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R. J. MILLETTE

2,428,631

CLAMPING DEVICE

Filed Oct. 3, 1945

*Fig. 1.*

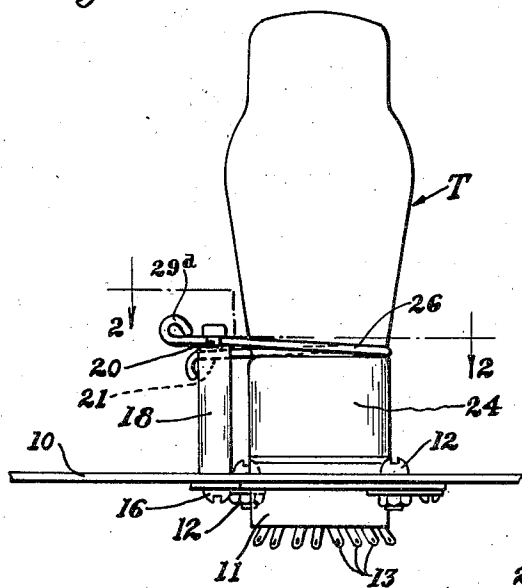


*Fig. 3.*

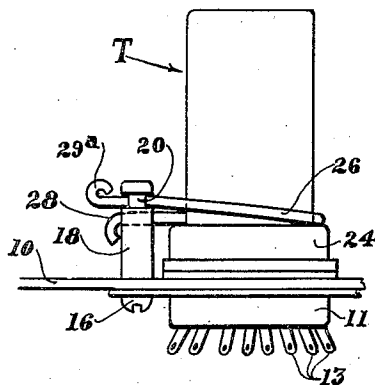


*Fig. 4.*

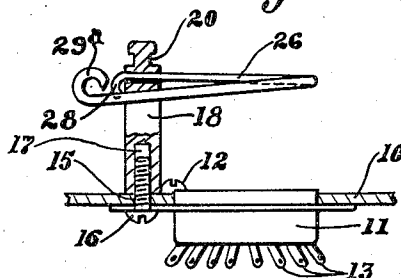
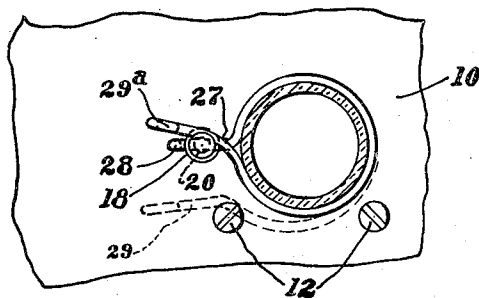


*Fig. 2.*



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## UNITED STATES PATENT OFFICE

2,428,631

## CLAMPING DEVICE

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Application October 3, 1945, Serial No. 619,997

5-Claims. (Cl. 248—361)

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This invention relates to a clamping device to hold radio tubes and the like in fixed position.

My principal object is to provide a simplified clamping device to hold a radio tube or the like in position in a socket regardless of what changes in position or stress or vibration the tube is subjected to.

Another object is to provide a clamping device that is especially simple to install in place and to clamp and unclamp around a tube. A further object is to reduce the cost of producing such a device by using fewer and simpler parts than have heretofore.

Reference is made to my pending patent application, Serial No. 577,527, filing date February 12, 1945.

The foregoing and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction and combination of parts such as is disclosed by the drawings and specification. The nature of the invention is such as to render it susceptible to changes and modifications, and, therefore, I am not to be limited to said disclosure; but am entitled to all such changes therefrom as fall within the scope of my claims.

In the drawings;

Figure 1 is a front elevational view of my clamping device showing a radio tube clamped thereto.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1, the dash lines indicating the spring clamp in normal or unclamped position.

Figure 3 is a front elevational view similar to Figure 1, showing my device clamped to a metal tube.

Figure 4 is a front elevational view of my clamping device in unclamped position and without the radio tube, the chassis and post being shown in section.

As illustrated, my clamping device has a support or chassis 10 in which the usual radio tube socket 11 is mounted by screws 12. Contact lugs 13 extend from said socket 11.

Said chassis 10 has a hole 15 therein through which a screw 16 passes into engagement with a screw threaded hole 17 in a post 18 to firmly attach said post to said chassis 10.

Said post 18 has a laterally extending groove 20 therein slightly below the top, and a hole 21 that extends laterally therethrough just below said groove 20, and is just large enough to receive a spring wire 26 later described.

Set in said socket 11 is a radio tube T which has a base portion 24, the top edge of which is in substantial horizontal alinement with the lower extremity of said hole 21.

A clamping spring or wire 26 holds said tube T fixedly in position. It has a tube retaining portion forming less than a complete circle normally. One end portion 27 of said spring wire

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26 extends through said hole 21 and the end extremity is bent over as at 28 to keep said end in said hole 21. Since the bottom of said hole 21 and the top edge of said tube base 24 are in the same horizontal plane, the circular portion of said spring wire 26 naturally rests on said top edge, in which location it is most effective as a clamping means to prevent any movement upwardly of said tube T. The opposite end of said clamping spring 26 has an extension portion 29 which is at substantially a right angle to the adjoining circular portion of said clamping spring and part of which when in clamping position, extends into said groove 20 and presses against said post 18. A loop 29a is formed at the end extremity of said extension portion 29 for convenience and by which said clamping spring 26 is pressed by a person's thumb to or from clamping position.

When said spring 26 extends around said tube T and crosses over an end portion of itself, as shown in Figure 2 of the drawings, and bears against said post 18, said clamping spring 26 is under tension and the tube T is held tightly and irremovably in said socket 11. By moving said extension portion 29 away from and above said post 18 said clamping spring is loosened and said tube T can readily be removed from or inserted in said socket.

The circular portion of said clamping spring 26 normally forms at least two-thirds of a circle, as illustrated in Figure 2 of the drawings partly by dash lines. When it is in clamping position a complete circle is formed and the two free ends 27 and 29 of my device cross each other.

What I claim is:

1. A clamping device to hold a radio tube or the like comprising supporting means, a post attached to said supporting means, a spring member embodying an encircling portion and having an end portion engaging said post and extending outwardly therefrom and joining said encircling portion and having another end portion extending outwardly and joining said encircling portion and which is adapted to detachably engage said post under tension when in clamping position, said end portions crossing each other beyond said encircling portion when in clamping position.

2. A clamping device to hold a radio tube or the like comprising supporting means adapted to support a radio tube in vertical position, a post attached to said supporting means extending vertically parallel with said tube, a spring member embodying an encircling portion and having an end portion engaging said post and extending outwardly therefrom and joining said encircling portion and having another end portion extending outwardly and joining said encircling portion and which is adapted to detachably engage said post under tension when

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in clamping position, said end portions extending towards each other in a direction towards said post and being adjacent each other where they engage said post, said encircling and end portions extending substantially horizontally when in clamping position.

3. A clamping device to hold a radio tube or the like comprising supporting means, a post attached to said supporting means and extending beyond said means, a spring member embodying an incomplete circle portion and having one end portion connected to said post and extending horizontally outwardly therefrom and joining said circle portion and having another end portion joining said circle portion and which is adapted to detachably engage said post under tension when in clamping position, said circle portion and end portions when in clamping position forming substantially a complete circle, with said end portions crossing each other adjacent said post, said latter end portion extending outwardly farther beyond said post than said first-mentioned end portion.

4. A clamping device to hold a radio tube or the like comprising supporting means, a post attached to said supporting means and extending beyond said means, said post having a laterally extending groove formed therein and having a hole extending laterally therethrough and below said groove, and a spring member having one end portion extending through said hole, said spring member having a circular portion that normally constitutes at least two-thirds of a circle and a portion at one end connected to said circular portion and extending at an angle there-

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to and which is adapted when in clamping position to cross said first-mentioned end portion and extend into said groove and thereby bear against said post.

5. A clamping device to hold a radio tube or the like comprising a chassis having a hole therein, a post attached to said chassis and extending beyond it and having a screw-threaded longitudinally extending hole therein, a screw extending through said chassis hole into said screw-threaded hole, said post having a laterally extending groove formed therein in the upper portion thereof and having a hole extending laterally therethrough adjacent to and below said groove, and a spring member having one end portion extending through said hole and beyond embodying an outside portion extending at an angle to the adjacent portion so it cannot slip out of said hole, said spring member having a circular portion that constitutes at least two-thirds of a circle and a portion at one end connected to said circular portion and extending at an angle thereto and which is adapted when in clamping position to cross said first-mentioned end portion and extend into said groove and thereby bear against said post.

ROLAND J. MILLETTE.

#### REFERENCES CITED

30 The following references are of record in the file of this patent:

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