Jan. 27, 1942. S. DOWINSKY 2,271,289

PRESSING IRON

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Fig. 1.

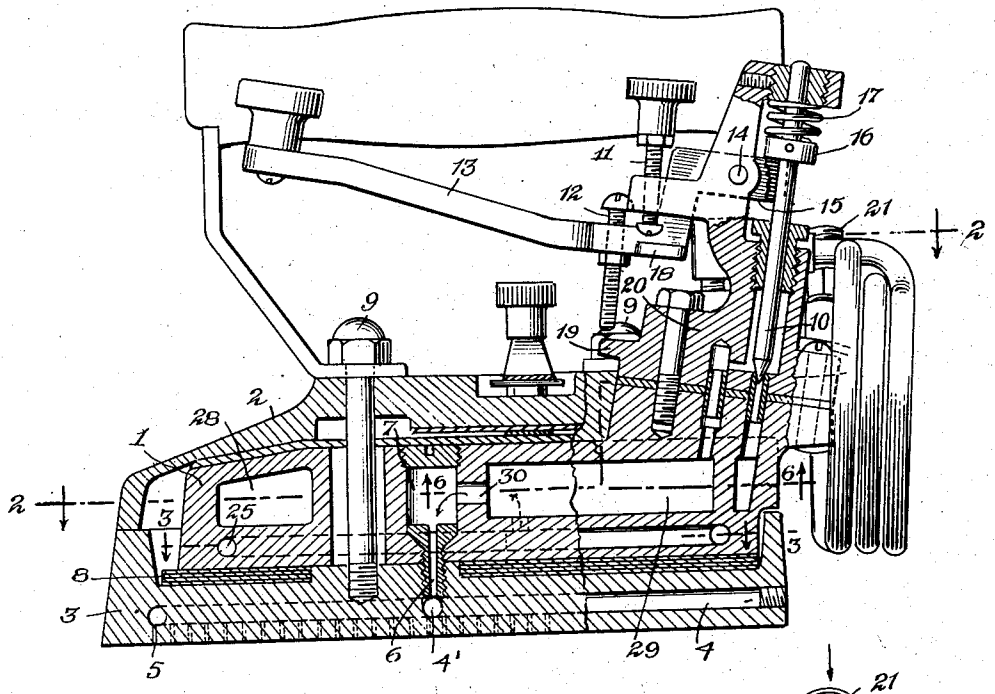
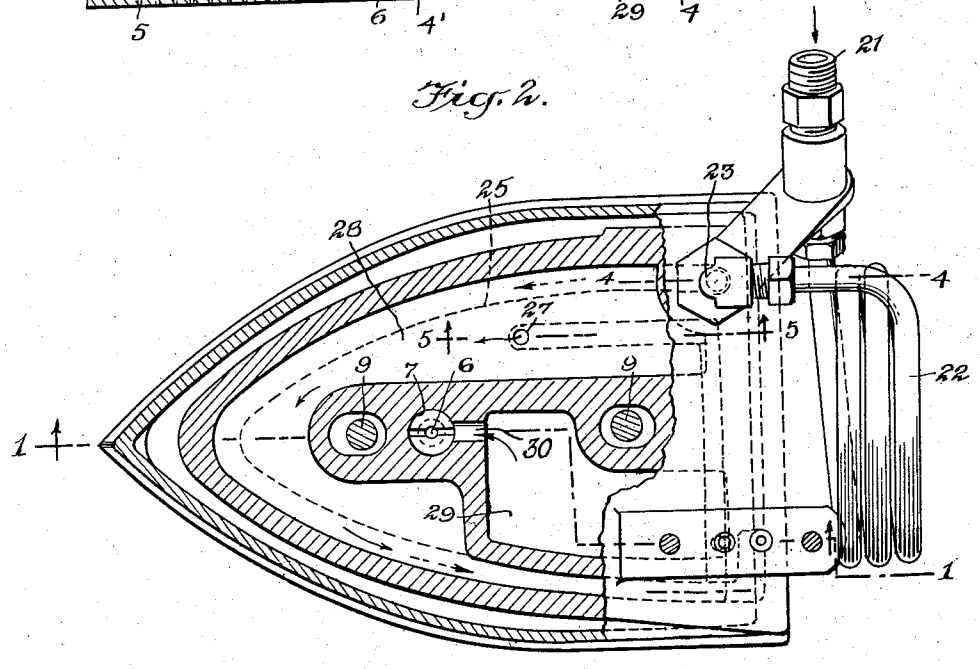


Fig. 2.



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Fig. 3.

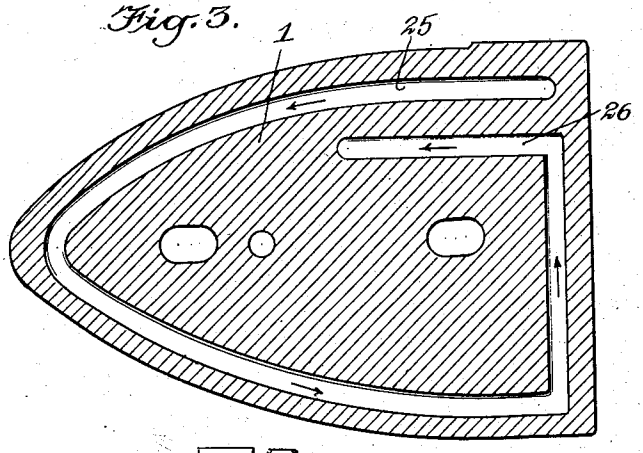


Fig. 4.

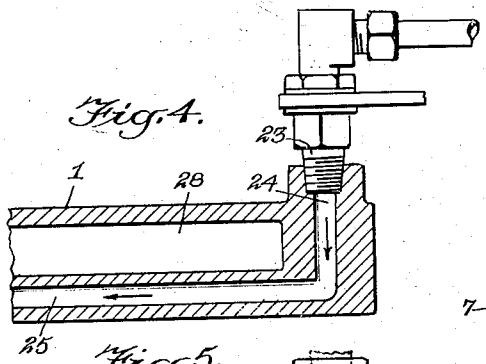


Fig. 5.

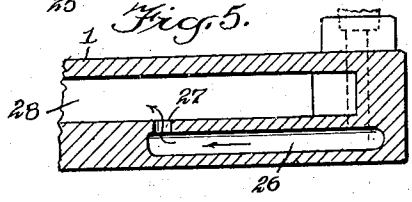


Fig. 6.

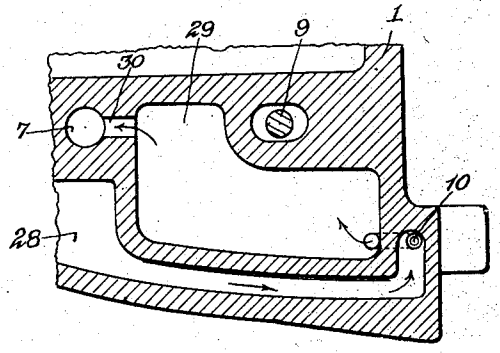
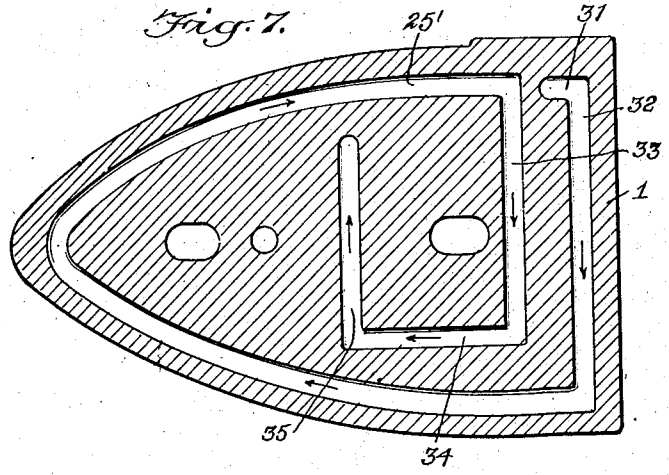


Fig. 7.



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2,271,289

PRESSING IRON

Samuel Dowinsky, New York, N. Y.

Application October 2, 1940, Serial No. 359,386

3 Claims. (Cl. 38—77)

This invention relates to pressing irons and particularly to an improvement over my prior Patent No. 2,123,002 and my pending application Serial No. 251,683, an object of the invention being to provide an improved steam-heating block wherein a low grade steam or water may be led into the block and discharged as superheated steam.

Another object of the invention is to provide a steam-heating block formed from a single casting and provided with a plurality of steam-heating chambers in one plane and steam-heating passageways in a parallel plane with ports connecting these chambers and passageways so that water or steam entering at one point will follow in successive order and be discharged at another point.

A further object of the invention is to provide an improved arrangement of valves and valve control for controlling the passage of steam from one steam-heating chamber to another.

In the accompanying drawings—

Fig. 1 is a vertical sectional view through an iron disclosing an embodiment of the invention, the same being taken on the line 1—1 of Fig. 2;

Fig. 2 is a sectional view through Fig. 1 approximately on the line 2—2;

Fig. 3 is a fragmentary sectional view through Fig. 1 on the line 3—3, the same showing the arrangement of the steam-heating passageways embodying certain features of the invention;

Fig. 4 is a fragmentary sectional view through Fig. 2 approximately on the line 4—4;

Fig. 5 is a fragmentary sectional view through Fig. 2 on the line 5—5;

Fig. 6 is a fragmentary sectional view through Fig. 1, approximately on the line 6—6;

Fig. 7 is a view similar to Fig. 3 but showing a slightly modified arrangement of passageways.

Referring to the accompanying drawings by numerals, 1 indicates a block which is a metal casting and may be cast of different kinds of metal, as for instance, aluminum, iron, and the like. This block is arranged in a casing 2 which is identical with that disclosed in my pending application above referred to. Arranged below the block 1 is a base 3, also identical with that shown in my prior pending application. The base 3 is provided with superheating chambers 4 having outlets 5. A tubular threaded member 6 provides communication between the passageway 7 and a transverse superheating chamber 4' which distributes steam to the various chambers 4. The construction just described in regard to base 3, together with the electric heater 8, is disclosed in my prior application above mentioned.

The block 1 is clamped in place by the respective bolts 9 and constitutes the invention in connection with the valve 10. The hand adjusting members 11 and 12 are adapted to adjust or control the action of the hand lever 13. It will be observed that when the lever 13 is depressed it will swing on its pivot 14 and the end 15 will raise the stop or abutment 16 and compress the spring 17. This will open valve 10 more or less according to the movement of the lever 13. In case it should be desired to hold valve 10 open constantly to either a large or a small extent, member 11 would be screwed down until it presses against the shoulder 18 and thereby swings lever 13 a desired distance to hold the valve 10 open. The screw or member 12 is adapted to strike a shoulder 19 on a casting 20 and limit the downward swinging movement of lever 13. Usually this is used only when the member 11 is not employed.

From Figs. 1 and 2 it will be observed that water from any desired source is adapted to pass into the pipe 21, through the coil pipe 22, and thence through a tubular fitting 23 into the inlet port 24, as shown in Fig. 4. As the coil pipe 22 is near the remaining part of the iron, water passing through this coil will become heated and may even be converted into a low quality or grade of steam. Consequently, hot water or low grade steam is discharged into the inlet port 24. The inlet port 24 merges into a tubular passageway 25 which extends around the edge of the casting or block 1 near the perimeter. This passageway, as shown in Fig. 3, extends near one side across the front, near the other side across the back and merges into a right-angled portion 26 which, in turn, merges into an outlet port 27, as shown in Fig. 7. The passageway 25, as well as the ports 24 and 27, are preferably formed by coring when the block 1 is cast, but if desired the block could be cast around tubes or certain portions of the passageways could be drilled and the outer parts closed with plugs. Preferably, however, the passageways are cast and usually after the sand is removed the passageways are more or less rough. This provides an increased surface contacting with the steam for more quickly heating the same. The steam from the passageway 25 is discharged through the port 27 into the first steam-heating chamber 28 where it is further heated and then passes through the valve structure 10 into the second steam-heating

chamber 29. A passageway 30 extends from chamber 29 to the passageway 7, whereby any steam in the superheating chamber 29 may quickly flow into the superheating chambers 4 and 4' and then be discharged through the outlet jets or passages 5.

It will be observed that the block 1 is cast in one piece and that all the chambers or passageways therein are formed in this casting so that as the electric heater 8 functions block 1 will be heated and, in turn, will provide the desired heat for the steam as it passes from one chamber to the other. It will be noted that the steam accumulates in passageway 25 and the heating chamber 28 and is allowed in chamber 29 only intermittently unless valve 10 is held open.

In Fig. 7 a slightly modified form of block 1' is disclosed. This block is identical with block 1 except for the passage 25', which is provided with a slight offset 31 in the rear passageway 32, and instead of the passageway 26 there is provided a second rear passageway 33, which merges into a side passageway 34 and a transverse passageway 35. The outlet end of passageway 35 has an outlet port similar to port 27 shown in Fig. 5 and thereby discharges into the chamber 28. This provides a greater or rather longer path for the flow of steam and, consequently, permits the steam to absorb more of the heat units before the stream is discharged into the heating chamber 28.

I claim:

1. A pressing iron including a base having superheating chambers therein and having discharge orifices in the bottom of the iron leading from said superheating chambers, a block fixed in said base having a first heating chamber, a second heating chamber, said first and second heating chambers extending substantially throughout said block in the same plane, and a primary heating passageway below said heating chambers, said passageway extending near each side edge of the block, across the back of the block, and to a point below the first heating chamber, an auxiliary passageway extending from one end of the first-mentioned passageway to said first heating chamber, a manually operated valve controlling communication between said first heating chamber and said second heating chamber, means for supplying low grade steam to said first-mentioned passageway, said block and said base having communicating passages therein connecting said second heating chamber with the superheating chambers in the base, and an electric heating element in the base below said block serving to heat both the base and the block.

2. In a pressing iron, a steam heating block comprising a casting having first and second steam heating chambers in the same plane, valved means controlling communication between said chambers, an inlet port leading from a point on the surface of the casting to a point below the plane of said chambers, a steam heating tubular passageway having its inlet end merging into said inlet port, said passageway being in a plane parallel to but below the plane of said chambers and adjacent the sides, front and rear edges of the block, said passageway following the general outline of the block with the discharge end portion extending at right angles to the rear edge of the block, said end portion having a section extending parallel to said inlet port, said section opening into said first steam heating chamber and an outlet passageway leading from said second steam heating chamber to the opposite surface to where said inlet port enters.

3. A pressing iron including a base having super-heating chambers therein and having discharge orifices in the bottom of the iron leading from said superheating chambers, a block fixed in said base having a first heating chamber, a second heating chamber, said first and second heating chambers extending substantially throughout said block in the same plane, and a primary heating passageway below said heating chambers, said passageway extending near each side edge of the block, across the back of the block, and to a point below the first heating chamber, an auxiliary passageway extending from one end of the first-mentioned passageway to said first heating chamber, a manually operated valve controlling communication between said first heating chamber and said second heating chamber, means for supplying low grade steam to said first-mentioned passageway, said block and said base having communicating passages therein connecting said second heating chamber with the superheating chambers in the base, and means to heat the base and the block.

SAMUEL DOWINSKY.