

M. L. UDWIN.
GAS HEATED SAD IRON.
APPLICATION FILED JULY 18, 1908.

963,188.

Patented July 5, 1910.

2 SHEETS—SHEET 1.

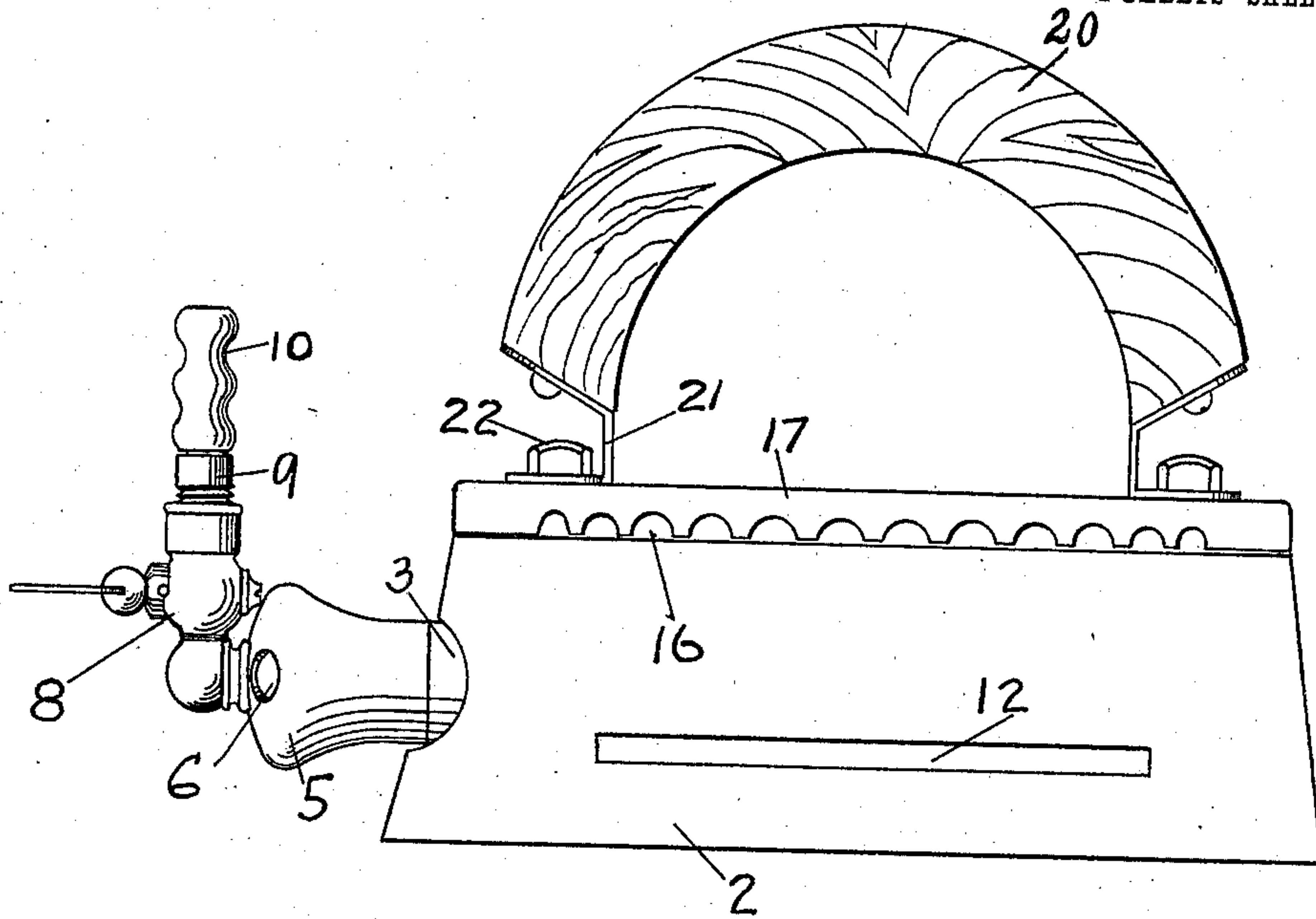


Fig 1

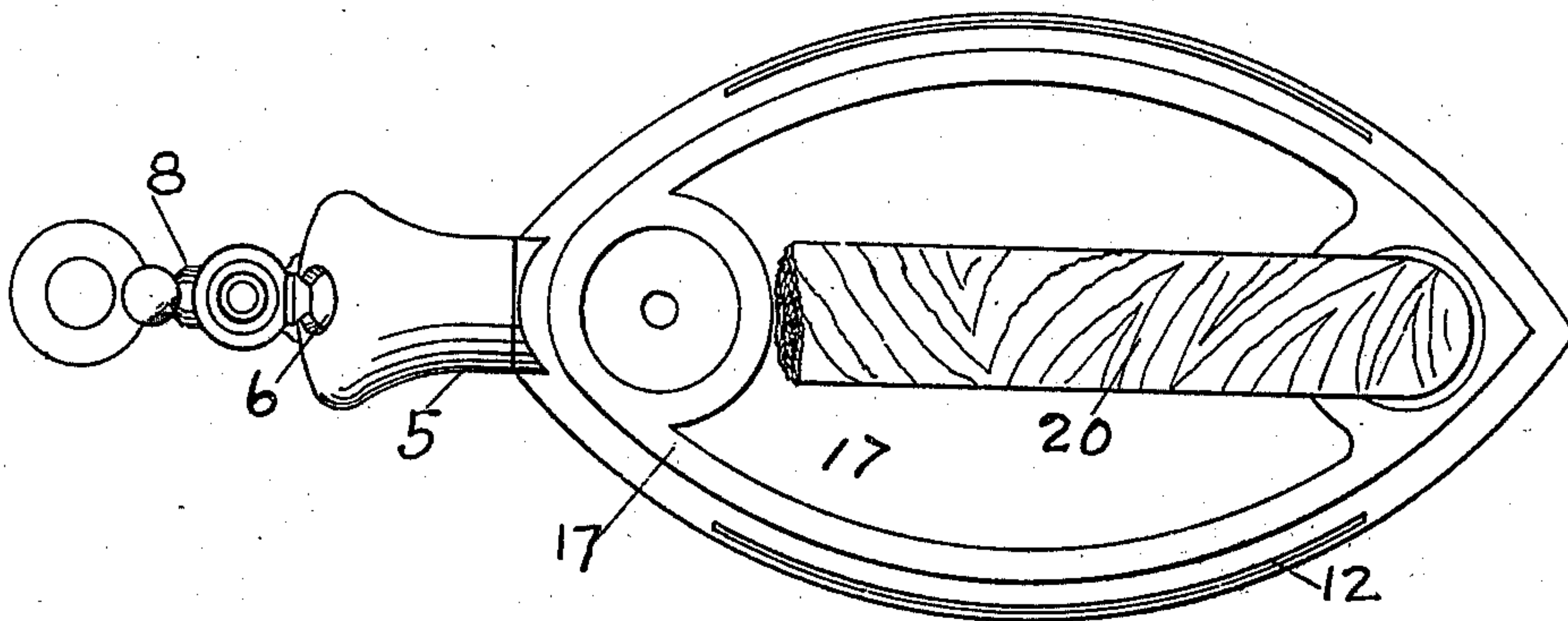


Fig 2

Witness
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W O Brewster

Inventor.
Maurice L. Udwin
By W. E. Williams atty

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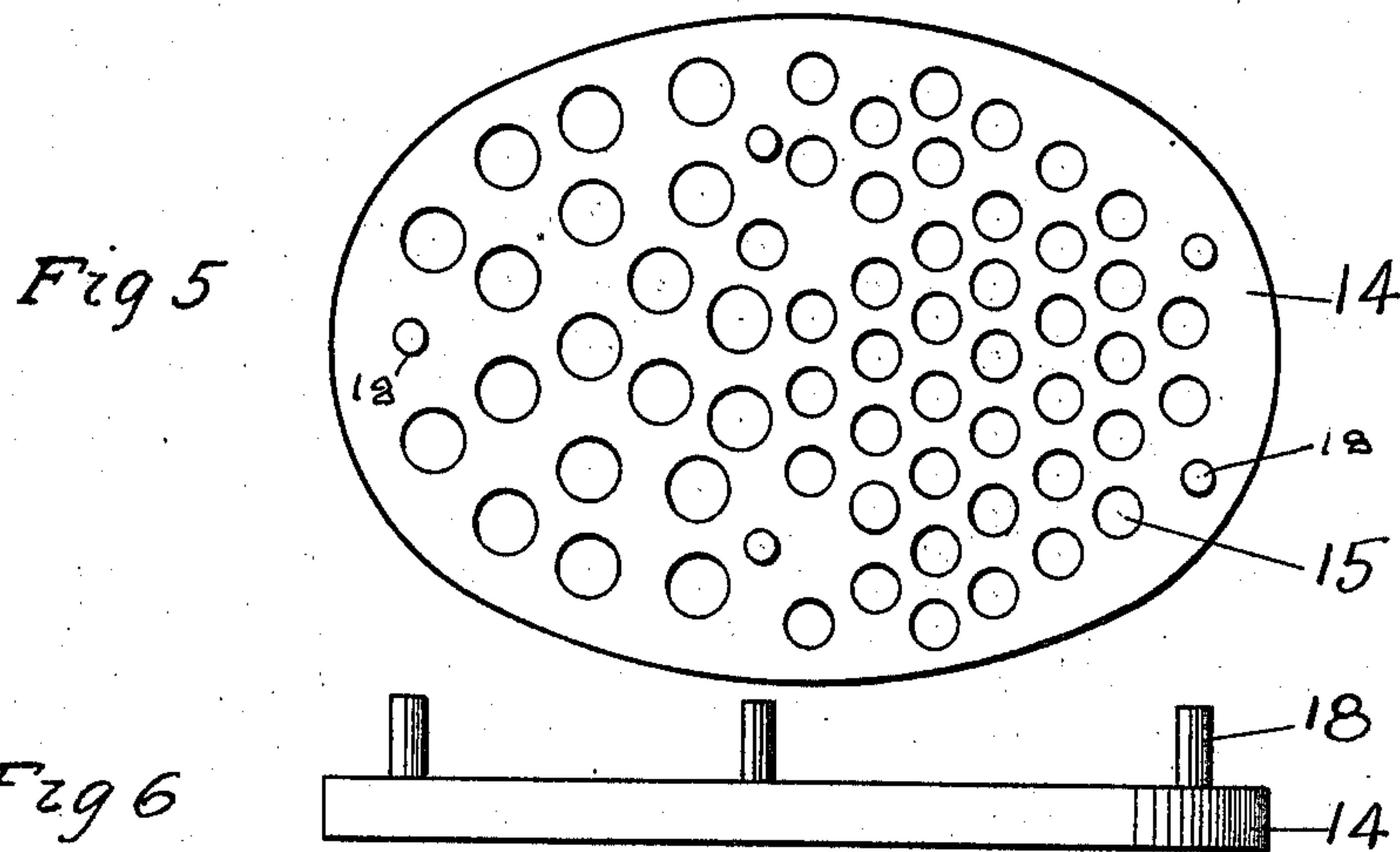
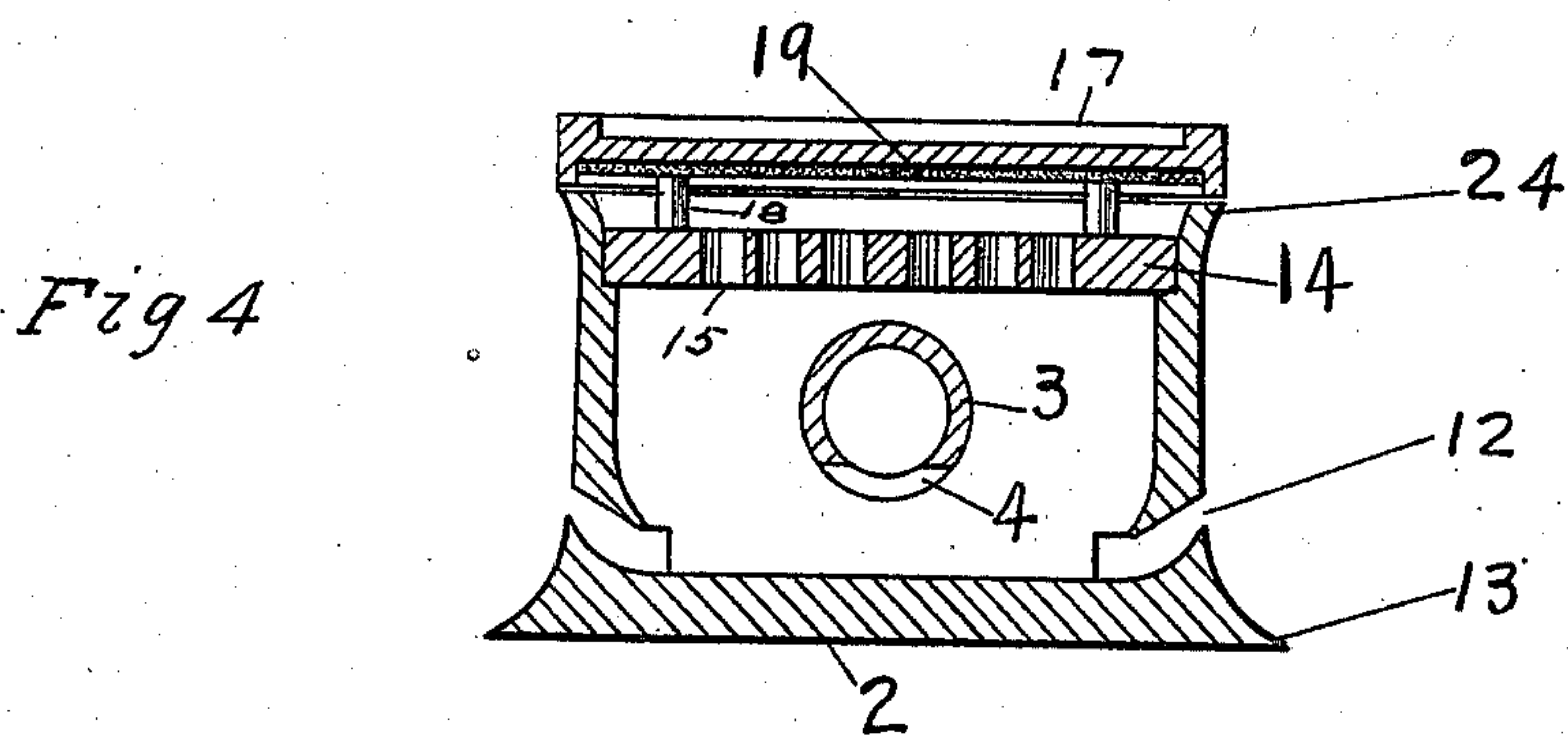
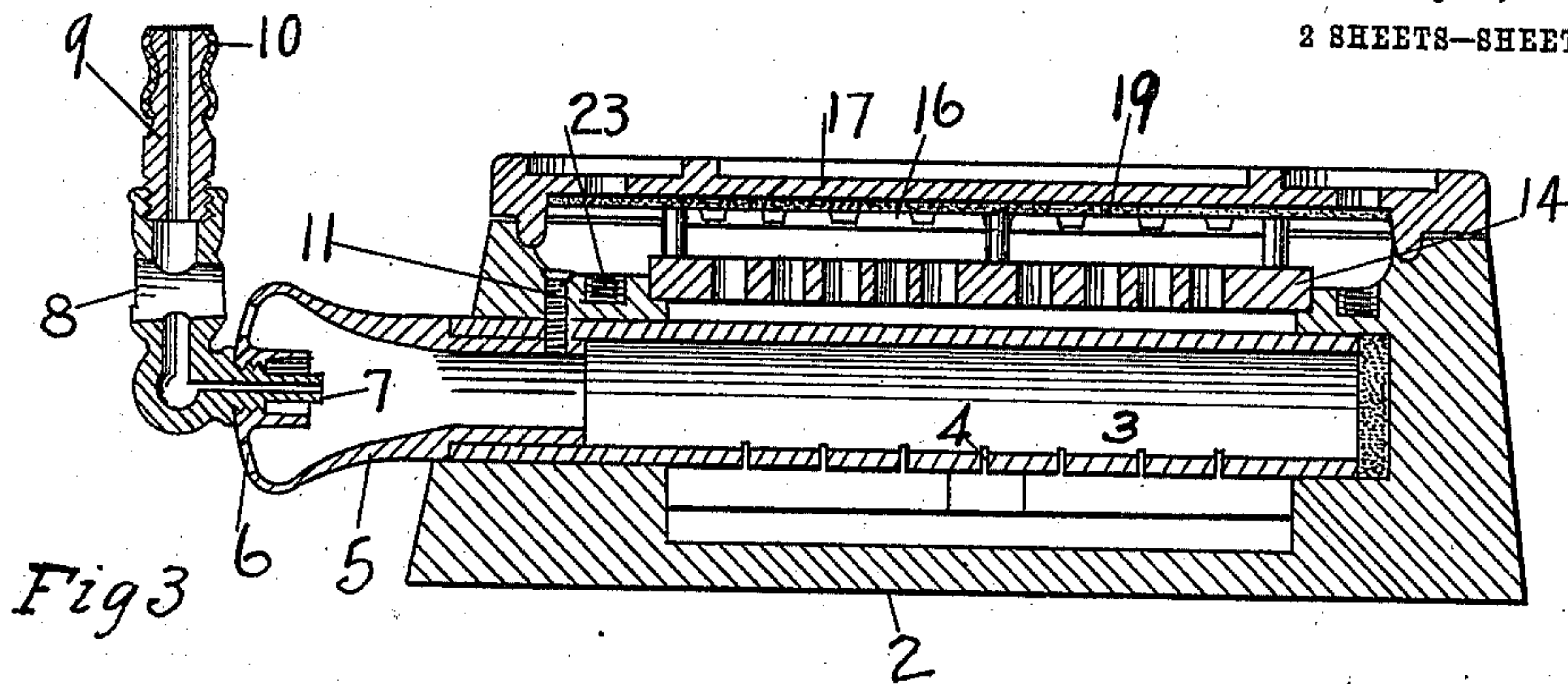


Fig 6



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UNITED STATES PATENT OFFICE.

MARCUS LOUIS UDWIN, OF CHICAGO, ILLINOIS.

GAS-HEATED SAD-IRON.

963,188.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed July 18, 1908. Serial No. 444,268.

To all whom it may concern:

Be it known that I, MARCUS L. UDWIN, a citizen of the United States, residing at Chicago, and the county of Cook and the State of Illinois, have invented a new and useful Improvement in Gas-Heated Sad-Irons, of which the following is a specification.

The object of my invention is to produce an efficient and serviceable gas iron having the merits hereinafter described.

Reference will be had to the accompanying drawing wherein,

Figure 1 is a side elevation of the iron and, Fig. 2 is a plan view with a part of the handle broken away; Fig. 3 is a side sectional elevation; Fig. 4 is a transverse sectional elevation; Fig. 5 is a plan of a heat radiating plate; Fig. 6 is an edge view of the heat radiating plate.

In the drawing, 2 indicates the ironing surface of the ordinary shape generally in use for all sorts of sad irons: and it is to heat the surface 2 in the best manner possible that is the primary object of the invention. To heat surface 2 I provide a gas burning pipe 3 provided with burner jet openings 4 which impinge the gas flames downward on to the upper or inner surface of the ironing surface 2. The tube 3 is provided with an entrance or mixing chamber 5 for the mixing of the gas and air, the air coming in at the holes 6 distributed around a central gas nozzle 7 screwed into the end of chamber 5. The gas nozzle piece 5 is provided with a stop cock 8 and gas hose tip 9, covered with a vulcanized fiber, heat-insulating tip 10 to which an ordinary drop gas hose is attached in the manner commonly used. The gas burner pipe 3 is secured in place by a screw 11, permitting its easy removal and replacement.

Extending along the side of the body of the iron there are provided the escape apertures 12, for the escape of the products of combustion. These apertures are curved in cross-section as is shown by Fig. 4 to assist in inducing the burned gases to pass out through these cavities, instead of at the top of the iron which is a desideratum. The gas flames of the burner impinging downward assist in causing the circulation in this direction. The outer edge 13 of the surface 2 extends beyond the edge of the aperture 12 to protect the goods being ironed from the heat of the escaping gases, also a desideratum.

Located above the burner pipe 3 there is the radiating plate 14 supported in a seat in the body of the iron. This plate 14 is provided with perforations for the entrance of air from the top coming in through openings 16 in the edge of top plate 17 of the iron. On the top of plate 14 there are pins 18 on the top of which rests a sheet of asbestos or other suitable insulating material 19 in close contact with the top plate 17.

The handle 20 of the iron is wood or other suitable material secured by metal clips 21 which are fixed by screws 22 to the iron. The screws 22 pass down through the plate 17 into threaded cavities 23 in the main body of the iron, and thus the screws 22 hold in place, the handle, the top plate, the insulating sheet and the radiating plate which is a desirable construction.

The top section of the iron (see Fig. 4) is made wider as is shown by the edges 24 for the purpose of deflecting the hot gases arising from the iron, away, as much as possible, from the hand of the operator when using the iron. The radiating plate 14 gets heated from the heat of the burner and it in turn heats the air that is drawn in through the holes 16 and thereby aids the combustion which takes place at the burners and this plate also radiates heat back or downward and thereby helps to heat the base surface 2 which is a desideratum.

What I claim is:

1. The combination with a hollow sad iron body having along its sides near the bottom discharge passages leading upwardly and outwardly from the lowermost portion of its interior and an air inlet leading into the upper part of its interior, of a longitudinally extending burner in the medial plane of the body arranged to discharge obliquely and laterally outward against the upper surface of the bottom; whereby the products of combustion ejected through said passages cause influx of air through said inlet, cooling the top and heating the entering air.

2. The combination with a hollow sad iron body having on each side a longitudinal slot leading obliquely upward from its bottom through its lateral wall, of a vapor burner arranged longitudinally within the body to discharge obliquely outward against its bottom; whereby the products of combustion and air are ejected near the bottom and directed away from the article being ironed.

3. The combination with a hollow sad iron body having an inlet near the top and an outlet near the bottom and further having its bottom portion projecting to some distance beyond the point of discharge, of a vapor burner arranged within the body to discharge against the bottom and through said outlet; whereby cold air is drawn in above, hot gases are discharged below, and the article being ironed is protected from the hot discharged products by the projecting bottom portion.

4. The combination with a hollow sad iron body having a cold air inlet above and upwardly and outwardly extending discharge openings at the lower part of its interior, of a vapor burner arranged within the body to discharge toward said openings, and a foraminous plate between the burner and inlet, dividing the interior of the body into an upper cold air compartment and a lower highly heated compartment; whereby the upper part of the apparatus is protected from heat by a constantly changing layer of relatively cold air.

5. The combination with an upwardly open hollow sad iron body having its upper portion laterally overhanging the part below, an air inlet at its top, lateral, upwardly-curved discharge openings at its bottom, and a base extending outward beyond said discharge openings, of a vapor burner in the longitudinal medial plane of the chamber and arranged to discharge obliquely outward against the bottom of the body, a foraminous plate horizontally dividing said chamber above the burner, a cover for the body, a heat insulating plate protecting the lower side of the cover, a heat insulating handle, and screws detachably fixing the handle, cover and plates to said body, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses on this 13th day of July 1908.

MARCUS LOUIS UDWIN.

Witnesses:

W. O. BREWSTER,
JOHN GRANT.