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(54) **MAGNETIC BED-RAIL ATTACHMENT PARTICULARLY SUITED TO STERILE ENVIRONMENTS**

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Related U.S. Application Data

(60) Provisional application No. 60/545,956, filed on Feb. 19, 2004.

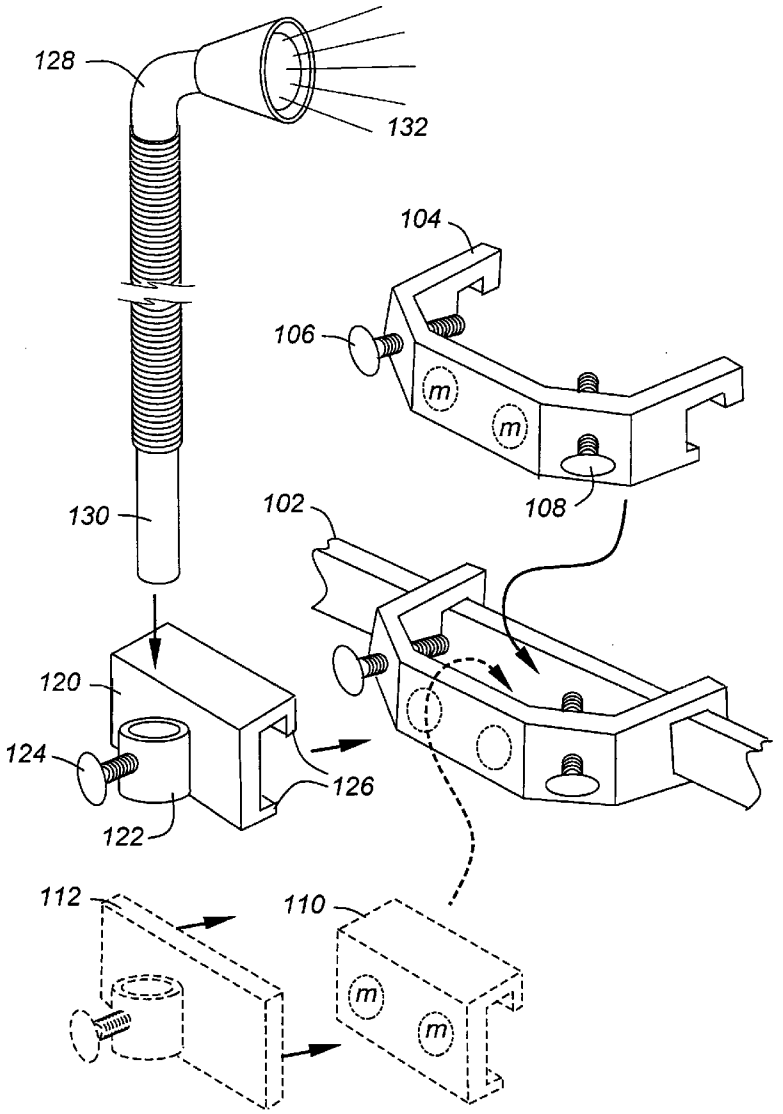
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(57) **ABSTRACT**

A multi-component attachment system, including a first clamp that attaches to a bed-rail, and a second component which connects to a lighting system or other accessory, allows a sterile drape to go over the bed-rail attachment, while allowing a lamp or other accessory to magnetically attach through the drape, thereby preventing interruption of the sterile field.



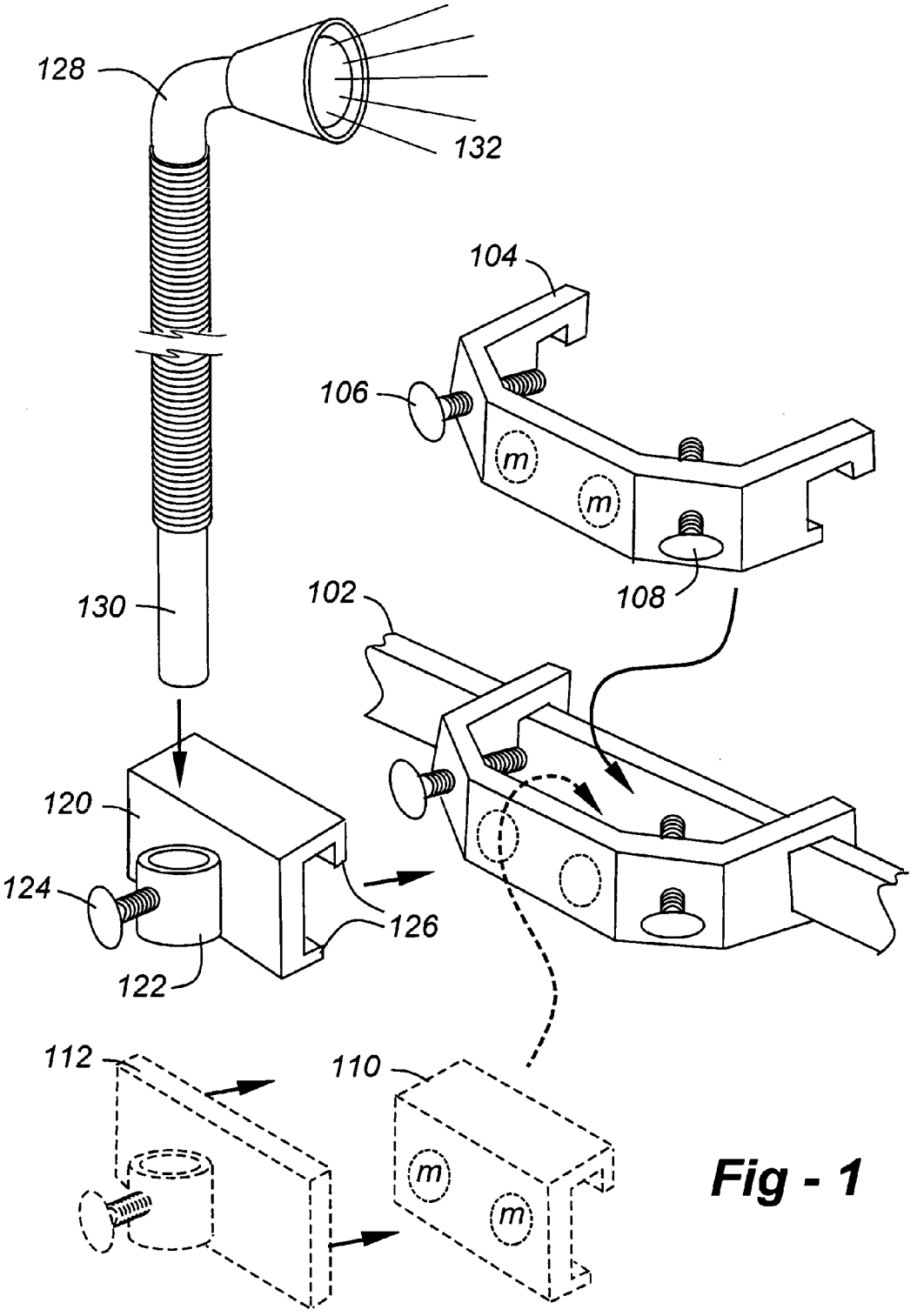


Fig - 1

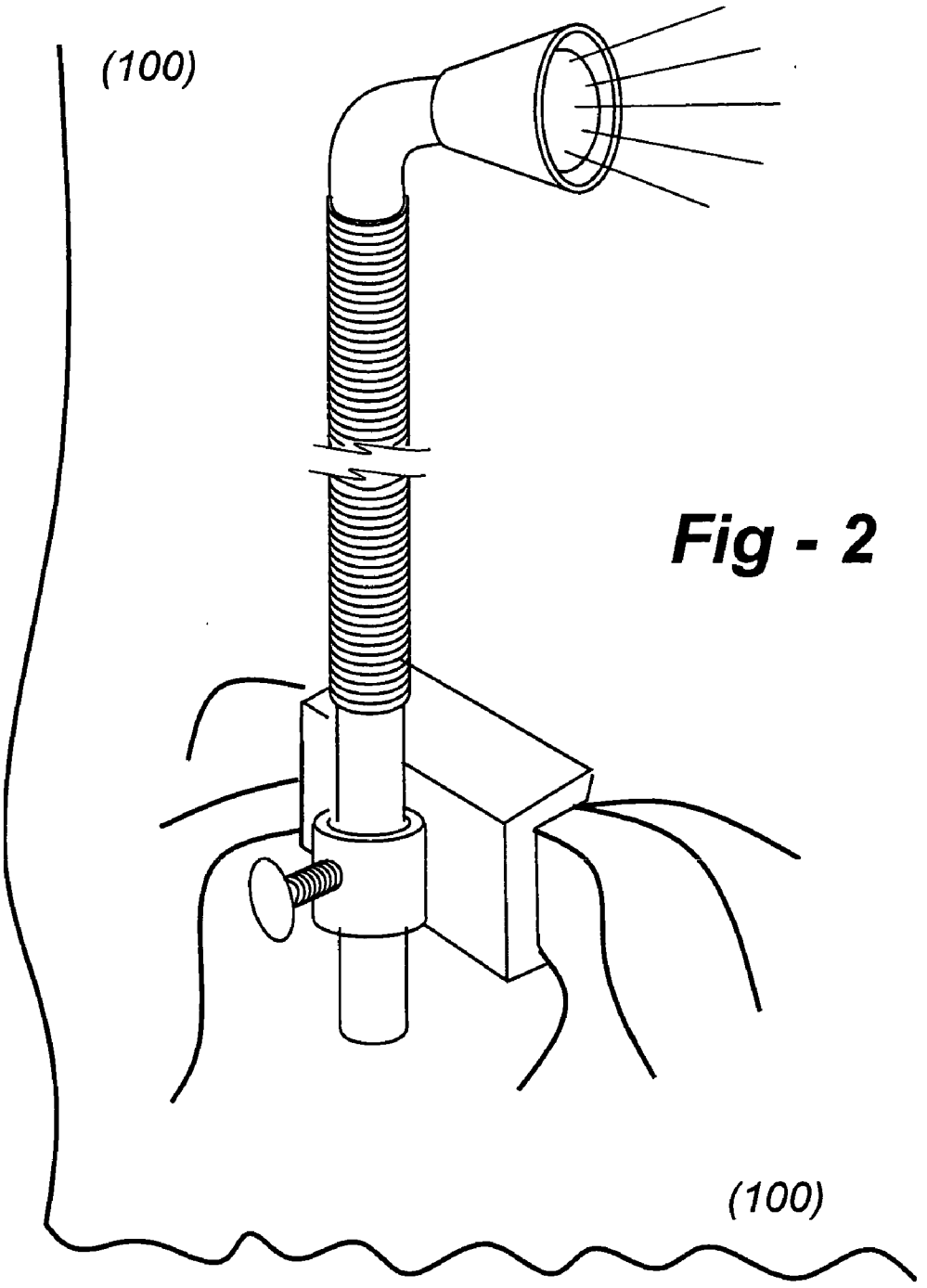


Fig - 2

MAGNETIC BED-RAIL ATTACHMENT PARTICULARLY SUITED TO STERILE ENVIRONMENTS

REFERENCE TO RELATED APPLICATION

[0001] This application claims priority from U.S. Provisional Patent Application Ser. No. 60/545,956, filed Feb. 19, 2004, the entire content of which is incorporated herein by reference.

FIELD OF THE INVENTION

[0002] This invention relates generally to hospital and surgical appliances and, in particular, to a magnetic attachment for lights, and so forth, particularly in sterile environments.

BACKGROUND OF THE INVENTION

[0003] It is often difficult for surgeons and other medical practitioners to adequately visualize procedures without appropriate lighting. It has been found that flexible or "gooseneck" lights are advantageous for this purpose, as they may be flexed or snaked to guide illumination directly to an area of interest. The problem, however, is that once a sterile field is created, these lamps must be clamped to the bed-rail, or the like, thereby interrupting the sterile fields and creating a potential source of germs and pathogens.

SUMMARY OF THE INVENTION

[0004] This invention improves this situation through the use of a magnetically coupled multi-component attachment system. The preferred embodiment includes a first clamp that attaches to a bed-rail, and a second component which connects to a lighting system or other apparatus, with a magnetic attachment therebetween. This allows a sterile drape to go over the bed-rail attachment, while allowing a lamp within the sterile field to magnetically attach through the drape, thereby preventing interruption of the field.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] **FIG. 1** is a drawing depicting the components associated with preferred embodiments of the invention; and

[0006] **FIG. 2** illustrates a lamp installed to a bed rail using the components of **FIG. 1**.

DETAILED DESCRIPTION OF THE INVENTION

[0007] **FIG. 1** is a drawing depicting the components associated with preferred embodiments of the invention. A clamp **104** attaches to a bed-rail **102**. Such a clamp may utilize a "Clark" attachment, which fits into recesses or notches (not shown) on the bed-rail, and which uses manual fasteners such thumb screws **106** and **108** for tightening purposes.

[0008] Unlike existing clamps, however, the inventive clamp **104** includes one or more magnets (m) adapted for coupling to a second component **120**. Preferably, rare earth or other very strong magnets are used. As shown in **FIG. 2**, this allows a drape **100** to be dressed over the clamp **104**, with component **120** being held in position by way of magnetic attraction. The component **120** includes a sleeve **122** and manual fastener **124**, to receive the stem **130** of a flexible lamp **128** providing illumination where needed as shown as **132**.

[0009] Apart from the preferred embodiment just described, there are several variations to the invention. First, the magnets may be located either on component **104** or **120**. Location on component **120** may allow a conventional "Clark" attachment to be used. The magnets may also be located on an intermediate piece **110**, which should also permit a standard Clark bracket to be used. Although lip features **126** are preferably used, these may not be necessary with strong magnets, allowing a simpler plate such as **112** to be used. Finally, although the coupling shown is adapted to receive a gooseneck lamp, other accessories may be accommodated, including non-gooseneck lights, trays, tubing holders, and any other appliance benefiting from isolation from the bed or frame.

I claim:

1. An accessory holder for use with a bed having a frame and a sheet or drape, comprising:

a first component that attaches to the bed frame;

a second component including a coupling to receive an accessory; and

one or more magnets allowing second component to be magnetically coupled to first component through the sheet or drape.

2. The accessory holder of claim 1, wherein the accessory is a lamp.

3. The accessory holder of claim 1, wherein the first component attaches to the bed frame using a Clark-type coupling.

4. The accessory holder of claim 1, wherein the second component further includes overhang or underhang feature to provide mechanical coupling in addition to magnetic coupling.

5. The accessory holder of claim 1, further including an intermediate component that mechanically attaches to the first component and provides a magnetic coupling to the second component.

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