

THE JOINT EXAMINATION BOARD

PAPER P6

INFRINGEMENT AND VALIDITY OF UNITED KINGDOM PATENTS

11<sup>th</sup> NOVEMBER 1998

10.00 a.m. – 2.00 p.m.

Please read the following instructions carefully. This is a **four hour** paper.

1. Write on one side of the paper only using black or dark blue ink. You must write your examination number and designation of the paper in the top right hand corner of each sheet. You must not state your name anywhere in the answer.
2. No printed matter or other written material may be taken into the examination room.
3. Answers must be legible. If the examiners cannot read a candidate's answer no marks will be awarded.
4. Candidates are reminded that marks are awarded more for the points selected for discussion and the reasoning displayed than conclusions reached.

Document checklist:-

Client's letter – 2 pages;

Leaflet entitled "Cracker Creations" – 2 pages description, 1 sheet drawings;

Supplier's Patent – GB 2020202 - 2 pages description, 1 page claims and 1 sheet drawings;

United States Patent No. 3,000,001 – 2 pages description, 1 sheet drawings;

and

United States Patent No. 3,200,000 – Abstract with one figure.

## CLIENT'S LETTER

Yesterday you received the following letter from a new Client :

I am the Managing Director of a Company operating a chain of decorators supply shops supplying both the trade and DIY markets. I know very little about patents but I am very worried by a recent event which seems to be based on a patent of one of my suppliers. An acquaintance in my local Chamber of Commerce has suggested that I write to you for advice.

My shops sell wallpaper, paints, paintbrushes and other decorators tools including knives and scissors. I have recently set-up an Autumn promotion for wallpaper sales, giving a small trimming knife free with each roll of wallpaper. The knives are very cheap, almost disposable, items which I bought as a job lot from an importer of novelties that was closing down.

However, a few days ago I received a letter from a firm of Patent Agents acting for a firm which supplies me with decorators tools, and drawing my attention to a patent held by the suppliers. A copy of the patent was enclosed. The patent is for a fairly large and expensive knife which I stock and sell in small quantities, but this knife looks so completely different to the trimming knife in the promotion, that I cannot see how the patent can possibly be relevant to my activities.

20

Please advise me as soon as possible on the significance of this letter and whether it could have damaging effects on my wallpaper promotion. I have found that the promotion is significantly increasing my autumn sales and I really do not want to stop providing the novelty knives-. On the other hand, the suppliers do give me excellent terms for their goods, with extended credit, and I do not wish to change to another supplier.

25

I enclose a copy of the supplier's patent (GB 2020202) and a leaflet about the novelty trimming knife. The knife was on the market for a few months earlier this year, and I understand that only my order for 100,000 was imported from the Far East before the importer (Cracker Creations) went into liquidation.

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CLIENT'S LETTER

You acknowledged the letter yesterday and have had a computer-based search carried out by your assistant. This search has revealed two documents which appear to be relevant to the subject-matter of the supplier's patent.

- 5
- 1) US Patent No. 3,000,001, granted 30 January 1986 titled Safety Knife
  - 2) US Patent No. 3,100,000, granted 3 March 1987 titled Heavy Duty Retractable Blade Utility Knife.

Advise your Client on the possible effects of the Patent on the promotion, the response your Client should make and what options are open to the supplier.

10

FOR THE PURPOSE OF THIS QUESTION ASSUME THAT THE PROMOTION IS A SALE OF THE KNIFE

## CRACKER CREATIONS LEAFLET

Cracker Creations introduce a novelty knife which is a safety knife which can be used in paper cutting, pencil sharpening and other handicraft works, and can also be adapted to have many different alternative applications. For Example, the safety knife can be used as a keyring, a mascot or a magnetic paper holder. This novelty knife is ideal as a Christmas cracker novelty. Furthermore, the knife is compact, easy to handle, has a handsome appearance and is so inexpensive that it can be treated as disposable.

10 Technical Specification

In general terms, the features of the safety knife comprise a generally 'flat semi-circular holder housing a chamber in which there is a guideway for an elongate blade, the guide-way serving to guide the blade in a straight movement between projected and retracted positions, a guide slot and a slider positioned externally of the holder co-operating with the guide slot, a wire spring in the chamber which biases the slider, and thereby the blade, to the retracted position, such that pressure must be applied to the slider in the direction of projection of the blade.

20 The novelty safety knife is illustrated in Figures 1 to 3. which present different views of the handy safety knife showing that the knife is a semi-circular, generally flat, box like holder 10. The box is of a handful size and the semi-circular shape is selected so as to provide a comfortable and steady hold during use.

25 The box is made of two substantially plate-like holder segments 12 and 14. A peripheral wall 16, protrudes from one segment 12, at right angles to the plane of the inner surface 12a of the segment. A portion of the peripheral wall, 16, is cut away to provide an opening 18.

30 The first segment 12 also has a guide slot 20 which extends towards the opening 18 and a pair of parallel guideways 22 and 24, around the guide slot 20. An elongate knife blade 36, of complementary shape to the guideway 22, is placed in the guideway 22. The guideway 22 serves to guide the blade 36 in a straight movement between projected and retracted positions. A generally disc-shaped slider 30 having a cross-hatched surface 26 and a stem 28,

**CRACKER CREATIONS LEAFLET**

extends through the guide slot 20 and guideway 22 and through an aperture 38 in the blade 36.

5 Thus, the slider 30 is able to move smoothly between projected and retracted positions of the blade 36.

The slider 30 is biased to the retracted position by the action of a wire spring 34 having a coil 34a mounted on a support pin 3.5 with one end 34b engaged with the peripheral wall 16 and the other end 34c loosely inserted through an aperture 32.

10

the two segments of the box are held together using a pin and socket arrangement (not shown); which enables the box to be opened and the blade replaced.

15 When not in use, the slider 30 is held in the retracted position by the action of the wire spring 34, and the knife blade 36 is entirely concealed within the holder 10. In use, the holder is held such that the thumb exerts a pushing force onto the slider 30 in the direction of the opening in the peripheral wall 16. Subsequent release of the pushing force results in the automatic return of the slider 30 back to the retracted position with the knife blade 36 concealed within the holder 10.

20

CRACKER CREATIONS

1/1

Fig. 1.

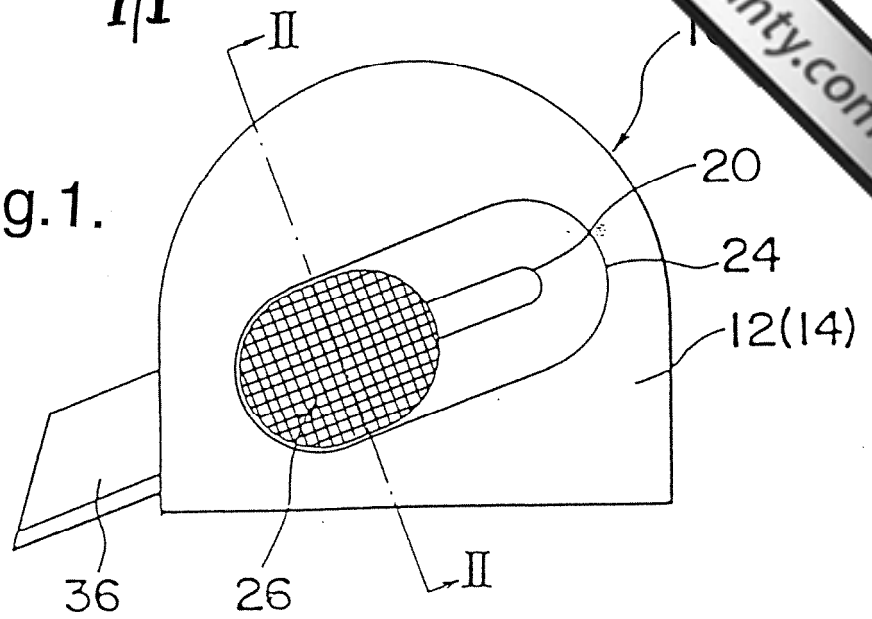


Fig. 2.

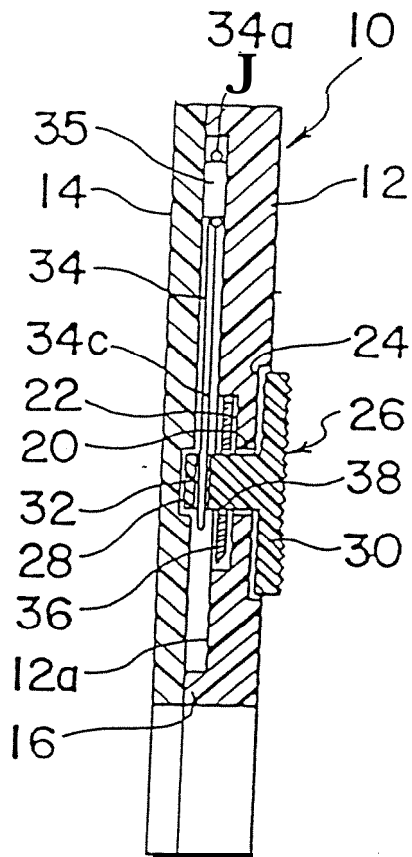
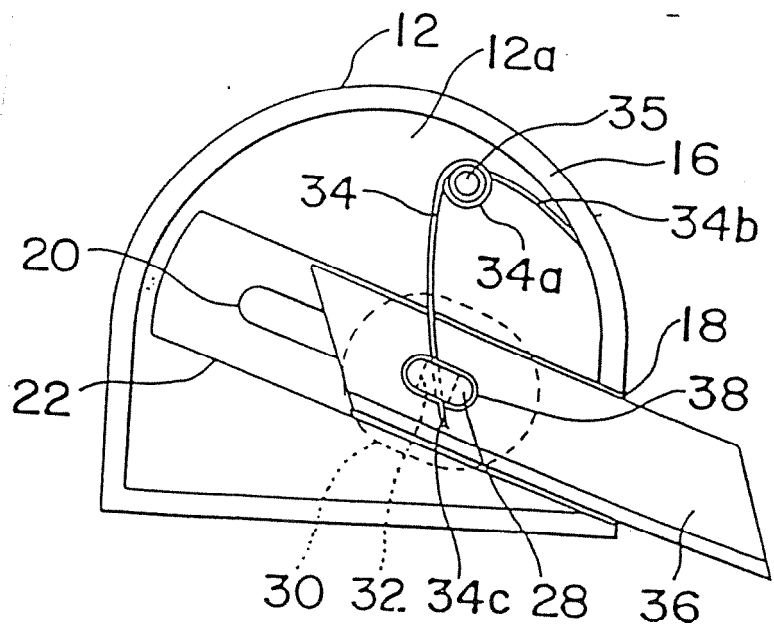


Fig. 3.



SUPPLIER'S PATENT

GB 2020202

Filed 2 July 1987

Granted 8 October 1990

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This invention relates to a safety cutter and more particularly to a safety knife having  
10 a retractable blade.

15

The present invention provides a knife with a retractable blade, which blade remains  
in the operating position only in use and automatically reverts to the retracted or safety  
position when not in the hands of the operator.

The prior art discloses knives having a retractable blade but such knives do not  
provide automatic retraction of the blade should the knife slip or be inadvertently dropped.

20

According to the present invention there is provided a safety cutter comprising a  
casing within which is mounted a blade carrier incorporating an operating button, a blade  
attached to the blade carrier, a spring mounted within the casing and biased at one end against  
a detent in the casing and at the other end against the blade carrier to retain the blade in a  
retracted position within the casing, the blade carrier being operably biased by the spring so  
that the blade is exposed to its operating position only when pressure is exerted on the  
25 operating button against the spring.

25

The invention is more particularly described with reference to the drawings in which

30

Fig. 1 is a perspective view of the assembled knife with the blade in the  
retracted position

Fig. 2 is a part sectional side elevation showing the blade in the retracted  
position

Fig. 3 is a part sectional side elevation showing the blade in the operating  
position

## SUPPLIER'S PATENT

The component parts illustrated in the drawings comprise a casing in two complementary halves 1 and 2, which, when assembled are held together by nuts 3; a metal blade 5; a blade carrier 7, having a pivotal lug, 6, at its forward end and extending into an operating button; and a hair spring 8.

5

When the knife is assembled, the blade 5 is attached to the blade carrier 7, by any convenient means known in the art, for example, small nuts and bolts (not shown) through holes (not shown) so that the blade 5 may be easily removed and replaced. The blade carrier 7 is pivotally mounted within a cavity 9 formed when the two halves of the casing are joined together and the pivotal lug 6 is located within a pivotal mount 10.

10

In the embodiment illustrated the blade carrier 7 has a second lug 11 located at its backward end, which lug abuts against a lip 12, below the upper surface of the casing, thus preventing the blade carrier 7 from inadvertently springing out of the casing under the influence of the hair spring 8.

15

The hair spring 8 is mounted within the casing about a pivotal point 13 and one end of the spring abuts against a detent 14 within the casing, as illustrated in Figs 2 and 3, while the other end 15 is biased against the lower edge of the blade carrier 7 to automatically retain the blade 5 in the retracted position as illustrated in Fig 2.

20

The blade 5 can only be exposed for use by pressure on the operating button 7 against the bias of the hair spring 8 and this operating position is illustrated in Fig. 3.

25

The safety knife of the present invention gives improved handling and safety for cutting and opening packages, shrink-wrap cases and general purpose usage. If the knife is put down or slips the blade automatically retracts and consequently the knife provides a safer method for opening cases and packages than existing knives. In the preferred embodiment described herein the blade 5 faces backwards for normal usage but knives or cutters within the scope of the invention may take a wide range of blade shapes and sizes.

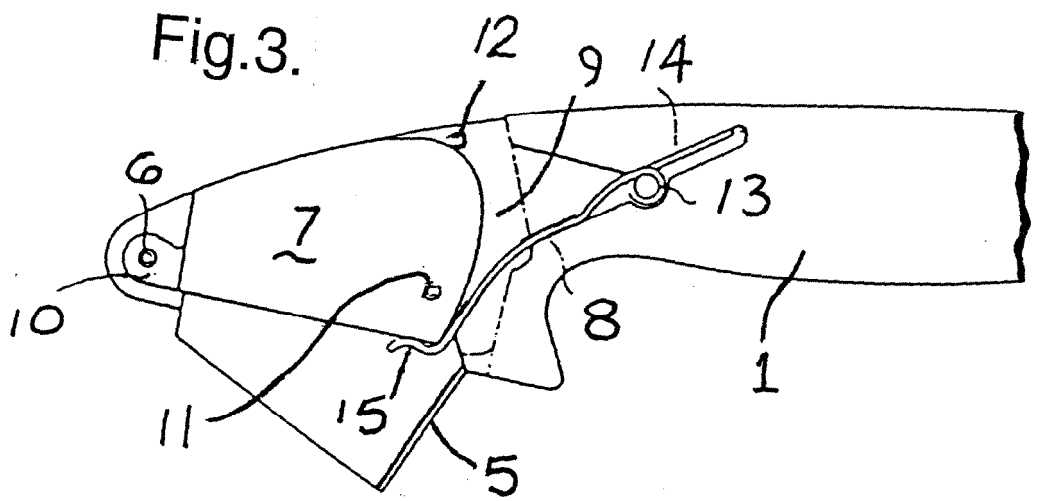
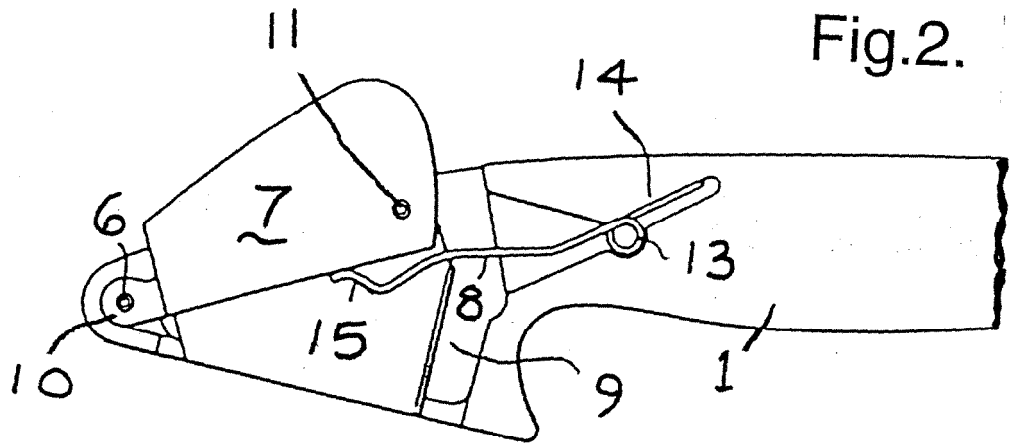
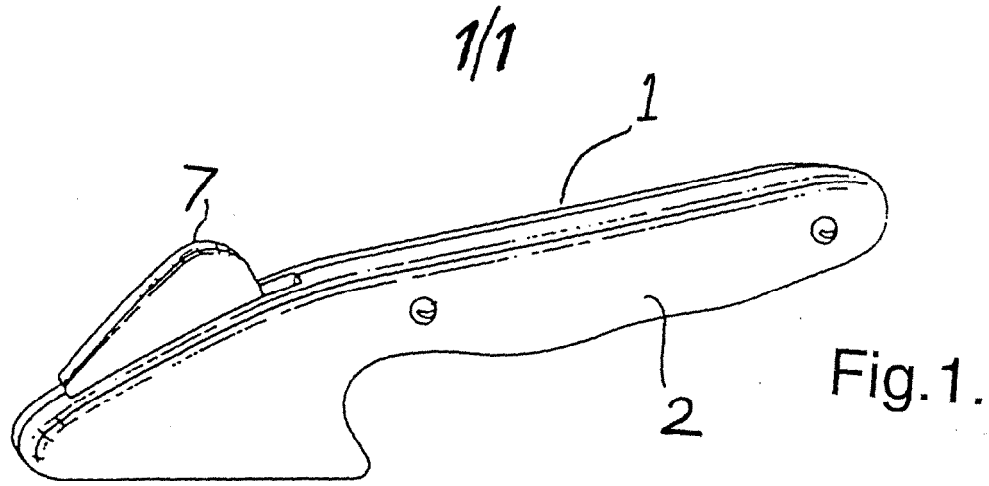
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## SUPPLIER'S PATENT

WHAT WE CLAIM IS :-

1. A safety cutter comprising a casing within which is mounted a blade carrier  
5 incorporating an operating button, a blade attached to the blade carrier, a spring  
mounted within the casing and biased at one end against a detent in the casing and at  
the other end against the blade carrier to retain the blade in a retracted position within  
the casing, the blade carrier being operably biased by the spring so that the blade is  
exposed to its operating position only when pressure is exerted on the operating button  
10 against the spring.
2. A cutter according to claim 1, in which the spring is pivotally mounted.
3. A cutter according to claim 2, in which the blade carrier is pivotally mounted in the  
15 casing such that the blade carrier is operably biased against the spring about its pivot.
4. A cutter according to any of the preceding claims wherein the blade faces backwards.
5. A cutter according to any of the preceding claims in which the casing is elongated at  
20 one end to form a handle and the operating button extends at the opposite end of the  
cutter.



US PATENT NO. 3,000,001

GRANTED 30 JANUARY 1986

SAFETY KNIFE

This invention relates generally to safety knives for cutting corrugated cardboard  
5 boxes and the like, and it particularly relates to a knife in which a cutting blade is  
continuously biased toward a retracted position within the knife's handle.

A safety knife in which a push button is rigidly attached to a blade, and the button  
must be pushed to latch the blade in a forward position against the tension in a spring in  
order to keep the blade extended into a cutting position. If the push button is released  
10 again, it is released from the latch and the spring immediately retracts the blade into a  
safe position in the handle.

It is an object of this invention to provide a safety knife in which the blade is  
exposed only during use. It is a further object of this invention to provide a safety knife  
which can utilise replaceable razor blades and the like. These and other objects will be  
15 apparent from a reading of the specification and the attached drawings in which :

Figure 1 is a front (interior) elevational view of one half of a safety knife.

Figure 2 is a side elevational view of the safety knife wherein a hook has engaged the  
corner of a cardboard container and the handle has been pulled away from the container  
to extend the blade which is about to engage the container.

20 In summary, the invention includes a handle and a blade holding carriage which is  
slidably received in the handle. A tension spring between the handles and the carriage  
holds the blade inside the handle. A small hook is secured to the carriage protrudes a  
relatively short distance beyond the handle when the carriage is fully retracted into-the  
handle. In use, the hook firmly engages a cardboard carton or the like and a backward pull  
25 on the handle causes the carriage (and the blade held therein) to be pulled out of the  
handle into the cutting position. If the handle is ever pulled transversely away from the  
box, the carriage is no longer held against the tension spring and the carriage is  
immediately drawn safely backward into the handle.

Referring to the embodiments shown in Figures 1 and 2 the safety knife 10  
30 includes a handle 12 having a cavity in which a portion defines a groove 14 extending  
from the front of the handle to near the mid point of the handle. The interior end of the

groove 14 forms a mechanical stop for the blade holding sliding carriage 20. Another restraint on the carriage 20 is provided by upper wall 21 and bottom wall 22. In order to bias the carriage 20 toward its retracted position within the handle at all times, a tension spring 30 is affixed at one of its ends to the carriage and at its opposite end to the handle.

5 A pin 32 extends transversely to a groove 34 which is sized so as to freely accommodate the tension spring 30. A stud 24, is provided for preventing the carriage 20 from being pulled out of the handle too far - such that the restraining spring 30 might be stretched beyond its yield point. An elongated aperture 28, is provided in the carriage 20 at a location where it fits over the stud 24.

10 The carriage consists of one thin metal side connected to another thin rigid side by a narrow web 40, which defines a thin cavity for receiving a cutting blade. The cutting blade is a common single-edged razor blade 42 which are widely available.

An anchor 46 is rigidly secured to the side of the carriage 20. Attached to this anchor is a spring steel wire 48 which extends in a cantilevered fashion toward the front  
15 of the carriage 20. Integral with the distal end of the wire is a small hook 50 which is inclined with respect to the linear part of the wire 48 so as to form an angle with the wire of about 90°. In use (Figure 2) the handle 12 is positioned so that the wire 48 with the hook 50 bears against a corner of a box 80, such that when the handle 12 is moved to the right the hook 50 is held fast by the corner, so that it does not move with the handle 12.

20 The carriage 20 is firmly secured to the proximate end of the wire 48 and so the carriage 20 remains with the hook 50. The effect is to pull the carriage 20 and blade 43 out of the handle cavity, such that a corner of the blade is now in an exposed, cutting position. By continuing to pull the handle 12 to the right the blade 43 begins to cut through the cardboard immediately below the handle in the manner of a conventional safety knife.

25 A further advantage of the disclosed construction is that the handle 12 may be held in a very natural manner.

Fig.1.

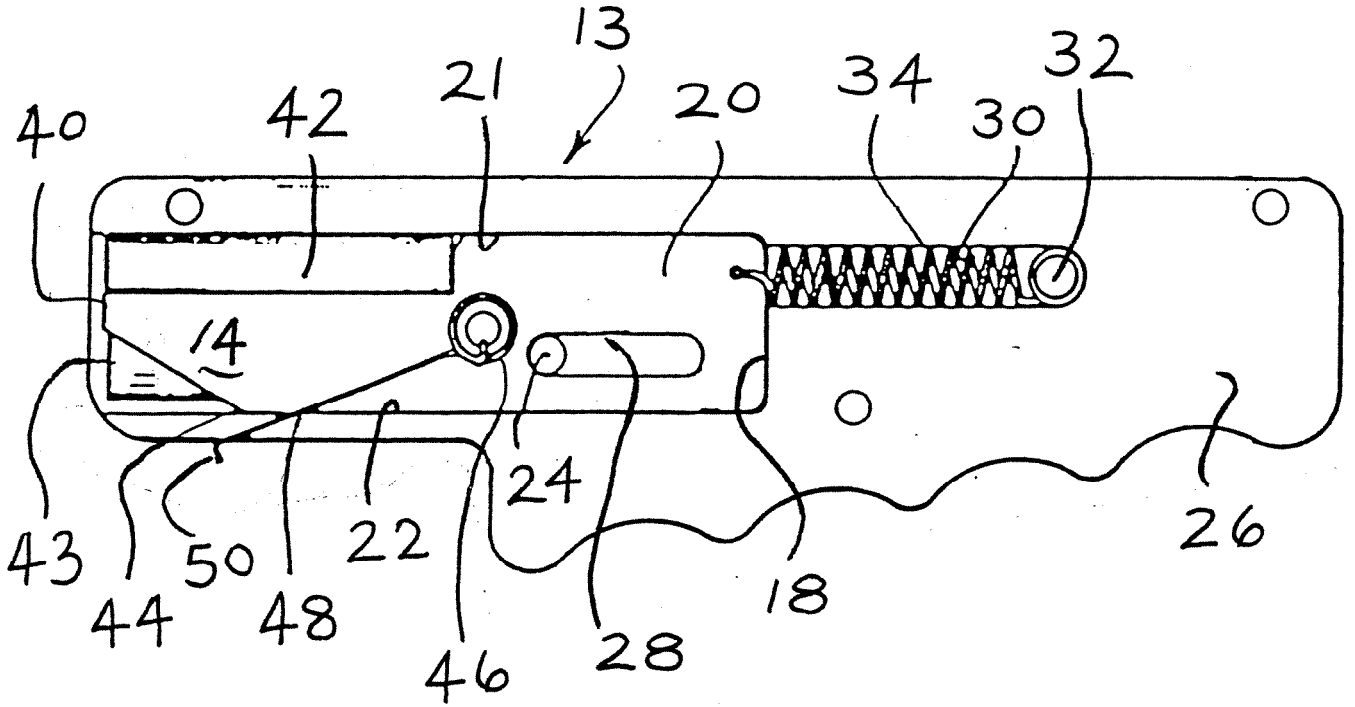
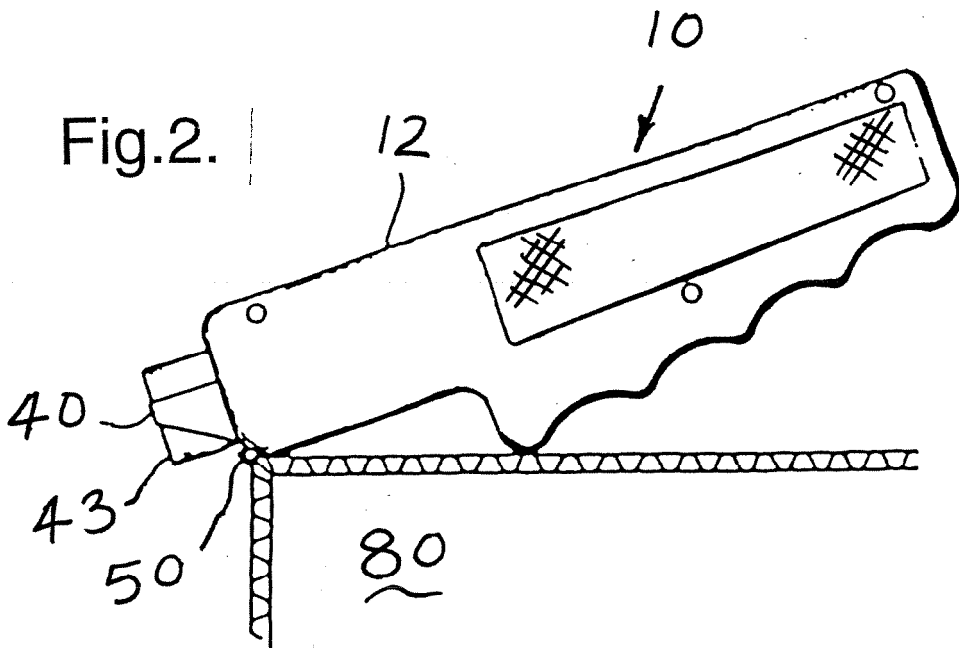


Fig.2.



US PATENT NO. 3,100,000

GRANTED 3 MARCH 1987

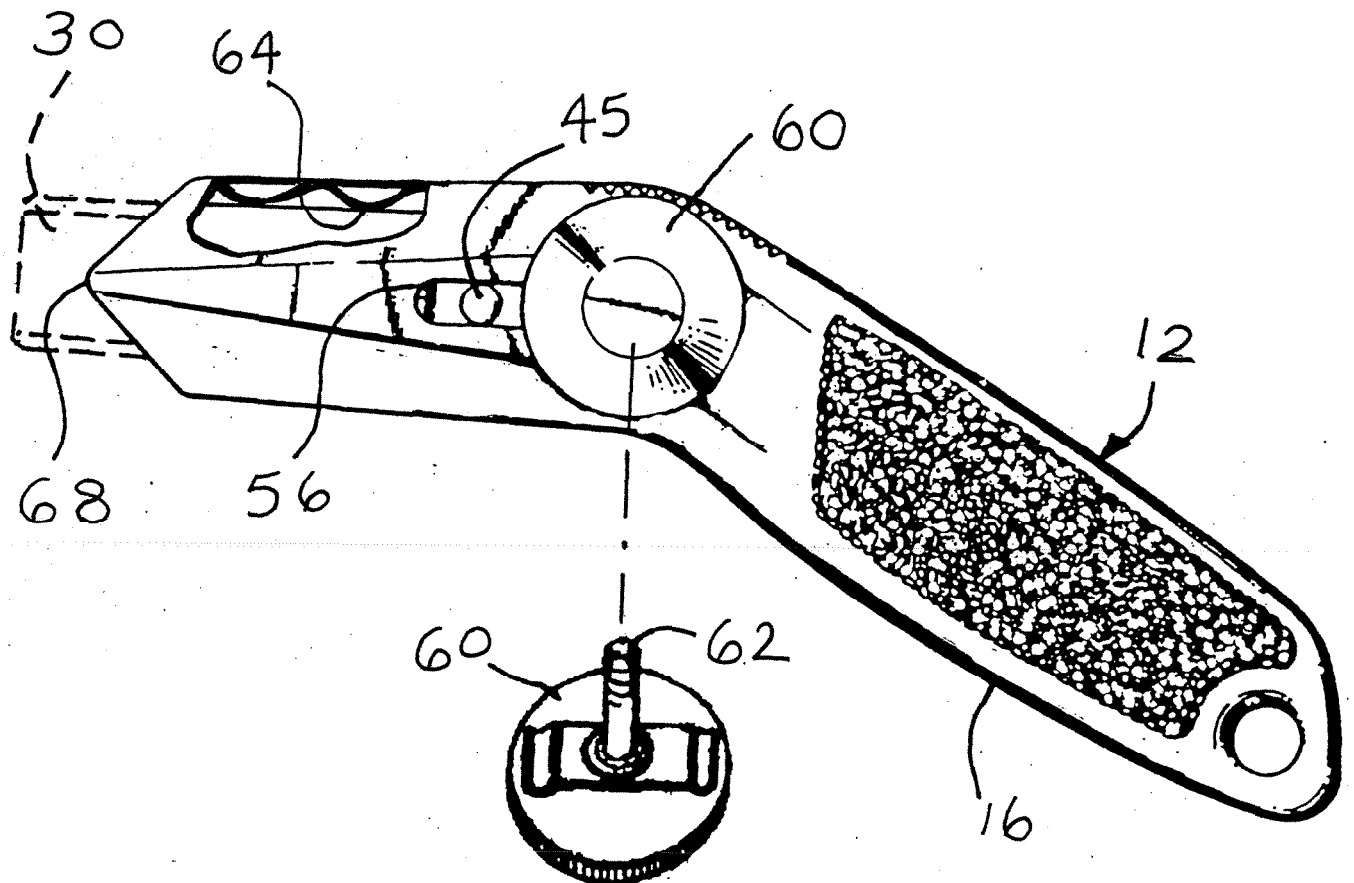
HEAVY DUTY RETRACTABLE BLADE UTILITY KNIFE

ABSTRACT

A retractable blade utility knife 12 is formed with a handle 16 terminating at one end in a blade receiving opening 68, a blade carrier 45 can move in a slot 56, a button 60 is screwed into the blade carrier and, when loosened, can be slide backwards and forwards along the slot to extend and retract a blade 30 (shown extended in dotted form).

Preferably a spring member 64 (shown in cut-away) may be provided to stop the button and blade carrier from sliding freely in the slot.

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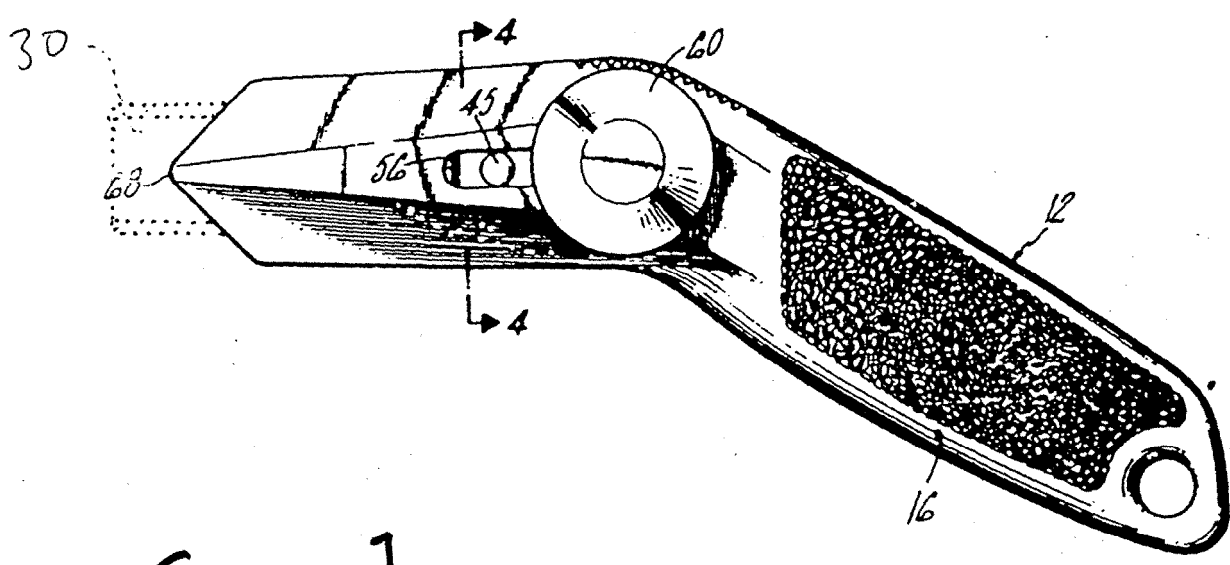


Figure 1