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[54] **INFUSION TUBE HOLDER AND METHOD**  
**3 Claims, 3 Drawing Figs.**

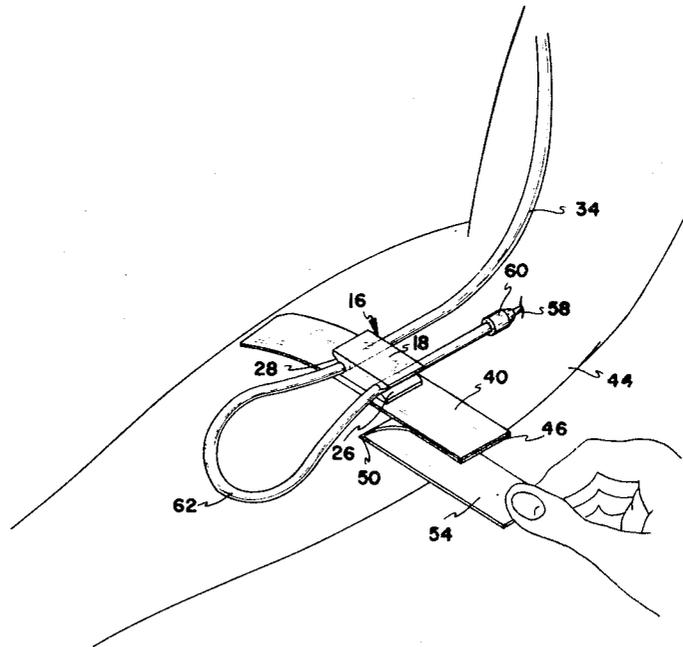
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 205 A

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**ABSTRACT:** Method and apparatus adhesively holding a looped infusion tube adjacent a venipuncture site, the apparatus including a generally flat body member carried upon an adhesive strip and opposed tube receiving recesses.



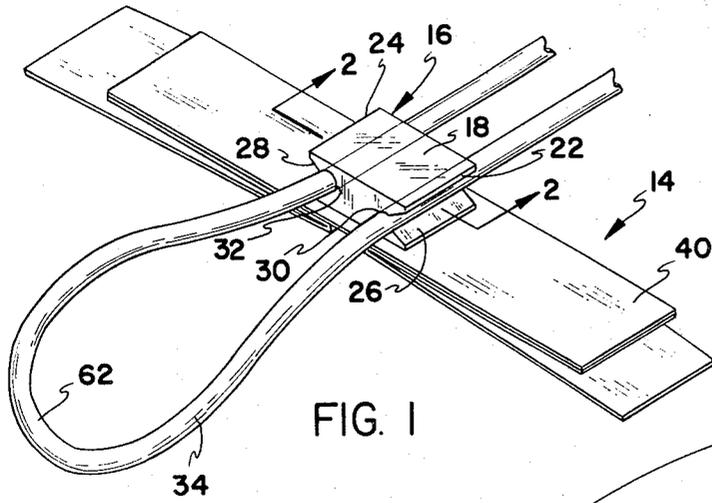


FIG. 1

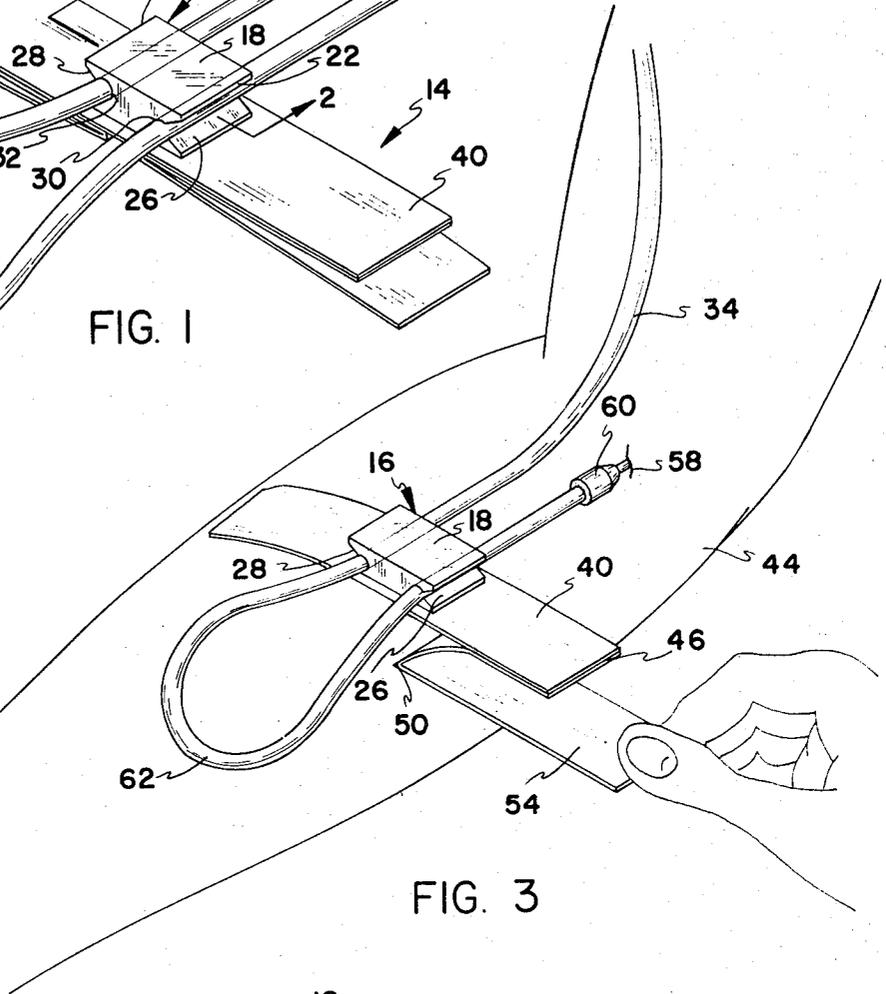


FIG. 3

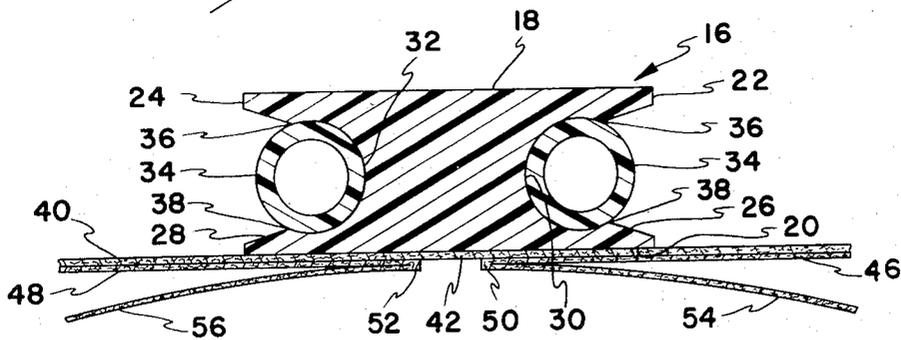


FIG. 2

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# INFUSION TUBE HOLDER AND METHOD

## BACKGROUND

### 1. Field of the Invention

The present invention relates to novel method and apparatus for holding an infusion tube safely adjacent a venipuncture site in a patient's arm.

### 2. The Prior Art

Conventional intravenous infusion procedures normally include performing a venipuncture in a patient's arm with a hollow needle having an infusion tube attached. Care must be taken to prevent inadvertent lateral movement of the needle relative to the arm when the patient moves his arm from place to place. Lateral movement of the needle and arm causes the flesh to tear around the puncture site thereby making the puncture site irritated and susceptible to infection. Also, lateral movement causes the sharpened end of the needle to be withdrawn out of the vein so that a painful hematoma is developed.

In order to avoid the mentioned dangers, it has been common practice to form the infusion tube into a loop adjacent the venipuncture site and to tape the loop to the skin of the patient's arm with adhesive tape. It has been found, however, that taping the infusion tube to the arm does not adequately immobilize the infusion tube because the infusion tube has a tendency to work free with the movement of the arm.

## BRIEF SUMMARY AND OBJECTS OF THE INVENTION

The present invention provides an infusion tube holder and method firmly holding an infusion tube in looped configurations securely against the skin near a venipuncture site.

It is a primary object of the present invention to provide a novel infusion tube holder.

It is another primary object of the present invention to provide an improved method for safely securing an infusion tube to a patient's arm near a venipuncture site.

These and other objects and features of the present invention will become more fully apparent from the following description and appended claims taken in conjunction with the accompanying drawings.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective illustration of the presently preferred embodiment of the invention with the infusion tube shown in looped configuration;

FIG. 2 is a longitudinal cross section taken along lines 2—2 of FIG. 1; and

FIG. 3 is a perspective illustration of the method of securing the holder embodiment of FIG. 1 to a patient's arm in which a venipuncture has been performed.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

### The Structure

Reference is now made to the figures wherein like parts are designed with like numerals throughout.

Referring particularly to FIG. 1, the presently preferred embodiment of the invention generally designated 14 includes a body member generally designated 16 which is preferably formed of resilient plastic material and is preferably generally rectangular in configuration. The body member has an upper generally planar surface 18 and an opposed generally planar surface 20 (see FIG. 2).

Opposed side edges 22 and 24 are respectively provided with recesses 26 and 28, which open to the exterior of the body member 16. The bottom of the respective recesses 26 and 28 is contoured as at 30 and 32 so as to snugly receive portions of the periphery of infusion tube 34 in mating relation. It should be observed that each of the recesses 26 and 28 is provided with opposed downwardly projecting ridges 36 and also diametrically opposed upwardly projecting ridges 38 (see FIG. 2). Ridges 36 and 38 are spaced one from another a

distance which is slightly less than the maximum diametral dimension of the infusion tube 34. Thus, the infusion tube 34 must be press-fit into mating relation within the recess 26 or 28.

The lower surface 20 of the body member 16 is integrally secured to a strip 40 preferably formed of highly flexible synthetic or natural fibrous material. The lower surface 42 of the strip 40 is provided with an adhesive material adapted to secure the strip 40 tightly against a patient's arm 44 (see FIG. 3).

In order to protect the adhesive material, two strips of tape 46 and 48 are each folded upon themselves as at 50 and 52 respectively so as to form downwardly projecting tabs 54 and 56. The tape 47 and 48 is preferably formed of paper or flexible synthetic material and is preferably provided with a glossy surface adapted to be placed against the adhesive material of the lower surface 42 of the strip 40. Thus, the tape 46 and 48 may be easily removed from the adhesive material on the surface 42 by pulling on either one of the tabs 54 or 56 such as is shown in FIG. 3.

### The Method

According to the presently preferred method, a venipuncture is made in the arm 44 by penetrating the flesh and vein (not shown) with a hollow intravenous needle 58 as shown in FIG. 3. The infusion tube 34 which is connected to the needle 58 by a coupling 60 is then formed into a loop 62.

A portion of the tube 34 at the base of loop 62 is forced into the channel 26 past the ridges 36 and 38 into mating relation and, similarly, another portion of the tube 34 at the base of the loop 62 is forced into the channel 28. In order to secure the holder 14 immovably upon the patient's arm 44, the tabs 56 and 54 are removed from the strip 40 so as to expose the adhesive material on the surface 42. Thereafter, the strip 40 may be tightly pressed upon the surface of the skin as shown in FIG. 2 to make the body member 16 immobile relative to the arm 44.

It can be appreciated that the above-mentioned steps may take place in any desired sequence to accomplish the same result.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. An intravenous infusion tube holder comprising:

a base member having flat upper and lower surfaces;

laterally opening recesses in opposed sides of the base member, the recesses each being adapted to releasably and simultaneously receive a doubled length of an infusion tube, said recesses comprising parallel contoured channels adapted to conform to a portion of the periphery of the infusion tube and restraining ridges axially aligned with the channels and spaced from the inner surface of the channels so as to restrain the infusion tube in press-fit relation within the channel; and

an adhesive strip mounted upon the lower surface of the base member for adhesively securing the base member to a patient's arm.

2. A holder as defined in claim 1 wherein said base member is generally flat in configuration and is formed of essentially rigid, though resilient synthetic material.

3. A holder as defined in claim 1 wherein said adhesive strip is formed of flexible material having an adhesive coating on one side, the adhesive coating being protected by removable tape prior to adhering the strip to the patient's arm and further comprising means for integrally securing the other side of the strip to the base member.

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