J. R. KELLEY.

KASSETTE.

APPLICATION FILED JULY 26, 1915.

1,213,208. Patented Jan. 23, 1917.

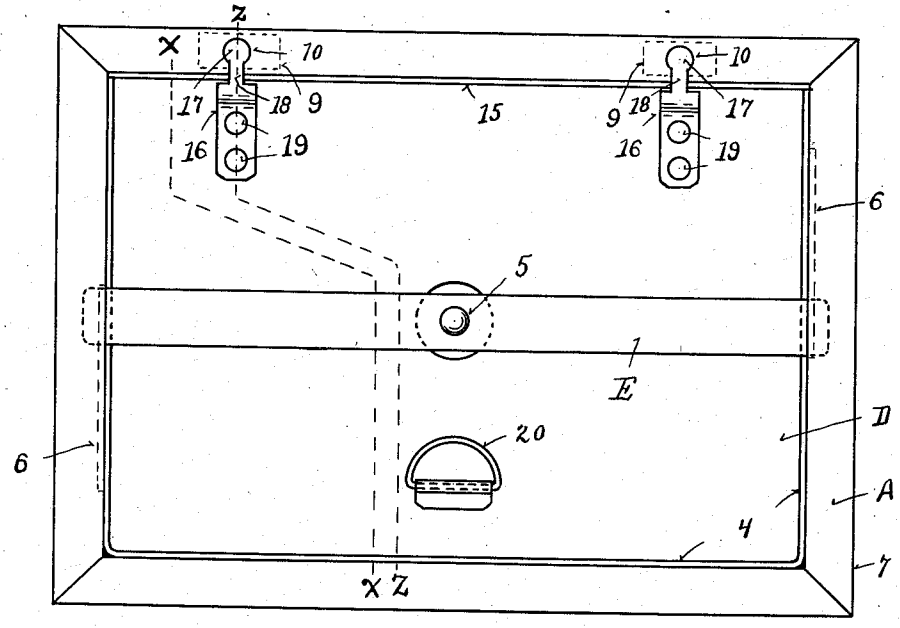


Fig. 1.

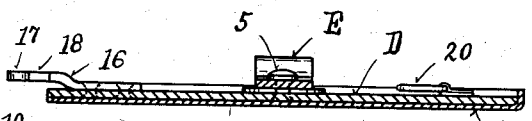


Fig. 2.

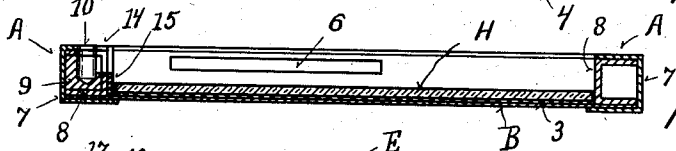


Fig. 3.

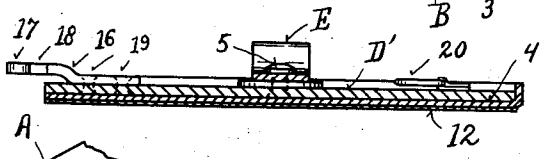


Fig. 4.

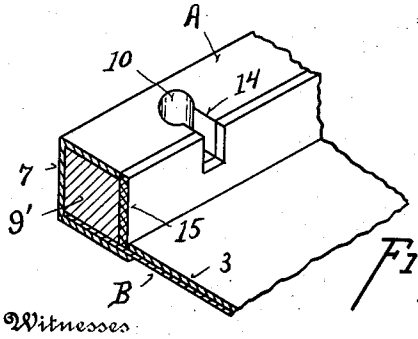


Fig. 5.

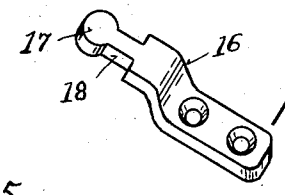


Fig. 6.

Witnesses

W. Thornton Rogers

V. R. Kropff

Inventor

John Robert Kelley

By C. W. Miles.

Attorney

UNITED STATES PATENT OFFICE.

JOHN ROBERT KELLEY, OF COVINGTON, KENTUCKY.

KASSETTE.

1,213,208. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed July 26, 1915. Serial No. 42,063.

To all whom it may concern:

Be it known that I, JOHN ROBERT KELLEY, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Kassettes, of which the following is a specification.

My invention relates to improvements in kassettes or holders for photographic plates to be used in connection with X-ray apparatus.

One of its objects is to provide an improved plate holder of metallic construction.

Another object is to provide a plate holder having a plurality of interchangeable or detachable backs.

Another object is to provide in a plate-holder improved means to hinge the back and frame members together.

My invention also comprises certain details of form, combination, and arrangement all of which will be fully set forth in the description of the accompanying drawings in which:

Figure 1 is a rear plan view of a kassette embodying my improvements. Fig. 2 is a sectional view through the back detached and on line X X of Fig. 1. Fig. 3 is a sectional view through the frame with the back detached and on line Z Z of Fig. 1. Fig. 4 is a view similar to Fig. 2 of another back to be employed interchangeably with the back Fig. 2. Fig. 5 is an enlarged detail perspective partly in section of one of the hinge sockets. Fig. 6 is an enlarged perspective detail of one of the hinge members detached.

The accompanying drawings illustrate the preferred embodiment of my invention in which A represents a rectangular frame built up of metal and having a continuous sheet B of aluminum or similar material preferably a metal, which is pervious to X-rays extending across one face. A sheet 3 of paper or similar material impervious to ordinary light waves but pervious to X-rays is preferably laid upon or attached to the inner face of the sheet B. The sensitive photographic plate H is placed upon the sheet 3 being protected thereby against direct contact with the metal plate B, and also against the action of ordinary light waves either by reflection or transmission through the sheet 3.

A back plate of metal D see Fig. 2 is provided with an inner facing material of paper, felt, or similar material 4 which is impervious to ordinary light waves, and also adapted to absorb and prevent the reflection of ordinary light upon the sensitive plate. The metal plate D is of a material according to the result desired either pervious or impervious to X-rays and rigid or non-flexiole so as to bear uniformly over its inner face against the sensitive plate. The back-plate D has centrally pivoted thereto at 5 a leaf spring E the opposite ends of which engage recesses 6 in the walls of the frame A to press the plate D in contact with the photographic plate and to lock the plate D in place relative to the frame A.

The frame A is preferably built up of one or more sections 7 preferably one which is U-shaped or channel shaped in cross section and is bent and mitered at the corners, with the plate B in place. Sections of sheet metal 8 bent to channel shape are telescoped into the sides and ends of the section 7, and serve to reinforce the section 7 and to form an inner facing for the frame A and a strong rigid hollow metal frame. The sections 7 and 8 are preferably soldered or brazed together to form a rigid rectangular frame. At the points where the hinge sockets 10 are to be located one of the sections 8 is reinforced internally by short blocks of solid bar metal 9 into which said sockets may be subsequently drilled and cut. If desired a solid bar 9′ the full length of one side of the frame may be employed and telescoped into the section 7 on the side where the hinge sockets are to be formed as indicated by Fig. 5, instead of employing a reinforced channel shaped section 8.

As illustrated in Fig. 4, it is at times desirable to employ a back plate D′ having an inner facing 4′ of the same character as in Fig. 2, and in addition thereto a sheet of chemically prepared or treated material 12 which is sensitive to or phosphorescent under the action of X-rays, to influence the action on the sensitive plate, and it is desirable to use two or more back plates D and D′ interchangeably with one or more frames A.

In order to provide a hinge which will enable the plates D and D′ to be readily detached or used interchangeably, and will provide for the requisite adjustment of the back plate to and from the front plate B, to accommodate sensitive plates of different

thickness and also to guide the back plate accurately to position without lateral movement relative to the sensitive plate, I provide cylindrical recesses or hinge sockets 10 cut into the solid metal with narrower slots or recesses 14 leading therefrom to the inner edge of the frame. A piece of felt or similar facing material 15 with recesses to register with the recesses 14 is preferably attached to the inner face of that side of the frame in which the hinge sockets are formed. Hinge members 16 provided with heads 17 to enter the cylindrical hinge sockets 10 and narrow necks 18 to enter the recesses 14, are attached by rivets 19 or otherwise to the back plates D and D′ so that either plate may be interchangeably hinged to the frame A and readily detached therefrom and the side walls of the recesses 14 will guide the back plate by engaging the necks 18. When the plates D or D′ are lifted to a position at right angles to the frame A said back plates will be supported upon the ends or heads 17 of the hinge members 16 resting at the bottoms of the sockets 10. For convenience in lifting the plates D and D′ rings 20 are pivotally attached to the rear faces thereof, and when not in use lie against the face of said plates.

The slots 6 to receive the ends of the spring are stamped in the sheet metal sections 8 before said sections are assembled in the frame.

The apparatus herein illustrated and described is capable of considerable modification without departing from the principle of my invention.

Having described my invention what I claim is:

1. A plate holder comprising a face plate, a hollow metal frame formed by telescoping channel-shaped members one into the other encircling and carrying said face plate, and a back plate having metal hinge members to guide said back plate accurately into position relative to said frame and to prevent lateral movement of said back plate.

2. In a plate holder having a face plate and a detachable back plate, a polygonal sheet metal frame comprising channel shaped members telescoped one into another to form a hollow frame of substantially rectangular cross-section.

3. A plate holder comprising a face plate, a rigid sheet metal frame encircling and carrying said face plate and formed by telescoping channel-shaped members one into the other, and a metal back plate having metal hinge members to detachably connect said back plate to said frame and to guide said back plate into position relative to said frame.

4. A plate holder comprising a face plate, a rigid metal frame encircling said face plate, hinge sockets in one section of said frame having narrower channels leading therefrom at one side, a back plate having hinge members provided with heads to enter said sockets and necks to enter said lateral channels to detachably connect said back plate to said frame and to guide it to position therein.

5. A plate holder comprising a face plate, a rigid metal frame encircling and carrying the face plate, hinge sockets in one section of said frame having narrower lateral channels leading therefrom at one side, a back plate having metal hinge members provided with heads to enter and move to and from the bottom of said sockets and necks to enter and move between the walls of said lateral channels to detachably and adjustably connect said back plate to said frame.

6. A plate holder comprising a face plate, a metal frame encircling and carrying said face plate and provided with hinge sockets, and a plurality of detachable and interchangeable back plates each provided with hinge members to engage said hinge sockets to guide said back plates accurately to position relative to said frame.

In testimony whereof I have affixed my signature in the presence of two witnesses.

JOHN ROBERT KELLEY.

Witnesses:
ED GRIVE,
MARY B. STEWART.