No. 750,465. PATENTED JAN. 26, 1904.

F. A. KOCH.

SURGICAL INSTRUMENT CASE.

APPLICATION FILED SEPT. 15, 1903.

NO MODEL.

Fig. 1.

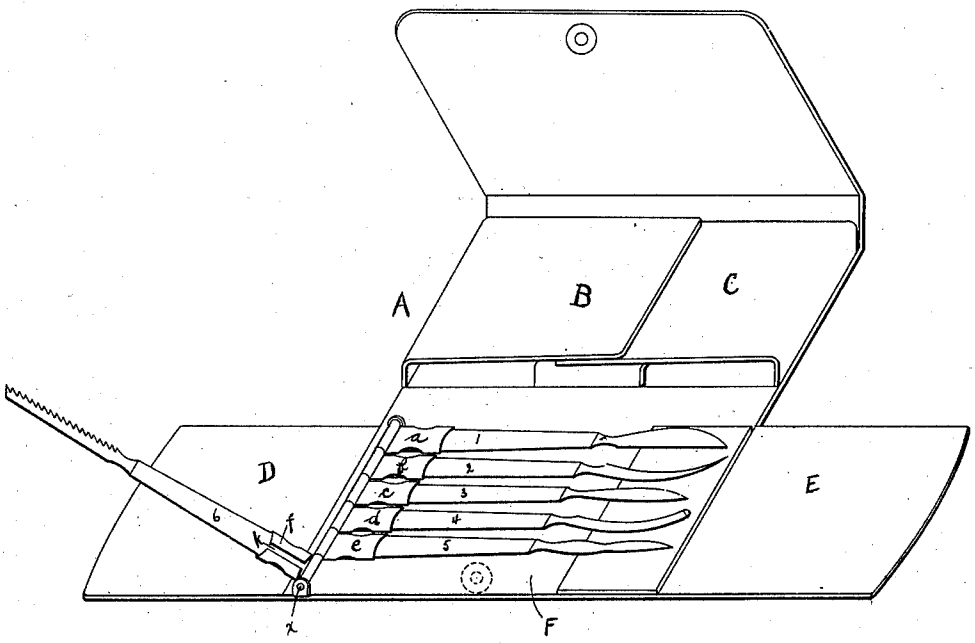
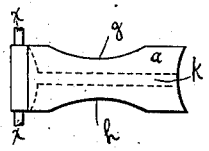


Fig. 2.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 750,465. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

FREDERICK AUGUST KOCH, OF NEW YORK, N. Y.

SURGICAL-INSTRUMENT CASE.

SPECIFICATION forming part of Letters Patent No. 750,465, dated January 26, 1904.

Application filed September 15, 1903. Serial No. 173,247. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK AUGUST KOCH, a citizen of the United States, residing at New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Surgical-Instrument Cases, of which the following is a full, clear, and exact specification and description, reference being had to the drawings accompanying and forming a part of the same.

This invention relates to improvements in surgical-instrument cases of the general class of instrument-cases whose object is to pack several or many surgical instruments in a small compact bulk; and the objects of my invention are, first, to provide a holder or holders which will hold instruments securely in their places within the case and which at the same time will permit the instrument or instruments to be detached easily therefrom; second, to attain a higher degree of asepsis in such cases. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a surgical-instrument case partly opened and showing a number of holders with surgical instruments inserted, and Fig. 2 a detailed view of one of the holders.

Similar characters refer to similar parts in both views.

In Fig. 1 an instrument-case is shown, unfolded and partly open, in which there are two compartments A and F for the placing of instruments. The covers B and C, attached to compartment A, are represented as folded and overlapping each other. The covers D and E, attached to compartment F, are unfolded and expose to view the holders *a*, *b*, *c*, *d*, *e*, and *f*, holding the instruments 1, 2, 3, 4, 5, and 6, respectively. The handles of aseptic surgical instruments as chiefly manufactured at the present time are slightly broader at the free end than at the end adjacent to the instrument proper.

The holder *a* in Fig. 2, which is a more detailed view of the holders *a*, *b*, *c*, *d*, and *e* in Fig. 1, may be constructed of any metallic or other substance, which may be so tempered as to acquire spring-like qualities. The holder is cylindrical in form, the cross-section of which may be circular or elliptical or any form adapted to the particular form of the object to be inserted and held. In the inner surface or face of each holder is a longitudinal slit or opening *k*, running the full length of the face. This longitudinal opening permits free play of the spring-like qualities of the holder. When the broadened end of an instrument-handle is forced into the holder, the cylindrical surfaces are distended, and as the handle is forced farther into the holder the cross-section of the handle at the entrance of the holder continues smaller and the cylindrical surfaces of the holder contact and tightly bind the instrument-handle. The holders are fastened to and revolve upon a rod *x*, suitably fastened closely to the body of the case, as shown in Fig. 1. In order to enable the holder to exercise its spring-like qualities at the unattached end more independently of like action in the holder at or near its attached end, a circular or elliptical section on each side of the holder may be cut out, as seen at *g* and *h* in Fig. 2. By cutting out such sections on either side and beveling the edges inwardly or slightly swelling the edges outwardly a means is provided by which the fingers can secure a firm hold upon the holder for the purpose of raising or revolving it, together with the instrument it holds. The holders prevent the instruments from falling out of the case upon opening the same, and at the same time the physician or surgeon can with ease, quickness, and facility pick up and remove any desired instrument from the case.

I do not mean to limit my invention to the particular form of case illustrated in the accompanying drawings nor to the form and number of holders shown. It is manifest that any number or groups of holders may be used and that their form may be modified to adapt them to different forms of instrument-handles.

What I claim as new, and desire to secure by Letters Patent, is—

1. A surgical-instrument holder, consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flat-

tened cylinder, the longitudinal edges of which are left free, one face of said cylindrical holder being longer than the other at the lower end and rolled in such a way as to permit of a rod being inserted, thus forming a hinge, each side of said holder being perforated with a hole extending nearly its entire length, substantially as described.

2. A surgical-instrument holder, consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flattened cylinder, the longitudinal edges of which are left free, one face of said cylindrical holder being longer than the other at the lower end and rolled in such a way as to permit of a rod being inserted, thus forming a hinge, each side of said holder being perforated with a hole extending nearly its entire length, the edges of the upper surface of the holder being beveled or swelled in such a manner as to admit of the tip of the finger being inserted in order that the holder with the instrument may be turned or lifted outwardly, substantially as described.

3. In a surgical-instrument case, the combination, in a folding case, of a group of surgical-instrument holders, all attached, by hinge, to a rod fastened to the interior surface of said case, each holder rotating independently of the others, and each of said holders in said group consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flattened cylinder, the longitudinal edges of which being left free, one face of said cylindrical holder being longer than the other at the lower end and rolled in such a way as to permit of said rod being inserted, thus forming said hinge, each side of each holder being perforated with a hole extending nearly its entire length, substantially as described.

4. In a surgical-instrument case, the combination in a folding case, of groups of surgical-instrument holders, all holders of each group attached, by hinge, to rods fastened to the interior surface or surfaces of said case, each holder rotating independently of the others, and each of said holders in each group consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flattened cylinder, the longitudinal edges of which being left free, one face of each said cylindrical holder in said groups being longer than the other and rolled in such a way as to permit of said rods of said groups being inserted, thus each holder forming said hinge, each side of each holder being perforated with a hole extending nearly its entire length, substantially as described.

5. In a surgical-instrument case the combination, in a folding case, of a group of surgical-instrument holders, all attached, by hinge, to a rod fastened to the interior surface of said case, each holder rotating independently of the others, and each of said holders in said group consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flattened cylinder, the longitudinal edges of which being left free, one face of said cylindrical holder being longer than the other at the lower end and rolled in such a way as to permit of said rod being inserted, thus forming said hinge, each side of each holder being perforated with a hole extending nearly its entire length, the edges of the upper surface of each holder being beveled or swelled in such a manner as to admit of the tip of the finger being inserted in order that each holder with the instrument may be turned or lifted outwardly, substantially as described.

6. In a surgical-instrument case, the combination, in a folding case, of groups of surgical-instrument holders, all holders of each group attached, by hinge, to rods fastened to the interior surface or surfaces of said case, each holder rotating independently of the others, and each of said holders in each group consisting of a metal or other substance having the qualities of a spring, said metal or other substance being so folded or bent as to resemble a flattened cylinder the longitudinal edges of which being left free, one face of each said cylindrical holder in said group being longer than the other and rolled in such a way as to permit of said rods of said groups being inserted, thus each holder forming said hinge, each side of each holder being perforated with a hole extending nearly its entire length, the edges of the upper surface of each holder being beveled or swelled in such a manner as to admit of the tip of the finger being inserted in order that each holder with the instrument may be turned or lifted outwardly, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK AUGUST KOCH.

Witnesses:

CHARLES GIESSELMAN,

OTTO MARSCHALL.