

(No Model.)

A. GEIGER.
CLOSURE FOR VULCANIZERS.

No. 600,067.

Patented Mar. 1, 1898.

Fig. 1.

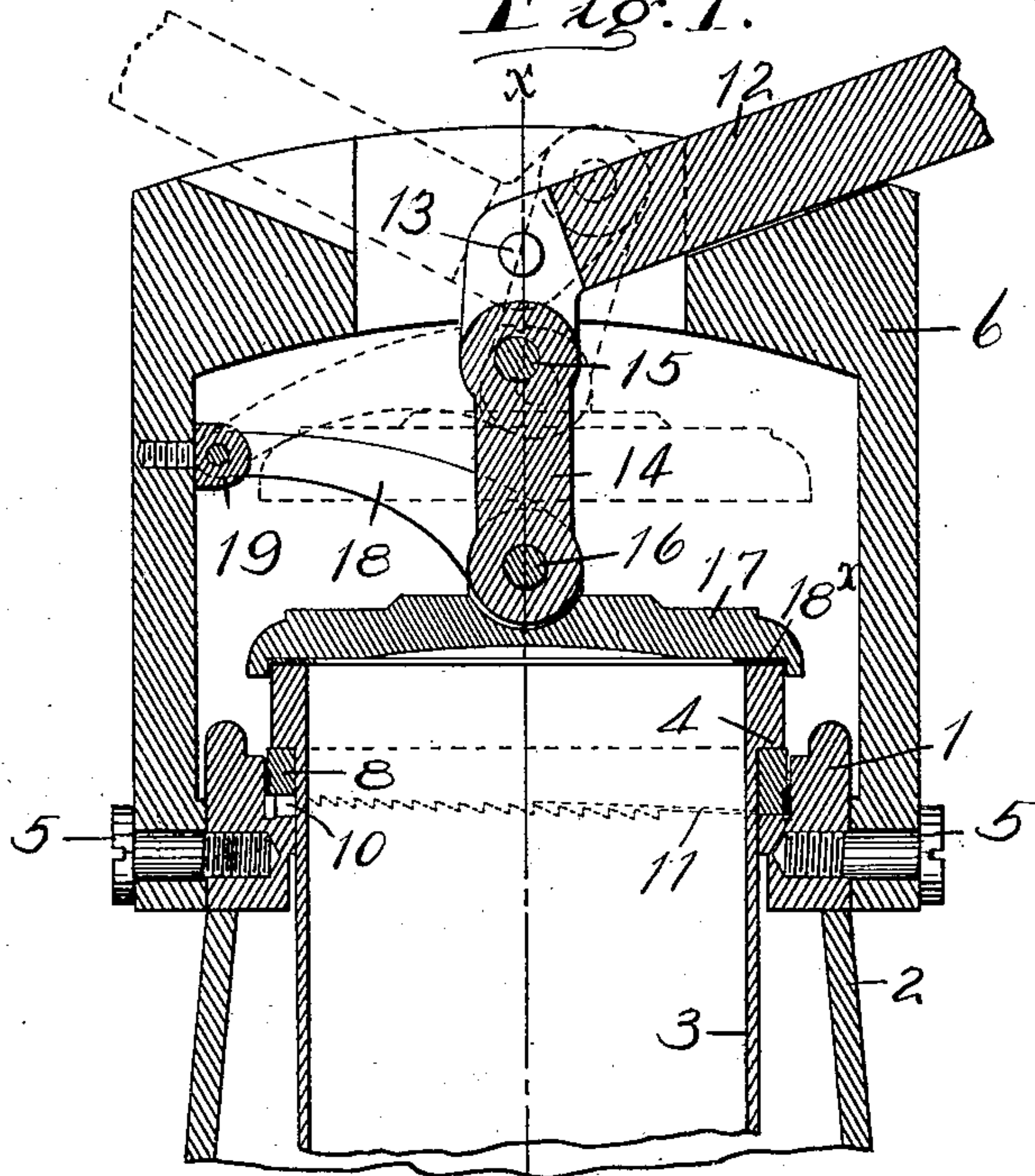


Fig. 3.

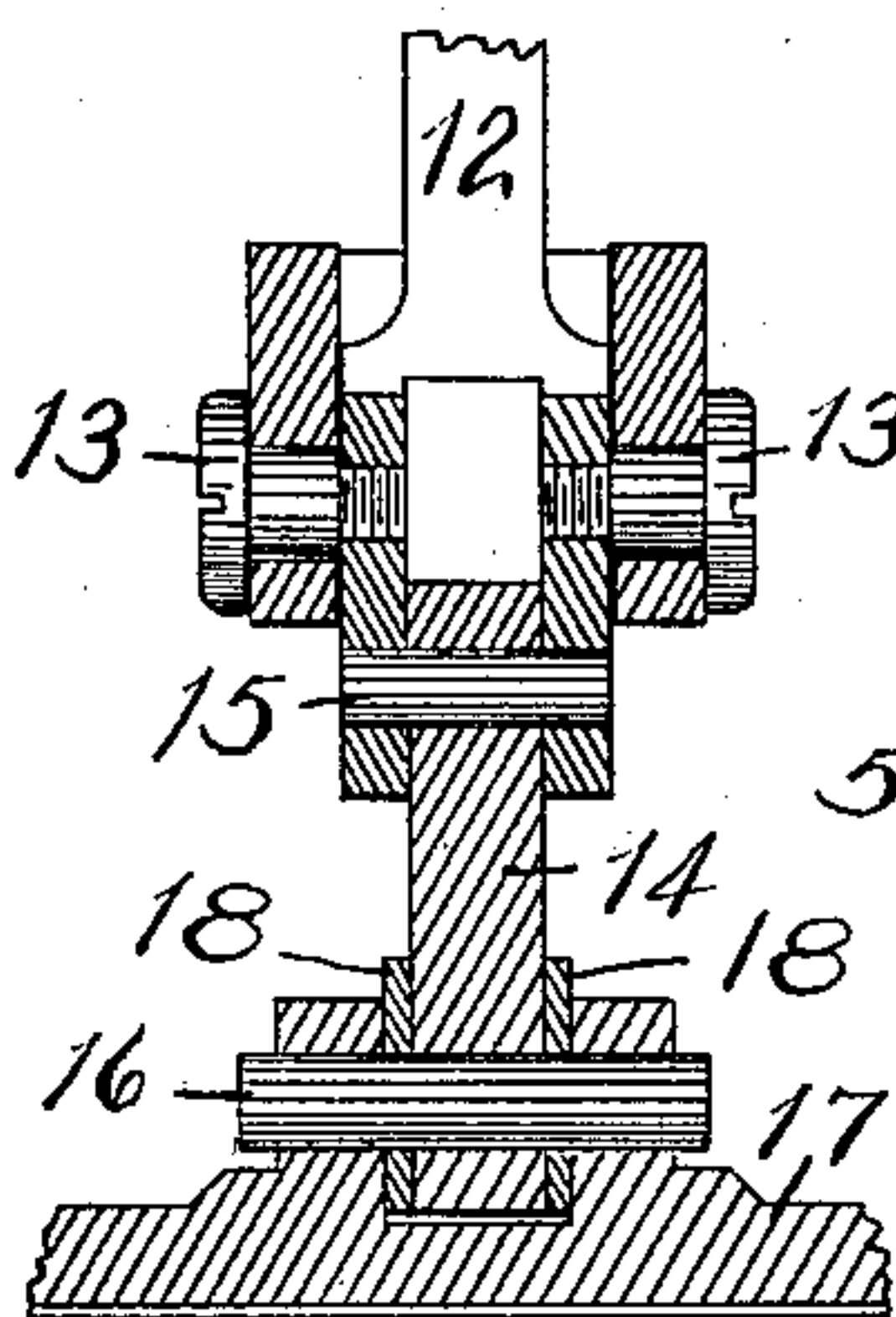


Fig. 2.

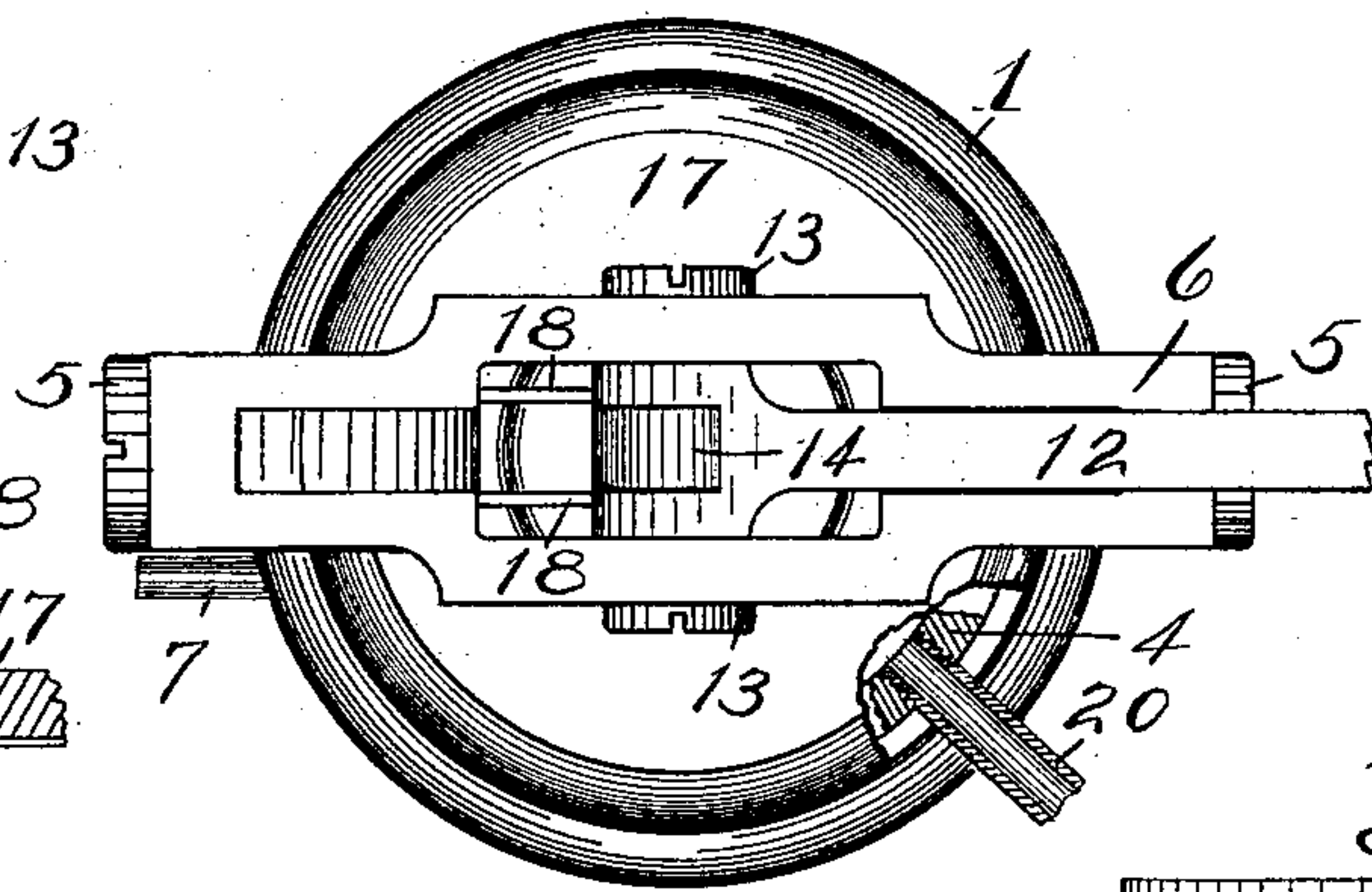


Fig. 4.

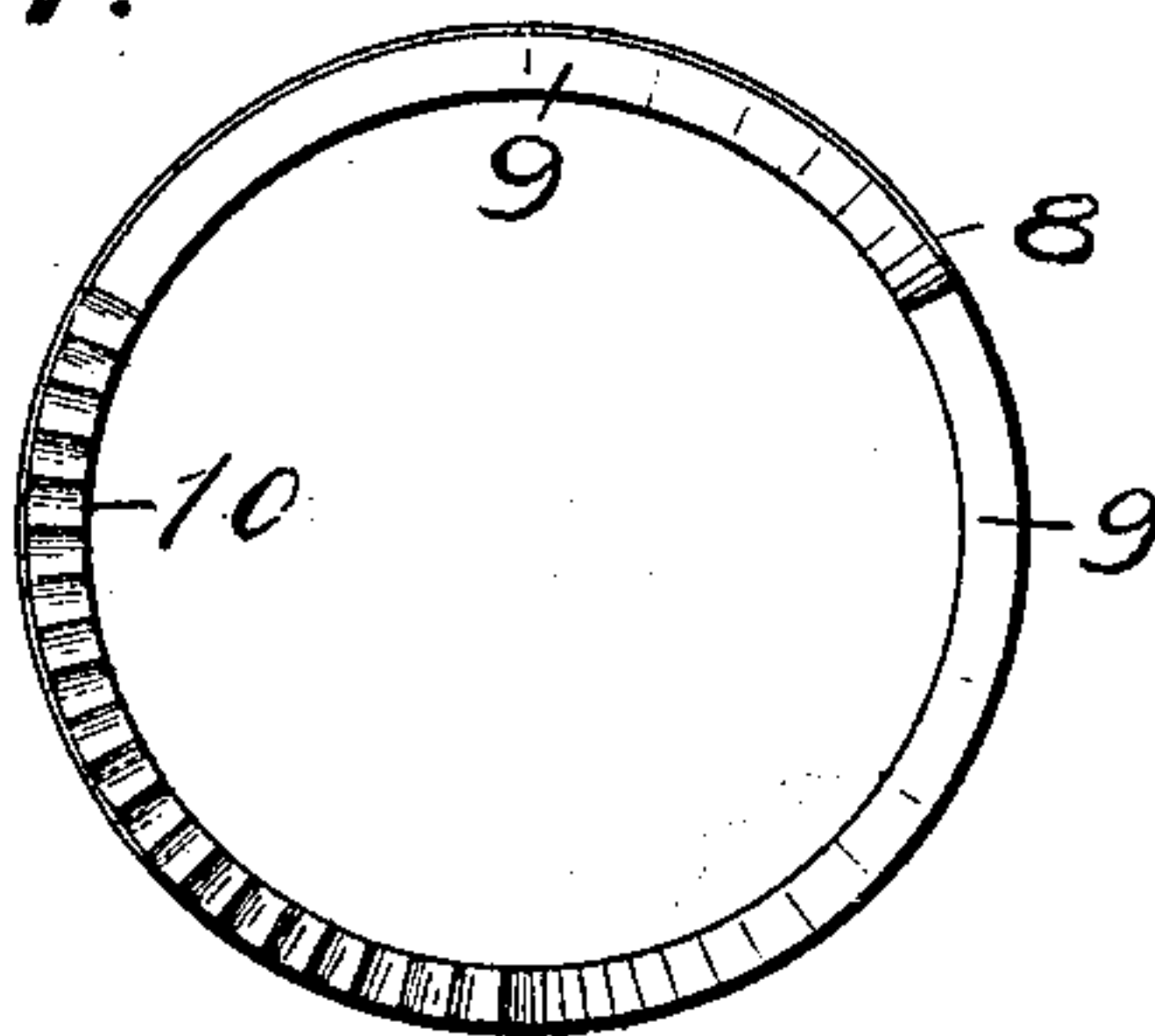
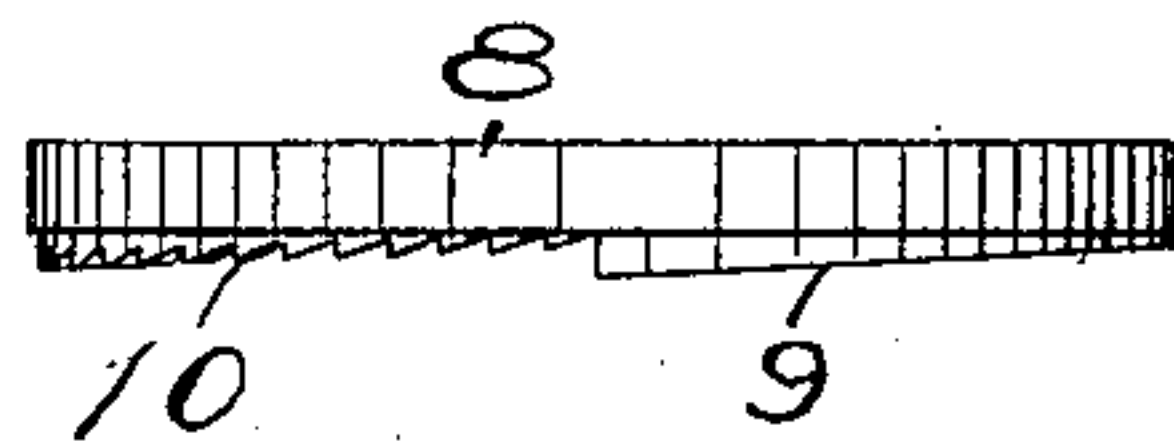


Fig. 5.



Witnesses.

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CLOSURE FOR VULCANIZERS.

SPECIFICATION forming part of Letters Patent No. 600,067, dated March 1, 1898.

Application filed August 23, 1897. Serial No. 649,214. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH GEIGER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Closures for Vulcanizers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention has for its object to provide an improved closure for vulcanizers or similar vessels whereby the cover or lid may be quickly opened and tightly closed by the manipulation of a single part or lever and whereby also the joint between the lid or cover and the retort or vessel may be adjusted to take up any wear and prevent leakage; and to these and other ends it consists in certain improvements in construction and combinations of parts, all as will be hereinafter fully described and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a vertical sectional view of a vulcanizer provided with my improvements; Fig. 2, a plan view of the same; Fig. 3, a vertical sectional view on the line $x\ x$ of Fig. 1; Fig. 4, a bottom view of the adjustable ring for supporting the retort, and Fig. 5 a side view of said ring.

Similar reference-numerals indicate similar parts.

1 indicates an annular frame or casting forming the main frame of the retort-closure supported upon and attached to a support 2 in the usual or any preferred manner, and 3 the vulcanizing retort or vessel having the flange 4 at its upper end and adapted to be supplied with water and heated by a suitable flame, as usual.

Arranged at opposite sides of the frame 1 are screws 5, forming pivotal connections for the yoke 6, which is adapted to swing thereon over and away from the upper end of the retort or vessel, a suitable stop-pin 7 limiting the motion in one direction.

In the upper portion of the annular frame 1 is a groove having a plurality of cam-sur-

faces 11, with which coöperate similar surfaces 9, formed on the lower side of a retort-supporting ring 8, (shown in Figs. 4 and 5,) one of the cams on the frame 1 and ring, respectively, being provided with serrations or teeth 10, forming frictional engaging surfaces holding the ring in adjusted position.

The yoke is provided at the top with a slot, in which operates a lever 12, pivoted upon the studs or screws 13, passing through the yoke at right angles to the pivots of the latter and turning freely therein. The lower end of the lever is turned at an angle to the operating portion or handle and is bifurcated to receive the end of a link 14, pivoted upon a pin 15, the lower end of the link being in turn pivoted by a pin 16 to ears on the upper side of the cover or lid 17 of the retort.

18 indicates guiding arms or links pivoted to the top of the cover by the pin 16 and to a block or stud 19, secured to the side of the yoke, said links serving to guide the cover in its vertical movements and insure its being properly positioned over the retort.

It will be noted that the lower arm of the lever and the link 14 form a toggle, and the ends of the slot in the yoke (which latter constitute stops for the lever) and the toggle are so relatively arranged that when the toggle is straightened the center (indicated by pin 15) is slightly to one side of a vertical line drawn through the screws 13 and pin 16, and the upward pressure on the cover will tend to hold the lever in engagement with its stop.

Between the under side of the cover and the top of the retort is arranged a suitable packing-ring 18^x to make a steam-tight joint between the parts.

The manner of using the device will be apparent to those skilled in the art, the retort being bodily adjustable on the frame 1 by the rotation of the cam-ring 8 to bring the top to the correct height, and then the yoke being swung over by a sidewise movement of the lever the latter is turned on its pivot and the toggle straightened to clamp the cover firmly on the retort, the links guiding the said cover properly to its place.

By forming the slot in the lower end of the lever I am enabled to shorten the distance

between the yoke and the top of the retort, as the link will pass up between the ends, as shown in dotted lines.

As the upper edge of the retort is above the edge of the frame 1 and the adjusting-ring 8 below it, the pipe 20 for the pressure-gage and blow-off may extend out at one side of the upper part of the retort, as shown in Fig. 2, thus obviating the necessity of having these parts on the cover, where they would be liable to damage when operating the closure.

The device as a whole is cheap and simple and may be readily operated and adjusted.

I claim as my invention—

1. In a vulcanizer, the combination with the retort, the frame and the yoke pivoted on the frame, of the cover, guiding-links connecting the cover and yoke, the lever pivoted to the yoke on a center extending at an angle to the yoke-pivots, the link connected to the lever and cover and forming with the former a toggle, substantially as described.

2. In a vulcanizer, the combination with the retort, the frame and the slotted yoke pivoted on the frame, of the cover, the lever pivoted in the yoke and having the bifurcated shorter end, the link pivoted to the bifurcated end of the lever and forming with the latter a toggle, substantially as described.

3. In a vulcanizer, the combination with the frame and the yoke pivoted thereto, of the lever pivoted on the yoke, the cover and the link pivoted to the lever and cover, guiding devices between the cover and yoke, the retort having the flange, and the cam-ring be-

tween said flange and the frame, substantially as described.

4. In a vulcanizer, the combination with the annular frame having the cam-surfaces thereon, the retort having the flange at its upper end, the adjustable retort-supporting ring having cam-surfaces corresponding to those on the frame and arranged beneath the flange on the retort, of the yoke pivoted on the frame, the lever pivoted on the yoke and the cover operated thereby, substantially as described.

5. In a closure for vessels, the combination with the annular frame having the cam-surfaces, the supporting-ring having cam-surfaces coöperating with those on the frame, and holding serrations between the ring and frame, of the vessel having the flange supported on the ring, the yoke pivoted on the frame, the cover on the yoke, and operating devices therefor, substantially as described.

6. The combination with the frame having the cam-surfaces, the ring thereon having corresponding cam-surfaces, and holding serrations between the ring and frame, of the vessel having the flange supported on the ring, the yoke pivoted on the frame, the lever on the yoke having the bifurcated end, the cover and the link connected to the cover and lever, and guiding devices between the cover and yoke, substantially as described.

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Witnesses:

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