

M. SUNSHINE.

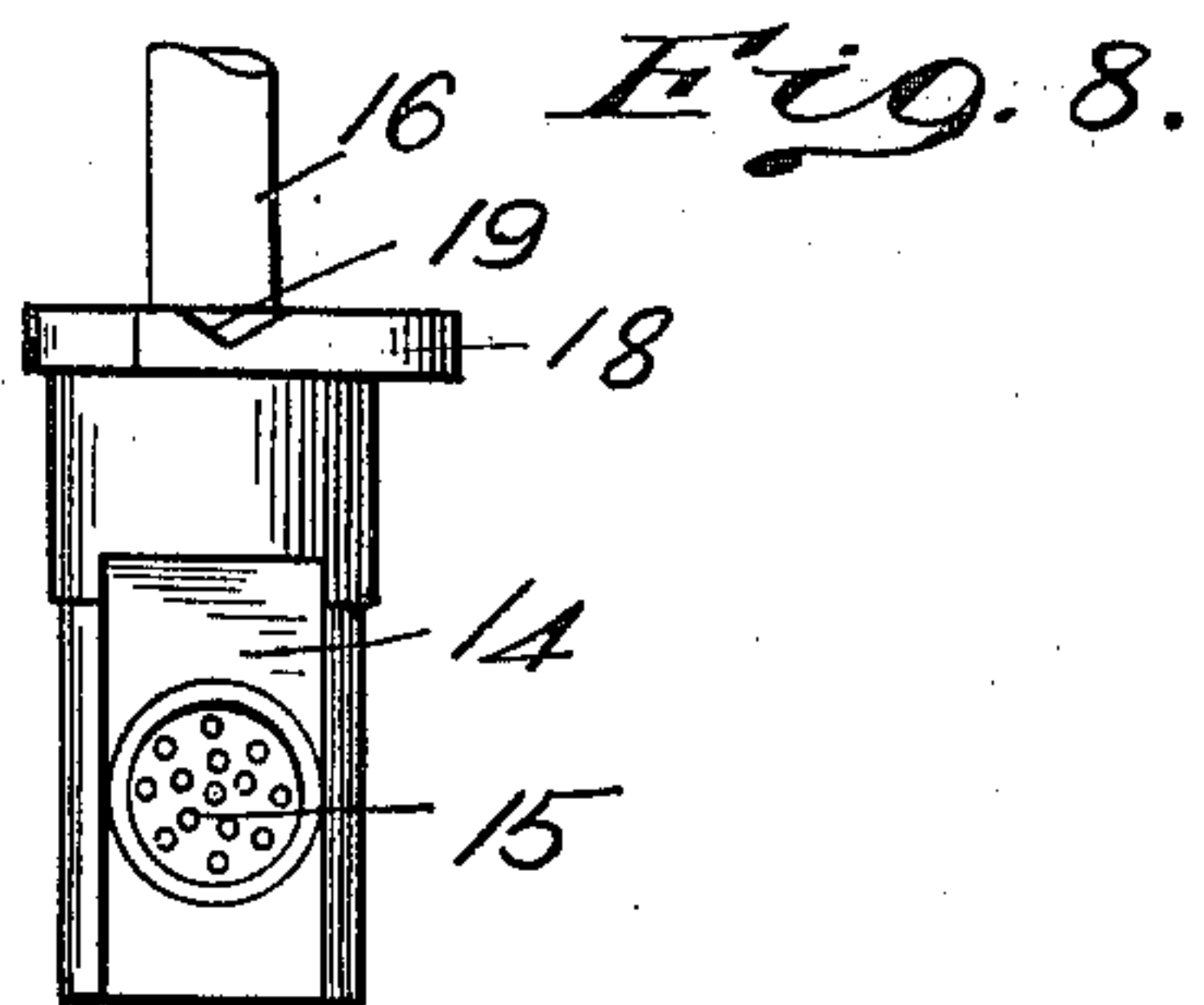
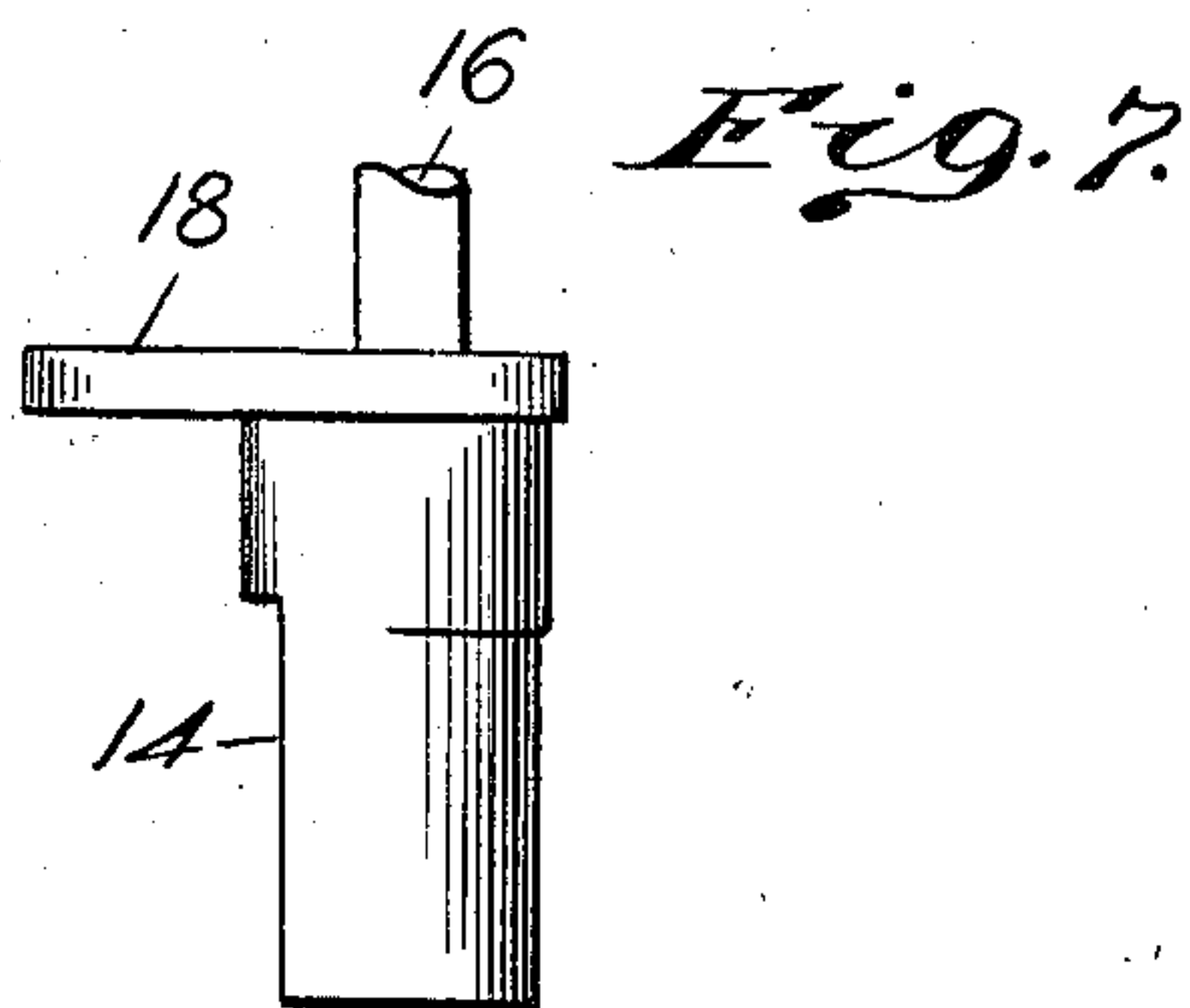
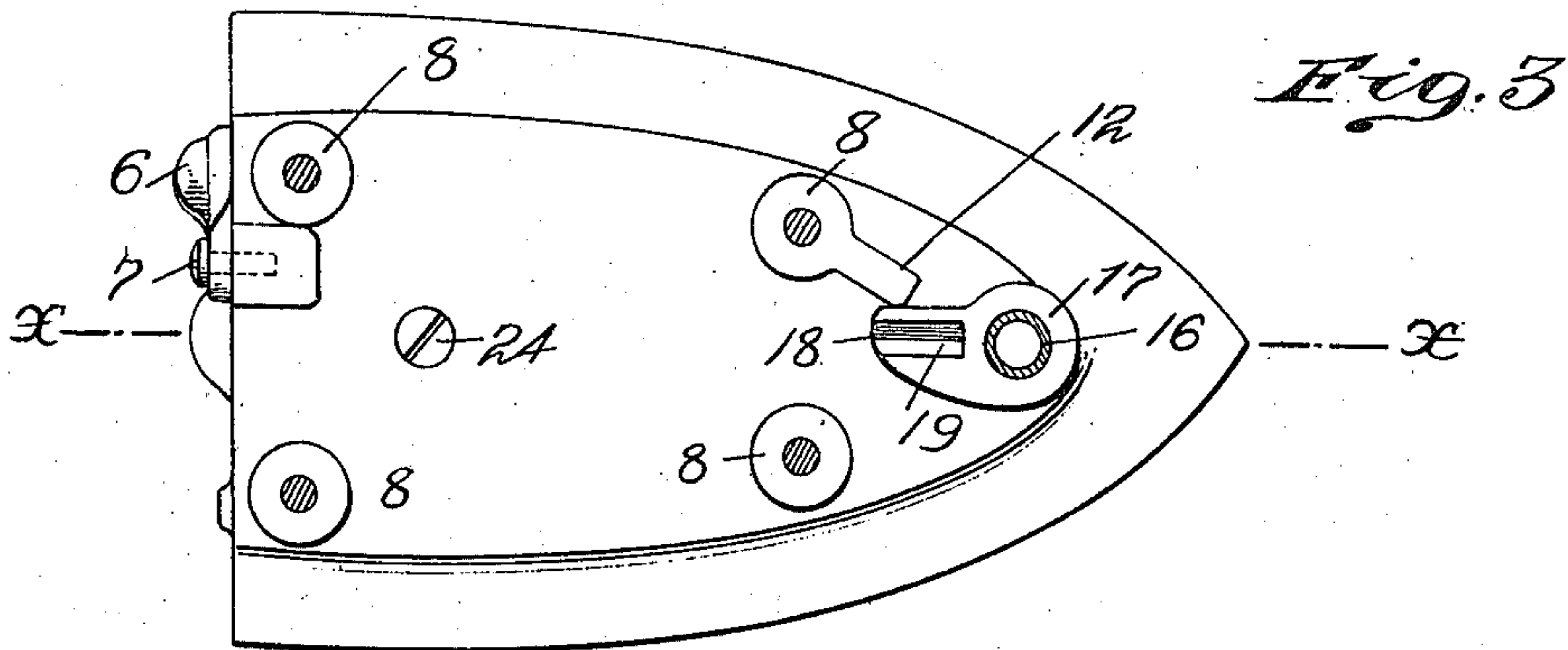
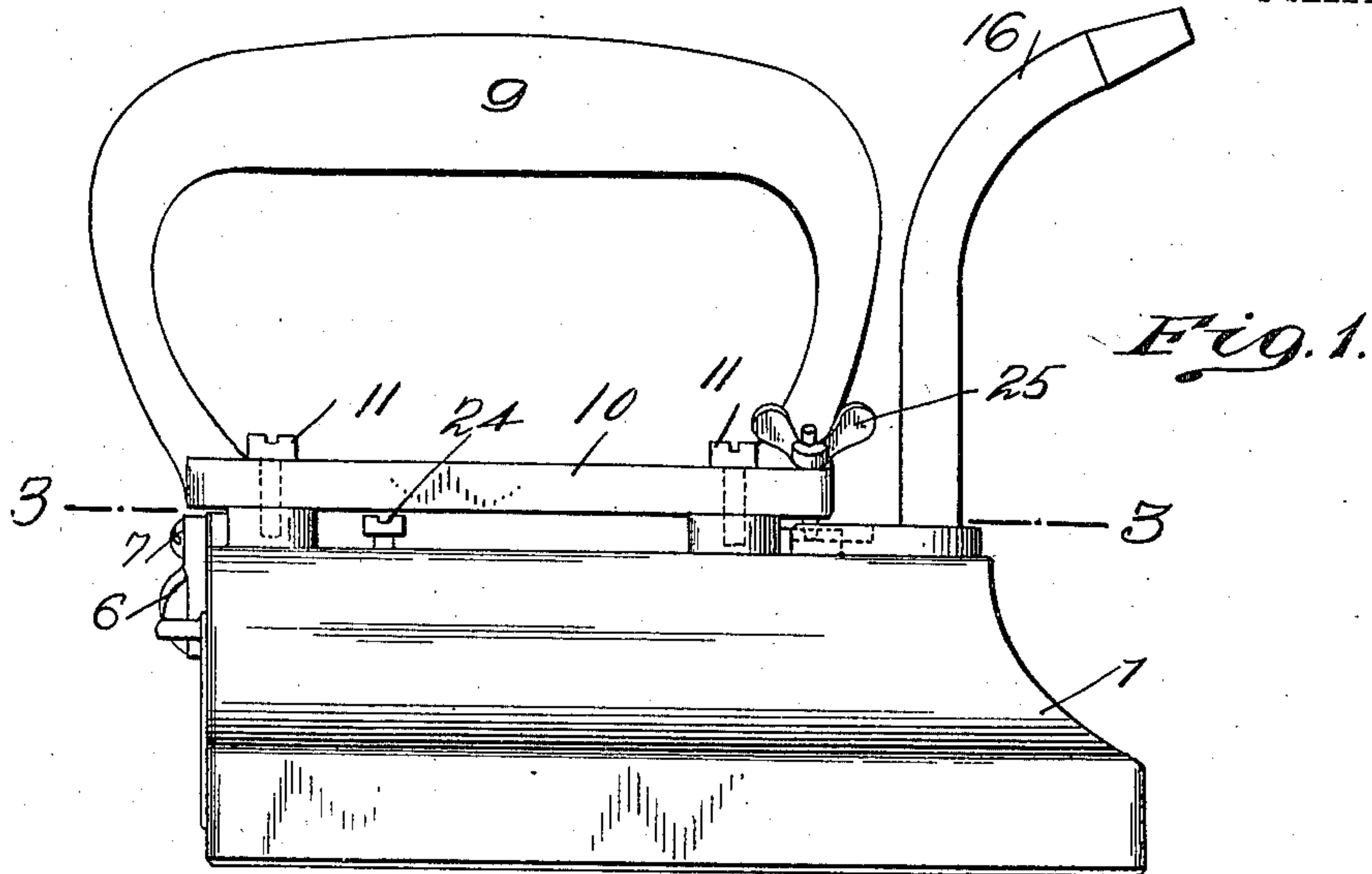
SAD IRON.

APPLICATION FILED AUG. 10, 1909.

963,093.

Patented July 5, 1910.

2 SHEETS—SHEET 1.



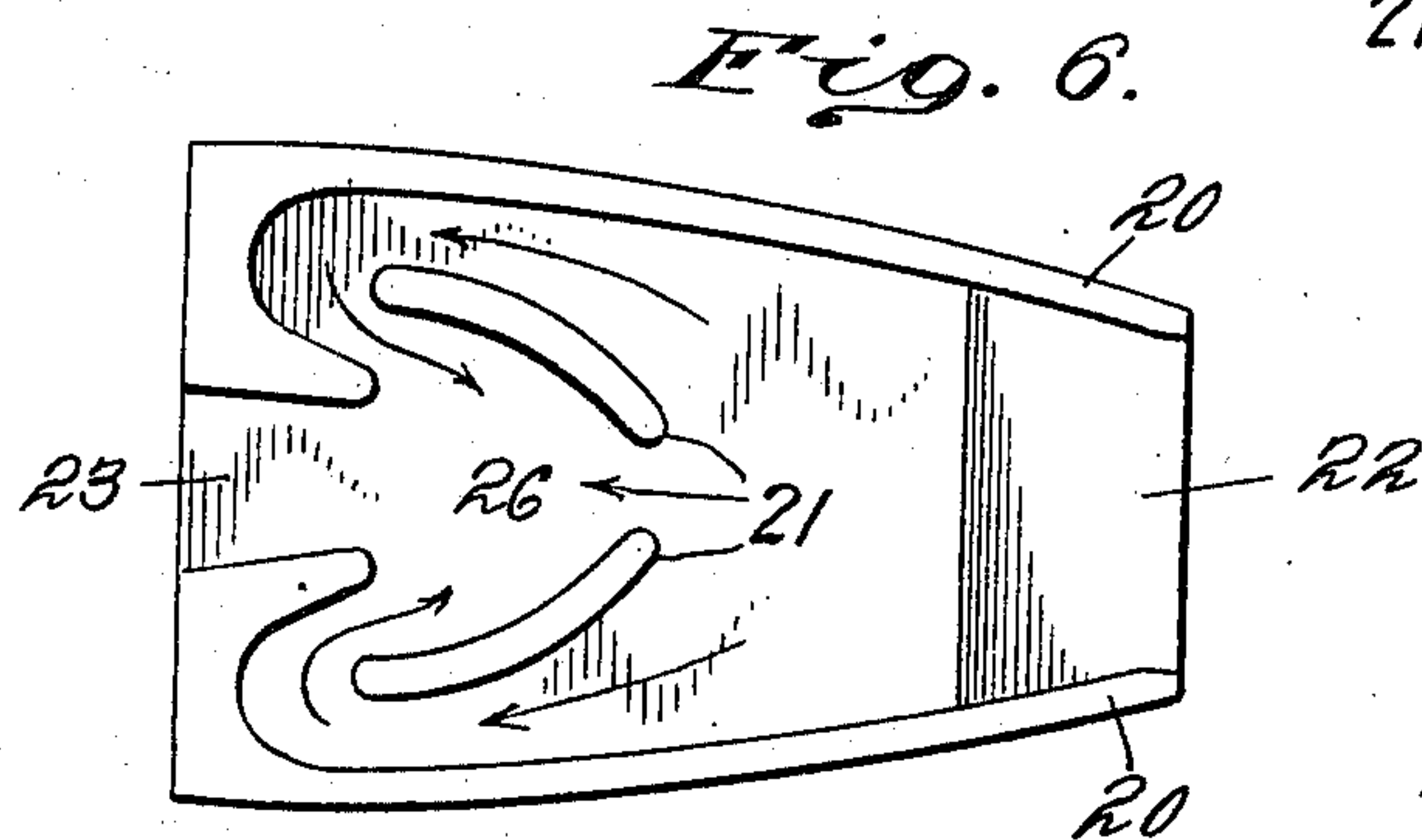
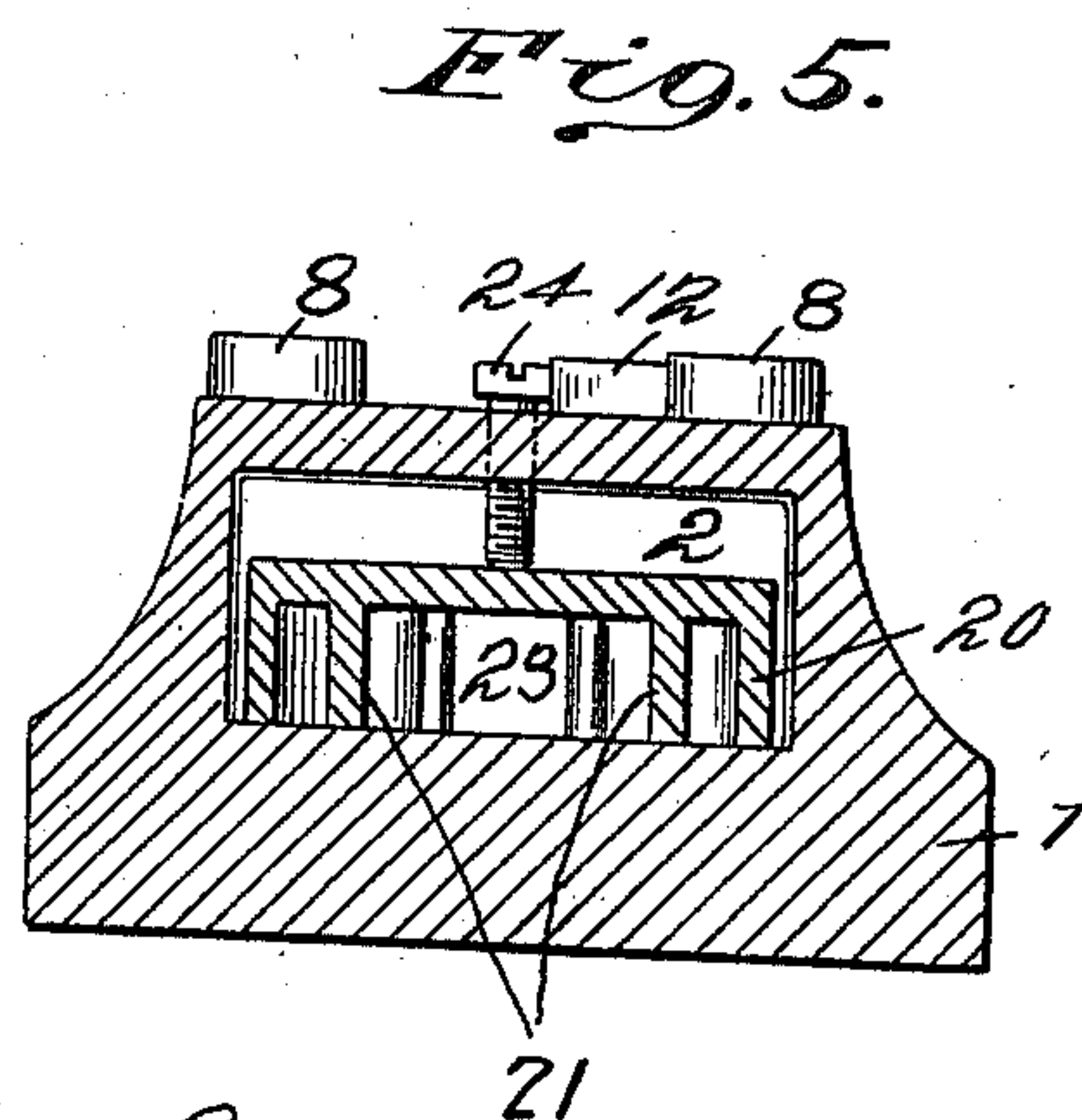
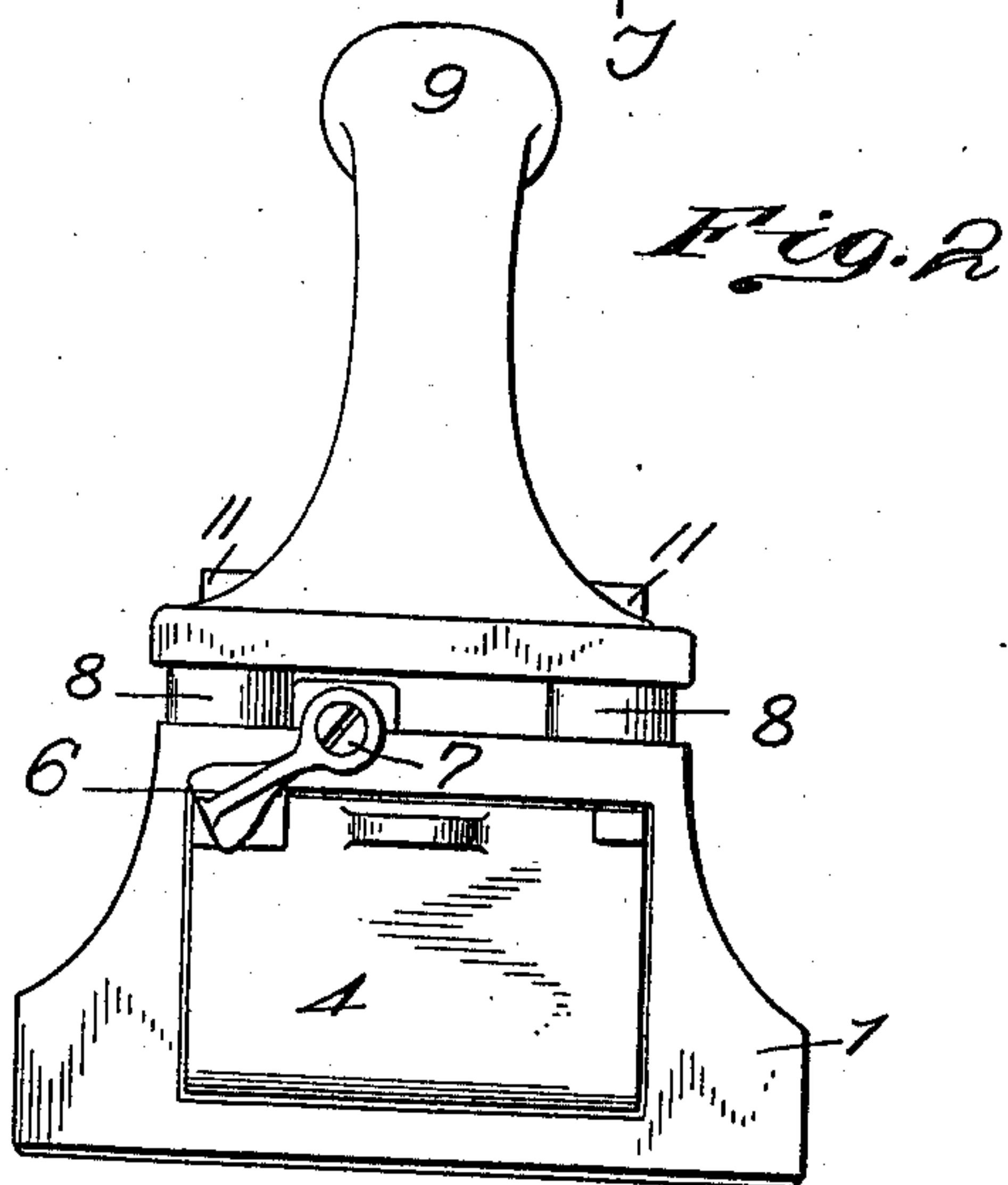
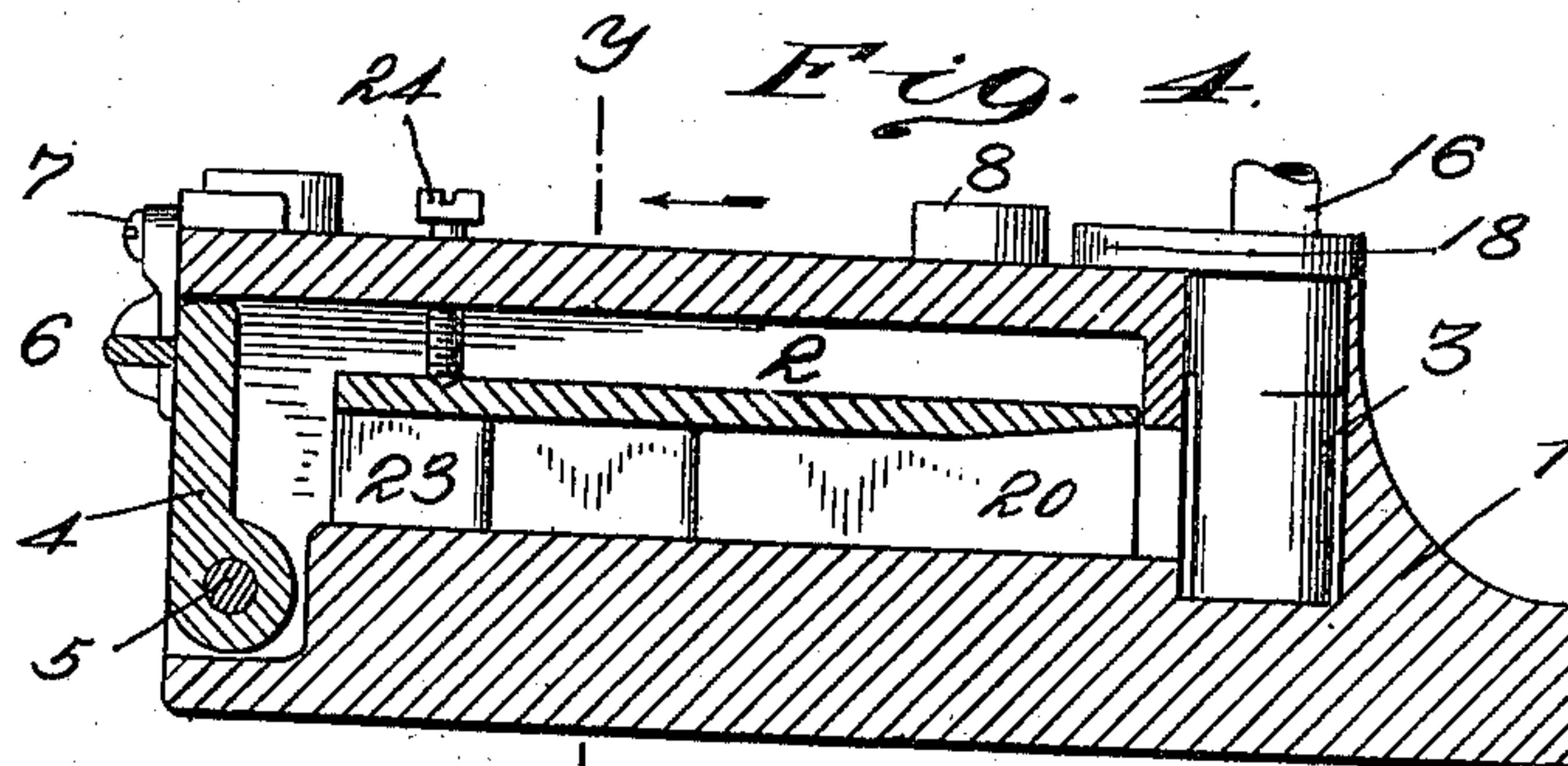
Witnesses:  
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*Adolph [unclear]*

Inventor  
*Monroe Sunshine*  
By his Attorneys  
*Dunwo [unclear]*

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SAD IRON.  
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2 SHEETS—SHEET 2.



Witnesses:  
*Harold Hebio*  
*Alfred G. Jones*

Inventor.  
*Manroe Sunshine*  
By *his* Attorneys  
*Sumner Turk*



# UNITED STATES PATENT OFFICE.

MONROE SUNSHINE, OF NEW YORK, N. Y.

SAD-IRON.

963,093.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed August 10, 1909. Serial No. 512,113.

*To all whom it may concern:*

Be it known that I, MONROE SUNSHINE, of the city, county, and State of New York, have invented certain new and useful Improvements in Sad-Irons, of which the following is a full, clear, and exact specification.

My invention relates to certain new and useful improvements in sad irons, and especially those provided with gas heating attachments, which operate to maintain the iron at the required temperature.

It has for its object the provision of means which will utilize the gas consumed to the best possible advantage, so that a minimum quantity may be used, and thus effect a maximum economy in the operation of the iron.

Another object is to provide an iron with a removable burner, which can be inserted and withdrawn therefrom with the least possible trouble and manipulation, and at the same time provide means whereby the burner shall always be inserted in the proper manner and be held firmly secured in place against removal or disturbance.

With these objects in view I have illustrated one form of my invention in the accompanying drawings, wherein—

Figure 1 is a side elevation of an iron with the burner in place. Fig. 2 is a rear elevation thereof, Fig. 3 is a top plan view of the iron with the handle and handle plate removed. Fig. 4 is a side sectional view, taken on lines  $x-x$  of Fig. 3, Fig. 5 is a cross-section on line  $y-y$  of Fig. 4. Fig. 6 is a plan of the under side of the heat distributing plate. Fig. 7 is a side elevation of the burner, and Fig. 8 is a face view thereof. Similar reference numerals indicate like parts in all the drawings.

As will be seen the iron proper is preferably formed of a metal casting 1 with a heat chamber, 2, and a burner recess, 3, communicating therewith, the heat chamber being open at the rear and provided with a hinged door or gate, 4, for closing the same. This door is shown hinged at 5, and a latch, 6, pivoted at 7 to the upper rear portion of the casting, is adapted to hold the door closed when the iron is in use. The said door 4 has a loose fit, as shown in Figs. 2 and 4, to permit the escape of the products of combustion.

Upon the upper face of the casting projecting bosses, 8, 8, 8, 8 are formed, and a handle 9 formed integral with the handle plate, 10, is adapted to be secured in place upon the bosses by bolts, 11, 11, 11, 11, which pass through apertures in the handle plate, and are adapted to screw into threaded recesses in the said bosses, 8, 8, 8, 8. A lug or stop 12, is also formed upon the top of said iron, for instance, as shown in Fig. 3, as an extension of one of the bosses, which lug serves to limit the rotation of the burner as will be hereinafter described.

The handle and handle plate are mounted upon the studs in order to remove the same as far as possible from the heat of the iron, and to prevent the handle from absorbing the heat generated, and the air space between the upper surface of the iron and the handle plate permits the passage of air which also tends to keep the handle cool.

The burner, 13, may be of any desired type, but I prefer to use a plug burner, such as that indicated in Figs. 7 and 8, which consists generally in a short, hollow cylinder or plug, having a flat segment, 14, provided with a gas aperture, which latter is covered with a wire gauze or screen, 15, to serve as a flame shield, according to the principle of the well known Davey lamp.

The burner is provided with a hollow stem or supply pipe, 16, through which the gas passes, and also with a flange, 17, having a projection, 18, and this flange is preferably provided with a shallow recess or slot, 19, for the purposes hereinafter described. The burner is of such a size as to fit snugly within the burner recess 3, in the iron, and the pipe, 16, is of such diameter as will supply the necessary amount of combustible gases. Any suitable means, such as a rubber hose or the like, may be utilized for connecting the iron with the gas supply.

Within the gas chamber, 2, I provide a heat distributor or gas deflector, which consists of a plate having downwardly extending flanges, 20, 20 and 21, 21, the former being located generally along the sides of said plate, serving as heat inclosures, and form a combustion chamber, while the latter are located as shown, and within the outer ones. The heat distributor is entirely open at the bottom and at the forward end, 22, and at the rear at an opening 23, is pro-



vided to enable the operator to examine the flame while the iron is in operation. The heat distributor is readily removable from the combustion chamber, and is held in place therein by a set screw, 24, passing through the top of the iron and bearing upon the surface of the heat distributor, as shown in Fig. 4.

The forward edge of the handle plate, 10, projects somewhat beyond the bosses 8, 8, as shown in Fig. 1, and a set screw, 25, is threaded into an aperture therein, and is adapted to engage the slot, 19, of the burner flange, 18, when the latter is in place, and thus serves to hold the burner firmly in the proper position when it is inserted in the burner recess.

The operation of the device will be readily understood from the foregoing. When the iron is desired for use, all that is necessary is to insert the burner in the burner recess, turning the same at right angles to the position shown in Fig. 1. A quarter turn of the burner then will bring the flange, 18, under the forward extension of the handle plate and against the lug, 12, and the said screw, 25, can then enter the slot, 19, and hold the burner firmly in place. To remove the burner the foregoing operations are simply reversed, and thus I have provided a very simple and effective and quickly operable means of securing the burner in place.

While I prefer to use a lug, 12, for limiting the rotation of the burner in the iron it is evident that it may be dispensed with, and the set screw alone used for holding the burner in the proper position. If the lug is dispensed with, it is preferable to employ the slotted flange, but this also is not essential, as the set screw can be used alone to hold the flange and the burner in place.

As shown in Fig. 7, the flange, 18, and burner segment, 14, are arranged practically in alinement, and when the burner is in place the gases emitted through the screen, 15, and ignited are projected into the combustion chamber under pressure. A certain amount of these gases are forced between the central flanges 21, 21 as indicated by the arrows, but a portion of the gases are also deflected outside the flanges, 21, and so back into the space, 26, where they meet the incoming gases through the center aperture, and by this arrangement I obtain a very complete distribution of the burning gas through the combustion chamber, and practically prevent any from being forced back through the passage, 23, which is therefore always accessible to the eye of the user, and enables him by merely opening the door, 4, to ascertain at any time while the iron is in use, the exact condition of the flame therein.

It is obvious that many modifications and changes may be made in my invention with-

out departing from the spirit thereof, and I therefore do not limit myself to the specific construction shown, but

What I claim and desire to secure by Letters Patent is:

1. The combination with a sad iron having a heat chamber, a burner recess communicating therewith, and a positioning stop or lug, of a rotatable and removable burner provided with a gas vent and a positioning flange adapted to contact with the stop on the iron when the gas vent registers with the opening between the heat chamber and burner recess. 70 75

2. The combination with a sad iron having a heat chamber, a burner recess communicating therewith, and a positioning stop or lug, of a rotatable and removable burner provided with a gas vent, and a positioning flange adapted to contact with the stop on the iron when the vent registers with the opening between the heat chamber and burner recess, and means for holding the flange against said stop. 80 85

3. A sad iron having a heat chamber, a burner recess communicating therewith, a handle and handle plate, a removable cylindrical burner, having a gas vent and a positioning flange, adapted to be rotated in said burner recess, the flange being so arranged as to lie underneath the handle plate when the burner vent registers with the communication between the heat chamber and burner recess, and adapted to be rotated from under said handle plate to enable the burner to be removed, and releasable means on the plate cooperating with said flange to secure the burner against rotation. 90 95 100

4. A sad iron having a heat chamber, a burner recess and a communication therebetween, a stop lug on said iron, a handle plate connected to said iron and a handle attached to said plate, a removable cylindrical burner, adapted to rotate in said burner recess, and having a gas vent and a positioning flange, the said flange being adapted to contact with the lug on the iron when the gas vent of the burner registers with the communication between the heat chamber and the burner recess, and a set screw on said iron, cooperating with the positioning flange to hold the parts in position. 105 110 115

5. A sad iron provided with a heat chamber, a burner adapted to supply gas thereto, and a heat distributing plate, having directing flanges depending from said plate to the bottom of the iron and in contact with the bottom adapted to divide the flow of gas from the burner, and deflect it upon itself, so as to obtain a uniform distribution throughout the iron. 120 125

6. A sad iron provided with a heat chamber, a burner adapted to supply gas thereto, and a heat distributor consisting of a plate adapted to deflect the gases downward, said 130



distributor being provided with external flanges along the sides thereof, and having interior deflecting flanges depending from said plate to the bottom of the iron for dividing the incoming gas and deflecting it upon itself for the purposes specified.

7. A sad iron provided with a heat chamber, a burner adapted to supply gas thereto, and a heat distributor consisting of a plate adapted to deflect the gases downward, said distributor being provided with external flanges along the sides thereof, and having interior deflecting flanges extending from said plate to the bottom of the iron for dividing the incoming gas and deflecting it upon itself, and an opening at the rear to permit examination of the flame.

8. A sad iron provided with a heat chamber, a burner adapted to supply gas thereto, and a heat distributor consisting of a plate adapted to deflect the gases downward, said distributor being provided with depending external flanges along the sides thereof, and having interior depending deflecting flanges for dividing the incoming gas and deflecting it upon itself, and an opening at the rear to

permit examination of the flame, for the purposes specified.

9. A sad iron provided with a heat chamber, a burner adapted to supply gas thereto, a heat-distributor consisting of a plate closed at the top and having a gas entrance at the front, said heat distributor also having separated interior deflecting flanges and side-walls, said flanges being situated in the path of the flame and depending from the heat-distributing-plate to the bottom of the iron and adapted to divide the incoming gas and direct it against the side walls, and said side walls having their rear portions formed with a return bend to direct said divided flow of gas forward, a rear opening and a partial closure therefor and for permitting the escape of the gases.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MONROE SUNSHINE.

Witnesses:

ADOLPH F. DINSE,  
HARRY C. HEBIG.