(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 121 977**
A1

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **84300378.1**

(22) Date of filing: **20.01.84**

(51) Int. Cl.³: **A 44 C 7/00**

(30) Priority: **21.01.83 GB 8301597**

(43) Date of publication of application: **17.10.84 Bulletin 84/42**

(84) Designated Contracting States: **DE FR GB IT**

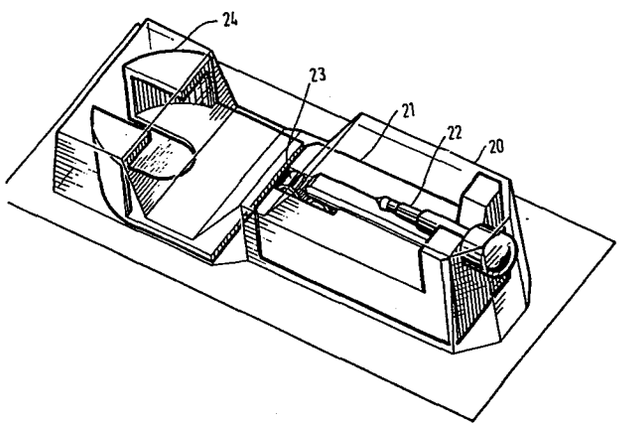
(71) Applicant: **Mander, Brian, The Willows 48 Fishers Lock, Newport Shropshire (GB)**

(72) Inventor: **Mander, Brian, The Willows 48 Fishers Lock, Newport Shropshire (GB)**

(74) Representative: **Mayes, Stuart David et al, BOULT, WADE & TENNANT 27 Furnival Street, London, EC4A 1PQ (GB)**

(54) Affixing of ear-piercing members.

(57) An improved method of piercing ears so as to avoid accidental transmission of blood-borne disease comprises: presenting an ear-piercing member (22) adjacent one side of the ear; holding adjacent the other side of the ear a retaining device (23) for said member, the device being supported by a disposable support (21); projecting the ear-piercing member so as to pierce the ear and engage the retaining device; and removing the support from said device. There is also provided a pack (20) for use in the method, including a novel form of holder (21) for the ear-piercing member and retaining device.



EP 0 121 977 A1

AFFIXING OF EAR-PIERCING MEMBERS

This invention relates to a method of affixing to an ear an ear-piercing member and to devices for use in that method. The invention relates particularly, though not exclusively, to the affixing in a human ear of an ear stud.

A conventional method of inserting into a human ear lobe a stud or other ear-piercing member is by means of a projector of a pistol-type, for example a projector having a plunger to engage the stud, propulsion means to propel the plunger, means to restrain the plunger against the propulsion means and a trigger by which the user can release the restraining means and allow the plunger and the stud carried thereby to be propelled against the ear lobe. As ear-piercing commonly results in one or two drops of blood being released from the ear lobe, use of this conventional method very often results in traces of blood being deposited on those surfaces of the projector which come into contact with the ear lobe during the piercing operation. Although rigorous washing of the projector after an ear-piercing operation can sometimes remove

all traces of blood this is not always the case. Even more serious is the fact that in practice the instrument is not always washed thoroughly, and traces of blood remain on it between one ear-piercing and the next. In consequence, there is a substantial risk of infection being transmitted from one person to another when using the conventional method of ear-piercing.

There has now been devised, according to the present invention, an improved method of ear-piercing by means of which the disadvantage referred to above can be avoided.

Accordingly, in a first aspect the invention provides a method of affixing in an ear an ear-piercing member, which comprises:

presenting said member adjacent one side of the ear;

holding adjacent the other side of the ear a retaining device for said member, the device being supported by a disposable support;

projecting the ear-piercing member against said one side of the ear with sufficient force to cause said member to pierce the ear and engage the retaining

device;

and removing the support from said device.

In a second aspect the invention provides a pack for use in the method of the first aspect of the invention the pack comprising:

an ear-piercing member, a retaining device for retaining the ear-piercing member in place in an ear;

and a holder for the retaining device, said holder being adapted to constitute the disposable support of the method of the first aspect of the invention, and the retaining device being held by the holder so that the holder can be used as the disposable support in the method of the first aspect of the invention without re-arrangement of said device with respect to the holder.

The holder conveniently also holds the ear-piercing member in such a way that said member can be loaded in a projector without manual contact with said member.

There is now described, by way of example and with reference to the accompanying informal drawings, a method of affixing in a human ear an ear stud, according to an embodiment of the first aspect of the invention

and a pack comprising an ear stud, back clasp and holder therefor, according to an embodiment of the second aspect of the invention.

In the drawings:

FIGURE 1 is a perspective view of the pack;

FIGURE 2 is a front elevation of the holder;

FIGURE 3 is a cross section on the line III-III of Figure 2;

FIGURE 4 is a rear elevation of the holder;

FIGURE 5 is a top plan view of the holder;

FIGURE 6 is a bottom plan view of the holder;

FIGURE 7 is a front elevation of a cover for the re-action member of a projector for the ear-piercing member;

FIGURE 8 is a cross section on the line VIII-VIII of Figure 7;

FIGURE 9 is a top plan view of the cover; and

FIGURES 10 and 11 are respectively a front elevation and side elevation (partly in section) of an alternative cover for the reaction member.

Sheet 4 of the drawings comprises sketches illustrating the several stages or steps of the embodiment of the method of the invention with reference to the use of a projector of the pistol-type for the stud.

With reference to Figure 1 the pack comprises a sealed container 20 of transparent plastics material containing a disposable support 21 on which there is mounted a stud ear-piercing member 22 and a back clasp 23 adapted to engage the leading end of the stud 22, and a disposable cover 24 the purpose of which is described below.

The disposable support 21 is shown in greater detail in Figures 2 to 6; and the disposable cover 24 is shown in greater detail in Figures 7 to 9. It will be seen from the drawings that holder/disposable support 21 has a notch 30 (Figures 5 and 6) providing the means of holding the stud 22 in position on the support 21, that the slot 31 provides the means of holding the back clasp 23 in position on the support and that the tongue 32 acts as a spring to prevent accidental displacement of the back clasp from slot 31. The arched re-entrant 33 in support 21 provides a means of engagement with an extension member of a pistol-type projector for the stud, as is described below.

There is now described, with reference to sheet 4 of the accompanying drawings an embodiment of the method of the invention. In this method embodiment there is used as projector for the ear-piercing stud a projector of the pistol-type the muzzle end of which is shown in the drawings of sheet 4. The remainder of the projector (not shown on sheet 4) comprises a pistol grip handle and, at the rearward end of the projector plunger, an enlargement thereof by means of which the plunger can be cocked, these features of the remainder of the projector can be of the type found in conventional pistol-type projectors for ear-piercing.

The following steps of the method embodiment are numbered using the numbers shown on sheet 4 of the drawings.

STEP 1

The ear lobe to be pierced is cleansed with an antiseptic.

STEP 2

The sterile pack is opened and there is removed therefrom the disposable cover 24.

STEP 3

The disposable cover 24 is engaged with the re-

action member of the projector so that the hood portion of the cover engages the upper curved surface of the re-action member and the plate-like portion of the cover thereby covers the front face of the re-action member.

STEP 4

With the disposable cover in place on the re-action member and the projector in its uncocked stated, the disposable support is presented to the lug at the forward end of the projector plunger and the head of the stud, which is a close push fit with an internal bore in the plunger, is engaged therewith by manual presure on the disposable support.

STEP 5

By a manual twisting motion of the support 21 the stud is detached therefrom without its head being displaced from the bore of the plunger. The support is then presented to the lug or locater and the arched re-entrant 33 is engaged with the lug thereby mounting support 21 so that the back clasp held therein comes into alignment with the leading end of the stud 22.

STEP 6

The projector is then cocked by manual withdrawal of the plunger against the spring or other propelling means of the projector.

STEP 7

The cocked projector is then presented to the ear lobe to be pierced so that the lobe enters the gap defined by the forward facing surface of the disposable cover 24 and the rearward facing surface of support 21. Rearward pressure on the projector trigger causes the lug to be drawn backwards until the ear lobe is sandwiched between the support 21 and disposable cover 24. Further backward pressure on the trigger causes the plunger to be released and instantly to plunge forward under the influence of the propelling means carrying with it the stud whose leading pointed end pierces the ear lobe and engages with the centrally located aperture in the back clasp. Pressure on the trigger is then released allowing the lug and the support mounted thereon to move forward and release the ear lobe.

STEP 8

The support 21 and cover 24 are then removed from the projector and disposed of leaving the projector

ready for the next piercing. Any drop of blood emerging from the ear lobe during the piercing is prevented from contact with the lug and re-action member of the projector by means of the disposable support 21 and disposable cover 24, respectively.

Although the invention hasbeen described with reference to the piercing of human ears, it is applicable also to affixing ear-piercing members to ears of mammals and other animals.

REP/mw

CLAIMS

1. A method of affixing in an ear an ear-piercing member, which comprises:

presenting said member adjacent one side of the ear;

holding adjacent the other side of the ear a retaining device for said member, the device being supported by a disposable support;

projecting the ear-piercing member against said one side of the ear with sufficient force to cause said member to pierce the ear and engage the retaining device;

and removing the support from said device.

2. A method according to Claim 1, in which the ear-piercing member is projected against the ear by means of a hand-held pistol or other projector.

3. A method according to Claim 2, in which said support is held by an extension of the projector.

4. A method according to Claim 2 or 3, in which the projector includes a reaction member and means to hold the ear gripped between the support and the reaction member as the ear-piercing member is projected.

5. A method according to any of the preceding claims, in which the reaction member is provided with a disposable cover to prevent the reaction member from contacting the ear.

6. A method according to any of the preceding claims, in which the ear is a human ear.

7. A method according to Claim 1, substantially as described herein with reference to the accompanying drawings.

8. A pack for use in the methof of Claim 1, the pack comprising:

an ear-piercing member;

a retaining device for retaining the ear-piercing member in place in an ear;

and a holder for the retaining device, said holder being adapted to constitute the disposable support of the method of claim 1,and the retaining device being held by the holder so that the holder can be used as the disposable support in that method without re-arrangement of said device with respect to the holder.

9. A pack according to Claim 8, in which the holder also holds an ear-piercing member suitable for retention by said retaining device, the holder and the retaining device being such that when the ear-piercing member has been removed from the holder the holder can be used as the disposable support in the method of Claim 1, without re-arrangement of said device with respect to the holder.

10. A pack according to Claim 8 or 9, in which the retaining device comprises a back clasp including an aperture to receive the leading pointed end of an ear-piercing member, the holder comprises a plate having formed in a first edge thereof a recess releasably to hold the retaining device while exposing said aperture and having formed in a second edge a re-entrant by means of which the holder can be engaged with a lug or other extension member of a pistol-type projector, and means releasably to hold the ear-piercing member prior to use thereof.

11. A pack according to Claim 10, in which the means releasably to hold the ear-piercing member comprises a flange outstanding from the plate and having formed therein a notch to engage the shank of the ear-piercing member, whereby said member is held with the shank substantially parallel to the plate.

12. A pack according to Claim 10 or 11, in which the plate is an elongate substantially rectangular plate of molded plastics material, said recess extends through the thickness of the plate and is formed with two lateral rebates extending longitudinally of the recess and the plate has, molded integrally therewith, a resilient tongue to hold the retaining

device in place in the recess.

13. A pack according to Claim 8, substantially as described herein with reference to the accompanying drawings.

14. A pack for use in the method of Claim 1, substantially as shown in Figure 1 of the accompanying drawings.

15. A holder for use in the method of Claim 1 or in the pack of Claim 8, which comprises a plate having formed in a first edge thereof a recess releasably to hold a retaining device comprising a back clasp including an aperture to receive the leading pointed end of the ear-piercing member while exposing said aperture and having formed in a second edge, opposed to said first edge, a re-entrant by means of which the holder can be engaged with a lug or other entension member of a pistol-type projector and means releasably to hold the ear-piercing member prior to use thereof.

16. A holder according to Claim 15, substantially as described herein with reference to the accompanying drawings.

17. A holder according to Claim 15, substantially as described herein and substantially as shown in Figures 2 to 6 of the accompanying drawings.

REP/MMW

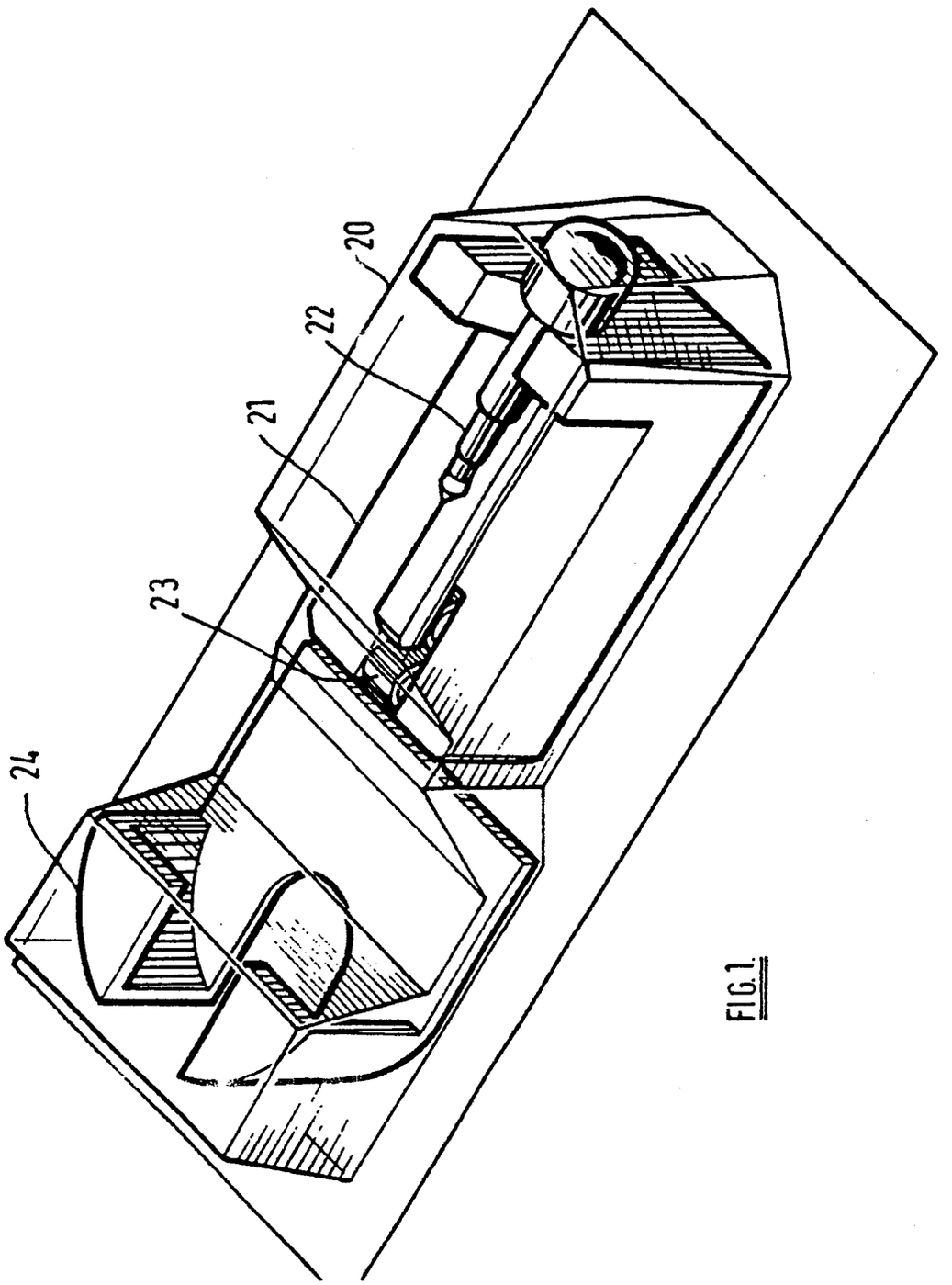


FIG.1.

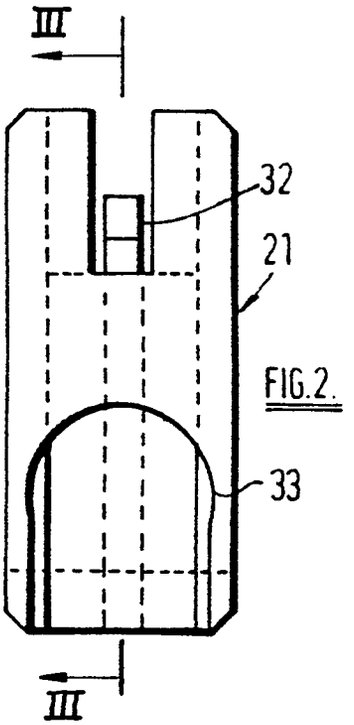


FIG.2.

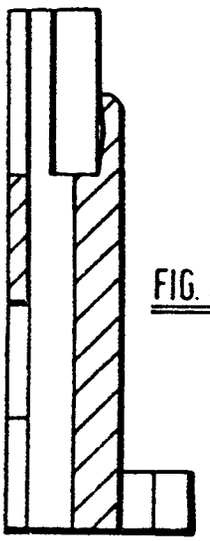


FIG. 3.

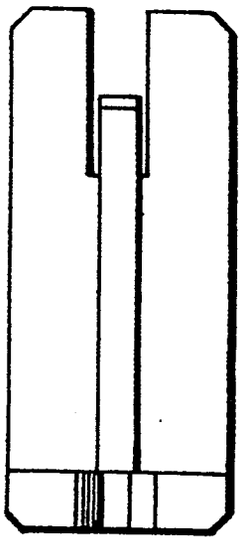


FIG.4.

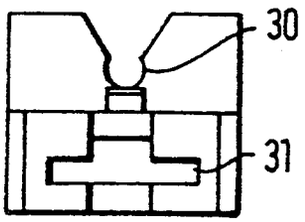


FIG. 5.

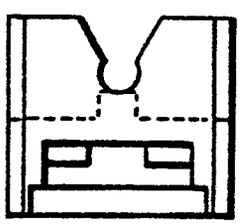


FIG.6.

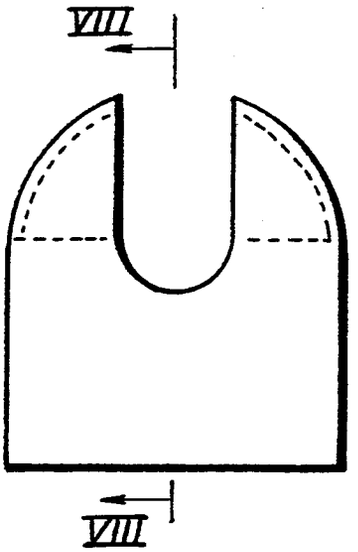


FIG. 7

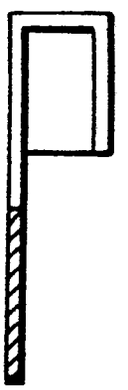


FIG. 8.

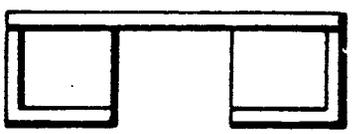
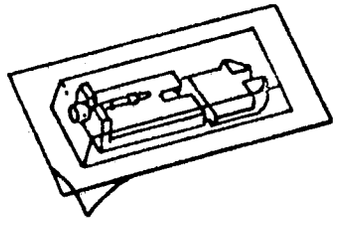


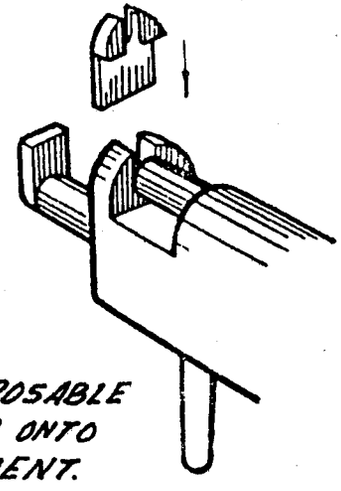
FIG. 9.

1/ CLEANSE EAR LOBE WITH ANTISEPTIC WIPE.



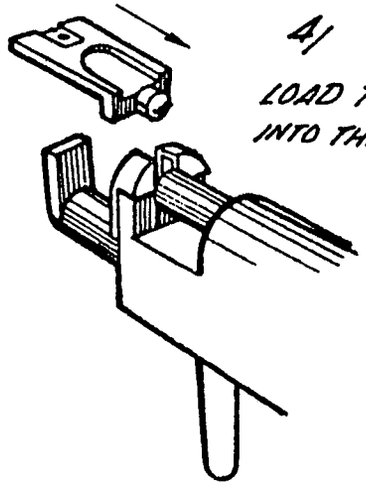
2/

OPEN THE STERILE PACK CONTAINING ONE STUD AND ONE BACK CLASP IN THE DISPOSABLE MOUNT AND THE DISPOSABLE FRONT COVER.



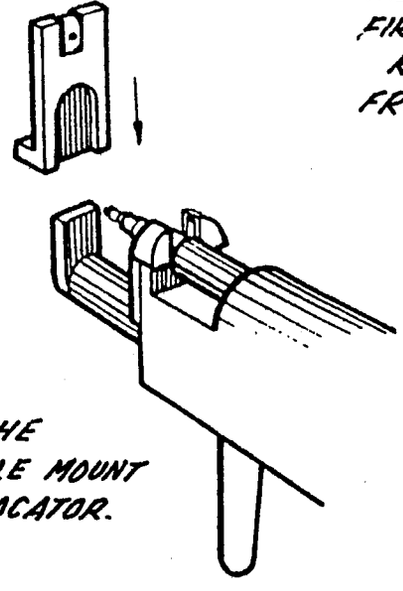
3/

FIT THE DISPOSABLE FRONT COVER ONTO THE INSTRUMENT.



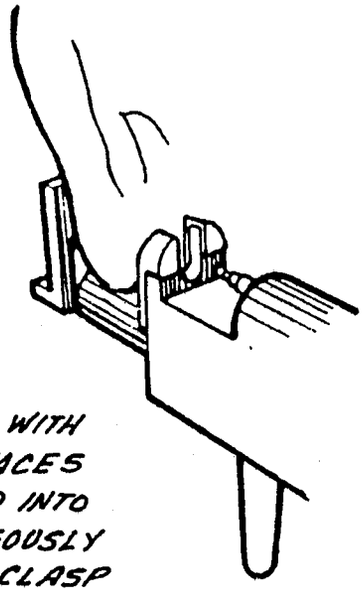
4/

LOAD THE STUD INTO THE INSTRUMENT.



5/ PUSH THE DISPOSABLE MOUNT ONTO THE LOCATOR.

6/ PULL BACK INSTRUMENT INTO THE FIRING POSITION.



7/

GRIP THE EAR WITH THE TWO STERILE FACES AND FIRE THE STUD INTO THE EAR SIMULTANEOUSLY FIRING THE BACK CLASP REMOVE THE INSTRUMENT FROM EAR.

8/ PULL OFF AND DISPOSE OF THE FRONT COVER AND MOUNT IN READYNESS FOR THE NEXT PIERCING.

4/5

0121977

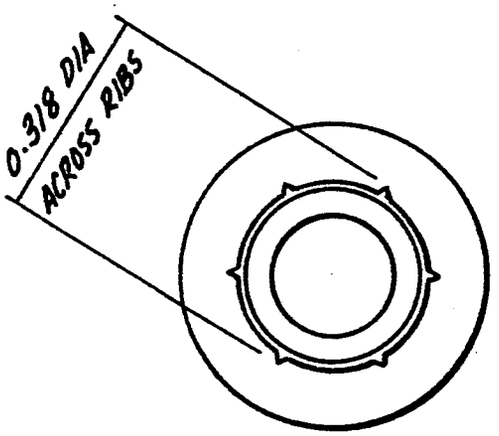


FIG. 10.

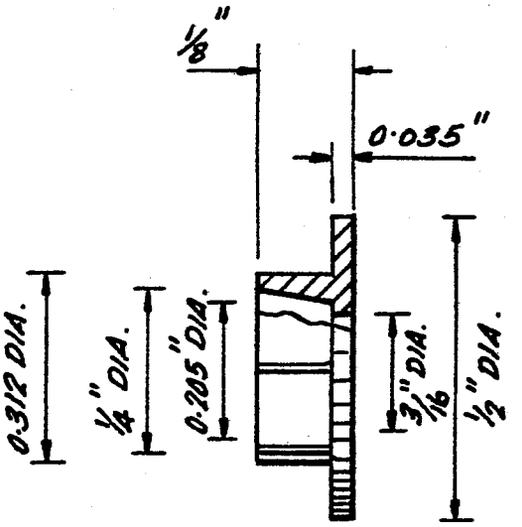


FIG. 11.

DECIMALS ± .002" FRACTIONS ± .010"

0121977

European Patent Office

EUROPEAN SEARCH REPORT

Application number

EP 84 30 0378

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
X	US-A-4 009 718 (J.A. HASTINGS) * Column 1, lines 58-68; column 2, lines 1-5; column 3, lines 55-68; column 4, lines 1-48, 56-68; column 5, lines 1-38; claims; figures *	1-7,8, 13	A 44 C 7/00
X	US-A-4 079 740 (J.E. PHALON) * Column 1, lines 25-45, 64-68; column 2; column 3, lines 1-59; claims; figures *	1-7,8, 13	
X	US-A-4 030 507 (INVERNESS CORP.) * Column 1, lines 11-15; column 3, lines 9-68; columns 4-8; column 9, lines 1,2; figures *	1-7,8, 13	TECHNICAL FIELDS SEARCHED (Int. Cl. ³)
A	US-A-4 020 848 (T.J. DiCICCO)		A 44 C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	09-05-1984	GARNIER F.M.A.C.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document