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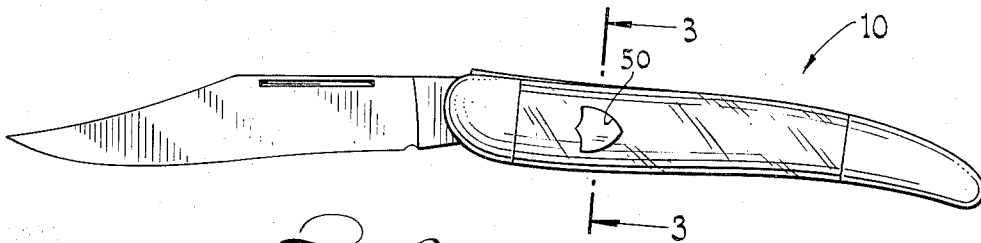
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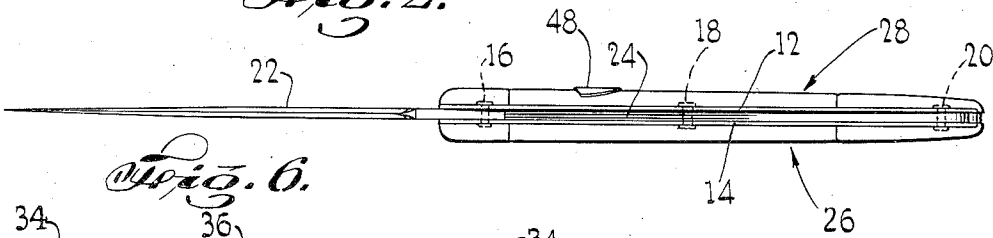
KNIFE

Filed March 5, 1945

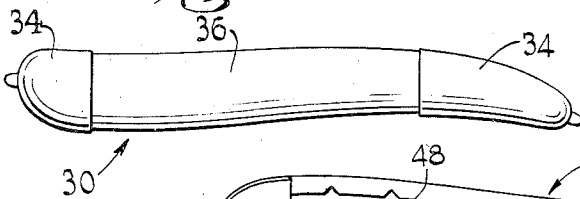
*Fig. 1.*



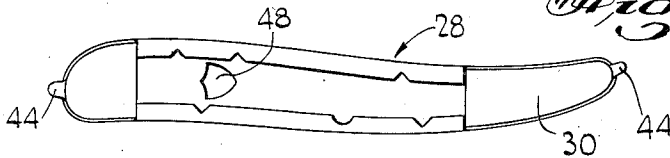
*Fig. 2.*



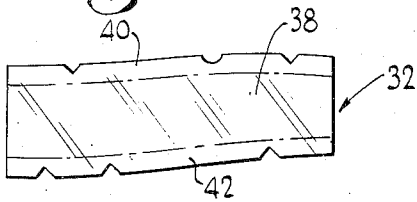
*Fig. 6.*



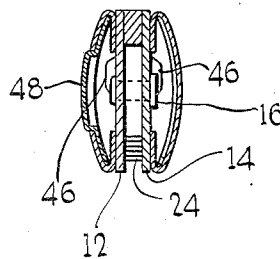
*Fig. 4.*



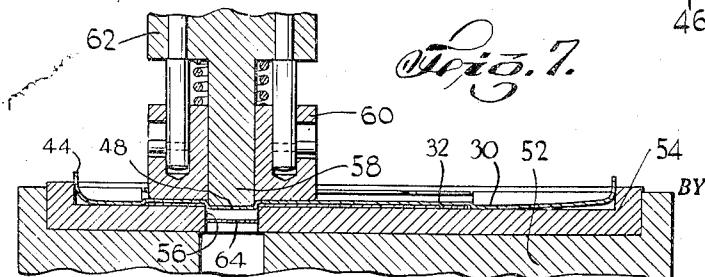
*Fig. 5.*



*Fig. 3.*



*Fig. 7.*



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## UNITED STATES PATENT OFFICE

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KNIFE

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3 Claims. (Cl. 30—164)

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This invention relates to knives and, more particularly, to an improved knife handle.

It is an object of my invention to provide a knife handle whose covering means includes a thin non-metallic scale embodying a metallic ornament which extends through an accurately matching aperture in the scale.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the claims.

In the accompanying drawings, in which is shown one of the various possible embodiments of this invention,

Fig. 1 is a side view of a knife embodying my invention;

Fig. 2 is a front view thereof;

Fig. 3 is an enlarged sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a back view of a finished covering means for one side of the knife handle;

Fig. 5 is a top plan view of a scale member comprising part of said covering means;

Fig. 6 is a top plan view of a combination scale holding and bolster or tip forming member, which comprises the other part of the covering means; and

Fig. 7 is a sectional view through a die used for the formation of the metallic ornament.

Referring now to the drawings, 10 denotes a knife embodying my invention and comprising a pair of spaced elongated lining sheets 12, 14 joined by a plurality of rivets 16, 18, 20. One of the rivets 16 forms the pivot on which a knife blade 22 is rotatably mounted. The curved tang end of said blade bears against a standard resilient spacer 24 located intermediate the lining sheets 12, 14 adjacent one pair of longitudinal edges of said sheets.

The knife construction thus far described is conventional and provides a rough frame of which the two exposed faces of the lining sheets must be suitably concealed. For this purpose, each side of the frame has mounted thereon a covering means 26, 28 which may be fabricated, in general, in the manner shown and described in United States Letters Patent No. 2,284,833 issued June 2, 1942. Essentially, each covering means includes a combination scale supporting and bolster or tip forming member 30 (Fig. 6) hereinafter called the "support" and an orna-

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mental scale member 32 (Fig. 5) hereinafter called the "scale."

The support is fabricated from sheet metal and comprises an elongated, interiorly concave stamping whose plan configuration conforms approximately to the plan configuration of that side of the knife frame on which it is adapted to be mounted. Bolsters or tips 34, 34 at the opposite ends of the support exactly conform to the contour of the ends of the lining sheets which they overlie. An intermediate portion 36 of the support, which integrally connects the bolsters 34, 34, has a configuration similar to but smaller than that of the underlying part of the knife frame so that the scale, when superimposed thereon in a manner later described, will conceal the longitudinal edges of said portion and the entire covering member, including the scale and support, will jointly present a contour exactly matching the configuration of a lining sheet. The ends of the intermediate portion 36 are slightly lower than the bolsters whereby, when said portion is covered by the scale, the top surface of the scale will be substantially flush with the top surface of the bolsters.

The scale 32, which may likewise be fashioned from sheet material, comprises a plastic substance and preferably one which can be plasticized by heat and pressure, such substances including by way of example Celluloid, cellulose acetate, cellulose acetate butyrate, regenerated cellulose, cellulose nitrate, styrene resins and acrylic resins. If desired, plastic materials which can be plasticized in other manners may be employed, such materials including, for instance, phenol or urea formaldehyde resins. The scale has an elongated central portion 38 which overlies the intermediate portion 36 of the support and has lateral extensions 40, 42 bent around the edges of said intermediate portion, as described in said patent so as to secure the scale in position, said scale being locally plasticized where it is bent around the support.

Suitable means is also provided to secure the covering means 26, 28 to the knife frame. Said means may include tangs 44 integrally extending away from each end of the support and adapted to be forced into pockets 46 on the ends of the lining sheets 12, 14.

Pursuant to my invention, I incorporate a metallic ornament in the non-metallic scale in a novel manner which involves no extra expense for material and only a slight additional expense, if any, for labor. This is to be contrasted with previous practice, wherein, when metallic or-

naments were provided, the same were invariably riveted on as an additional piece over a thick scale-forming member. I provide the metallic ornament by embossing a projection 48 of the desired configuration on the exterior surface of the interconnecting support portion 36 and simultaneously punching a matching aperture 50 in the scale. This avoids the expense and difficulty of registering such projection 48 with a precut scale aperture. Said projection should be at least high enough to extend all the way through the scale and, if desired, may project slightly above the upper surface of said scale, as shown in Fig. 3. Projections may be provided on one or both of the covering means 26, 28, and any desired number of projections may be simultaneously formed.

In Fig. 7, I have illustrated an apparatus which is employed to form a projection and simultaneously cut out a matching aperture in the scale. Said apparatus includes a die block 52 in which there is received an anvil 54. The anvil has an aperture 56 which negatively matches the configuration the projection 48 is to have. Cooperating with the anvil is an embossing punch 50 which is moved toward and away from said anvil by suitable means such as a reciprocating head 62. The head on which the punch is mounted also carries a spring pad 60 surrounding the punch 58.

To use the apparatus, a covering means, such as the covering means 26 on which the scale already is wrapped around the support, is set on the anvil 54, said anvil being provided with a configuration which negatively corresponds to the external surface of the covering means. When the reciprocating head moves downwardly, the spring pad 60, which leads the punch 58 will first engage said covering means, the pad pressing against the interior surface of the covering means and being shaped to fit in between the two inward lateral extensions 40, 42 of the scale. However, if desired, said pad may additionally press against said extensions. As the pad firmly resiliently presses the covering means against the anvil, the punching die 58 descends to form the embossing 48 to a height at least substantially equal to the thickness of the scale 32. When the projection moves toward the anvil it acts as an extension of the punch 58 and cuts a piece 64 out of the scale and leaving an aperture which negatively matches the projection. Preferably, the scale is thinner than the support so that the piece 64 will be sheared from the scale while the projection 48 remains integral with the support and need not be raised a height greater than the thickness of said support.

It will thus be seen that there is provided a knife handle which achieves the several objects of this invention and is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various

changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A knife covering means comprising an elongated interiorly concave sheet metal support including a middle portion and a pair of end portions slightly raised above said middle portion, a plastic scale mounted on said middle portion, and means to secure said scale to said middle portion, said securing means comprising opposed longitudinal attaching portions on said scale folded around the longitudinal edges of said middle portion, the part of said scale overlying the middle portion of said support being drum tight thereon, said attaching portions of the scale underlying said middle portion, said middle portion having a raised embossing of predetermined outline which is integrally connected along its entire periphery to said middle portion; and said scale having a through aperture whose outline negatively matches the outline of said embossing, said embossing extending through said aperture and being snugly received therein.

2. A knife covering means comprising an interiorly concave sheet metal support, a plastic scale mounted drum tight on said support, means to secure said scale to said support, said securing means comprising opposed side attaching portions on said scale member folded around the side edges of the support, said scale having an aperture, and a raised embossing on said support extending through said aperture and snugly received therein, said embossing being integrally connected along its entire periphery to said support.

3. A knife covering means comprising a sheet metal support, a plastic scale mounted on said support, means to secure said scale to said support, said securing means comprising opposed side attaching portions on said scale member folded around the side edges of the support, said scale having an aperture, and a raised embossing on said support extending through said aperture and snugly received therein, said embossing being integrally connected along its entire periphery to said support.

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