

- [54] **PICK-GUARD**
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- [52] U.S. Cl. .... **206/349**; 30/151; 30/164.7; 128/214.4; 220/339
- [51] Int. Cl.<sup>2</sup> ..... **B26B 29/00**; B65D 85/54
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- [56] **References Cited**  
**UNITED STATES PATENTS**  
 2,053,707 9/1936 Farmer ..... 30/151 X

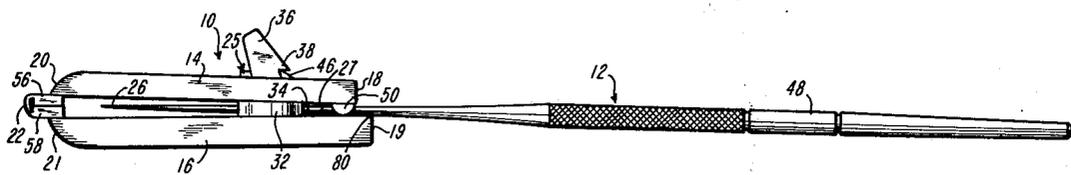
3,512,631	5/1970	Price et al.....	206/349
3,568,673	3/1971	Cowley .....	128/214.4
3,610,240	10/1971	Harautuneian .....	128/214.4
3,741,377	6/1973	Krellen .....	220/339 X
3,746,162	7/1973	Bridges .....	220/339 X
3,825,110	7/1974	Halbich et al. ....	220/339 X

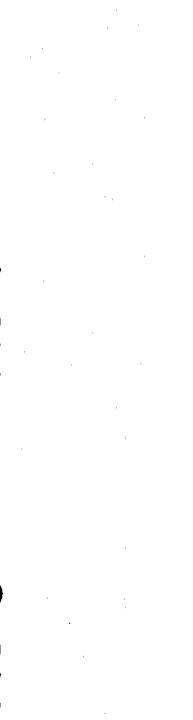
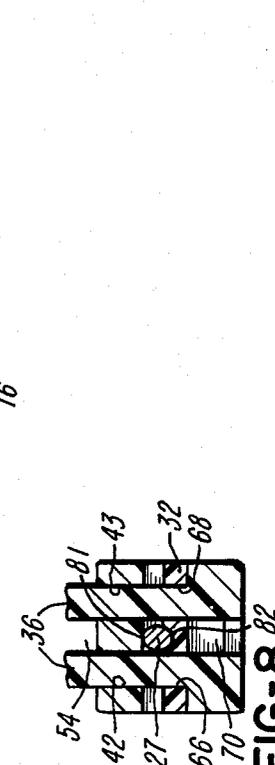
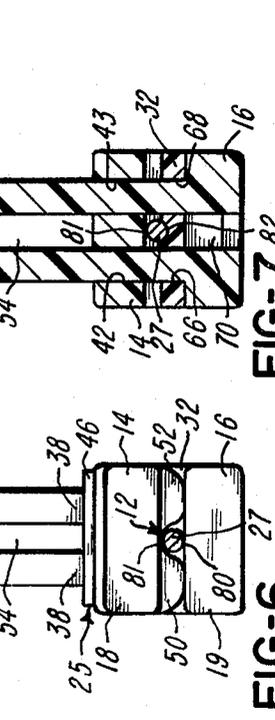
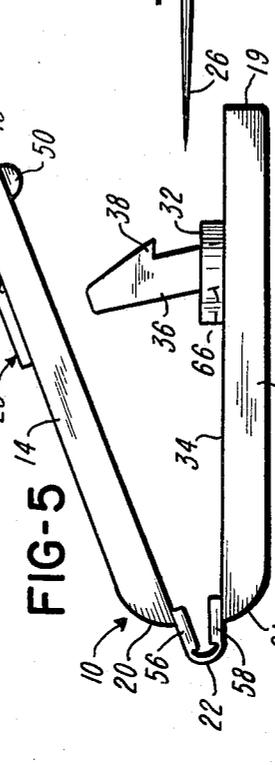
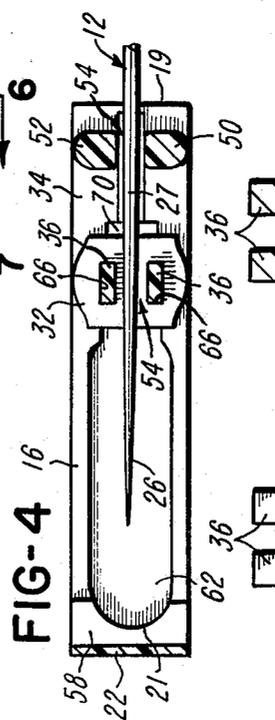
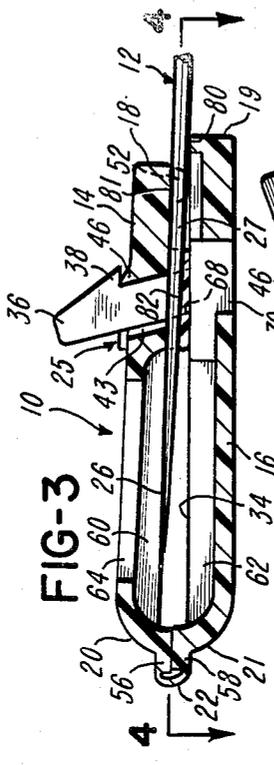
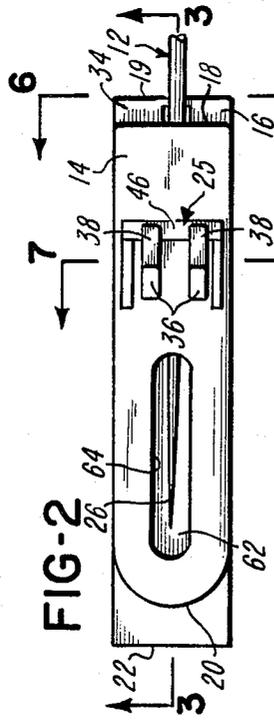
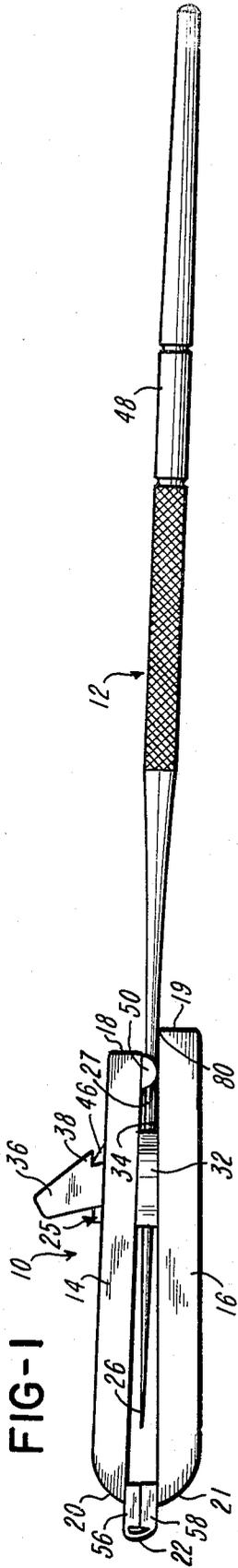
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[57] **ABSTRACT**

An autoclavable pick-guard for shielding the delicate tip of a medical pick, or the like, comprises a pair of hingedly connected jaws which are adapted to be securely though releasably clamped onto the tip-adjacent end of a pick inserted longitudinally of said jaws.

**7 Claims, 8 Drawing Figures**





## PICK-GUARD

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The subject invention is directed to an autoclavable pick-guard which readily accommodates and effectively shields the delicate tip of any of a variety of medical picks or the like and which includes means for readily and visually ascertaining the configuration of the shielded tip. The pick-guard is easily and efficiently opened and/or closed with one hand.

## 2. Description of the Prior Art

It is known to manufacture an autoclavable, unitary clamp comprising a pair of jaws which are hingedly secured to one another and are resiliently maintained in normally open, spaced-apart relationship, wherein the jaws include an integral latch and latch-keeper for securely though releasably locking the jaws in closed relationship for clamping one or more tubes which are carried by and pass transversely between the jaws, such as illustrated, by way of example, in the pending application of Gale W. Miller, et al.; entitled: UNITARY CLAMP; Ser. No. 363,034; assigned to Cincinnati Bio-Medical, Inc., now U.S. Pat. No. 3,896,527.

## SUMMARY OF THE INVENTION

The pick-guard of the present invention differs from the aforementioned clamp in that the latch and latch-keeper are designed to permit the delicate tip of a medical pick or the like to be longitudinally inserted into the space between the normally open jaws and between a pair of upstanding, laterally spaced latches for substantially enveloping and effectively shielding the tip during all phases of handling, including storage and autoclaving. The pick-guard differs, further, in that one of the jaws includes a deformable, resilient bearing surface whereby the pick-guard will readily accommodate, securely grip and effectively shield any of a variety of medical picks having tips of different size and/or configuration.

The pick-guard comprises upper and lower elongate jaws secured in pivotal relationship with one another at one of their ends by an integral hinge which resiliently urges the jaws into normally open, spaced-apart relationship. A pair of transversely aligned, laterally spaced latches are secured to and carried by the lower jaw and are securely though releasably engageable with a latch-keeper in the upper jaw for locking the jaws in closed, pick-gripping relationship, whereby the closed jaws securely grip, substantially envelop and effectively shield the delicate tip of the pick.

A resilient pad is disposed in abutting relationship with the upper surface of the lower jaw in encompassing relationship with the lower ends of the two latches to define a deformable, resilient bearing surface for receiving the medical pick, whereby the pick-guard readily accommodates and securely grips any of a variety of shapes and sizes of medical picks. One of the jaws includes an elongate, central opening between the latch members and the pivoted ends of the jaws for readily and visually disclosing the location and configuration of the shielded tip.

The latches are transversely aligned, laterally spaced, upstanding, resilient members which are secured to and project upwardly from the lower jaw, whereas the latch-keeper comprises a pair of latch-receptive slots in the upper jaw. A latch-keeper defining lip at the for-

ward edge of each slot is securely though releasably engageable with the latches, whereby the latches may be efficiently and readily engaged with or disengaged from the latch-keeper with one hand, permitting the other hand to remain free for handling the medical pick.

The jaws, hinge, latches and latch-keeper comprise a unitary article of manufacture, whereas the resilient pad is a separate article which is secured to and carried by the lower jaw. Each of said articles is manufactured from a non-pyrogenic material which may be readily subjected to autoclaving, thereby permitting use of the pick-guard to shield the delicate tip during all phases of handling.

It is, therefore, an object of the present invention to provide an autoclavable pick-guard for shielding the delicate tip of a medical pick or the like during all phases of handling — including storage and autoclaving — wherein the pick-guard will readily accommodate a variety of medical picks having tips of different size and/or configuration, wherein the medical pick may be easily and efficiently removed from the pick-guard, and wherein personnel may readily and visually ascertain the configuration of the shielded tip.

Other objects and features of the invention will be readily apparent from the accompanying drawings and description of the preferred embodiment.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side-elevational view of a pick-guard embodying the teachings of the present invention shown in gripping and shielding relationship with the tip of a medical pick or the like.

FIG. 2 is a top-elevational view of the pick-guard of FIG. 1.

FIG. 3 is a sectional view taken at line 3—3 of FIG. 2.

FIG. 4 is a sectional view taken at line 4—4 of FIG. 3.

FIG. 5 is a view of the pick-guard with the jaws in normally open, spaced-apart relationship.

FIG. 6 is a sectional view taken at line 6—6 of FIG. 2.

FIG. 7 is a sectional view taken at line 7—7 of FIG. 2.

FIG. 8 is a fragmentary view similar to FIG. 7, illustrating the pick-guard in gripping and shielding relationship with the tip of a second medical pick or the like.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the pick-guard is illustrated in the drawings and is designated, in general, by the reference numeral 10. The pick-guard comprises upper and lower elongate jaws 14, 16 which have forward ends 18-19 and rearward ends 20-21, respectively. The jaws are hingedly secured to one another by resilient hinge 22 which is integral with and forms part of rearward ends 20-21. The hinge resiliently urges and normally maintains forward ends 18-19 in open, spaced-apart relationship (FIG. 5).

A pair of transversely aligned, laterally spaced latches 36 are formed integral with and project upwardly from lower jaw 16. The latches securely though releasably engage a latch-keeper 25 in jaw 14 for releasably locking forward ends 18-19 in closed juxtaposition, whereby the jaws will securely grip the periph-

eral surface of a longitudinally inserted medical pick 12 or the like at 27 for substantially enveloping and effectively shielding the sharpened and/or pointed tip 26 thereof (FIGS. 1 and 2). It will be noted that gripped portion 27 of the medical pick is disposed rearwardly of tip 26, whereby the delicate tip remains free and clear of the pick-guard.

Resilient pad 32 is seated in abutting relationship with the upper surface 34 of jaw 16 and provides a readily deformable, resilient bearing surface engageable by the medical pick, whereby the pick-guard readily accommodates and securely grips any of a variety of picks at 27 and 127, effectively shielding tips of different size and/or configuration without resulting in deformation of jaws 14 and 16 (FIGS. 7 and 8). Upper jaw 14 includes an elongate window or opening 64 for visually ascertaining the location and configuration of the shield tip.

Jaws 14 and 16, hinge 22, latches 36 and latch-keeper 25 comprise an integral, unitary article of non-pyrogenic material which may be readily subjected to autoclaving, such as, by way of example, polypropylene or the like. Preferably, the material is naturally resilient, whereby resilient hinge 22 is generated by manufacturing the pick-guard in a unitary mold with jaws 14 and 16 disposed in coplanar, longitudinally aligned relationship.

Pad 32 comprises an article of readily deformable, resilient, non-pyrogenic material which may be readily subjected to autoclaving, such as silicone rubber or the like.

The latches of the preferred embodiment comprise a pair of transversely spaced, upstanding members 36 which are integral with and project upwardly from lower jaw 16 (FIGS. 1, 3 and 7). Latch-keeper 25 comprises a pair of transversely spaced, elongate slots 42-43 in upper jaw 14 (FIGS. 2 and 7) which are complementary with, readily accommodate and loosely receive latches 36. Upper jaw 14 includes a transversely extending, upwardly projecting lip or latch strike 46 which is adjacent to and projects rearwardly from the forward-most edges of the slots. Each latch 36 includes a forwardly projecting, latch strike-engaging rib 38 for securely engaging lip 46 and locking the jaws in closed juxtaposition. The latches 36 are efficiently and readily disengaged from latch-keeper 25 by cradling the pick-guard 10 in the open palm of one hand and retracting latches 36 rearwardly with the thumb, thereby disengaging ribs 38 from latch strike 46 and releasing upper jaw 14. The resilient hinge 22 then urges jaws 14 and 16 into open, spaced-apart relationship and thereby permits withdrawal of the shielded tip 26 from the pick-guard by grasping handle 48 of the pick with the free hand and advancing the pick in the direction of arrow A (FIG. 5).

Latches 36 are normally resiliently urged toward the forward ends of the jaws, and will return to the latch-keeper engaging position when released by the thumb.

With particular reference to FIGS. 4, 7 and 8, it will be noted that resilient pad 32 includes a pair of transversely spaced, elongate slots 66,68 complementary with and adapted to receive latches 36. The slots define a snug, slip-fit relationship with the lower jaw-adjacent end of the latches, whereby the latches provide means for maintaining the pad in seated relationship with upper surface 34 of the jaw. The lower jaw includes cavity 70 which is disposed directly beneath pad 32.

The cavity provides clearance for the pad when said pad receives a medical pick and is depressed and deformed thereby when jaws 14 and 16 are closed.

A pair of transversely aligned, laterally spaced abutments 50,52 depend from upper jaw 14 and with latches 36 define an intermediate, elongate, pick-receptive channel 54 for longitudinally guiding the medical pick into the pick-guard. The latches and abutments provide side walls for channel 54 and ensure against transverse movement of the medical pick relative to the pick-guard during handling.

Complementary spacers 56,58 are integral with and form a part of hinge 22 (FIGS. 1, 3 and 5). The spacers are disposed in abutting relationship with one another when the jaws are closed, and with abutments 50, 52 maintain the closed jaws 14 and 16 in substantially parallel, spaced relationship with one another to establish clearance for the tip 26.

Jaws 14 and 16 include complementary chambers 60 and 62, respectively, which provide additional clearance for tip 26. The elongate opening 64 is disposed in communication with chamber 60 and is in alignment with the longitudinal axis of the pick-receptive channel 54.

In the preferred form, end 19 of lower jaw 16 is forward of end 18 of upper jaw 14. This arrangement provides three contact points between the jaws and pick 12, as illustrated at 80, 81 and 82 of FIG. 3, and ensures a tight, non-slip grip of the pick by the pick-guard.

What is claimed is:

1. A one-piece, plastic pick-guard for shielding the tip of a medical pick or the like, comprising a pair of elongate jaws integrally hinged together at one of their ends for pivotal movement between open and closed positions, one of said jaws having a pair of transversely aligned, laterally spaced upstanding latches, the other jaw having a pair of transversely aligned, laterally spaced, latch-receptive openings therethrough, a transverse latch strike on the said other jaw at one side of and spanning each of said latch-receptive openings, and a deformable, resilient pad secured to and carried by said first mentioned jaw, adjacent and in circum-scribing relationship with the lower or jaw-adjacent ends of the latches, said laterally spaced latches defining the sides of a longitudinally extending pick-receptive channel.

2. A device as called for in claim 1, wherein the jaw in which the latch-receptive openings are located includes an elongate, centrally disposed through opening which extends longitudinally of said jaw in spaced relationship with the latch-receptive openings therethrough and the hinged end thereof, said elongate, longitudinal opening providing visual access to the contents of the guard during those periods of time when the jaws are in closed position.

3. A device as called for in claim 1, wherein the pick-guard and the deformable, resilient pad are each of a non-pyrogenic, autoclavable material.

4. A device as called for in claim 1, wherein the deformable, resilient pad includes a pair of transversely aligned, laterally spaced, latch-receptive slots therethrough which define a snug, slip-fit relationship with the lower or jaw-adjacent ends of the latches, and wherein the said first mentioned jaw includes a cavity intermediate said latches and in open communication with the deformable, resilient pad.

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5. A device as called for in claim 1, which includes a pair of transversely aligned, laterally spaced abutments secured to, carried by and projecting from the free end of the jaw in which the latch-receptive openings are located, and in longitudinal alignment with the latches; and a pair of complementary spacers integral with and forming part of the hinge, wherein the abutments and spacers define contact points between the jaws when said jaws are in closed position.

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6. A device as called for in claim 1, wherein each of the jaws includes an elongate, longitudinally extending chamber intermediate the latches and the hinge and in open communication with the pick-receptive channel.

7. A device as called for in claim 1, wherein the free end of the said first mentioned jaw is forward of the free end of the other jaw.

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