July 16, 1957 H. H. SCHOTT 2,799,102

CUSHIONED HANDLE

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Fig. 1

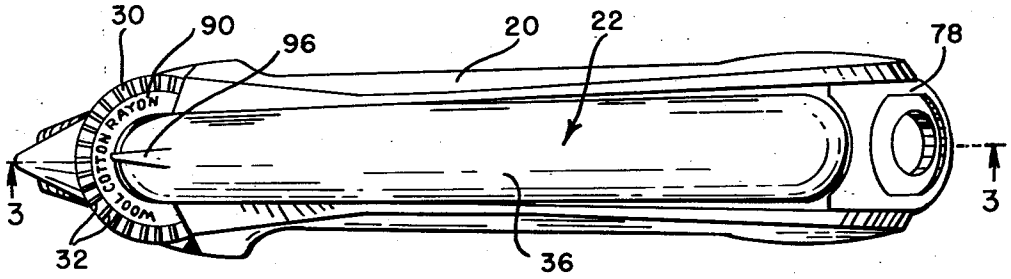
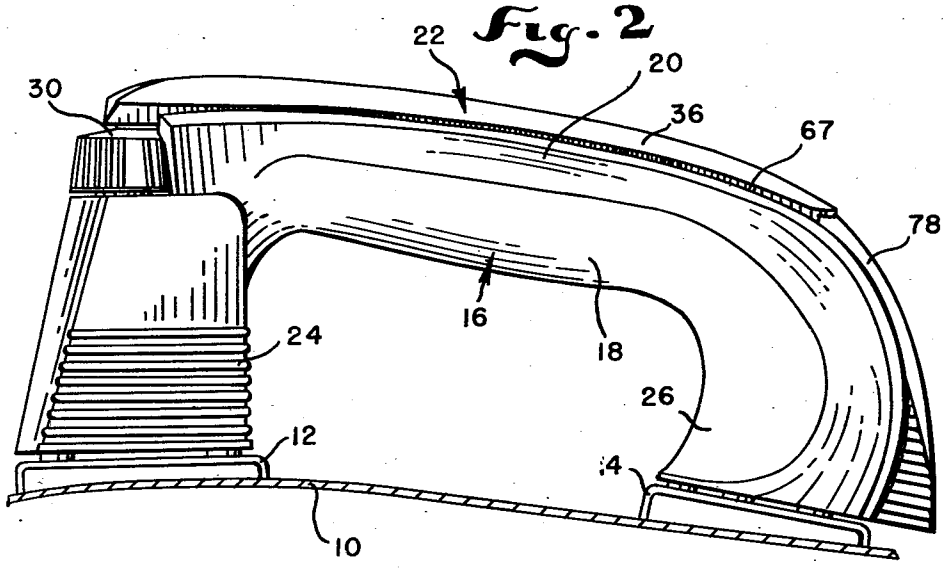


Fig. 2



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Fig. 3

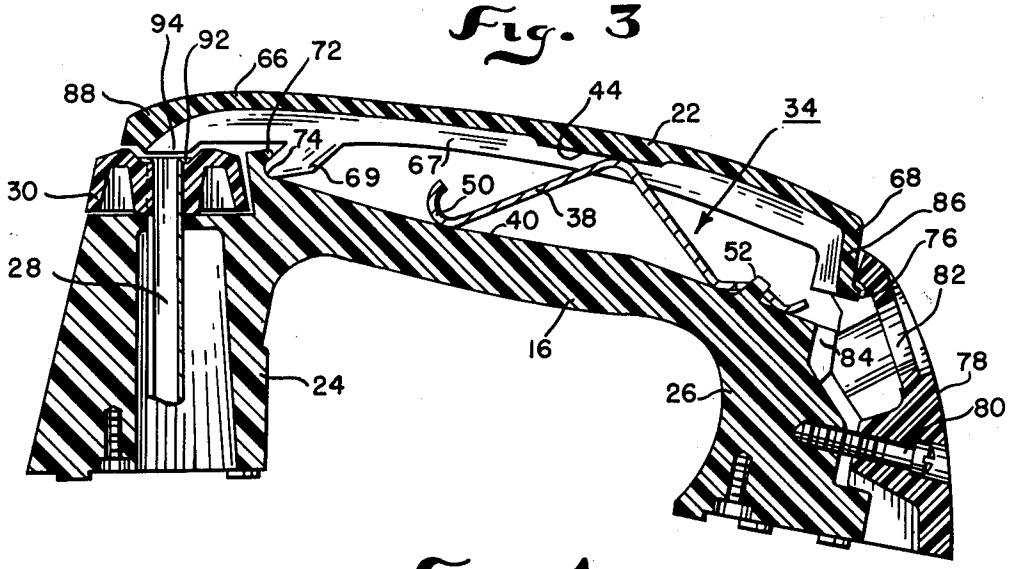


Fig. 4

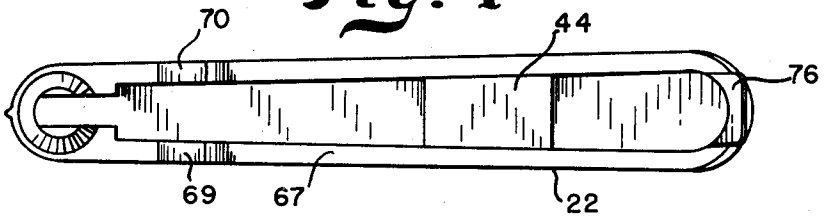


Fig. 5

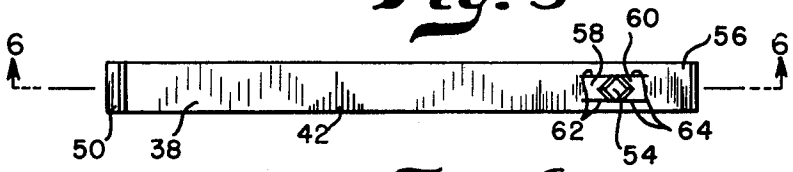
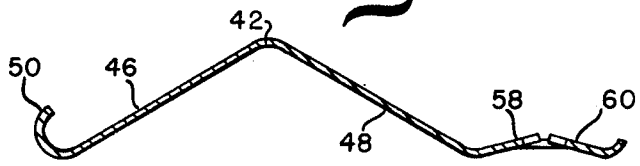


Fig. 6



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CUSHIONED HANDLE

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Application May 14, 1954, Serial No. 429,859

5 Claims. (Cl. 38—90)

The present invention relates to improvements in cushioned or resilient handles for appliances and the like.

The modern housewife must spend considerable time handling appliances in the home. These appliances are often relatively heavy and by their nature must be used so that the user's hand receives jars or shocks in lifting or manipulating the appliance and again in setting it down. An example of such an operation is in the use of the flatiron where the iron must be continuously lifted and set down and pushed to and fro. Since each force is accompanied by an equal and opposite force, it is common knowledge that the housewife's hand and arm are jarred when the iron is set down and also as the iron is pushed back and forth. The strain on the arm and hand is increased by the necessity of applying a downward pressure to the iron during ironing.

In order to reduced the resultant fatigue which accompanies long and tiresome periods of ironing, the present invention contemplates providing a cushioned appliance handle whereby part of the shock is absorbed in the handle thereby reducing the shock transmitted to the housewife's arm.

Accordingly an object of the present invention is to provide a cushioned handle for an appliance which will enhance the functionality and appearance of the handle and will protect the operator from jars and shocks and will improve the general usefulness of the appliance.

A further object of the invention is to provide an appliance handle with a cushioned insert which is very simple in construction and is especially simple to assemble to thereby reduce assembly time and unit cost.

A still further object of the invention is to provide an appliance handle with a cushioned insert in which the insert protects and improves the operation of the control knob.

Other objects and advantages will become more apparent in the following specification taken in connection with the appended drawings in which:

Figure 1 is a plan view of an appliance handle shown for purposes of illustration as a handle attached to a flatiron and embodying the features of the present invention;

Fig. 2 is a side elevational view of the appliance handle;

Fig. 3 is a sectional view taken along line 3—3 of Fig. 1;

Fig. 4 is a plan view of the cushioned insert taken from the bottom of the insert;

Fig. 5 is a plan view of the spring which gives resilience to the insert; and

Fig. 6 is a side elevational view of the spring.

In the embodiment chosen to illustrate the features of the present invention a handle of the type which may be used on a flatiron is illustrated. This handle, as viewed in Fig. 2, rests on the upper rounded surface **10** of the iron and is suitably secured thereto with spacers **12** and **14** between the front and rear ends **24** and **26** of the handle and the iron to reduce heat transmission from the iron to the handle.

The handle itself has a central gripping portion **16** which has a rounded lower surface **18** comfortable to the hand and a similarly rounded upper surface **20**. This upper surface is continued in the center top of the handle by a cushioned insert **22** which will be later described in detail.

The gripping portion **16** of the handle is supported on the iron by a forward post **24** and a rear post **26**, both of which may be integral with the handle and which may have various design contours such as illustrated in the present drawings.

Mounted in the forward post **24** is a vertical control shaft **28** which carries at its top end a control knob **30**. The knob and shaft are rotatable usually to operate certain control devices in the appliance and in the present case may be used to control the temperature of the iron by adjusting the thermostat, usually found housed in the body of the iron. The knob **30** may be of any desired shape and can carry ribs **32** on its outer peripheral surface to facilitate rotation when the user grasps the control knob.

A recess **34** is present in the top surface of the body **16** of the handle and this recess extends longitudinally from the rear supporting post **26** to the forward post as may be seen in Fig. 3.

Located in this recess is the cushioned insert **22** which has a rounded upper surface **36** which substantially conforms to the contour of the upper surface **20** of the body **16** of the handle to form a continuation of the handle gripping surface. The insert, although its surface substantially conforms to the rest of the handle, does project slightly above the upper surface **20** of the handle to permit slight downward travel into the recess before its upper surface exactly conforms to the surface of the handle. With this structure most of the pressure exerted between the user's hand and the handle will be exerted on the cushioned insert. The amount of projection of the insert above the handle at the rear end **68** of the insert is slightly greater than at the front end, however, since the cushioned insert moves by pivoting about its front end.

It is to be noted that the cushioned insert is resiliently mounted in the recess of the handle so that pressure thereon can cause it to descend into the recess and thereby much of the shock between the handle and the hand of the user is absorbed by the cushioned insert.

To obtain the cushion effect for the insert to make it resilient, a leaf spring **38** is located in the recess between the insert and the floor **40** of the recess. The spring, as shown in its detailed views in Figs. 3, 5 and 6, is in the shape of an inverted V with its tip **42** bearing against a smooth flattened area **44** on the under surface of the insert. The legs **46** and **48** of the spring rest on the floor **40** of the recess **34** with the leg **48** being secured to the recess and the leg **46** being slideable on the smooth floor of the recess to absorb the flexure of the spring. To permit the leg **46** of the spring to readily slide, it is provided with a rounded foot **50**.

Projecting from the floor **40** of the recess is a protuberance **52** to which the other leg **48** of the spring is anchored. To secure the leg of the spring to the protuberance, a hole **54** is cut in the foot **56** of the spring with resilient fingers **58** and **60** at either side of the opening. These fingers are formed by cutting longitudinal slits **62** and **64** away from the opening on each side of the opening and parallel to the spring.

It will be seen from the above description of the construction and from the drawings that these resilient fingers **58** and **60** will wedge against the walls of the protuberance **52** when the spring is pushed over it thus holding the leaf spring securely in place. As the cushioned insert **22** moves up and down, the legs **46** and **48** of the spring flex and foot **50** slides along the floor **40** of the recess.

To hold the cushioned insert **22** in position in its recess in the handle, it is pivotally attached to the handle at its forward end **66** and although it possesses free vertical motion at its rear end **68**, it is limited in its movement out of the recess.

The cushioned insert **22**, Figs. 3 and 4, has a flange **67** extending around the outer edge which guides the insert in its movements in the recess 34. This flange also creates a concave under surface for the insert which helps keep the tip 42 of the leaf spring in place. Near the forward end of the insert a pair of forwardly extending fingers **69** and **70** project downwardly from the flange to be inserted beneath an overhanging lip **72** extending across the forward end of the recess. The fingers **69** and **70** pivot in the pocket **74** formed beneath the lip **72** to permit the cushioned insert to pivot about that point.

To limit the pivotal movement of the rear end **68** of the insert, the flange has a rearwardly projecting edge **76** which limits the upward movement of the insert by engaging the upper edge of a cap **78** which is secured to the rear post **26** by a stud **80**. This cap **78** contains an opening **82** to grant access to the electrical cord and is hollow for containing the electrical connections and leads which run down into the body of the flatiron. The cap bears against a shoulder **84** on the post **26** which is so positioned to give clearance to the rear face **86** of the insert flange so that it can pivot freely about and will not bind at the rear edge. The cap, however, holds the insert far enough forward so that the fingers **69** and **70** will remain in the pocket **74**. In actual operation the face **86** will slideably bear against the cap **76** so as to hold the pivotal fingers **69** and **70** in the pocket **74**.

With the above structure the assembly of the iron is a simplified operation requiring a very minimum of steps. With the handle in place on the appliance the leaf spring **38** is placed in the recess by forcing the hole **54** over the protuberance. The spring will automatically lock itself in place. The insert **22** is then dropped in the recess **34** and slid forwardly, the fingers **69** and **70** automatically being guided into the pocket **74**. The rear end **68** of the insert is then pushed downwardly against the action of the spring and the cap **78** positioned over the rear post and secured in place by the stud **80**. The assembly is thus complete in a few simple steps which can be performed by even an inexperienced assembler.

The forward end of the cushion insert has an overhanging extension **88** which extends over the control knob **30** to hide and protect the top of the shaft **28**. The forward edge of the extension is rounded and does not hide the edge of the knob which contains indicia **90** indicating the knob setting, Fig. 1. The center of the knob has a depression **92** and into this depression extends a projection **94** from the flange **67**, the projection being located beneath the overhanging extension **88** of the insert.

At the top center of the extension **88** is a ridge **96** which acts as a pointer or indicator with which the indicia of the control knob is aligned. Since the forward end of the cushioned insert is pivotally secured, its vertical movement is relatively slight and its cooperative function with the control knob is not disturbed by its cushioned pivotal movement.

Thus it will be seen that I have provided an improved cushioned handle to be used on appliances such as flatirons which accomplishes the objectives above set forth. The handle is simple in structure and is well suited to be formed of plastic and as thus formed, and being of relatively few parts, is inexpensive.

The assembly of the parts can be accomplished with a minimum of motions, by simply inserting the spring, sliding the insert forward within the recess and placing the cap in position over the rear end of the insert. This reduction in assembly time also affects a considerable reduction in unit cost.

The completed cushion handle is attractive in appearance with the working parts being concealed and the insert conforming to the general contour and appearance of the over-all handle.

I have, in the drawings and specification, presented a detailed disclosure of the preferred embodiment of my invention. It is to be understood that the invention is susceptible of modifications, structural changes and various applications of use within the spirit and scope of the invention and I do not intend to limit the invention to the specific form disclosed but intend to cover all modifications, changes and alternative constructions and methods falling within the scope of the principles taught by my invention.

I claim as my invention:

1. A cushioned appliance handle comprising in combination a handle with a recess in the upper surface, means to connect the handle to an appliance including a rear supporting post fixed to the handle, a cushioned insert positioned in the recess having a vertical rear wall substantially longer than the thickness of the handle lying adjacent thereto, means at the front end of the recess for holding the insert in the recess, a spring urging the insert outwardly of the recess, a rearwardly extending flange at the rear end of the insert adjacent the lower end of said rear wall, a cap mounted on said post and overhanging the flange to limit the upward movement of the insert so that it will conform with the contour of the handle, and stud means to secure detachably the cap to said post.

2. A cushioned appliance handle comprising in combination a handle with a recess in the upper surface, means to connect the handle to an appliance, a cushioned insert located in the recess and pivotal about a locus near one end, a spring positioned in the recess between the handle and the insert, said spring being spaced from said locus and urging the opposite end of said insert out of said recess, means located in the floor of the recess and securing the spring within the recess, and means to limit the movement of said opposite end of the insert out of said recess so that the surface will substantially conform to the contour of the handle.

3. A cushioned appliance handle comprising in combination a handle with an elongated recess in the upper surface, means to connect the handle to an appliance, a cushioned insert positioned in said recess, means to limit the movement of the insert out of the recess and to lock the insert therein, a leaf spring urging the insert upwardly, a protuberance extending upwardly from the floor of the recess, an opening at one end of the spring with a finger adjacent the opening formed by cuts in the spring, said protuberance extending through the spring opening with the finger bearing against the projection to lock the spring in position in the recess.

4. A cushioned appliance handle comprising in combination a handle with a recess in the upper surface, means to connect the handle to an appliance, a control knob mounted on a control shaft at one end of the handle, the knob having a depression in the center, a cushioned insert located at said recess and having an extension extending over the knob with a projection on the lower surface of the extension projecting into the depression in the knob, means to pivotally lock the forward end of the insert in the handle recess, a resilient spring urging the insert out of the recess and positioned between the handle and the insert, and means at the rear end of the insert attached to the handle and limiting the pivotal movement of the handle outwardly of the recess.

5. A cushioned appliance handle comprising in combination a handle with a gripping surface and a recess in the top of the handle, means to connect the handle to an appliance, an appliance control knob mounted at one end of the handle, a cushioned insert positioned in said handle recess and having an index marker at one end located adjacent the control knob, a spring located in said recess

and bearing against the insert urging it out of the recess, and means limiting the movement of the insert out of the recess so that its upper surface conforms to the contour of the handle.

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