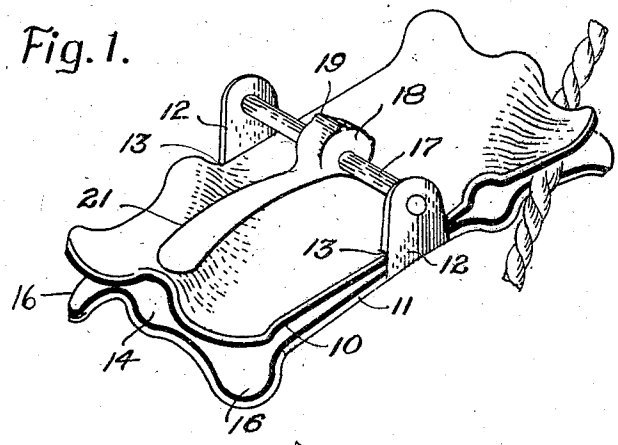
J. P. TARBOX.
CORD ADJUSTER.
APPLICATION FILED SEPT. 16, 1910.

1,087,093. Patented Feb. 10, 1914.

Fig. 1.



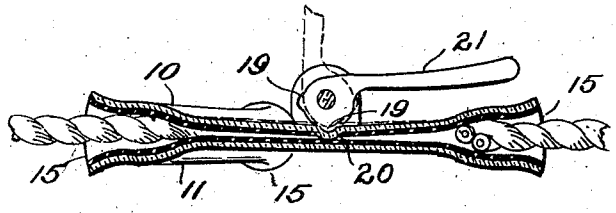
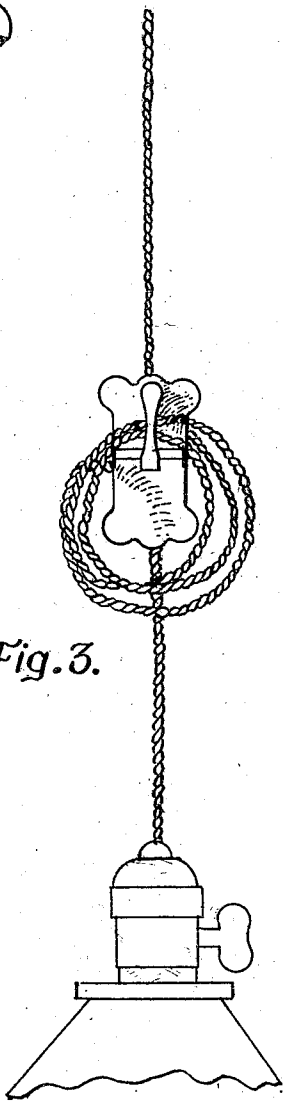


Fig. 2.

Fig. 3.



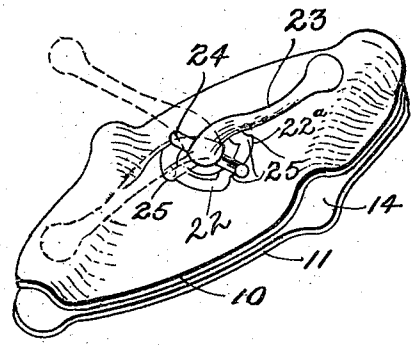


Fig. 4.

Witnesses
William E. Tucker.
C. H. Bickerton

Inventor
John P. Tarbox

UNITED STATES PATENT OFFICE.

JOHN P. TARBOX, OF WASHINGTON, DISTRICT OF COLUMBIA.

CORD-ADJUSTER.

1,087,093. Specification of Letters Patent. Patented Feb. 10, 1914.

Application filed September 16, 1910. Serial No. 582,317.

To all whom it may concern:

Be it known that I, JOHN P. TARBOX, a citizen of the United States, and a resident of Washington, District of Columbia, have invented certain new and useful Improvements in Cord-Adjusters, and that the following is a full and accurate description thereof.

My invention relates to cord adjusters of the type particularly adapted for use in connection with the twisted conductor cords of electric lamps of the incandescent type. It may however be advantageously used in connection with the adjustment of cords of other types of lamps.

The prime objects of my invention are to produce a neat and attractive cord adjuster in appearance, which is relatively inexpensive and which at the same time has a range and adaptability sufficient to make it a convenience, and to make its use most advantageous in the field for which it is designed. A commercial device of this nature must have efficiency and durability, and I have given sufficient special attention to these qualifications in the device of my invention to make it of high efficiency and of practically unlimited durability.

In the accomplishment of the objects of my invention I make use of an elemental form of cord adjuster very well known in the art and in which use is made of two cooperative clamping surfaces adapted to engage the cord, and means for clamping these surfaces together. Instead, however, of forming these members of rigid material as is usual, I form them of sheet metal, and preferably associate one of the surfaces with a flexible member in such a manner that it is pressed yieldingly toward the other. I configure these surfaces in such a manner as to form furrows or grooves in which the cord may be most efficiently held. The edges of the members opposite the clamping surfaces are flared to facilitate the insertion of a cord into a furrow.

Instead of the old form of clamping device for clamping the surfaces together and which has only two positions, one in which it is applying greatest pressure, and holding the clamping surfaces fast upon the cord, and in the other of which the surfaces are released from the cord, I make use of a clamping device, having three defined positions, one in which the cord is free to be removed from the surfaces and the surfaces disengaged from it, an extreme position in which the cord is held fast and may be drawn between the surfaces with difficulty, and a mean position in which a cord may be drawn between the surfaces with less difficulty. Preferably I make this device a lever operated device, so positioning the lever with respect to the device that it may be used as a support for the cord. Preferably also I form the clamping members which carry the clamping surfaces relatively longer than they are wide and locate the clamping device between the ends of the clamping members. Whether the members are relatively long or not I preferably form the furrows in such a position that they extend from the middles of the opposite ends of the adjuster diagonally or on a bias to one side, terminating on the sides. Both furrows may thus be run free from the clamping device, and have a free opening to the outer edges of the clamping members. Still further I increase the efficiency of the device by providing insulation of the same configuration as the furrows to prevent undue wear and short circuiting of worn conductors, and flare the ends of the furrows to further decrease wear on the conductors.

Other detailed features will be clear from a view of a specific embodiment of my invention.

In the accompanying drawings I have shown two embodiments of my invention. Though these embodiments are the best now known to me, my invention may be given other forms without departing in any wise from its generic spirit.

Of the drawings Figure 1 is a perspective view of one form; Fig. 2 is a central longitudinal section of the same form; Fig. 3 is an elevation of this form of adjuster applied to a lamp cord, and Fig. 4 is a perspective view of the other form.

Taking up first the form of Figs. 1 to 3, 10 and 11 are two substantially rectangular superposed clamping members. About the middle of member 11 on each side thereof is an upwardly projecting ear 12. The member 10 is cut away at 13 in order that it may be held against lateral movement in all directions by the ears 12, and yet have free movement toward and from the member 11. Preferably both of the members are made of resilient material, but in any event one

member 10 is so made. Beginning at the middle of the opposite ends of the clamping members are grooves or furrows 14 which extend each of them on a bias and in opposite directions to the opposite sides of the clamping members. The inner walls of these grooves constitute clamping surfaces. Their outer ends 15 are flared as clearly shown in Fig. 2. The edges of the clamping members opposite the clamping surfaces, in this instance the corners 16 of the rectangles, are flared as shown. On the inside of each clamping member is provided sheet insulation of the same shape as the clamping members. Supported by the ears 12 is a pintle 17 carrying a cam 18. This cam is one of increasing eccentric form as shown in Fig. 2, and is adapted to engage the member 10, and flex it varying degrees when rotated. Projections 19 from the face of this cam are adapted to enter a groove 20 in the member 10 and hold the cam in each of several adjusted positions, and the member 10 at definite flexed points. An extended lever or other handle 21 is provided for operating the cam. The clamping device is designed in this embodiment to have three operative positions, first that shown in Fig. 1 in which the clamping surfaces are held together very lightly or may be moved with respect to each other; second, that shown in dotted lines in Fig. 2 in which the clamping members are held more tightly together, and in which the clamping device is held in position by one of the projections 19 provided for that purpose; and third, that shown in full lines in Fig. 2 in which the clamping surfaces are held most tightly together, and in which the clamping device is held in clamping position by the other of the projections 19. In the first of these positions of the clamping device a cord may be freely inserted into a cord groove or furrow by entering it between the flared edges 16 of the clamping members as shown in Fig. 1. Thus a portion of the cord to be adjusted may readily be entered in each furrow as shown in Fig. 4, without in any way disturbing the connections of the cord at either end. The cord, once entered, may as readily be removed. When the lever operated clamping device is moved to the position shown in Fig. 2 in dotted lines, the clamping surfaces are pressed yieldingly together upon the cord, the pressure being such as to prevent the cord being drawn through by the weight of the attached lamp, but at the same time such as will permit the cord to be freely pulled through the furrows to any desired adjusted position. Owing to the yielding engagement of the clamping surfaces with the cord, to the presence of the insulating sheets between them and the cord, and to the flared mouths of the furrows, this adjustment may be done easily and without the slightest damage to the covering of the cord or to its insulation. Should the insulation happen to be broken from other cause, the insulation of the adjuster prevents short-circuits from being made. In the third position of the clamping device in which the device is held by one of the projections 19 as in the second position, the clamping members are pressed together so tightly that they grip the cord firmly, the cord can only be drawn between them with difficulty if at all. In each of the three positions of the clamping device, the flexible one or both of said clamping members is held at a definite flexed point corresponding. When the clamping device is in its extreme position, the operating lever is spaced away from the body of the adjuster adjacent to it, and the taken in length of the cord may be hung over it in neat coils as shown in Fig. 4. It will be seen upon an inspection of this figure that the cord adjuster hangs in a vertical position by virtue of the arrangement of the furrows, and that together with the taken-in length of the cord supported by it, it makes a neat and attractive appearance. The design of the adjuster may be elaborated with an increase of artistic design, the construction lending itself to this very readily. When it is desired to readjust the cord, the lever of the clamping device is grasped by the fingers and moved to the second position, in which the cord may be adjusted as previously described, and again clamped tightly by moving the lever back to its extreme position. When it is desired to remove the adjuster from the cord, the lever is moved through its mean position all the way back to its free position in which the cord may be freely withdrawn from the furrows. It should be apparent that this adjuster is adaptable to all conditions of service, and that it may be rapidly and easily manipulated by any person. Of the disadvantages of the old forms of wooden adjusters this adjuster possesses none, but on the other hand it possesses so many advantages as to make its use most efficient and economical.

I have said that my invention might be given other forms and in Fig. 4 I show one of those forms. The clamping members instead of being substantially rectangular are made oval or circular in shape. The clamping device instead of being of the form of Figs. 1 and 2, is made up of cam surfaces 22^a and 22 struck up from the face of the upper clamping member. These surfaces 22^a and 22 slope upwardly in the same rotative direction. An operating lever 23 is pivoted to the lower plate 11 and provided with an engaging pin 24 adapted to engage the clamping surfaces and press the clamping members together as the lever is rotated. Depressions 25 in the cam surfaces 22^a and 22 corresponding to the projections

19 of the previously described form, give to the clamping device of this form the three positions shown in dotted lines which correspond to the two extreme positions and mean position of the previous form. The flared edges and the insulation between the clamping surfaces are omitted in this embodiment.

While I have shown and described the best forms of my invention now known to me, I desire to have it understood that my invention may be given other forms by those skilled in the art without departing in any wise from the generic spirit thereof, and further that I intend to cover in the annexed claims all such forms of my invention.

What I claim is:

1. A cord adjuster comprising two cooperating clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, said surfaces being adapted to engage the cord at two distinct points, and means for holding said device positively in two determinate clamping positions only, one of said positions being an extreme position wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty.

2. A cord adjuster comprising two cooperating clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, said surfaces being adapted to engage the cord at two distinct points, and means for holding said device positively in two determinate clamping positions only, one of said positions being an extreme position wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty, said device having a third position in which said cord may be freely removed from between said surfaces.

3. A cord adjuster comprising two cooperating clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, said surfaces being adapted to engage the cord at two distinct points, means for holding said device positively in two clamping positions only, one of said positions being an extreme position wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty, and an operating lever connected with said clamping device to occupy a position spaced away from said clamping members and substantially parallel thereto when said clamping device is positively held in the extreme position aforesaid.

4. A cord adjuster comprising two coöperating clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, means for holding said device positively in two clamping positions only, one of said positions being an extreme position wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty, an operating lever connected with said clamping device to occupy a position spaced away from said clamping members and substantially parallel thereto when said clamping device is positively held in the extreme position aforesaid, said surfaces having an upper clamping furrow between them extending from an upper point in line with said lever in its extreme position tangentially to said line and by a curved path laterally of said lever to one side of said surfaces, and a lower clamping furrow extending by a curved path from the opposite side of said surfaces laterally inward to the line of said lever aforesaid and tangentially thereto.

5. A cord adjuster comprising two coöperating plate clamping members, having furrows on the inner faces thereof, extending one from each end diagonally substantially parallel to each other and in opposite directions to points laterally displaced, said plates being symmetrically contoured as respects the line connecting the entering ends of said furrows, together with clamping means for said plates positioned symmetrically as respects said central line.

6. A cord adjuster comprising two coöperating clamping members, means for clamping them together and upon a cord, a lever for operating the same, which lever is movable in one plane only, said members having clamping furrows on opposite sides of said clamping means, and which extend parallel to each other in opposite directions from points in the plane of said lever to points laterally displaced therefrom.

7. A cord adjuster comprising two coöperating clamping surfaces, means for clamping said surfaces together, said surfaces being substantially symmetrical about a central line and occupying planes closely adjacent each other, an upwardly extending hook lying normally opposite and parallel to said central line closely adjacent to the planes of said surfaces but spaced away therefrom, said surfaces having an upper clamping furrow between them extending from an upper point on said central line downwardly and laterally at an acute angle to said central line, and a lower clamping furrow extending from a lateral point on a

side of said surfaces opposite said upper furrow inwardly and downwardly to a lower point on said central line, whereby a cord may be threaded through said upper furrow beginning at the central line, then coiled through and supported by said hook and then threaded through said lower furrow beginning at its lateral extremity and emerging at its lower end on the central line.

8. A cord adjuster comprising two coöperating clamping surfaces, said surfaces being substantially plane surfaces substantially symmetrical about a central longitudinal line and occupying planes closely adjacent each other, means for clamping said surfaces together located on said central line substantially midway between the ends of said surfaces, an operating lever for said clamping device having a normal clamping position immediately opposite, approximately parallel to and closely adjacent the said central line, said surfaces having diagonally opposite upper and lower clamping furrows on opposite sides of said central line, and extending from the ends of the said surfaces at said central line laterally in opposite directions to points respectively on opposite sides of said surfaces, whereby a cord may be threaded through the upper furrow beginning at the central line, coiled on said hook and continuing its course in the same direction, be threaded through the lower furrow beginning at its lateral extremity and emerging at the central line, the diagonally opposite edges of said surfaces on the diagonal line of the furrows being flared, and the furrows lying wholly without the clamping means whereby the cord may be threaded into the furrows by lateral insertion between the flared corners of the surfaces.

9. A cord adjuster comprising two coöperating plate-clamping members, substantially symmetrically disposed as respects a central line, and having cord receiving furrows on the inner faces thereof extending in opposite directions from said central line, and clamping means adapted to clamp said plate members together and upon a cord having two extreme clamping positions, in the one of which said cord is retained loosely in said furrows against falling therefrom and may yet be freely removed therefrom without further manipulation of the clamping device, and in the other extreme position of which the cord is clamped strongly within said furrows, so that it may be moved with difficulty only.

10. A cord adjuster for pendent electric lights comprising two coöperating plate clamping members adapted to engage and clamp the cord at two distinct points whereby slack may be accumulated between said points of engagement, one of said members having a cord receiving furrow on its inner face together with clamping means for said members adapted to clamp the same together, and having a single determinate positively differentiated clamping position in which said cord is frictionally clamped within said furrow and is yet readily movable therethrough by force applied, said clamping means having additionally an extreme position in which said cord is clamped strongly in said furrow, so that it may be moved with difficulty only.

11. An adjustable connection for pendent electric lamps comprising a flexible connecting cord and lamp fixture together with a cord adjuster therefor comprising two coöperating clamping surfaces adapted to engage the cord at two points, means for clamping said surfaces together to hold the cord fast at each of said two points, said means having both extreme and mean positions wherein said cord is clamped more or less positively, together with means defining a single determinate positively differentiated mean position of said clamping device in which said surfaces hold the cord in frictional engagement sufficiently to support the weight of the fixture attached to the lower end of the cord and yet permit ready adjustment of the cord therebetween.

12. A cord adjuster comprising two coöperating clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, means for holding said device positively in two determinate positively differentiated clamping positions only, one position being an extreme position, wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty, an operating lever connected with said clamping device to occupy a position spaced away from said clamping members and substantially parallel thereto when said clamping device is positively held in the extreme position aforesaid, said surfaces having an upper clamping furrow, and a lower clamping furrow between them, which furrows extend in opposite directions from points on a line passing through said clamping device and from the opposite ends of said surfaces to points on opposite sides thereof.

13. A cord adjuster comprising two coöperating clamping surfaces, a clamping device adapted to clamp said surfaces together and upon a cord to hold the cord fast, said clamping surfaces adapted to engage the cord at two distinct points whereby slack may be accumulated between said two points, means for holding said clamping device in one determinate positively differentiated extreme position only, together with an operating lever for said clamping device, adapted

to occupy a determinate position corresponding to the extreme position of said clamping device aforesaid, wherein said lever is spaced away from said surfaces but is substantially parallel therewith for a limited distance, whereby the slack in said cord between said two points of engagement may be looped around said lever.

14. A cord adjuster comprising two co-operating clamping surfaces, means for clamping the same together upon a cord to hold the cord fast, said surfaces having clamping furrows formed on opposite sides of said clamping device and extending in opposite directions from a line passing through said clamping device, diagonally and laterally across the body of said surfaces; together with means constituting a hook connected with said surfaces, located on the aforesaid line and adapted to receive and hold the slack in the cord, when the surfaces are in a vertical position.

15. A cord adjuster comprising two co-extensive coöperating clamping surfaces, a clamping device located on a substantially symmetrically disposed central line of the surfaces, said surfaces having clamping furrows on the inner faces thereof and extending one from each end of said central line and in opposite directions obliquely across the ends of said plate and substantially parallel with each other, the edges of said plates adjacent the furrows being flared away from each other.

16. A cord adjuster comprising two co-extensive coöperating substantially rectangular clamping plates, a clamping device located centrally of a longitudinal substantially median line, said members having clamping furrows between them and extending one from each end of said median line and in opposite directions diagonally across the corners of said surfaces and substantially parallel with each other, all four corners of the coöperating surfaces being flared away from each other.

17. A cord adjuster comprising two co-operating flexible clamping surfaces, a device for clamping said surfaces together and upon a cord to hold the cord fast, and means for holding said device positively in two determinate clamping positions only, one of said positions being an extreme position wherein said cord may be drawn between said surfaces with difficulty, and the other of said positions being a mean position wherein said cord may be drawn between said surfaces with less difficulty.

In testimony whereof I hereunto set my hand this 16th day of September, 1910.

JOHN P. TARBOX.

Witnesses:

THOMAS DURANT,

WILLIAM E. TUCKER.