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ADJUSTABLE TILTABLE WORK SUPPORT

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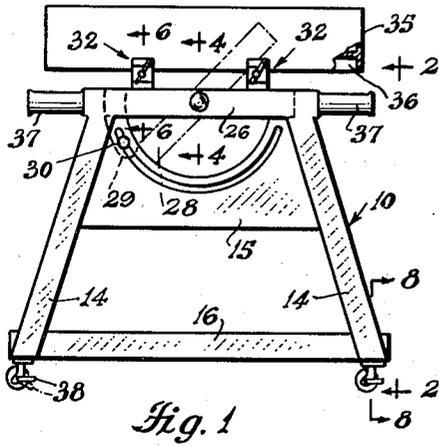


Fig. 1

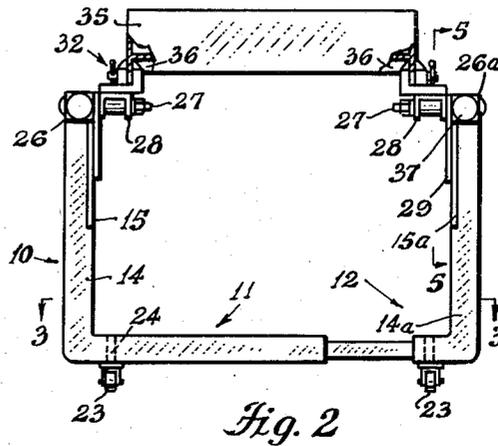


Fig. 2

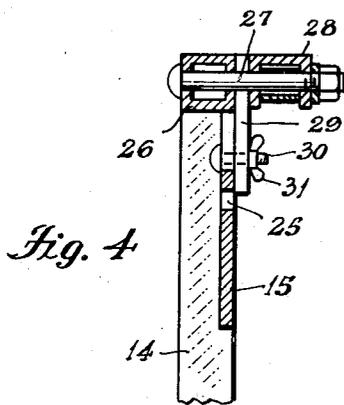


Fig. 4

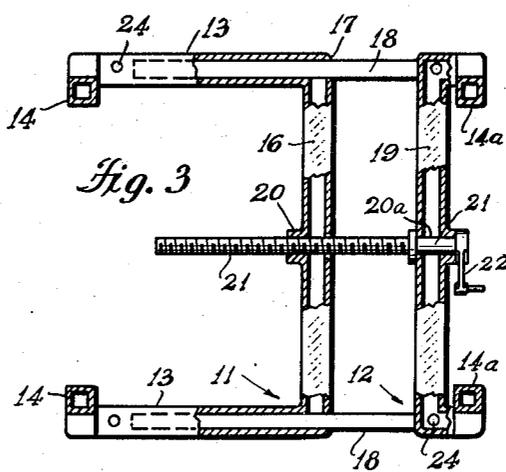


Fig. 3

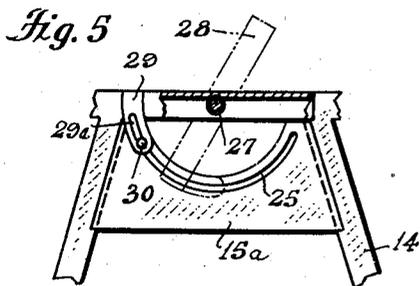


Fig. 5

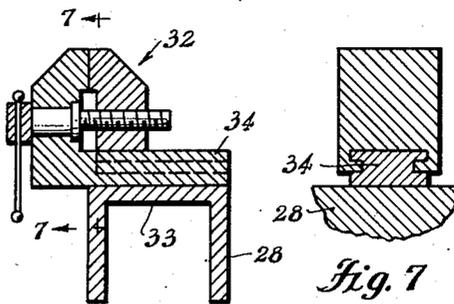


Fig. 6

Fig. 7

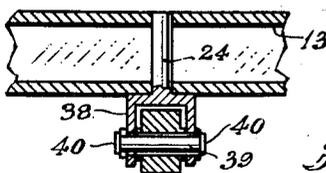


Fig. 8

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ADJUSTABLE TILTABLE WORK SUPPORT

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1 Claim. (Cl. 29—288)

This invention relates to tiltable supports for work pieces adapted to be worked upon by a mechanic, which permit of swinging the work piece through a substantial angle so that the work piece may be more accessible to be worked upon, for the convenience of the worker.

An object of the invention is the provision of an adjustable tiltable support or frame as broadly defined above but more particularly adapted for repair or manufacture of, and installation of, parts of chassis of radio and television apparatus. With this purpose in view, a more specific object is the provision of an improved elongatable or retractable supporting frame having tiltable work-holding parts provided with clamps or vises to engage and hold work-pieces which, in the case of radio or television apparatus, would generally be the chassis. As a result, in the case of repair of a television receiver, the chassis may be removed from the set after clamping the upright side members of the chassis frame in the vises of the tiltable support members to withdraw the chassis, after which it may be tilted through the desired angle to be worked upon.

The above broad as well as additional and more specific objects will be clarified in the following description wherein reference numerals refer to like-numbered parts in the accompanying drawing. It is to be noted that the drawing is intended solely for the purpose of illustration and that it is therefore neither desired nor intended to limit the invention necessarily to any or all of the exact details of construction shown except insofar as they may be deemed essential to the invention.

Referring briefly to the drawing, Fig. 1 is a side or end elevational view of an adjustable tiltable work support embodying features of the present invention.

Fig. 2 is a view taken on the line 2—2 of Fig. 1, that is, a front elevational view of the support.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 2.

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 1.

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 1.

Referring in detail to the drawing, the numeral 10 indicates the frame of the support, which is formed of two complementary sections 11 and 12 each of which constitutes a rigid unit. The frame 11 comprises, first, two parallel longitudinal base members 13 having at one end thereof (that is, one end of the support frame 10) upstanding legs 14 sloping upward toward each other, the upper portions of the legs being united by a vertical plate 15 secured to the legs. The other ends of the members 13 are joined by a cross-member 16. Thus the unitary base portion of the section 11 is com-

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posed of the member 16 and the members 13, these members being joined together in the shape of a U, and they are hollow and may be formed out of a single length of tubing or piping. The other ends of the members 13 are open, as shown at 17.

The frame 12 comprises two longitudinal base members 18 which slidably register in, and are withdrawable from, the base members 13 of the frame section 11, and at their outer ends (that is, the other end of the support frame 10), they have upstanding legs 14a similar to the legs 14 of the section 11. A hollow cross-member 19 joins the base members 18 near their outer ends. Intermediate their lengths, the cross-members 16 and 19 have aligned passages 20 and 20a, respectively, transversely therethrough, the former having screw threads. An elongated threaded rod or screw 21 extends loosely through the passage 20a and is threaded in the passage 20; the rod has a crank 22 on its outer end. It is apparent that upon turning the crank the two sections 11 and 12 may be brought together or spread apart, thus reducing or expanding the width of the support 10. The upper portions of the legs 14a are joined by a plate 15a, similar to the plate 15. To facilitate rolling of the support 10 along the floor, and also retracting or expanding the support, casters or rollers 23 on pins 24 extend downward from the base members 13 and 18 near the outer ends thereof.

The plates 15 and 15a have aligned arcuate slots 25 therethrough, the ends of each slot being positioned near the upper ends of the legs 14 or 14a. The upper extremities of the legs 14 and 14a are additionally joined by transverse members 26 and 26a, respectively, positioned above the top edges of the plates 15 and 15a. Intermediate the length of the transverse members 26 and 26a, aligned pivot pins 27 extend through these members and a channel member 28 is pivoted substantially intermediate its length on the pin 27. At one end each channel 28 has a short slotted arcuate arm 29 thereon adapted to move in the arc of the adjacent slot 25 upon swinging the channel on its pivot. A pin or bolt 30 in the slot 29a of the arm 29 passes through the slot 25 and has a nut 31 thereon to lock the arm to the plate 15 at any position of the channel 28 with respect to the slot 25.

The normal position of the channels 28, when the support is not in use, is shown in Figs. 1 and 5 in full lines; that is, they are horizontal, with the arms 29 thereon at the rear of the support 10, and with the webs 33 of the channels on top. Each channel 28 has two spaced vises 32 mounted thereon, with the bases 34 of the vises secured to the channel webs 33.

Figs. 1 and 2 show at 35 a work piece which, it is to be assumed, is the normally upright frame, including the chassis, of a television receiver, which in Figs. 1 and 2 has already been tilted into horizontal position by the means provided on the support 10. The front of such a receiver includes top and side frame members 36 extending forward therefrom around the edge of the receiver. With the receiver in its normal upright position, not shown, the support 10 is moved into position with respect to the receiver to position the latter between the ends of the support, that is, the pairs of legs 14 and 14a, and to position the vertical front of the receiver substantially or approximately in a vertical plane through the pivots 27. Assuming further that the frame 35 has already been loosened from the receiver, the channel members 28 are swung into vertical position, not shown, with the vises positioned to permit the side members 36 to register between the jaws of the two vises on each channel. The width of the support 10 is of course adjusted by the crank 22 to position the vises so that they may grasp the side members 36. When the vises are closed against

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these side members, the channels 28 and the frame 35 are swung forward through a substantial arc to position the frame 35 horizontally and with the back of the frame, where the repairs are to be made, exposed upward to the worker. Figs. 1 and 5 show, in broken lines, the channels 28 in an intermediate position between vertical and horizontal. In whatever position the chassis and the channels are swung into, between the vertical and the horizontal, the channels are locked therein by tightening the nuts 31, as is apparent.

In order to facilitate moving of the support, handle grips 37 extend from both ends of the members 26. The casters comprise U-shaped members 38 having the extremities of the legs 40 thereof rotatably supporting opposite ends of the caster axle 39.

For the sake of safety it is to be assumed that the handle grips 37 are made of or coated with an insulating material, and also that the casters 23 be insulated from the frame portions 11 and 12.

It is to be noted that the two sections 11 and 12 can be completely separated from each other by means of the crank and rod 21. When separated, the two sections can be arranged in a reduced and more compact mass for convenience in carrying the device about or for transportation.

I claim:

A support of the class described comprising a substantially rectangular base having four uprights extending from the corners thereof, the two of the uprights on one end of the base constituting one end of the support and the two of the uprights on the other end of the

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base constituting the other end of the support, horizontal cross-members joining the upper ends of the uprights on each end of the support and having aligned openings intermediate their length, a vertical plate secured to the uprights on each end of the support below said cross-members, each of said plates having an arcuate slot concentric with the axis of said aligned openings, said arcuate slots being aligned, two straight clamp-holding members each having intermediate its length a pin extending therefrom and each having a releasable clamp on each end thereof, each of said clamp-holding members being positioned adjacent one of said cross-members and having the pin thereon registering in the opening of the adjacent cross-member, each of said clamp-holding members having a relatively short arcuate arm on one end thereof having an arcuate slot therein aligned with the arcuate slot in the adjacent plate, a threaded bolt passing through the aligned arcuate slots of the arcuate arm and the plate adapted to lock the arm to the plate and hence to lock the clamp-holding member to the plate.

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