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ELECTRICALLY HEATED PAINT AND PAPER SOFTENING TOOL

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Fig. 3

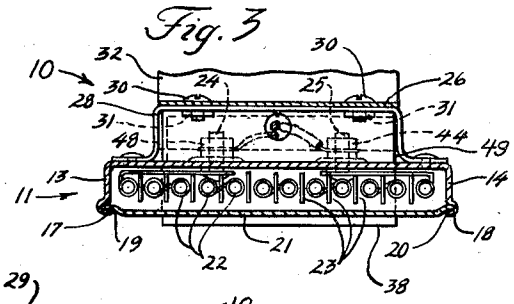


Fig. 1

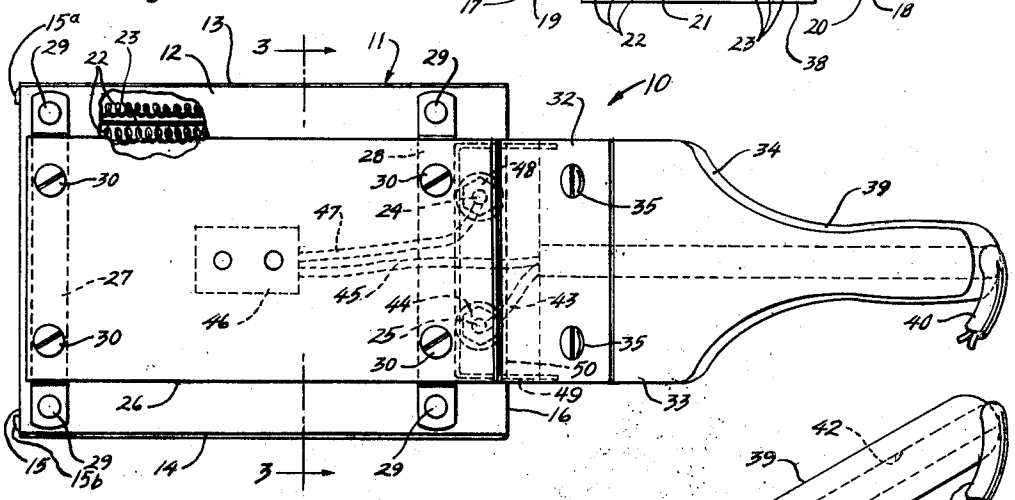


Fig. 2

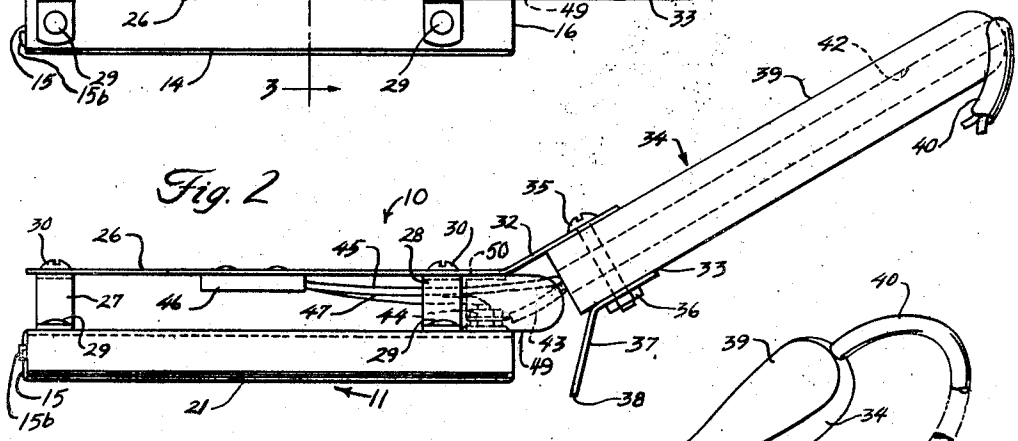
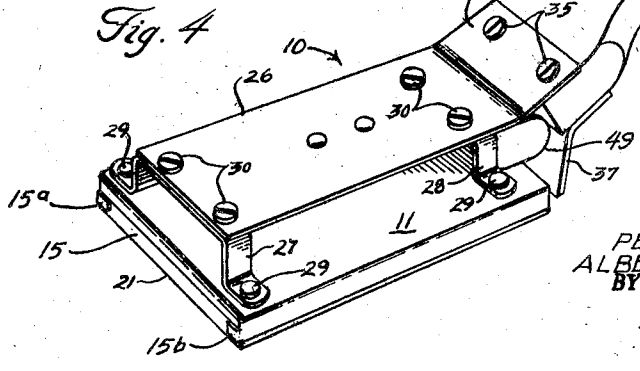


Fig. 4



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ELECTRICALLY HEATED PAINT AND PAPER SOFTENING TOOL

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6 Claims. (Cl. 219—21)

1

This invention relates to devices for softening paint or paper upon previously painted and papered surfaces, and more particularly to a portable tool having an electrically-heated flat surface for radiating heat upon the paint to be softened.

One object of this invention is to provide a device of the above nature which includes a baffle for shielding the operator from the radiant heat generated by the device.

Another object is to provide a device of the above nature having means for spacing the device a predetermined distance from the paint or paper to be softened.

Another object is to provide a device of the above nature in which the temperature will be controlled by a thermostatic switch which is so arranged that substantially the same degree of heat will be radiated against said switch and against the painted or papered surface.

A further object is to provide a device of the above nature which will be simple in construction, inexpensive to manufacture, easy to manipulate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawing one form in which the invention may conveniently be embodied in practice.

In the drawing,

Fig. 1 is a plan view, partly broken away, showing the improved paint and paper softening tool.

Fig. 2 is a side view of the same.

Fig. 3 is a cross sectional view, taken on the line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the tool.

Referring now to the drawing in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 generally indicates the improved tool, which comprises a shallow rectangular sheet metal casing 11 having a flat top wall 12, side walls 13, 14, and a rear end wall 16. The lower edges of the side walls 13, 14 are bent outwardly and then inwardly so as to provide inner grooves 17, 18 (Fig. 3), supporting upwardly offset edges 19, 20 of a slidable flat bottom plate 21 which serves as a closure for the casing 11.

The bottom plate 21 is provided with a vertical front wall 15 which serves as a closure for the

2

front of the casing 11 and which is engaged by a pair of ears 15a, 15b upon the side walls 13, 14, whereby the bottom plate 21 will be retained in place.

The interior of the casing 11 is provided with a series of heating coils 22 which are formed of suitable electrical resistance wire, and which are carried by mica supports 23, the ends of said series of coils 22 being connected to insulated terminal screws 24, 25 which extend upwardly through the rear portion of the upper wall 12.

The tool 10 also comprises a flat supporting top plate or baffle 26 which is secured in spaced parallel relation above the casing 11 by means of front and rear brackets 27, 28 of inverted U-shape, said brackets being secured to the top wall 12 by means of four rivets 29, and to said top supporting plate 26 by means of screws 30 and nuts 31.

The supporting top plate 26 has an upwardly-inclined rearwardly-projecting end portion 32, to the lower side of which a broad lower end 33 of a handle 34 is attached by means of screws 35 and nuts 36. The handle 34 may be of wood or other suitable head-insulating material and is spaced from the casing 11 so as to permit free air circulation therebetween and thus minimize the transfer of heat to said handle.

In order to permit the operator to readily hold the bottom plate 21 at a predetermined distance from the paint or paper to be softened, provision is made of a rigid angular metal support 37 which is firmly secured to the lower surface of the handle 34 by means of the nuts 36 and which has a lower edge 38 disposed below the plane of the bottom plate 21.

The handle 34 is preferably provided with a reduced and rounded grip portion 39 so that it may be readily grasped by the user.

In order to supply electric current to the resistance coils 22, provision is made of a two-wire cord 40, the outer end of which has an attachment plug 41 for connection to any suitable source of current, while the inner end of said cord extends through a central bore 42 in the handle 34. One wire 43 of the cord 40 is secured to the terminal screw 25 by means of a nut 44, while the other wire 45 is connected to a thermostatic switch 46 which is secured centrally to the lower

surface of the supporting plate or baffle **26**, as by rivets or spot welding.

The thermostatic switch **46** is also provided with a wire **47** which is secured to the terminal screw **24** by means of a nut **48**, thus connecting the switch **46** in series with the coils **22** so as to control the temperature of the tool **10**.

In order to prevent the fingers, tools, or other foreign objects from accidentally coming into contact with the terminal screws **24**, **25**, provision is made of a three-sided shield **49** which extends in spaced relationship around the front and sides of said terminal screws. The shield **49** comprises an upper flange **50**, whereby said shield is secured to the lower surface of the baffle **26** by any suitable means, such as welding.

Operation

In operation, the attachment plug **41** will be first connected to a source of electric current, whereupon the coils **22** will become energized so as to heat the casing **11** and the bottom plate **21**. The operator will then hold the tool **10** by means of the handle **34** in such a position that the bottom plate **21** may radiate heat upon the paint or moistened paper to be softened.

The lower edge **38** of the angular support **37** will preferably engage the surface of the paint or paper so as to serve as a rest for the tool **10** and thus enable the operator to readily hold the bottom plate **21** at the desired distance from the wall.

During the operation of the tool the supporting top plate **26** will remain relatively cool, and will serve as a baffle so as to reduce greatly the quantity of heat which is radiated in the direction of the operator's hand.

The thermostatic switch **46** will be operated by heat radiated from the casing **11** and will control the electric current supplied to the resistance coils **22**, and thus will maintain the plate **21** at the desired temperature.

Inasmuch as the paint or paper will be softened entirely by radiant heat, and the bottom plate will normally be held spaced from said paint, the tool may be moved readily over the surface to be softened, and will not be encumbered by softened paint or paper which might otherwise adhere to the bottom plate **21**.

After the paint or paper has been softened by the tool **10**, it may be removed by the use of any suitable scraper, not shown.

It will be understood however, that the operator may use the angular support **37** in some cases as a scraper if he so desires.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only, and that the invention is not to be limited to the specific disclosure, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent, is:

1. In a paint or paper softening tool, a casing having an electric heating means therein, a top supporting plate secured in spaced relation to the top of said casing, the space between said supporting plate and said casing being open at the sides of the tool, said supporting plate having an upwardly inclined flat end portion projecting outwardly of one end of said casing, a handle secured to the lower surface of said projecting portion in spaced relation to said casing, a thermostatic switch secured to the lower surface of said supporting plate, and conductors for connecting said heating means and said switch in series with a source of electric current, whereby said heating means may be controlled by the effects of heat radiation upon said thermostatic switch by said casing.

2. The invention as defined in claim 1 including a support secured to said handle and having a lower edge disposed below the plane of the bottom of said casing, whereby the operator may readily hold the tool in a position in which the bottom of said casing is spaced from the surface of the paint or the paper to be softened.

3. In a paint or paper softening tool, a casing having an electric heating means therein, the rear portion of said casing being provided with a pair of upwardly projecting terminal screws connected to said electric heating means, a top supporting plate secured in spaced relation to the top of said casing, said supporting plate having an upwardly inclined flat end portion projecting outwardly of one end of said casing, a handle secured to the lower surface of said projecting portion in spaced relation to said casing, and a shield extending in spaced relationship to opposite sides of said pair of terminal screws, said shield having a flange secured to the lower surface of said supporting plate and comprising sides terminating adjacent said handle whereby accidental contact with said terminal screws may be avoided.

4. In a paint and paper softening tool, a casing comprising side walls and a rear wall, a bottom plate slidably received in inner grooves adjacent the lower edges of said side walls, said bottom plate having a vertical front wall adapted to close the front of said casing and engaged by ears integral with said side walls for holding said bottom plate in said casing, heating means in said casing, and a rearwardly-extending handle connected to said casing.

5. In a paint and paper softening tool, a flat rectangular casing comprising a bottom plate and having heating means enclosed therein, a supporting plate secured in spaced parallel relationship to the top of said casing and extending over a major portion thereof, said supporting plate having a rear end portion projecting outwardly of and inclined upwardly at the rear end of said casing, a rearwardly extending handle attached at its forward end to the lower surface of the rear end portion of said plate in spaced relationship to the rear end of said casing, and a depending angular support attached to the lower surface of the forward end of said handle and having a lower edge disposed below the plane of said bottom plate.

6. In a paint and paper softening tool, a flat rectangular casing comprising a bottom plate and having heating means enclosed therein, a supporting plate secured in spaced parallel relationship to the top of said casing and extending over a major portion thereof, said supporting plate having a rear end portion projecting outwardly of the rear end of said casing and inclined upwardly, a rearwardly extending handle attached at its forward end to the lower surface of the rear end portion of said plate in spaced relationship to the rear end of said casing, and a depending angular supporting stand

attached to the lower surface of the forward end of said handle.

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