Feb. 23, 1965 W. DZIADULONIS ET AL 3,170,257

PORTABLE IRON

Filed Sept. 17, 1962 3 Sheets-Sheet 1

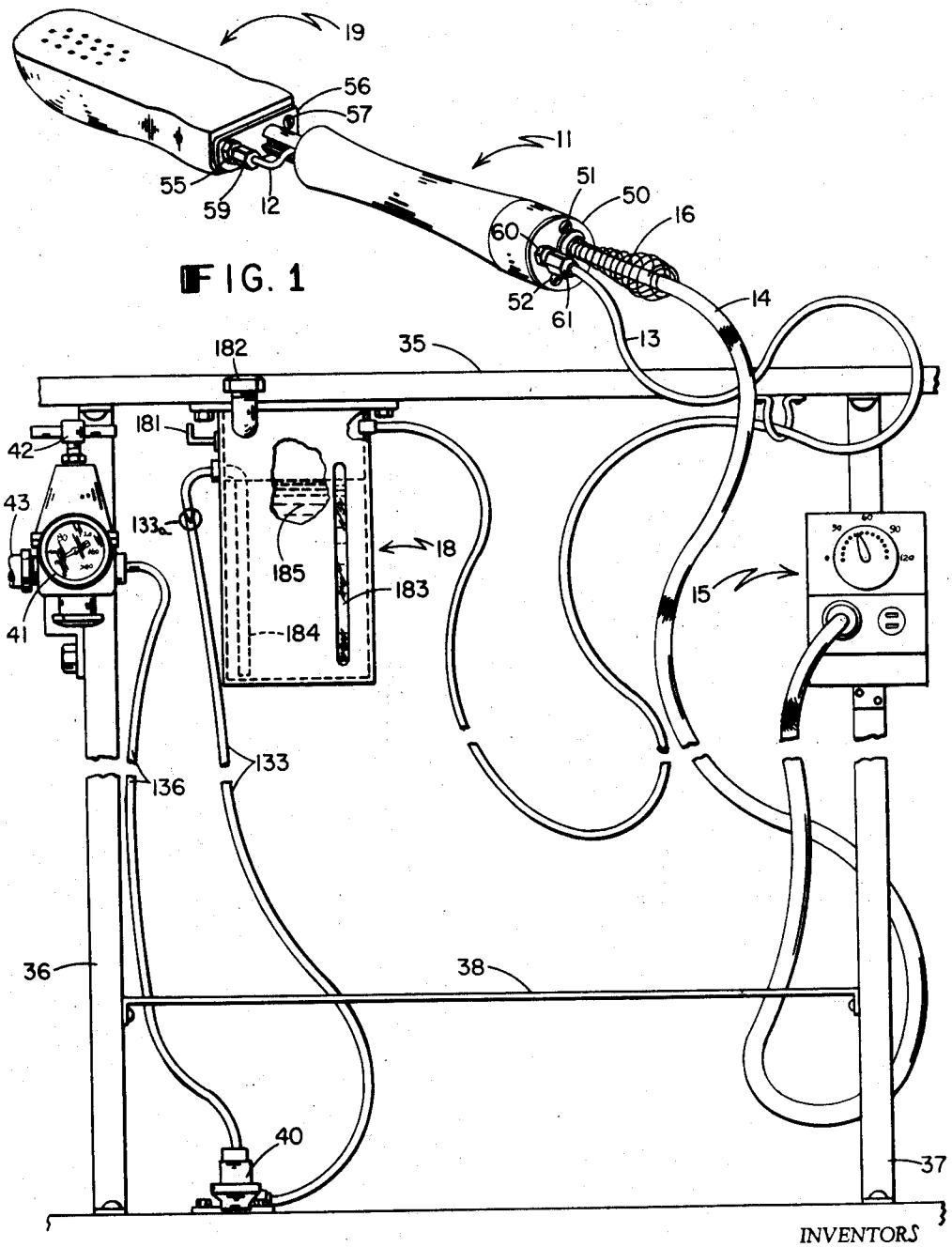


FIG. 1

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Filed Sept. 17, 1962 3 Sheets-Sheet 2

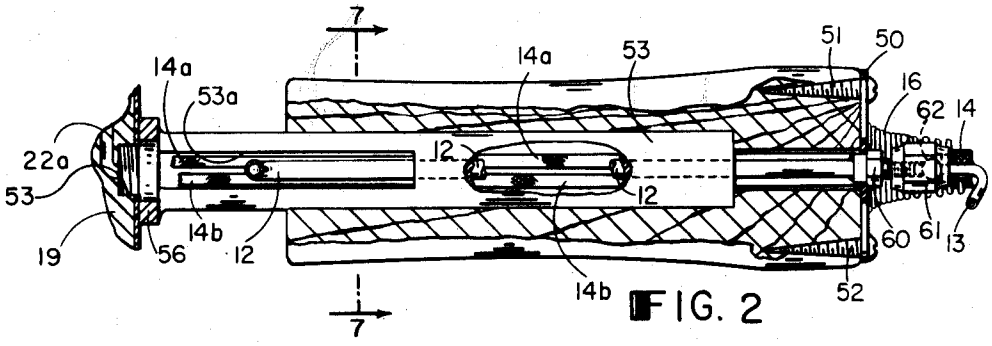


FIG. 2

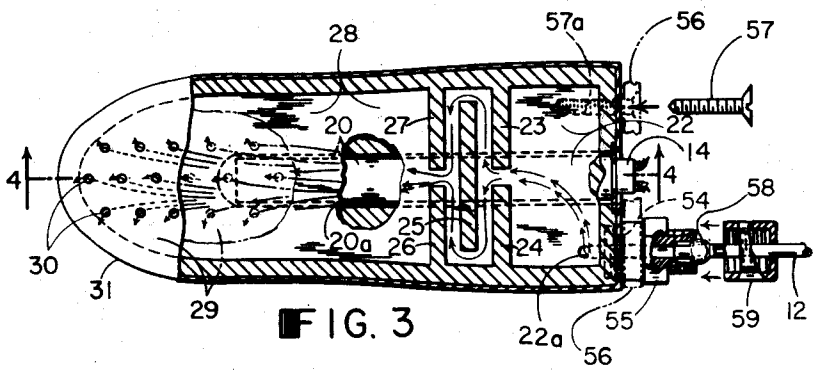


FIG. 3

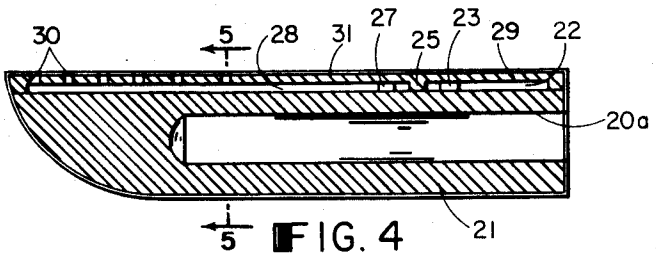


FIG. 4

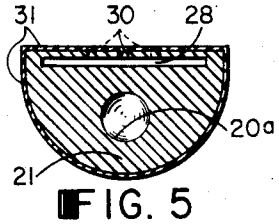


FIG. 5

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Feb. 23, 1965 W. DZIADULONIS ET AL 3,170,257

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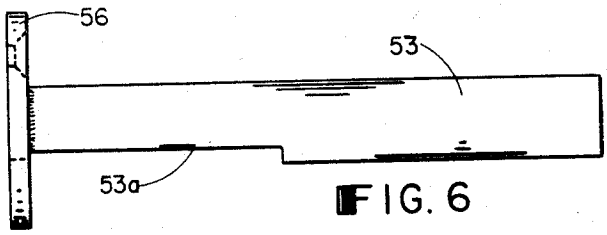


FIG. 6

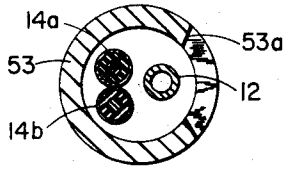


FIG. 7

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3,170,257

PORTABLE IRON

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Filed Sept. 17, 1962, Ser. No. 224,078
2 Claims. (Cl. 38—77)

This invention relates to a portable iron. In particular, it relates to a portable iron which can be used to apply heat and pressure to irregular or delicate surfaces, as for example, shoes.

One object of this invention is to provide a portable iron having a controllable amount of moisture.

A further object of this invention is to provide a portable steam iron suitable for delicate fabrics and materials in irregular forms.

Still another object of this invention is to provide a portable steam iron which can be used in the manufacture of shoes in an expeditious and safe manner.

Other objects and advantages of this invention will appear from the specification which follows and from the appended drawings of a preferred embodiment of this invention, wherein:

FIG. 1 is an assembly perspective view.

FIG. 2 is a side view, partially sectioned, of the handle.

FIG. 3 is a top view, partially sectioned, of the iron portion.

FIG. 4 is a section along line 4—4 of FIG. 3

FIG. 5 is a section along line 5—5 of FIG. 4.

FIG. 6 is a side view of a portion of the handle.

FIG. 7 is a section along line 7—7 of FIG. 2.

The invention comprises broadly a portable iron having a flexible supply line connected to a pressurized source of moist air and an electrical heating element. The ironing plate portion has perforations opening into a relatively shallow baffled chamber connected to the moist air supply line. The electrical and moist air supply lines are connected through the end of the handle and the entire surface of the ironing plate portion is coated with a smooth heat resistant plastic material, as for example, Teflon.

In the preferred form illustrated in the drawings, the invention comprises a handle, an aluminum ironing block attached to the handle, a conduit connected to the block through the handle and having an exterior flexible portion connected to a means for supplying moist air under pressure and an electrical heating element embedded in the block and connected by wires through the handle to an exterior flexible power supply line. The ironing block is characterized as having a flat plate portion with perforations opening into a relatively shallow chamber connected with the moist air conduit. Baffles are provided in the chamber between the perforated portion and the conduit portion and the entire block is covered with a layer of smooth heat resistant plastic.

Referring now to the drawings, the handle portion **11** is firmly attached to the ironing block **19** by means of a tubular bracket **53** having an offset portion for engagement with the wooden handle and a flange **56** attached by screw **57** to the ironing block **19**. The tubular portion **53** is provided with a slot **53***a* for insertion of the electrical wires **14***a* and **14***b* and also a relatively rigid conduit **12** which enters the ironing block through the flange **56** and is attached by the threaded coupling of receiving member **55** and nut **59**. The relatively stiff conduit is arranged so that it is bent into the slot **53***a* and out through the rear of tube **53** to a threaded coupling **60** and **61** at the end of the handle.

At the end of the handle is a plate **50** which is attached by screws **51** and **52** to the handle **11** and has a center

orifice registering with a drilled out portion extending to the tubular portion **53**. Attached to the plate **50** by the couplings **60** and **61** is a flexible conduit **13**. Also attached to plate **50** is a hollow spring **16** through which runs the insulated electrical supply line **14**.

The flexible conduit **13** is connected to one side of a vessel **18**. The vessel **18** is provided with water **185** whose level can be observed through window **183**. The connection of conduit **13** is above the water level as is also a safety valve **181**. Compressed air from a supply not shown is fed to the inlet **43** of a valve **42** having a pressure dial **41**. The valve **42** is connected by a line **136** to a foot pedal **40** and thence through line **133** and check valve **133***a* into vessel **18** below the water level. Vessel **18** and valve assembly **42** are supported on a frame **35** having legs **36** and **37**. On leg **37** is also supported an electrical supply **15** having a controllable voltage and to which is connected the flexible electrical supply line **14**.

The ironing block **19** comprises a flat plate **29** having perforations **30**. This plate has downward projections so that when attached to the block portion **21** it forms with projections **23** through **27** a baffled chamber connecting with front chamber **28** and rear chamber **22**. The chamber **22** is connected to the conduit **12** leading to the moist pressurized air supply line **13**.

The block portion **21** has a portion removed to form a cavity **20***a* in which the electrical heating element **20** is inserted. The back end of the electrical heating element is connected to conductors **14***a* and **14***b*. The entire surface of the block is covered with a heat resistant smooth surface plastic **31**.

In operating this invention the valve **42** is set so as to regulate the air pressure at a selected pressure, e.g., approximately 30 lbs. per square inch. The voltage of the electrical supply is regulated to provide the desired amount of heat. By operation of the foot pedal **40**, the desired amount of moist air is admitted to the heating block as may be required. By means of the wide controllability of both the heat and moisture that is supplied to the surface to be pressed, and because of the portability and flexibility of the ironing device, itself, it is possible with this invention to rapidly press irregular surfaces such as shoes or delicate fabrics without damage to the material.

While the preferred embodiment of this invention has been described in detail, the invention is not to be limited to the particular construction set forth, since various changes in the form proportions, arrangement of parts and details of construction may be resorted to without departing from the spirit and scope of the invention or destroying any of the advantages contained in the same, heretofore described and defined in the following claims.

We claim:

1. A portable iron, comprising a handle, an ironing block attached to said handle, a source of moist air under pressure, a flexible conduit connected between said source and said handle, a flexible electrical supply line connected to said handle and a power supply; said block comprising a relatively shallow interior chamber, a perforated ironing plate adjacent said chamber and an electrical heating element in said block; means being provided to connect said chamber through said handle to said conduit; means being provided to connect said electrical heating element through said handle to said supply line; said chamber including a baffled portion between the perforated portion of said ironing plate and said means for connecting said conduit; said entire block being covered with a layer of smooth, heat resistant plastic.

2. A portable iron, comprising a handle, an ironing block attached to said handle, a source of moist air under pressure, a flexible conduit connected between said source

and said handle, a flexible electrical supply line connected to said handle and a power supply; said block comprising a relatively shallow interior chamber, a perforated ironing plate adjacent said chamber and an electrical heating element in said block; means being provided to connect said chamber through said handle to said conduit; and means being also provided to connect said electrical heating element through said handle to said supply line; a slotted rigid tubular member attaching said iron block and handle together, said tubular member having a flange on one end and surrounding both the means for connecting said conduit with said chamber and the means for connecting said electrical heating element through said handle to said supply line.

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