooling device for stereotype printing plates comprising a support for such plates, a distributing device arranged adjacent to said support in operative position to discharge a 25 cooling agent against a plate on said support, and means for controlling the supply of the cooling agent to said distributing device.

2. A cooling device for stereotype printing plates comprising a support for such plates, 30 a device arranged adjacent to said support in operative position to deliver a cooling agent against a plate on said support, and a device for controlling the supply of the cooling agent to said delivering device, said controlling device 35 being arranged to be actuated by a plate when placed on said support.

3. A cooling device for stereotype printing plates comprising a support for such plates, a 40 delivery pipe arranged adjacent to said support in operative position to deliver a fluid cooling agent against a plate on said support,

said delivery pipe having a multiplicity of jet openings therein, a supply pipe communicating with said delivery pipe, a normally closed valve for controlling the supply to said 45 delivery pipe, and means for opening said valve and arranged to be actuated by a plate when placed on said support.

4. A cooling device for stereotype printing plates comprising a sink, a support therein 50 for such plates, a delivery pipe having a multiplicity of jet openings therein and arranged adjacent to said support in operative position to deliver a cooling agent against a plate on said support, a supply-pipe communicating 55 with said delivery pipe, a self-closing valve in said delivery pipe, and a lever for opening said valve, said lever being arranged to be actuated by a plate when placed on said support. 60

5. A cooling device for stereotype printing plates comprising a sink, a support therein for such plates, a delivery pipe having a multiplicity of jet openings therein and arranged 65 adjacent to said support in operative position to deliver a fluid cooling agent against a plate on said support, a supply pipe having branches communicating with each end of said delivery pipe, valves for controlling the passage of the cooling agent through said 70 branch pipes, said valves being normally closed, rock-arms operatively arranged relative to said valves, and a lever common to both of said rock-arms and arranged to actuate the same to open said valves when a 75 plate is placed on said support.

Signed at St. Louis, Missouri, this 28th day of August, 1908.

JOSEPH KURTEN.

Witnesses:

G. A. PENNINGTON,
J. B. MEGOWN.