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MAGNETIC SURGICAL DRAPE

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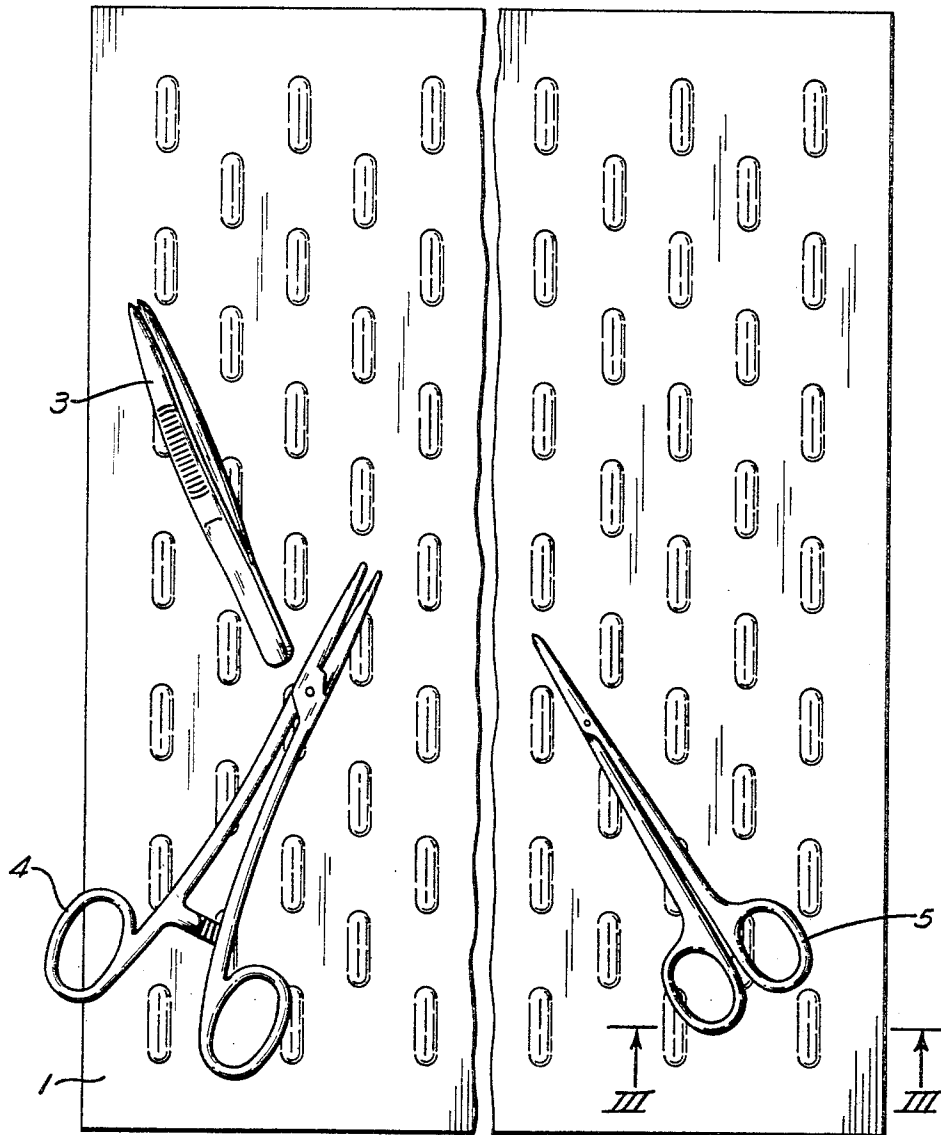


Fig. 1



Fig. 2

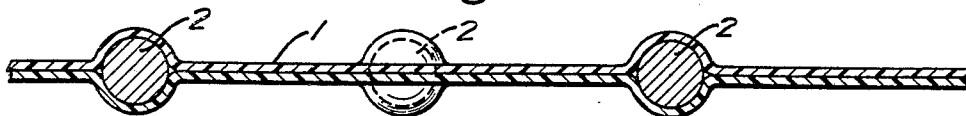


Fig. 3

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1

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MAGNETIC SURGICAL DRAPE

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1 Claim

ABSTRACT OF THE DISCLOSURE

A surgical drape to be laid upon a patient during surgery is formed from a flexible sheet having magnets embedded in it and forming protrusions on the opposite sides of the sheet. Surgical instruments laid upon the protrusions are held in place by the magnets beneath.

During operations a surgeon may pick up his instruments from a nearby table as he needs them or they may be handed to him by a nurse or assistant. As the surgeon changes from one instrument to another in some types of operations, he often lays the instruments on the patient himself, who thus serves as an instrument table. The trouble with this procedure is that the instruments may roll or slide off the patient and onto the floor.

It is an object of this invention to provide a special drape that can be laid upon a surgical patient for supporting and firmly retaining any surgical instruments that are laid on the drape. Another object is to provide such a drape which can be sterilized without damage and which has a long life.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which

FIG. 1 is a plan view of my surgical drape;

FIG. 2 is an end view thereof; and

FIG. 3 is an enlarged fragmentary longitudinal section taken on the line III—III of FIG. 1.

Referring to the drawings, the main body of the drape is formed from a flexible sheet 1 of impervious material that can be sterilized without damage to it, such as synthetic rubber or a suitable plastic. Preferably, the sheet is rectangular and it may be any desired size, but a sheet measuring about 18 by 24 inches is a convenient size because it is large enough for its purpose and yet not so large as to be bothersome. Embedded in this sheet is a plurality of closely spaced permanent magnets. Most suitably, these magnets are bar magnets 2 arranged in parallel rows with the magnets in each row substantially parallel to one another. It also is desirable that the magnets in each row be staggered relative to those in the adjoining rows.

To embed the magnets in the sheet, the sheet may be formed from two thin layers sealed together with the magnets between them. In forming the drape, the magnets are laid on one layer of the sheet and then the other layer is placed over them and the two layers are pressed very tightly together. They may be joined by an adhesive or by fusion under heat. The entire area of the two layers, except the portions overlying the magnets, are joined together face to face in this way, with the result that the

2

magnets are sealed in the sheet in fixed positions and cause the portions of the sheet engaging them to project from opposite sides of the sheet.

One way of making this drape is to place one layer of the sheet on a flat die provided with recesses slightly larger than the magnets. The bottoms of the recesses are connected with means for drawing the air out of them so that the portions of the flexible material overlying the recesses will be drawn down into them. The magnets then are laid on the material in the recesses, above which the magnets extend for about half their thickness, and the other layer of sheet material is laid over them. A top die, recessed like the bottom one, then is forced down to press the two layers tightly together around the magnets to form the flexible sheet with the magnets embedded in it. An adhesive between the layers may join them together, or the dies may be heated to fuse the layers when certain materials are used. The sheet tightly engages the magnets to hold them in place and seals them from the atmosphere so that they cannot rust.

The magnets are arranged closely enough together to assure at least one magnet attracting and holding a surgical instrument laid on the drape, no matter in what position the instrument may be placed. The instruments 3, 4, 5 can be placed, or even dropped carelessly, on this drape and yet they will not fall off because the magnets hold them securely. The instruments cannot possibly slide off the drape. This drape can be laid over any portion of the patient and will stay in place, because the protrusions from the body of the sheet form a non-skid surface, and the weight of the magnets causes the sheet to conform to the underlying contours of the surface supporting the drape. After use, the drape can be washed and sterilized and rolled into a small roll for storage.

I claim:

1. A surgical drape adapted to be laid upon a patient undergoing surgery, comprising an exposed flexible sheet formed of two superimposed layers of impervious synthetic plastic material, and a plurality of rows of spaced bar magnets between said layers, said layers completely covering all of the magnets and being sealed together throughout their areas except where spaced apart by the magnets, and said layers tightly engaging and conforming to the contours of the magnets between them to provide portions of the layers that project from the opposite sides of the remainder of the sheet between the magnets for engagement by metal surgical instruments to be held thereon by the sealed-in magnets.

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