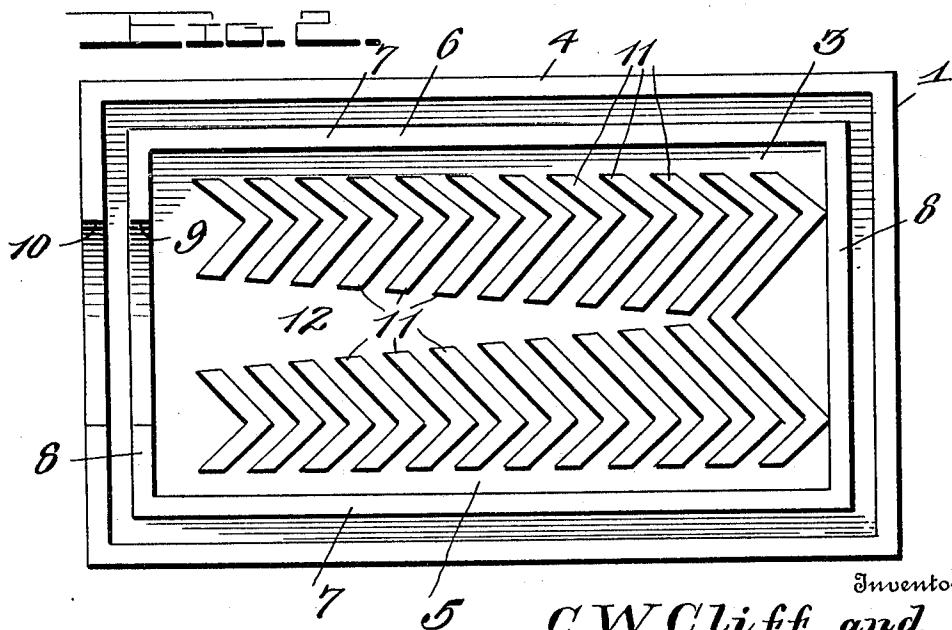
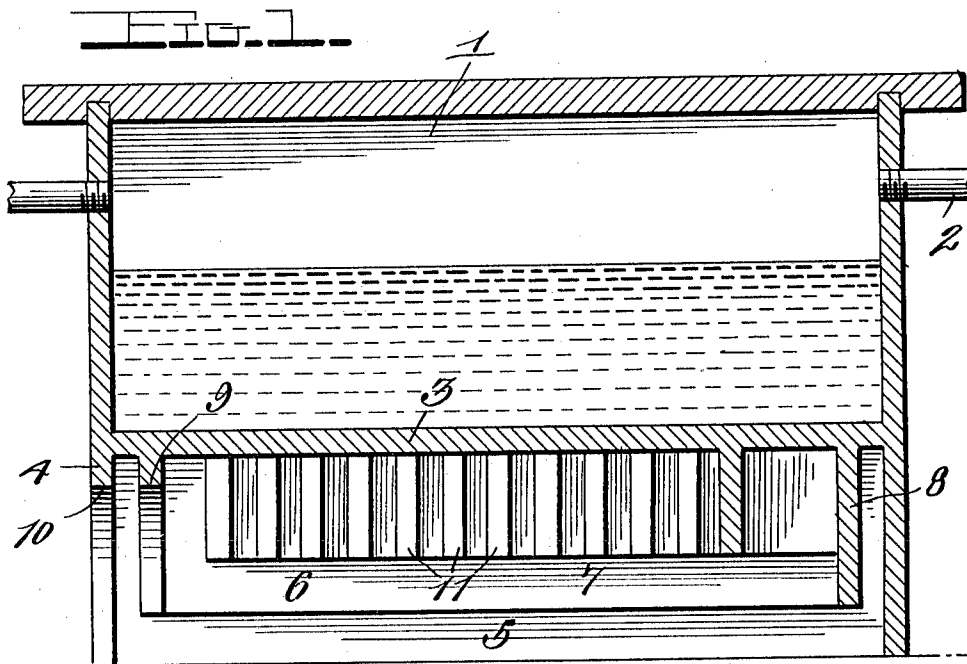


C. W. CLIFF & H. T. MAZE.
STEAM GENERATOR.
APPLICATION FILED OCT. 7, 1911.

1,040,510.

Patented Oct. 8, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

CHESTER W. CLIFF AND HARRY T. MAZE, OF ANDERSON, INDIANA.

STEAM-GENERATOR.

1,040,510.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed October 7, 1911. Serial No. 653,302.

To all whom it may concern:

Be it known that we, CHESTER W. CLIFF and HARRY T. MAZE, citizens of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Steam-Generators, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to a steam generator and particularly one to be used for vulcanizing processes.

The object of the invention is to provide an apparatus of this type with an improved fire box which is so constructed that the heat will be retained by peculiarly shaped members.

With the above and other objects in view, the invention resides in the novel features of construction, combination and arrangement of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which,

Figure 1 is a longitudinal sectional view; Fig. 2 is a bottom plan view.

In the construction of the device, a rectangular tank 1 is employed having a steam outlet 2 provided at one end thereof. The bottom 3 of the tank 1 is positioned slightly above the lower edges of the outer or protecting flange 4, whereby the fire box 5 is produced.

Formed integral with the bottom 3 and spaced from the flange 4 is a supplemental heat or flame retainer 6, the same being provided with sides 7 and ends 8, said retainer having its lower edges raised slightly above the lower edges of the protecting flanges 4. One of the ends 8 is provided with an opening 9 which registers with the door opening 10 formed in one end of said protecting flange.

Formed integral with the under surface of the bottom 3 are a plurality of V-shaped projections 11, the same being arranged in opposing relation and separated by a tapered channel 12, whereby the V-shaped

projections increase in width as the tapered end of the channel 12 is approached. It will be noted that the V-shaped projections 50 formed at the tapered end of the channel 12 are formed integral whereby the heat or flame is retarded to a certain extent at this point to more equally distribute the heat or flame. 55

Heat may be produced in the fire box 5 in any suitable manner, the V-shaped projections being for the purpose of retaining the heat and causing the circulation of the gases in the fire box. The supplemental 60 flame and heat retainer 6 will retain heat and at the same time direct the heat from the fuel directly upon the V-shaped projections 11. The space between the protecting flanges 4 and the heat or flame retainer 6 65 will also protect the V-shaped projections from the outer or cooler air.

Having thus described our invention, what we claim as new is:

A steam generator of the character described comprising a tank having a bottom and side and end walls extending below the bottom, a heat retainer comprising side and end walls extending downwardly from the bottom and depending therefrom, the bottom being closed, and two sets of V-shaped 75 integral projections extending downwardly from the bottom and terminating short of the lower edges of the heat retainer, the two sets of projections being spaced from each 80 other at the front and gradually converging toward the rear, and the front wall of the device and the front wall of the heat retainer being formed with registering openings leading into the space between the two 85 sets of projections.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CHESTER W. CLIFF.
HARRY T. MAZE.

Witnesses:

BERT M. COOK,
MARK J. ROZELLE.