April 4, 1967 S. SIMON 3,312,434

CORD HOLDER

Filed April 28, 1965

FIG. 1

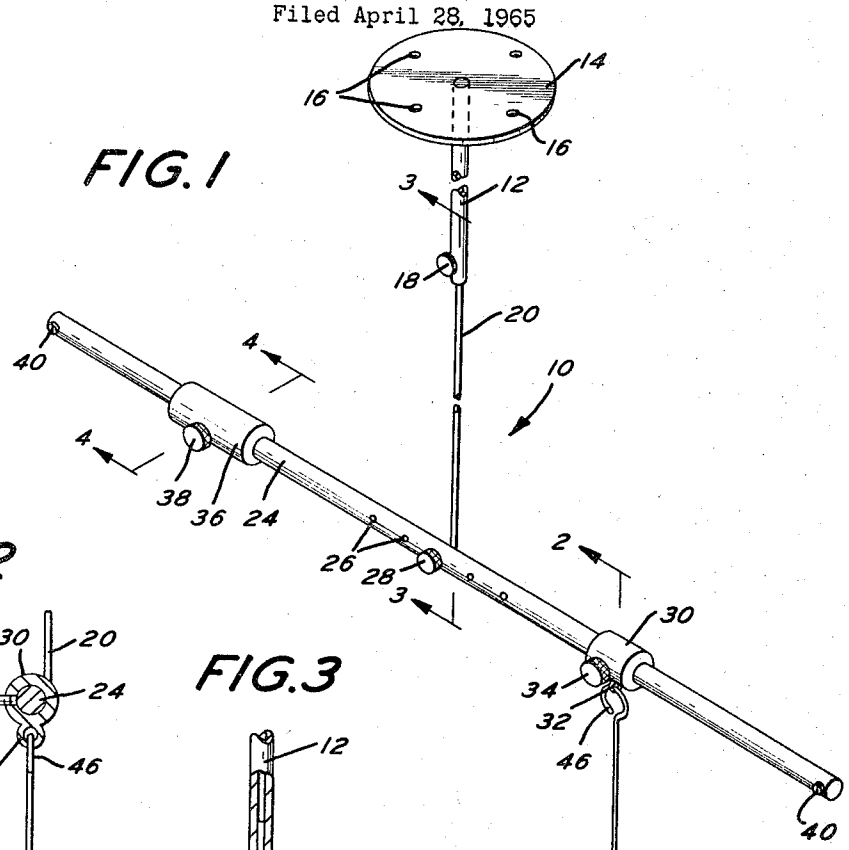


FIG. 2

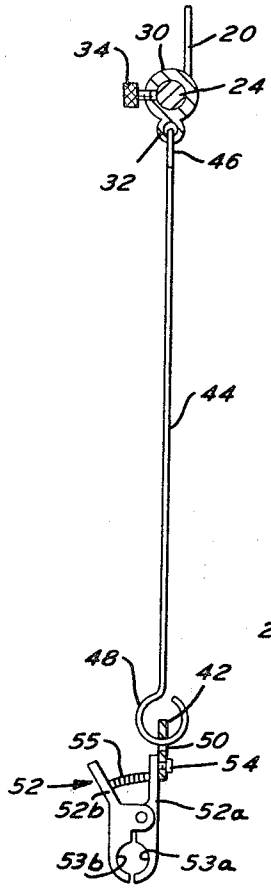
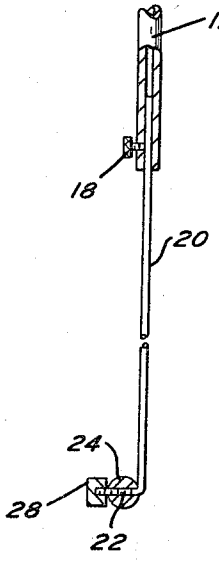


FIG. 3



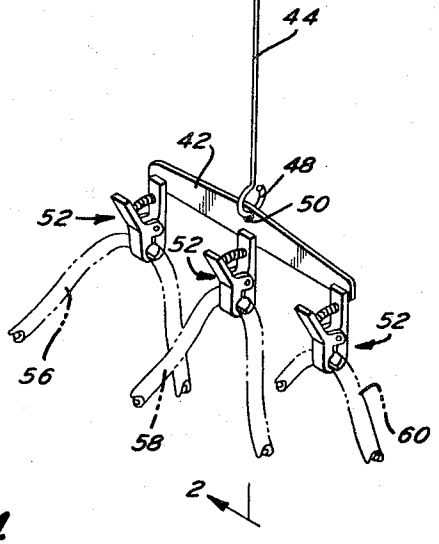
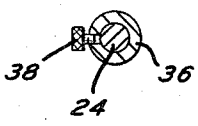


FIG. 4



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CORD HOLDER

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The present invention relates to a cord holder, and more particularly to a balanced cord holder for the water, power and light cords of a cystoscope.

In the use of the cystoscope for examination and surgery, a problem has always been in the supporting of the water, power and light cords of the cystoscope. These cords must be supported so that they do not contact the patient and so as to permit movement of the cystoscope without any tension or pull on the cystoscope. Heretofore, the cystoscope cords were either held by a nurse or an attendant, or were supported by such makeshift arrangements as twisted rubber bands with safety pins or overhead steel cables with pulley arrangements. However, none of these supporting means were satisfactory.

It is an object of the present invention to provide a novel cord holder.

It is another object of the present invention to provide a novel holder for the water, power and light cords of a cystoscope.

It is still another object of the present invention to provide a cystoscope cord holder which provides an overhead, balanced support for the cords and permits the cords to follow movement of the cystoscope without applying tension or pull on the cystoscope.

It is further object of the present invention to provide a cystoscope cord holder which is simple in construction, light in weight and easy to use.

Other objects will appear hereinafter.

For the purpose of illustrating the invention, there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

FIGURE 1 is a perspective view of the cystoscope cord holder of the present invention.

FIGURE 2 is a sectional view taken along line 2—2 of FIGURE 1.

FIGURE 3 is a sectional view taken along line 3—3 of FIGURE 1.

FIGURE 4 is a sectional view taken along line 4—4 of FIGURE 1.

Referring initially to FIGURE 1, the cord holder of the present inventionally is generally designated as **10**.

Cord holder **10** comprises a vertically extending mounting tube **12** having a flat mounting plate **14** secured to its upper end. The mounting plate **14** has a plurality of holes **16** therethrough through which screws or bolts can extend to secure the mounting plate **14** and mounting tube **12** to the ceiling of a room. A headed set screw **18** is threaded through the wall of the mounting tube **12** adjacent the lower end of the tube (see FIGURE 3). The upper end of a vertically extending mounting rod **20** slidably extends into the mounting tube **12** and is secured therein by the set screw **18**. As shown in FIGURE 3, the bottom end of the mounting rod **20** is bent to form a pivot pin **22** which is perpendicular to the mounting rod. The free end of the pivot pin **22** is threaded.

A supporting rod **24** is pivotally mounted on the pivot pin **22**. Supporting rod **24** has a plurality of spaced, diametrically extending holes **26** therethrough at the center portion of the rod. The pivot pin **22** extends through one of the holes **26** and a nut **28** is threaded on the pivot pin to secure the supporting rod on the pivot pin. A hanger

sleeve **30** is slidably mounted on the supporting rod **24** at one side of the pivot pin **22**. Hanger sleeve **30** has an eye **32** forward on its outer surface. A headed set screw **34** is threaded through the wall of the hanger sleeve **30** and engages the supporting rod **24** to secure the hanger sleeve at a desired position on the supporting rod. A counterbalance sleeve **36** is slidably mounted on the supporting rod **24** at the other side of the pivot pin **22**. A headed set screw **38** is threaded through the wall of the counterbalance sleeve **36** and engages the supporting rod **24** to secure the counterbalance sleeve at a desired position on the supporting rod. Separate headed pins **40** extend diametrically through the supporting rod at the ends thereof to prevent the hanger sleeve **30** and counterbalance sleeve **36** from sliding off of the supporting rod.

A hanger plate **42** is supported from the hanger sleeve **30** by a hanger rod **44**. Hanger rod **44** has a loop **46** at its top and which extends through the eye **32** of the hanger sleeve **30**, and a loop **48** at it bottom end which extends through a hole **50** in the center of the hanger plate **42**. Three clips **52** are secured in spaced relation to the hanger plate **42** by screws **54**. Each of the clips **52** comprises a pair of arms **52***a* and **52***b* pivotally connected together. The arms **52***a* and **52***b* have mating cord receiving notches **53***a* and **53***b* respectively in the lower ends of their facing surfaces. A spring **55** is compressed between the facing surfaces of the arms **52***a* and **52***b* adjacent their upper ends and normally holds the bottom ends of the arms together. The screws **54** extend through the top ends of the arms **52***a* of the clips **52** with the cord receiving notches **53***a* and **53***b* being below the hanger plate **42**.

To use the cord holder **10** of the present invention, the cords **56**, **58** and **60** of the cystoscope are each placed through the cord receiving notches **53***a* and **53***b* of a separate one of the clips **52** as shown in FIGURE 1. The mounting rod **20** can be moved vertically within the mounting tube **12** to adjust the height of the support for the cords and locked at the desired position by the set screw **18**. The hanger sleeve **30** can be moved along the supporting rod **24** to properly position the support for the cords with respect to the patient, and the hanger sleeve is locked in the desired position by the set screw **34**. The pivot pin **22** is inserted through the proper hole **26** in the supporting rod **24** to provide the desired movement of the cords **56**, **58** and **60**. If a large amount of movement of the cords is desired, the pivot pin **22** should be inserted in the hole **26** furthermost from the hanger sleeve **30**, whereas if only a limited amount of movement is required, the pivot pin can be inserted through the hole **26** closest to the hanger sleeve **30**. The counterbalance sleeve **36** is positioned along the supporting rod **24** so as to balance the weight of the cords **56**, **58** and **60**, and is locked in position by the set screw **38**.

In the use of the cord holder **10**, the cords **56**, **58** and **60** are firmly supported out of contact with the patient. However, upon movement of the cystoscope, the supporting rod **24** will pivot to permit the cords **56**, **58** and **60** to follow the movement of the cystoscope. Since the weight of the cords is balanced by the counterbalance sleeve **36**, only a slight force is necessary to move the cords, yet the cords will remain in any set position without any pull or tension on the cystoscope. In addition, the cord holder **10** of the present invention is of simple construction so that it does not take up much room and can be easily assembled and used.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claim, rather than to the foregoing specification as indicating the scope of the invention.

I claim:

A cystoscope cord holder comprising a mounting rod, means for mounting said mounting rod in a vertical position, a supporting rod pivotally mounted between its ends on the bottom end of said mounting rod for pivotal movement in a vertical plane, a hanger sleeve surrounding and slidable on the supporting rod at one side of the axis of pivotation of the supporting rod, a set screw threaded through said hanger sleeve and engaging said supporting rod so as to secure the hanger sleeve to the supporting rod at any desired position along the supporting rod, a hanger rod pivotally connected to said hanger sleeve, a hanger plate pivotally secured to the bottom end of the hanger rod, a plurality of cord holding clips secured to said hanger plate in spaced relation to each other, a counterweight sleeve slidably mounted on said supporting rod at the other side of the axis of pivotation of said supporting rod, and means for securing said counterweight to

the supporting rod at any desired position along the supporting rod.

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