

No. 622,175.

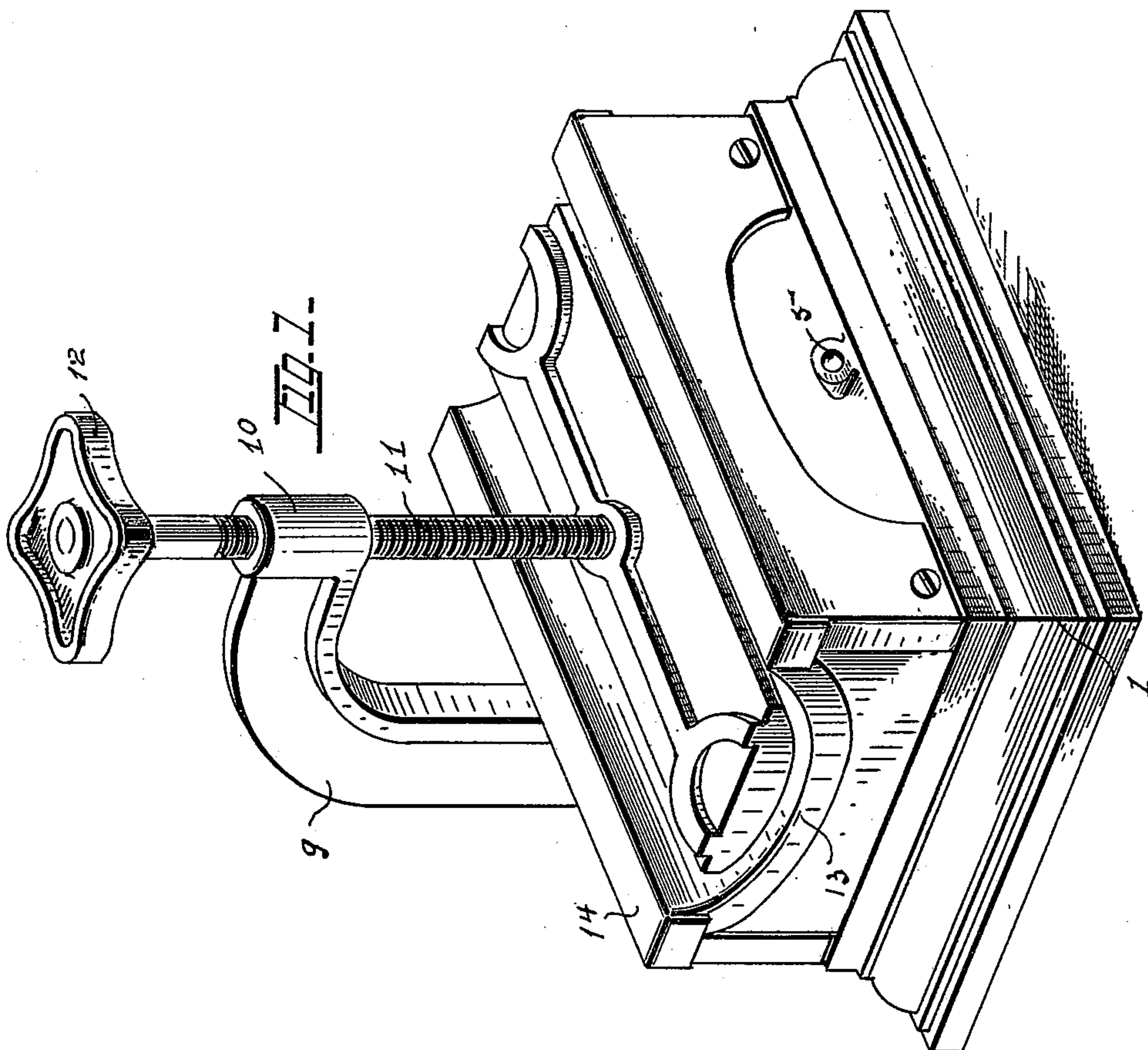
Patented Mar. 28, 1899.

J. E. BANCROFT.
VULCANIZER.

(Application filed Dec. 27, 1897.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

Albert Rosefield
H. H. Martin

INVENTOR

James E. Bancroft
By William Webster
att'y

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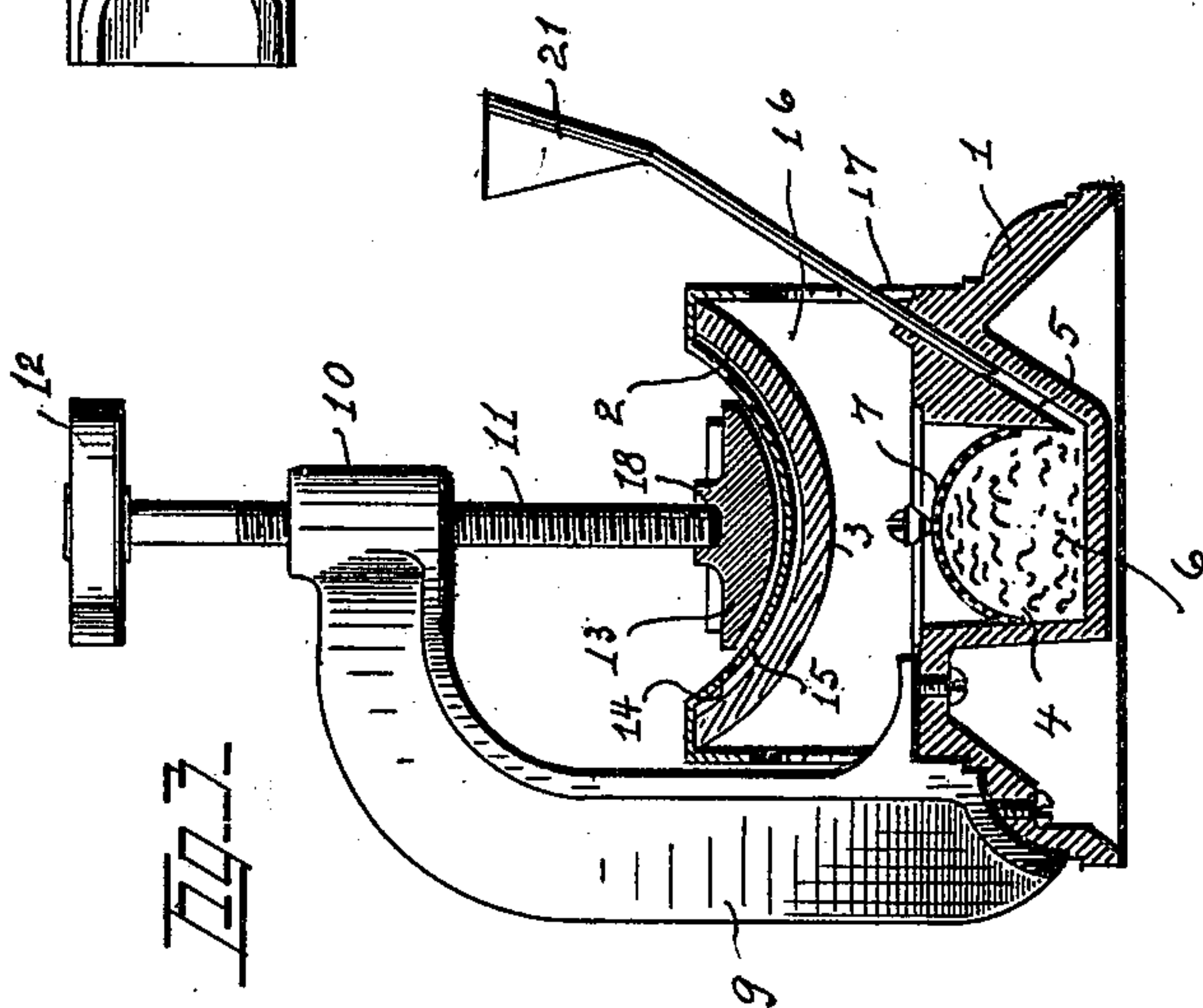
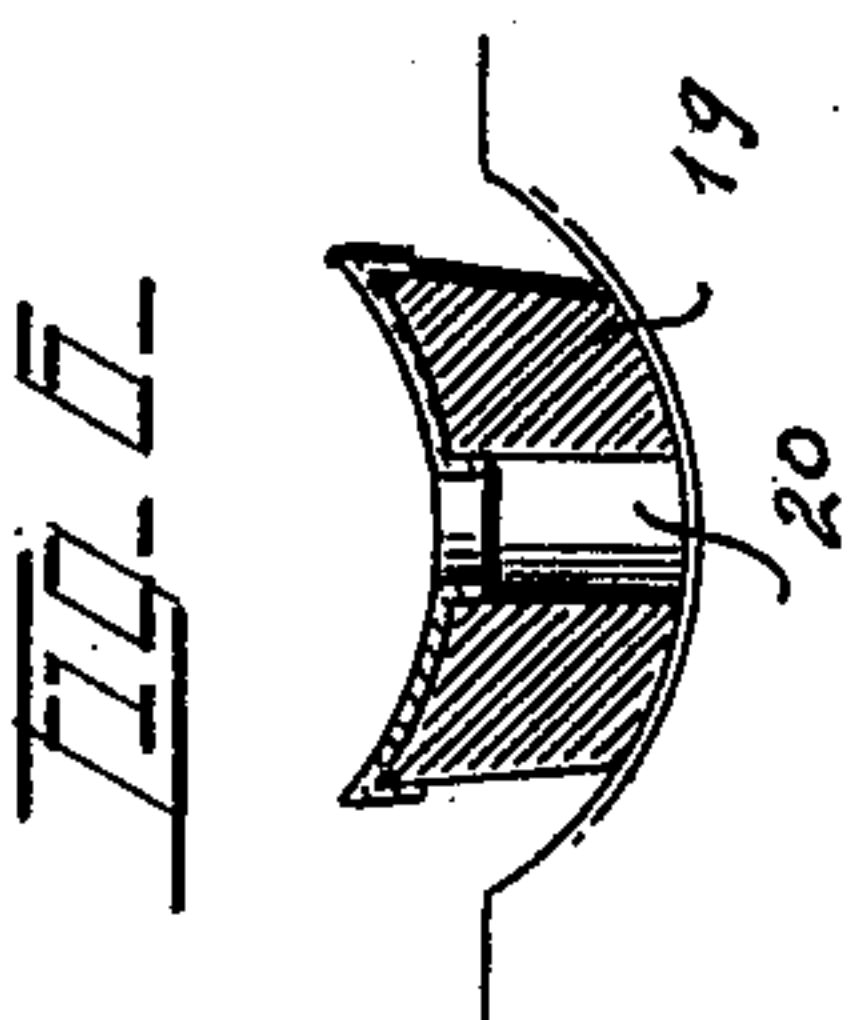
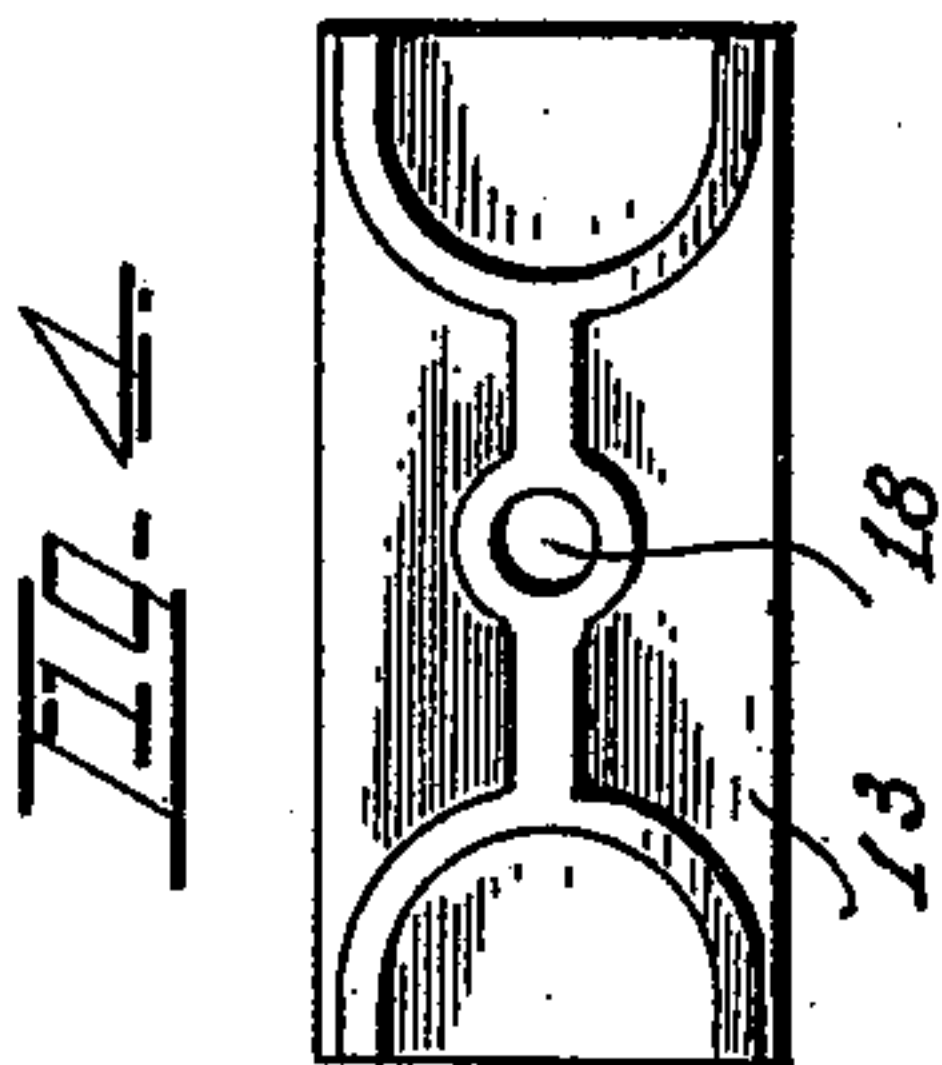
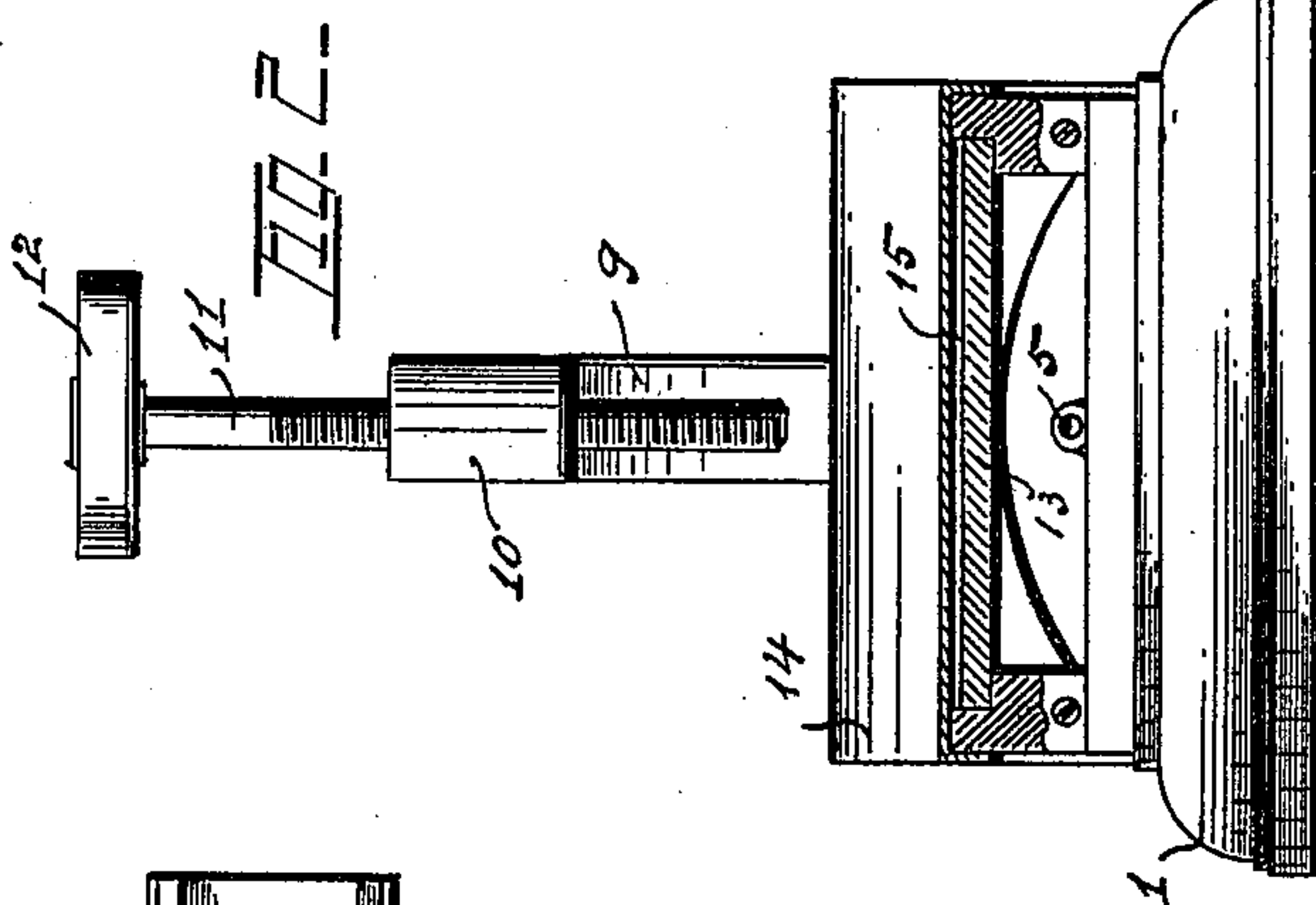
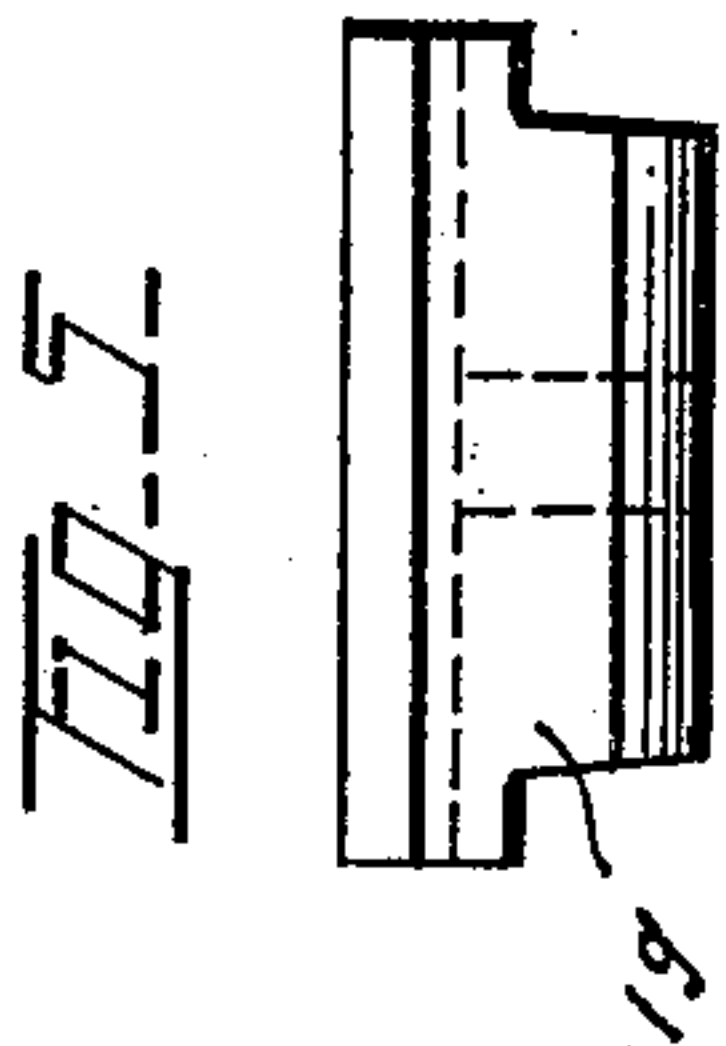
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UNITED STATES PATENT OFFICE.

JAMES E. BANCROFT, OF TOLEDO, OHIO.

VULCANIZER.

SPECIFICATION forming part of Letters Patent No. 622,175, dated March 28, 1899.

Application filed December 27, 1897. Serial No. 663,780. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. BANCROFT, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Vulcanizers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to a vulcanizer, having especial relation to an apparatus for vulcanizing tires, and has for its object to provide a simple and inexpensive means for securing the tire during the period of vulcanization and protect the thermal plate in contact with the tire in a manner that will prevent overheating of the thermal plate and consequent destruction of the material composing the tire.

A further object is to provide a base having a receptacle formed therein into which a predetermined amount of caloric medium can be introduced to generate the necessary temperature to properly vulcanize the tire.

A further object is to provide a detachable supplemental thermal plate having a central aperture into which the valve-stem may be embedded during the process of securing the valve-stem to the tire.

In the drawings, Figure 1 is an isometric view of an apparatus constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a transverse section. Fig. 4 is a top plan view of the clamp. Fig. 5 is a side elevation of the supplemental thermal plate, and Fig. 6 is a transverse section through the same.

1 designates the base, upon which is mounted a semicircular thermal plate 2, secured to the base 1 in a position to bring the crown 3 in direct alinement with a receptacle 4, formed integral with the base 1 and containing a caloric medium. The caloric medium is introduced into the receptacle 4 through a port 5 and is absorbed by an asbestos wick 6, which is retained in the receptacle 4 by a foraminous plate 7, secured to the base 1 by means of screws 8.

9 designates a yoke secured to the base,

having formed thereon a boss 10, which is provided with a screw-threaded aperture passing through the vertical axis, adapted to engage coincident screw-threaded portions upon a clamp-stem 11, which being revolved by means of a hand-wheel 12 compresses a detachable clamp portion 13, coinciding upon the lower edge with the arc of the thermal plate 2. To prevent overheating of the tire, the plate 2 is covered with a jacket 14, and between the jacket and thermal plate 2 there is introduced an insulating material 15. The jacket 14 continues circumferentially around the thermal plate 2, thereby forming a combustion-chamber 16, which may be perforated for the admittance of air or may be provided with openings 17 at or near the base.

The yoke 9 is centrally secured to the thermal plate 2, and to keep the clamp 13 in alinement when the pressure of the screw 11 is brought to bear upon it there is formed in the clamp a central depression 18, into which the lower end of the screw is held.

19 designates a supplemental thermal plate having a central aperture 20 for protecting the valve-stem of the tire.

In the operation a predetermined amount of caloric medium is introduced into the receptacle 4 through a funnel 21. The caloric medium is absorbed by the asbestos wick 6, and being ignited generates the thermal units which are absorbed by the thermal plate 2, thereby vulcanizing a tire, which after being properly prepared is secured in the vulcanizer between the thermal plate 2 and the clamp portion 13 previous to the ignition of the caloric medium. A previously-determined amount of caloric medium is introduced into the receptacle 4, necessary to properly vulcanize the tire, thereby preventing the destruction of the tire by overheating.

In the process of securing the valve-stem to the tire the valve-stem is embedded in an insulating material and inserted into the aperture 20 of the plate 19, which is then brought in contact with the thermal plate 2. The tire, being previously prepared, is secured between the thermal plate 19 and the clamp portion 13, when the process is repeated as before.

It will be seen from the foregoing that a vulcanizer constructed in accordance with

my invention can be cheaply manufactured, and the burning of the tire by an amateur is prevented by providing a receptacle adapted to contain a limited amount of caloric medium sufficient to properly vulcanize the necessary repairs and is attained with a minimum amount of labor and expense.

What I claim is—

1. In a vulcanizer, a base, a receptacle
10 formed integral therewith, a wick located therein, a foraminous plate secured to the base and adapted to hold the wick in position, an aperture formed in the walls of the base connecting with the interior of the re-
15 ceptacle, a funnel to introduce the caloric medium into the vulcanizer, a semicircular thermal plate supported and secured upon the base, a jacket secured to the thermal plate, and continued circumferentially around the
20 same, forming a combustion-chamber, an insulating material interposed between the jacket and thermal plate, a yoke secured to the base terminating in a boss having a screw-threaded aperture adapted to engage a coin-
25 cident threaded stem compressing a tire in-

terposed between the thermal plate and a clamping portion.

2. In a vulcanizer, a base having a receptacle to contain a limited amount of caloric medium necessary to properly vulcanize a
30 tire, a thermal plate supported thereon, housed within a jacket forming a combustion-chamber which is provided with a plurality of perforations, an insulating material interposed between the jacket and the thermal
35 plate, a supplemental plate supported upon the thermal plate, having a central aperture adapted to receive a valve-stem embedded in an insulating material, a yoke secured to the
40 base, provided with a screw-threaded portion, whereby a tire may be clamped between the supplemental base and a reasonable clamping portion.

In testimony that I claim the foregoing as my own I hereby affix my signature in pres-
45 ence of two witnesses.

JAMES E. BANCROFT.

Witnesses:

WILLIAM WEBSTER,
MAUD SCHUMACHER.