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MOUNTING MEANS FOR A DEFLECTION YOKE ASSEMBLY

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FIG.1.

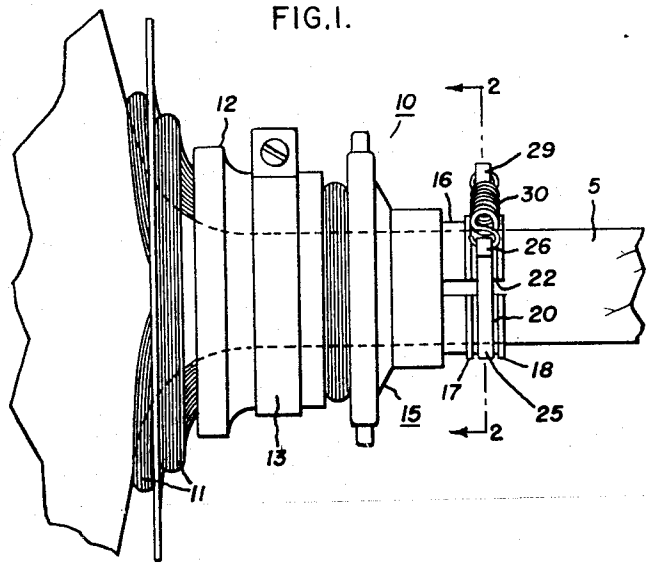


FIG.2.

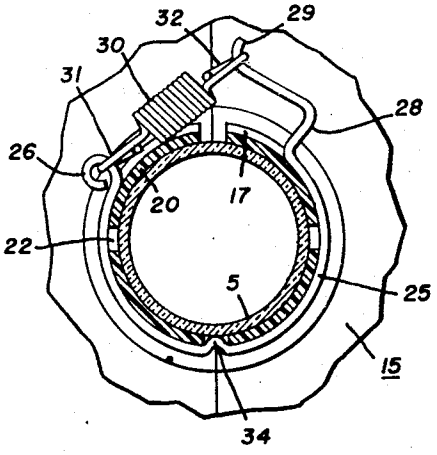
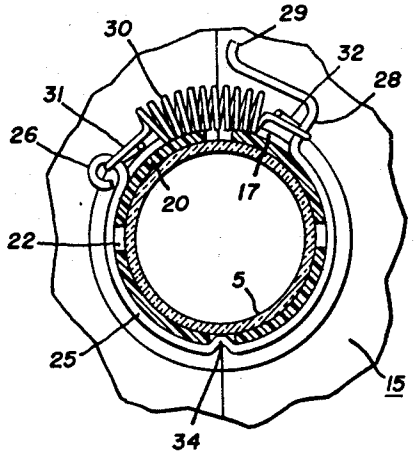


FIG.3.



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MOUNTING MEANS FOR A DEFLECTION YOKE ASSEMBLY

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3 Claims. (Cl. 313—76)

This invention relates to a deflection yoke assembly, and more particularly to a form and mounting clamp for securing such an assembly to the neck of a cathode ray tube.

In assembling television receivers, it is often necessary after the various components have been mounted on the chassis and in the cabinet to make tests and final adjustments in order that the receiver function properly. One such adjustment is required when mounting a deflection yoke assembly on the neck portion of a cathode ray tube. When the yoke is first assembled, means must be provided for holding it on the neck of the tube. This means must also allow for later adjustment, and then must finally lock the yoke in position after the final adjustment is made. These adjustments present a difficult problem particularly where space is at a premium. For example, in many portable television receivers, the neck of the picture tube extends through a small opening in a vertically mounted chassis. The final positioning of the yoke must then be accomplished through an extremely small opening.

Accordingly, it is an object of this invention to provide a new and improved means for mounting and after adjustment for finally positioning a deflection yoke assembly on the neck of a cathode ray tube.

A further object of this invention is to provide an adjustable clamp for varying the amount of tension exerted in holding a yoke assembly on the neck of a cathode ray tube to allow for initially mounting, and then finally positioning the yoke on the cathode ray tube.

Still another object of this invention is to provide a new and improved deflection yoke clamp which may be easily operable through a small opening in a television chassis.

Another object of this invention is to provide a new and improved clamp which has an adjustable tensioning means, the tension of which may be readily changed.

A further object of this invention is to provide a new and improved means for attaching a deflection yoke assembly to the neck of a cathode ray tube which is simple, easy to operate and economical.

In carrying out this invention in one illustrative embodiment thereof, a deflection yoke form is provided having a cylindrical end portion with an annular seat thereon. An annular clamp is provided which is adapted to fit on the aforesaid seat. The clamp is provided with a spring having one end secured to a portion of said clamp and a free end thereof adapted to be latched in a plurality of positions on another end portion of the clamp, whereby the tension of the spring may be varied by latching the spring to various positions on the other end portion of the clamp.

These and other advantages of this invention will be more clearly understood from the following description taken in connection with the accompanying drawing, and its scope will be apparent from the appended claims.

In the drawing:

Fig. 1 shows a deflection yoke assembly mounted on the neck of a cathode ray tube in accordance with this invention;

Fig. 2 is a partial cross-sectional view of Fig. 1 showing the deflection yoke clamp in a first engaged position; and

Fig. 3 shows the clamp in Fig. 2 in a second engaged position.

Referring now to Fig. 1, a deflection yoke assembly designated generally with a reference character **10** has a plurality deflection coils **11**, a core **12** and a core clamp **13** all mounted on a yoke form **15**. An end portion **16** of yoke form **15** defines a cylindrical opening adapted to accommodate the neck of a cathode ray tube **5**. End portion **16** is provided with annular flanges **17** and **18** defining an annular seat **20** therein.. End portion **16** is also slotted at points **22**. An annular yoke clamp **25** is adapted to fit in the annular seat **20**. Clamp **25** is provided with an eyelet **26** on one end portion thereof, a step **28** and a flange **29** on the other end portion thereof. It also has a spring **30** which is secured to eyelet **26** by a twisted end loop **31**. A twisted loop **32** which forms the other end portion of spring **30** is adapted to be engaged or latched to flange **29** or to the step **28**. Clamp **25** is also provided with an indentation **34** which is adapted to cooperate with one of the slots **22**. With such an indentation and slots **22**, the clamp is not free to rotate in the seat **20**.

In assembling the yoke assembly **10** on the neck of the cathode ray picture tube **5**, the clamp **25** is first positioned in the seat **20** or yoke form end **16** with the end **32** of spring **30** unlatched. When assembly **10** is placed on the neck of a picture tube **5**, the free end **32** of spring **30** is latched in the first engageable position to flange **29** as shown in Fig. 2. This initial step puts a small amount of tension on spring **30**, but it is not sufficient to securely lock the yoke assembly **10** into position. The assembly may still be adjusted.

After a final adjustment is made to determine the proper position of the yoke assembly **10** for best receiver operation, the spring end **32** is deflected over to the second engageable position or step **28** as shown in Fig. 3. When the spring **30** is deflected into its second position, greater tension is applied and the yoke is clamped tightly to the neck of tube **5**.

It should be noted that the clamp **25** is easily operable and may readily be latched or unlatched. For example, to move the spring from latch position **29** to latch position **28**, a standard pair of long nose pliers may be used to apply pressure to the end **32** of spring **30** and to step **28** in order to pull the spring over to latch position **28**. This ease of operation is an important consideration, particularly where the coil assembly **10** is mounted on neck of a tube which protrudes through a small opening in a vertically mounted chassis. In such a case, the final clamping of the yoke to the tube has to be accomplished through such an opening. By utilizing the yoke form and cooperating clamp in accordance with the present invention, the aforesaid function may be readily performed.

Since other modifications varied to fit particular operating requirements and environments will be apparent to those skilled in the art, the invention is not considered limited to the examples chosen for purposes of disclosure and covers all changes and modifications which do not constitute departures from the true spirit and scope of this invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In a deflection yoke assembly adapted to be mounted on the neck of a cathode ray tube, a yoke form having a pair of cooperating flanges defining an annular seat on one end portion thereof, said end portion having a cylin-

drical configuration adapted to house the neck of a cathode ray tube, and an annular clamp having a tension spring attached to one end portion thereof the other end portion thereof being bent to form a plurality of step-like positions for engagement by a free end of said spring for varying the tension on said spring in accordance with the position engaged, said clamp being mounted in said annular seat.

2. The structure defined in claim 1 wherein said end portion of said yoke form has at least one slot therein and said annular ring has an indentation which is adapted for registration with said slot.

3. In a deflection yoke assembly adapted to be mounted on the neck of a cathode ray tube, a yoke form having a pair of cooperating flanges defining an annular seat on one end portion thereof, said end portion having a cylindrical configuration adapted to house the neck of a cathode ray tube, and an annular clamp comprised of a partial ring, a step at one end of said ring comprised of a radial portion and a tangential portion, a flange at the

end of said tangential portion, a tension spring, means for securing one end of said spring to the other end of said partial ring, a hook means at the other end of said tension spring for engagement with said flange on the radial portion of said step, said clamp being mounted in said annular seat.

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