Nov. 13, 1934. R. D. CASS 1,980,848

X-RAY TABLE

Filed Nov. 29, 1932

Fig. 1.

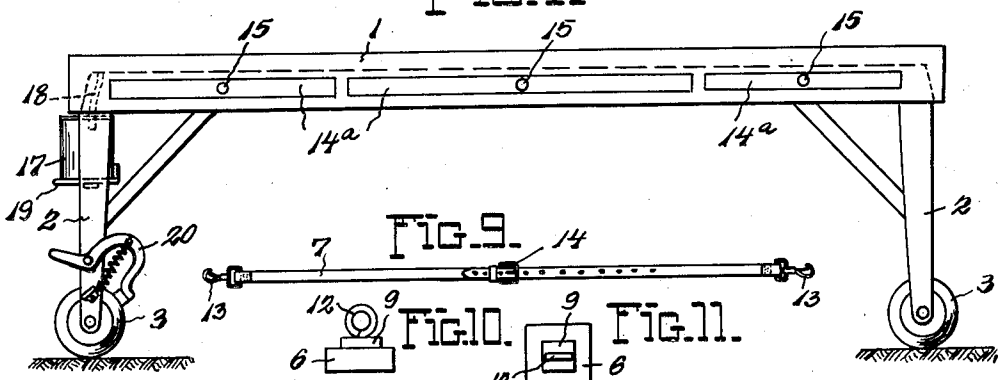


Fig. 9.

Fig. 10.

Fig. 11.

Fig. 2.

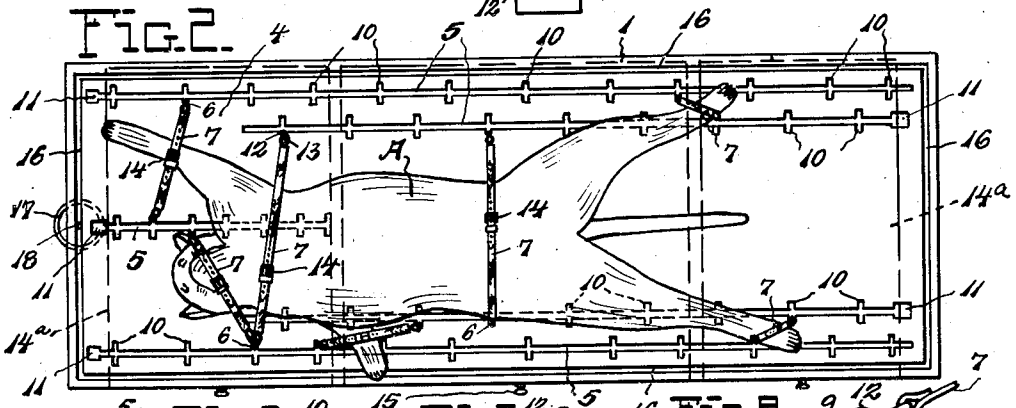


Fig. 4.

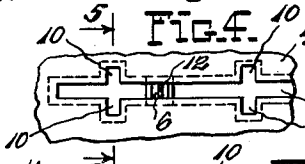


Fig. 5.

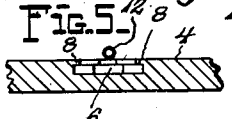


Fig. 8.

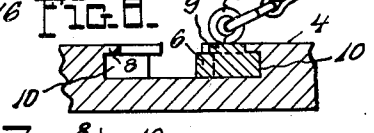


Fig. 6.

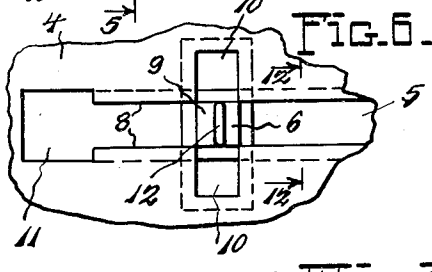
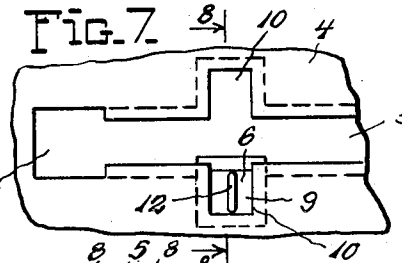


Fig. 7.



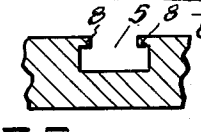


Fig. 12.

Fig. 3.

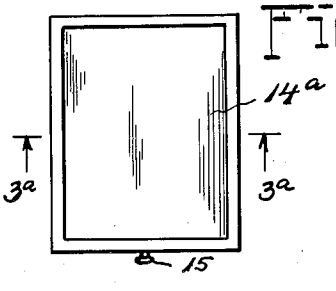
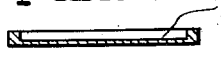


Fig. 3A.



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X-RAY TABLE

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Application November 29, 1932, Serial No. 644,869

5 Claims. (Cl. 250—34)

This invention relates to a portable table especially adapted for use in connection with the taking of anatomical X-ray pictures, having for one of its objects a novel construction which enables the ready photographing of any part of the anatomy of a subject placed upon the table.

The table of this invention is designed especially for veterinary use, although it is not to be regarded as being necessarily so restricted. However, in veterinary operations, the nature of the subject may render its positioning for the desired pictures a more or less difficult operation. This is especially true where the animal is large, it being sometimes difficult to hold the animal in position for the taking of the pictures, and to so restrain the animal in order to prevent injury thereto.

The present invention therefore embraces a construction which provides means for restraining the subject against all movement while in position on the table, insuring satisfactory photographs without danger of injury to the subject or photographer. This is an important consideration where the animal is a valuable specimen.

In order to suitably position the subject, the securing instrumentalities are made adjustable and are arranged to secure any sized subject in proper position on the table while being photographed. These securing instrumentalities consist of straps suitably secured to carriers which are arranged to be adjustable in guides disposed along the sides of the table. As many of these guides may be provided as may be necessary to secure subjects of different sizes in position, and as many of the straps may be employed as needed to firmly secure all parts of the anatomy of the subject against movement, so that the legs and body thereof are firmly restrained against the table.

The invention further contemplates the provision of instrumentalities whereby the films may be disposed beneath the table in such a manner that any part of the anatomy may be photographed while enabling various sizes of films to be employed, depending upon the part of the body to be pictured.

For accomplishing this, the table is provided with a plurality of film receiving compartments, which may be simply drawer-like receptacles or trays slidably mounted within the frame of the table and so disposed beneath the surface of the table as to be adjacent any part of the subject to be pictured, the desired film being simply laid in the desired position in these compartments.

In addition to its use as an X-ray table, the present construction may be so formed as to serve as an operating table, or for use in animal experimentation for anatomical demonstrations in vivo as well as for post-mortem work.

While the invention is illustrated as being used in connection with veterinary work, and will be so described in the following description, it is to be understood that the use of the table is not so limited, as obviously it may be employed for X-ray and operating purposes on human subjects as well as animal without substantial alteration of the construction of the table.

The accompanying drawing illustrates a convenient form of construction of the improved table, in which drawing

Figure 1 represents a side elevation of the improved table.

Figure 2 is a plan view illustrating the manner of strapping a subject to the table.

Figure 3 is a plan view of one of the film receiving compartments.

Figure 3*a* is a sectional view on the line 3*a*—3*a* of Figure 3, looking in the direction of the arrows.

Figure 4 is a fragmentary view of one of the guides showing a strap carrying member in position therein for adjustment.

Figure 5 is a sectional view taken on the line 5—5 of Figure 4, looking in the direction of the arrows.

Figure 6 is an enlarged fragmentary view showing one end of one of the guides, with a strap carrier positioned therein ready for interlocking with the guide in adjusted position.

Figure 7 is a view similar to Figure 6, but showing the strap carrier in locked position.

Figure 8 is a sectional view on the line 8—8 of Figure 7, and showing one end of a securing strap interconnected with the carrier member.

Figure 9 is a view of one of the straps.

Figure 10 is an end view of one of the strap carrying members, showing the shape thereof.

Figure 11 is a top view of the member of Figure 10, and

Figure 12 is a fragmentary sectional view on the line 12—12 of Figure 6, showing the configuration of the guide channel.

Referring to the drawing, the body of the table is indicated as 1 which is supported by legs 2, which are mounted on wheels 3. The table is provided with the operating surface 4, in which are provided the grooves or slots 5 in which are positioned the carrying members 6 for the securing strap 7.

One of the features of the invention includes

the positioning of these guide slots, and the shape of the slots. It will be observed that as many of these slots may be provided for the accommodation of a subject of any size as may be desired for the suitable positioning of the subject on the table. In the drawing, it will be seen that one of these slots extends along each long side of the table, and intermediate these slots, other longitudinally extending slots may be provided. In the form shown, the more widely separated slots are employed for securing larger sized subjects to the table, whereas the smaller sized subjects are accommodated by the more closely positioned slots. However, these slots are of similar shape in each instance, and, therefore, only one need be described in detail.

Each slot is substantially square-cut and is provided with over-hanging flanges 8 which retain the strap carrier members 6 in position in the slot without possibility of accidental displacement therefrom. The carrier members 6 are of a size which enables the carrier members to slide freely within the slot, the upstanding lug 9 of which members extends between the aforesaid guide flanges, so that the strap 7 may be readily secured, by instrumentalities hereinafter to be mentioned, to these carrier members.

The slots 5 are provided at suitable intervals therealong with transverse slots 10 of the same cross-sectional shape as the slots 5, and of the same cross-sectional area as the slots 5, and the flanges 8 terminate short of one end of the slots 5 to enable the strap carriers 6 to be inserted in the slots 5. This provides the slots 5 with an enlarged end, indicated at 11.

The strap carriers are adapted to fit snugly between the sides of the slots, and are proportioned so that they may be moved into the transverse slots 10 when it is desired to interlock the strap carriers in proper adjusted position so that they will be secured against accidental displacement from their adjusted position.

For securing the straps 7 to these carriers, each carrier is provided with an eye 12 adapted to receive a snap hook 13 secured to the ends of the strap 7.

Each strap is formed of two sections, joinable by the buckle 14 in the well understood manner. The manner in which the straps are employed and the adjustment thereof are clearly shown in Figure 2, and it is believed that no further description of this phase of the invention will be required.

For taking the X-ray pictures, a suitable number of film receiving trays are employed, which are indicated at 14*a*, and which are disposed beneath the operating surface of the table so as to receive film in such manner that any desired portion of the subject may be photographed. These trays 14*a* are simply shallow drawer-like receptacles, slidably mounted in the table and provided with a handle 15 by means of which the trays may be withdrawn and inserted relatively to the table. It will be apparent that film of any desired size may be employed in these trays, depending upon the portion of the subject to be photographed.

When it is desired to use the table as an operating table, it is provided with drains 16 extending around the margins of the table, and communicating with a receptacle 17 through drain openings 18, the receptacle being positioned on a support 19.

In order to facilitate the handling of the table, it may be provided with brake instrumentalities 20 of any standard type, so that the table may be more readily stopped when it is being moved from place to place.

It will therefore be seen that in order to examine the specimen, which may be designated as A, it is placed upon the table and the straps adjusted by sliding the carrier blocks 6 along the respective grooves 5 until the straps are in proper position for strapping down the respective part of the subject. The carrier blocks are then interlocked by slipping them into the transverse slots 10, thereby holding the blocks in required position. The ends of the straps are then brought over the portion of the subject to be secured, and strapped together sufficiently tightly to hold the subject against moving. In this manner the legs, body, and head may thus be held against movement. The X-ray lamp may then be adjusted to the desired position without difficulty, and the films arranged within the trays 14*a* so as to photograph whatever portion of the subject which may be desired to be pictured. Where it is desired to use the table for operating purposes, the subject is secured in position in a similar manner, fluids from the operation being removed through the drains 16 and thence into the receptacle 17.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

1. An operating table of the character described, comprising a table having an operating surface provided with a plurality of guide slots arranged in pairs, each slot being provided with cooperating opposing flanges and terminating short of one end of the guide slot, securing means for holding a subject to be examined against movement relative to the table, the said securing means comprising cooperating strap members and guide blocks disposed in the said slots, the said blocks having a portion thereof upwardly extending between the said flanges, each of the guide slots having locking slots of substantially the same dimensions as the said blocks extending transversely of the guide slots at intervals along the guide slot and adapted to receive the said blocks for securing the same against accidental displacement from adjusted position along its guide slot, and fastening means for securing each strap to its respective block.

2. An X-ray and operating table of the character described, comprising a table having an operating surface provided with a plurality of guide slots arranged in pairs, each slot being provided with cooperating opposing flanges and terminating short of one end of the guide slot, securing means for holding a subject to be examined against movement relative to the table, the said securing means comprising cooperating strap members having guide blocks adjustably disposed in the said slots, the said blocks having a portion thereof upwardly extending between the said flanges, each of the guide slots having locking slots of substantially the same dimensions as the said blocks extending transversely of the guide slots and adapted to receive the said blocks for securing the same against accidental displacement from adjusted position along their respective guide slots, the said locking slots of each pair of guide slots being in staggered relation relative to each other, and removable trays mounted in the table for receiving film.

3. An operating table of the character described, comprising a table having a slotted operating surface, securing means for a subject to be examined, the said securing means including

cooperating strap members, blocks interlockingly disposed in said slots, means for securing said blocks to said straps, the said blocks having a cross section substantially that of the said slots for preventing any substantial lateral displacement relatively to the slots, while being slidable therealong, and said operating surface having locking grooves extending transversely of the slots and of the same configuration as the slots, the said blocks being adapted to slide from the slots into the locking grooves for preventing displacement of the blocks from their proper adjusted position.

4. An X-ray and operating table of the character described, on which a subject is to be arranged for examination and exposure to X-rays, comprising a table having an operating surface provided with a plurality of slots arranged in pairs, securing means interlockingly and adjustably connected with the slots for holding a subject to be examined against movement relative to the table, the said securing means comprising cooperating strap members and blocks attached to said straps and disposed in the said slots, said slots having locking grooves extending transversely of the slots and adapted to receive the said blocks for securing the same against accidental displacement from adjusted position along their respective slots, the said locking grooves of each pair of slots being in staggered relation relative to each other, and removable trays mounted within the table for receiving film to be exposed to the X-rays.

5. An X-ray and operating table of the character described, comprising, in combination, a table having an operating surface provided with a plurality of spaced slots, securing means associated with said operating surface, comprising cooperating strap members, blocks in said slots, and means for securing the strap members thereto, the said blocks being free to slide longitudinally of the slots and interlocking therewith, said operating surface being further provided with locking grooves extending transversely of the slots and adapted to receive the said blocks to lock the same in adjusted position along their respective slots, film receiving drawers mounted in the table for positioning film beneath the portion of the subject to be photographed, the said surface of the table being provided with drainage means for removing fluids when the table is to be used for operating purposes, and supporting means enabling the table to be readily transported.

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