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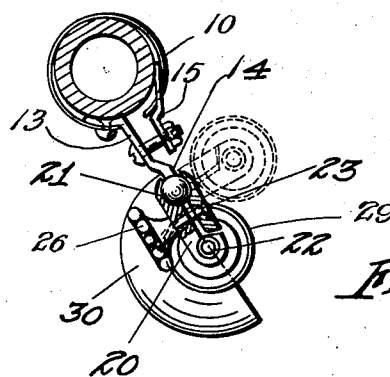
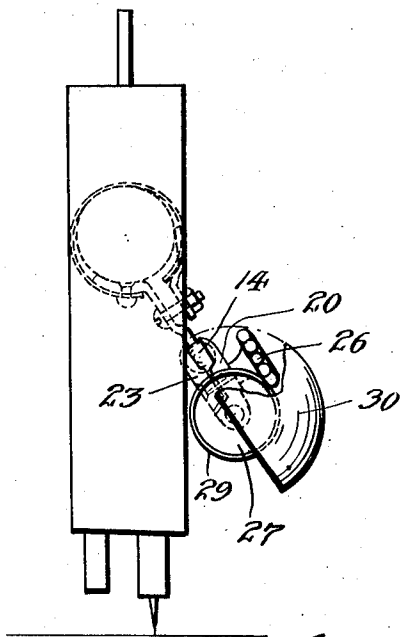
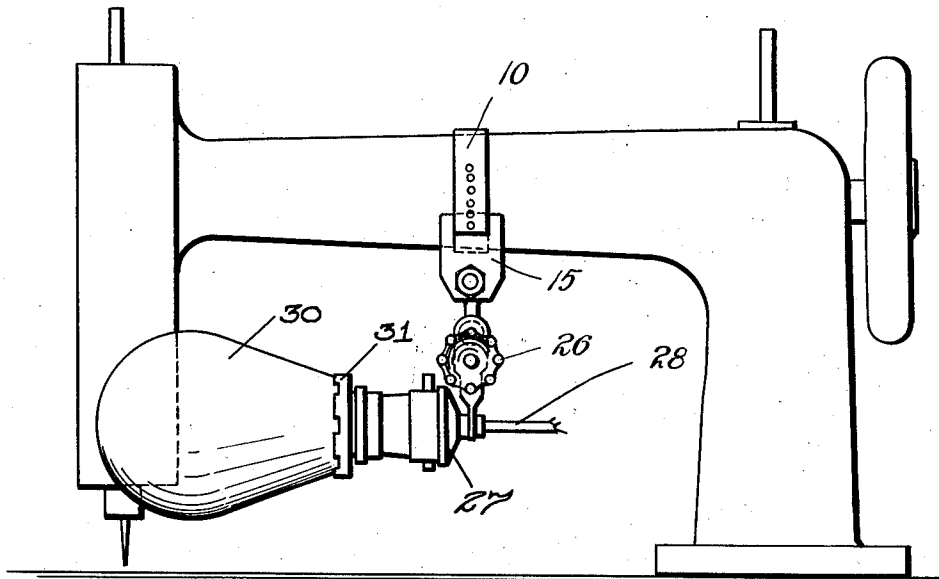
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SEWING MACHINE LAMP SUPPORT

Filed July 19, 1924

2 Sheets-Sheet 1



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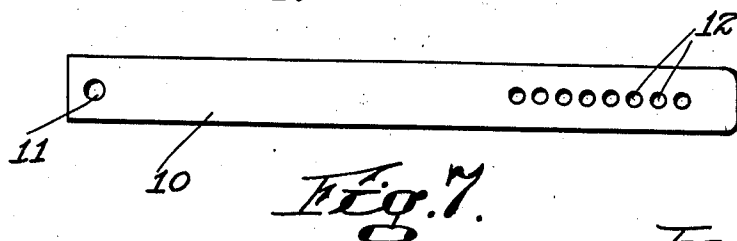
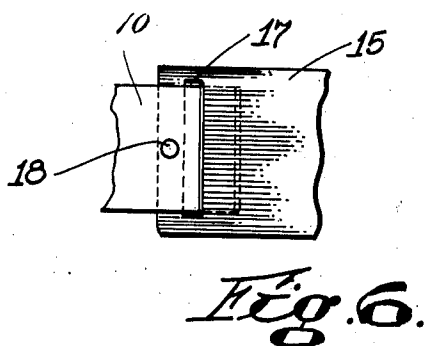
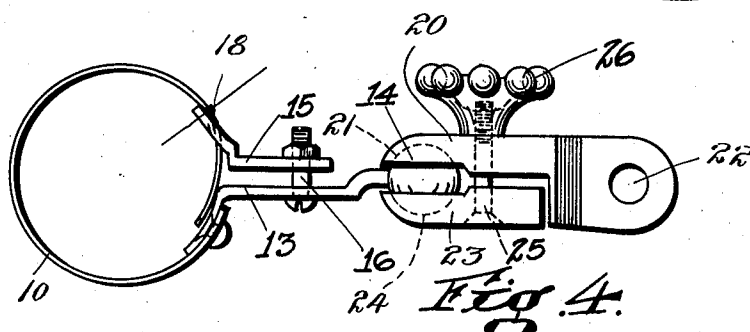
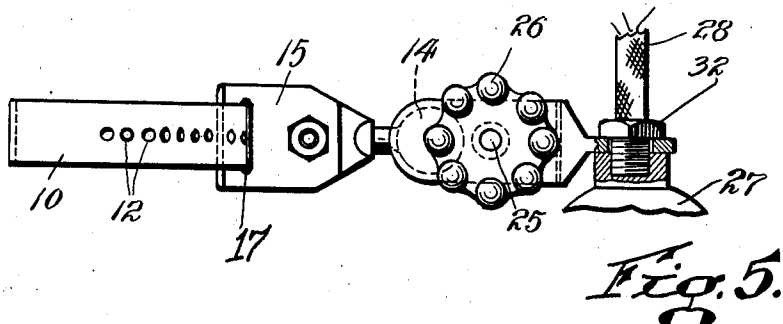
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UNITED STATES PATENT OFFICE.

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SEWING-MACHINE-LAMP SUPPORT.

Application filed July 19, 1924. Serial No. 726,962.

This invention relates to a support or holder for use on sewing machines, although it can be used on other articles and especially machinery presenting similar problems.

5 The principal object of the invention, of course, is to provide a support which can be adjusted to throw the light on the table of the machine in front of the needle and on the needle where it is needed while the machine
10 is running, but the invention also involves an arrangement which can be adjusted so as to be applicable to the frame or needle supporting arm of practically all makes of machines; to provide a construction in which the lamp
15 in addition to being conveniently adjusted for the purpose above described, can be turned around to throw the light in any part of the room and on the back of the table of the machine as well as on the front
20 of it and also can be reversed so as to throw the light in any direction opposite to the usual direction. The invention also involves details of construction of the support and its connection with the lamp supporting
25 means and especially the provision of a ball and socket joint which is especially useful for the adjustment above mentioned.

Reference is to be had to the accompanying drawings, in which—

30 Fig. 1 is a side view of the upper parts of a sewing machine of standard make showing a preferred embodiment of this invention applied thereto in position to throw the light on the needle and on the table in front
35 of it;

Fig. 2 is an end view of the same;

Fig. 3 is an opposite end view with the lamp shade turned half way around and showing in dotted lines another adjustment;

40 Fig. 4 is an enlarged edge view of the support with the lamp removed;

Fig. 5 is a side view of the same with the lamp in position;

45 Fig. 6 is a fragmentary detail view of a portion of the clamp, and

Fig. 7 is a view of the flexible strip constituting a part of the clamp.

50 As it is desired to provide a device which can be clamped on the frame or arm of a machine of nearly any standard make and as these frames usually involve an arm of circular but not cylindrical cross section and these arms are of various sizes. I preferably provide a clamp for supporting the whole
55 device comprising a flexible strip 10 of sheet metal having a perforation 11 at one end

and a row of perforations 12 at the other spaced close together. This strip is secured through the perforation 11 to a bracket 13
60 by means of a rivet or the like. This bracket 13 is a rigid piece of metal having at the end a sphere or ball 14, the purpose of which will appear and it is provided with a complementary bracket member 15 adapted to
65 be secured to it by a bolt 16 and nut. This bracket 15 has a transverse slot 17 arranged through it near the end and a stud 18 adapted to fit it in any of the holes 12. The two
70 brackets 13 and 15 are complementary. They have bearing surfaces extending out in opposite directions virtually in the arc of a circle for directing the flexible strip 10 into a substantially circular form, although it can assume an elliptical or other non-circular
75 shape in accordance with the arm on which it is to be put.

For the purpose of clamping it in position the strip is inserted in from the outside through the slot 17, as shown in Figs. 4, 5, and 6 especially, so that one of the perforations 12 will receive the stud 18 and the
80 strip can be tightened up as much as necessary to provide for desired adjustment. It will be observed that the end of the strip which comes inside extends over into a position to lap over the inner surface of the
85 bracket member 13 and the strip can be reduced to its shortest diameter because the end of this strip always extends over the inside surface of this member 13 and there
90 is no limit to the extent of the adjustment as far as this inner end of the strip is concerned. When adjusted on the frame of the sewing machine so that it is capable of gripping it, the screw 16 is tightened up and a
95 gripping action is secured thereby so that this bracket is held on the frame with the ball 14 projecting in any desired direction therefrom.

100 The other feature of the clamp consists of the external member of a ball and socket joint. This comprises two jaws. The jaw 20 has a substantially hemi-spherical concave surface 21 and is provided with a transverse perforation 22 for connection with the
105 lamp itself. The other jaw 23 of this clamp is provided with a concave hemi-spherical surface 24 and both of them are provided with perforations for receiving an adjusting and clamping screw 25 having a hand
110 nut 26 thereon. This screw has a non-circular head setting in a socket in one of the

jaw members. This construction holds the ball 14 in the socket 21—24. It will be observed that between the edges of the two jaws 20 and 23 there is a space extending more than half way around the clamp in the plane of the surface between them. This permits of the ball 14 swinging on a transverse axis throughout more than a half revolution in this clamp. The ball can also turn on a transverse axis through a complete circle.

The jaw 20 as stated has a transverse perforation 22. Through this perforation is adapted to extend a threaded bushing 32 having a hex head thereon. The jaw 20 is pivoted on this bushing to turn freely thereon except when the bushing is tightened up into the socket 27 of the lamp and then it is held in its adjusted position. Through this bushing passes the feed wire or cable 28. The lamp 29 has a semi-circular shade and reflector 30 extending longitudinally and capable of turning on the longitudinal axis to throw the light in any direction around it.

This construction is designed for use on a machine having a frame or arm of the general character indicated in Fig. 1 and for sale to the user after the machine is bought and installed in place. If applied to the machine in the factory, the bracket consisting of the flexible strip 10 would not be needed but would be replaced by a permanent member or at least one rigidly mounted on the frame when the machine is manufactured.

By the use of the flexible clamp, the whole device is capable of being turned to any point around the frame of the machine so that the light can be used universally without necessarily using the other adjustments, but on account of the connection of the bracket with the lamp itself the lamp can be turned around on its own axis before being tightened up. However, I prefer to provide the lamp with the shade 30 which is fixed to a rotatable collar 31 so that the shade can be rotated on the axis of the lamp and all the adjustment necessary is secured very conveniently in that way. But the most important adjustment is the ball and socket joint which allows the whole lamp and jaws 20 and 23 to be shifted on the clamp throughout more than a half circle in one plane and then allows it to be turned throughout a complete circle on the ball and socket joint about an axis at right angles to said plane. It is very obvious therefore that the clamp can be adjusted to any particular position required.

In Figs. 1 and 2 the lamp is shown as directing its light down on the table in front of the needle and on the needle itself where it is most commonly used and the parts are most conveniently located for that purpose. If it is desired to throw the light up into

the room for any purpose, the shade 30 is turned around exactly in the opposite direction as indicated in Fig. 3. The dotted line construction of this figure also shows a double adjustment on both these axes to get the lamp into another position. Obviously, the whole construction can be turned to any desired position on the arm but that is not a usual way of adjusting this lamp. The clamp is ordinarily set once for all and is not thereafter adjusted, all other necessary adjustments being secured in the other ways indicated. It constitutes a trouble lamp for a sewing machine because it is so universally adjusted. Furthermore, the lamp is detachable at the ball and socket point, so it can be used as a true trouble lamp anywhere over or under the machine.

The clamp itself is very important. The flexible strip passes through the slot in the bracket 15 from the outside in. This bracket is curved and one edge of the slot slanted so that the strip 10 binds in it. The stud positively prevents its pulling out. The other end of the strip is securely riveted to the convex end of the other bracket 13 to prevent pivotal motion. In use the strip is adjusted to its position while the brackets 13 and 15 are loose. Then the bolt 16 is tightened up so as to bring the brackets firmly together. This pulls in the ends of the strip and binds it tightly about the sewing machine arm. It provides a powerful grip on it and it will not work loose by the adjustment of the lamp or by any ordinary rough usage. As the end of the strip 10 comes inside it will bear on the inner surface of the bracket 13 as shown in Fig. 4 and add to the security with which it is held. It also allows adjustment through a wide range. The tightening of the clamp also forces the inner end of the bracket 15 against the arm of the machine and tends further to bind the strip 10 in the slot 17.

This furnishes a simple means for accomplishing these desired results. It consists of a few parts not likely to get out of order and does not involve awkward parts which are in the way of the operator.

Although I have illustrated and described only a single form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

1. In a lamp support for a sewing machine, the combination with a pair of jaws, means for clamping the jaws together, and means for mounting them adjustably on a sewing machine frame, of a ball mounted between said jaws and adjustable around in one direction in a semi-circle and throughout

a complete circle in a transverse plane, a flexible metallic strip connected with said ball and having a series of perforations arranged along it at the other end close together, a bracket having a perforation through which said strip is adapted to pass so that its end will come into contact with its inside surface and having a stud projecting from it beyond the perforation for engaging any one of the perforations in the strip to secure the adjustment thereof, and for clamping the strip firmly on a part of the frame of the sewing machine.

2. In a lamp support, the combination of a pair of jaws, with a member adapted to be secured to a sewing machine frame and adapted to be secured between said jaws, a screw passing through said jaws for clamping said jaws together, one of said jaws extending beyond the other and having a perforation therethrough, and a bushing extending through said perforation having a passage through its center for an electric wire or cable and having a screw threaded external surface, whereby the bushing can extend into the base of an electric lamp and fixedly clamp one of said jaws thereto to extend at right angles from the axis thereof.

3. In a sewing machine lamp support, the combination with a pair of jaw members each having a substantially hemispherical socket and having means for clamping them together, of a ball adapted to be located in said socket and to be clamped therein, means rigidly mounted with respect to said ball for securing it to the frame of a sewing machine, one of said clamping jaws having a perforation through it on the opposite end, a hollow bushing passing through said perforation and adapted to be secured to the end of a lamp base and providing a passage through it for the electric supply cable through the clamp.

4. In a sewing machine clamp support, the combination of a pair of jaws each having a substantially hemispherical concave surface, a screw passing through said jaws with a thumb nut on it for clamping said jaws together, one of said jaws extending beyond the other and having a perforation therethrough, and a bushing extending through said perforation having a passage through its center for an electric wire or cable and having a screw threaded external surface and provided with an integral head for manipulating it, whereby the bushing can extend into the base of an electric lamp and fixedly clamp one of said jaws thereto to extend at right angles from the axis thereof, with a ball mounted between said jaws and adjustable around in one direction in a semi-circle and throughout a complete circle in a transverse plane, said ball having mounted thereon means for securing it to the frame of a sewing machine.

5. In a sewing machine lamp support, the combination with a pair of jaws, means for clamping said jaws together, one of said jaws having a transverse perforation therethrough, and a bushing extending through said perforation, said bushing having a longitudinal passage for an electric wire or cable having a screw-threaded external surface, whereby the bushing can extend into the base of an electric lamp and clamp one of the jaws thereto to extend at an angle from the axis thereof, of a ball mounted between said jaws and adjustable around in one direction in a semi-circle and throughout a complete circle in a transverse plane, a flexible metallic strip secured to said ball and having a series of perforations arranged along it at the other end close together, a bracket having a perforation through which said strip is adapted to pass so that its end will come into contact with its inside surface and having a stud projecting from it beyond the perforation for engaging any one of the perforations in the strip to secure the adjustment thereof, and for clamping the strip firmly on a part of the frame of the sewing machine.

6. In a clamp for a sewing machine lamp support, the combination with means for adjustably supporting a lamp comprising a pair of jaws having semi-spherical concave surfaces, of a ball adapted to be received between said surfaces, a pair of brackets, a flexible metallic strip secured to one of said brackets and having a series of perforations arranged along it at the other end close together, the opposite bracket having a transverse slot through which said strip is adapted to pass, so that its end will come into contact with its inner surface, and having a stud projecting from it beyond the slot for engaging in any one of the perforations in the strip to secure it in adjusted position, and means passing through the two brackets for securing them together to clamp the strip firmly on a part of the frame of the sewing machine.

7. In a clamp, the combination with means for adjustably supporting a lamp, of a pair of brackets, a flexible metallic strip secured to one of said brackets and having a series of perforations arranged along it at the other end, the opposite bracket having a slot through which said strip is adapted to pass, and having a stud projecting from it beyond the slot for engaging in any one of the perforations in the strip to secure it in adjusted position, and means passing through the two brackets for securing them together to clamp the strip firmly on a part of the frame of the sewing machine.

In testimony whereof I have hereunto affixed my signature.

OTIS C. WHITE.