March 25, 1924. 1,488,334

S. FREY

APPARATUS FOR MAKING COVERS FOR CANTEENS AND OTHER ARTICLES

Filed Dec. 23, 1920 2 Sheets-Sheet 1

Fig. 1

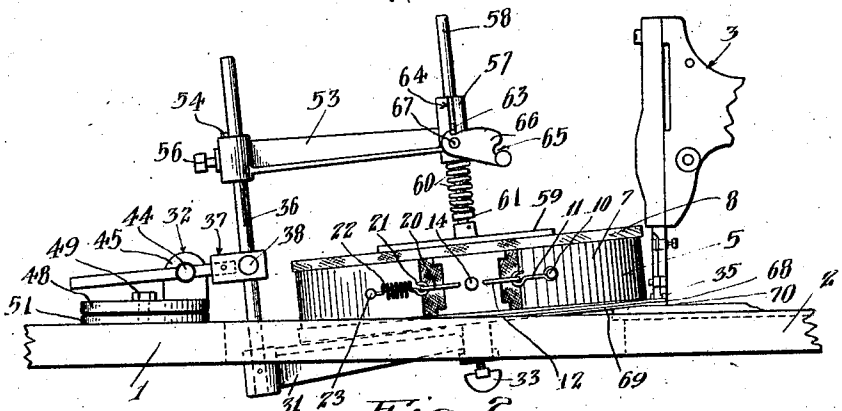


Fig. 2

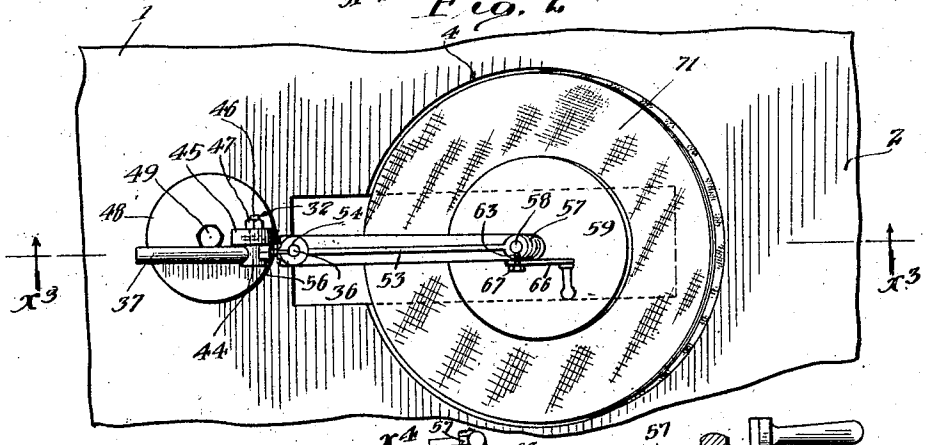


Fig. 3

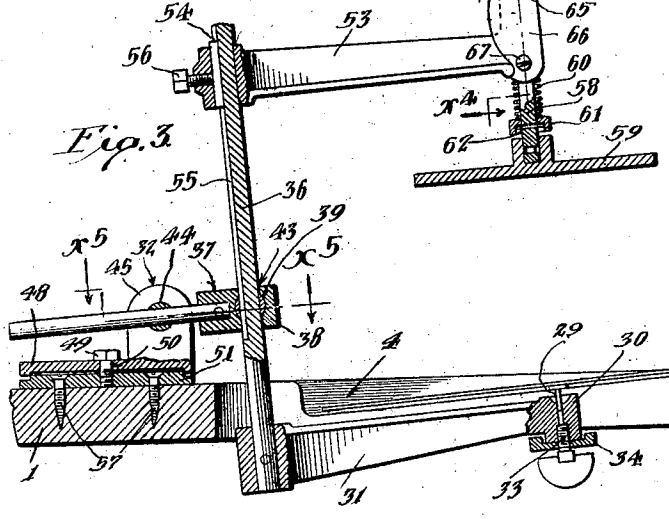


Fig. 4

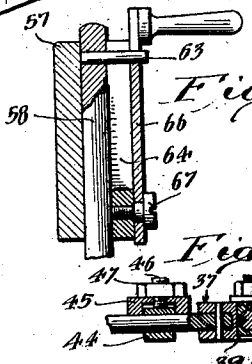


Fig. 5

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Filed Dec. 23, 1920 2 Sheets-Sheet 2

Fig. 6.

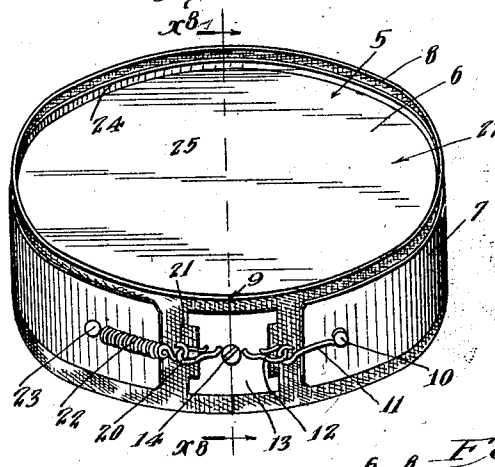


Fig. 7

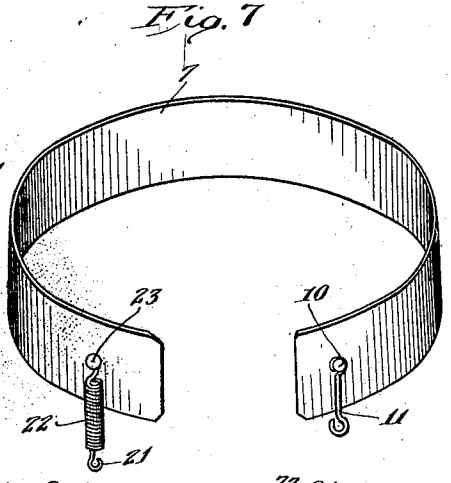


Fig. 8

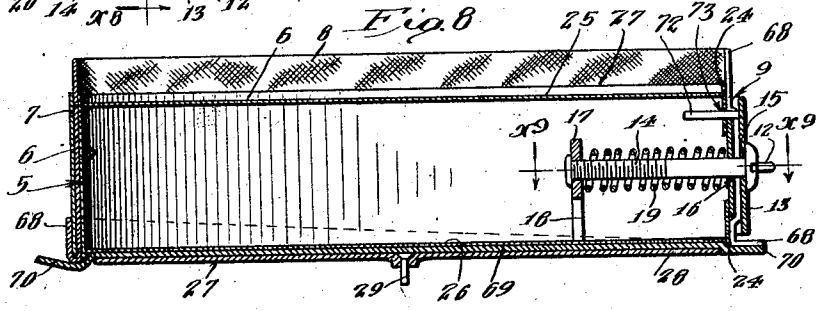


Fig. 10

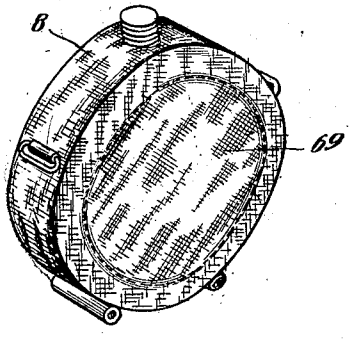
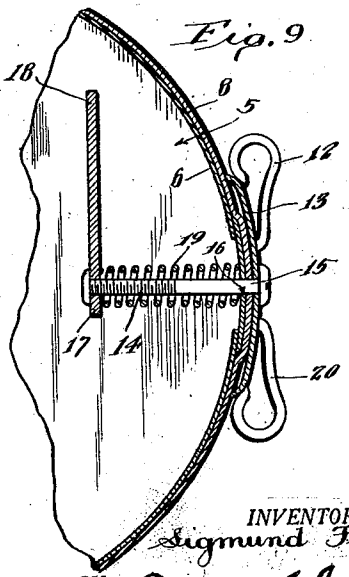


Fig. 9



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Patented Mar. 25, 1924. 1,488,334

UNITED STATES PATENT OFFICE.

SIGMUND FREY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO WOOLWINE METAL PRODUCTS COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

APPARATUS FOR MAKING COVERS FOR CANTEENS AND OTHER ARTICLES.

Application filed December 23, 1920. Serial No. 432,709.

To all whom it may concern:

Be it known that I, SIGMUND FREY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Apparatus for Making Covers for Canteens and Other Articles, of which the following is a specification.

This invention relates to apparatus designed to be used in conjunction with a sewing machine for making fabric covers or jackets for canteens and other articles, and an object of the invention is to make provision for sewing the cover on a suitable form or core so that the cover can be removed from said core and turned inside out when slipped over the canteen.

Another object is to so construct the covers of canteens that they will present a neat appearance when in place on the canteen.

Another object is to facilitate the application of the pieces of fabric to the core and removal of the partly finished cover from the core.

Another object is to make provision for accurately guiding the sewing needle in a circular path so that the predetermined size of the cover will not be deviated from.

Another object is to make provision for free rotation of the core so that the feed plate of the sewing machine will rotate the core at the sewing speed of the sewing machine.

Another object is to construct an apparatus of this character which will facilitate the correct making of canteen covers by more or less unskilled labor.

Other objects and advantages will appear in the subjoined detailed description.

The accompanying drawings illustrate the invention:

Figure 1 is a side elevation of the invention, a fragment of a sewing machine also being shown in position for sewing the cover which is shown in position on the core.

Fig. 2 is a plan view of Fig. 1, omitting the sewing machine head.

Fig. 3 is an enlarged fragmental sectional elevation on line indicated by x^3—x^3, Fig. 2, the drum and band of the core and the cover being omitted and the upper clamping plate being shown in raised or core-releasing position.

Fig. 4 is an enlarged sectional detail on line indicated by x^4—x^4, Fig. 3.

Fig. 5 is a fragmental plan section on line indicated by x^5—x^5, Fig. 3.

Fig. 6 is a perspective view of the core and cover shown in Fig. 1, before the peripheral cover strip has been turned over upon the core clamping band.

Fig. 7 is a perspective view of the core band, the latch device thereof being shown in unlatched position.

Fig. 8 is an enlarged sectional elevation on line indicated by x^8—x^8, Fig. 6.

Fig. 9 is a fragmental plan section on line indicated by x^9—x^9, Fig. 8, the clamping band and its hooks being omitted.

Figure 10 is a perspective view of a canteen provided with a cover constructed on the apparatus shown in the preceding figures.

There is provided a suitable support indicated fragmentarily at 1 and said support may be a continuation of or be made separate from the sewing table 2 of a sewing machine indicated in general by the character 3. The support 1 is provided with an opening 4 in which is rotatively mounted a core indicated in general by the character 5.

The core 5 may be variously constructed without departing from the broader phases of the invention, and in this instance is constructed as follows: The core 5 comprises a cylindrical drum 6 and a cylindrical clamping band 7 designed to fit around the periphery of the drum 6 so as to hold the peripheral strip 8 of the cover which is to be made, said strip being placed on the periphery of the drum 6 with the ends meeting as shown at 9, and the clamping strip 7 then being placed around the strip 8 to hold said strip smoothly and tightly in place on the drum.

A latch device is provided to hold the band 7 in closed position on the drum and in this instance the latch device is provided with a tension member so as to yieldingly hold the clamping band in position on the drum. The latching device is constructed as follows: Pivoted at 10 to one end of the clamping band 7 is a hook 11 adapted to detachably engage an eye 12 on a segmental clamping member 13 which is yieldingly held toward the periphery of the drum by a

screw 14 that extends through a hole 15 in the member 13 and through a hole 16 in the periphery of the drum. The inner end of the screw 14 is provided with a nut 17 which is positioned inside of the drum, said nut having an arm 18 adapted to engage the drum so as to prevent turning of the nut 17 when the screw 14 is turned. The screw 14 is provided with a coil spring 19 which bears at one end against the periphery of the drum and at its other end against the nut 17 so as to yieldingly draw the screw 14 inwardly and thus yieldingly hold the clamping member 13 against the end portions of the peripheral strip 8, said end portions being interposed between the clamping member 13 and the periphery of the drum. The clamping member 13 is positioned between the ends of the clamping band 7 and is provided with a second eye 20 adapted to be detachably engaged by a hook 21 formed by one end of a coil spring 22, the other end of the spring 22 being fastened at 23 to that end of the clamping band 7 which is opposite to the end having the hook 11.

At its periphery the drum 6 is provided with annular flanges 24 which extend outwardly beyond the heads 25, 26 of the drum thus forming a circular recess 27 in each end of the drum. Adapted to seat in either of the recesses 27 is a rotary lower clamping plate 28 which forms a part of the core 5 and which may be in the form of a disk provided at its center with an outwardly projecting pivot 29 adapted to turn in a bearing 30 of an arm 31 of a bracket indicated in general by the character 32. Preferably the outer end of the pivot 29 bears upon a pin 33, forming a step-bearing, adjustably screw-threaded into the bearing 30. The screw 33 can be turned in or out so as to raise or lower the clamping plate 28. The screw 33 is provided with a lock nut 34 to prevent turning of said screw accidentally after said screw has been properly adjusted. By screwing the screw 33 inwardly the clamping plate 28 will be raised relative to the level of the foot 35 of the sewing machine 3, and by turning the screw 33 outwardly the clamping plate 28 will be lowered relative to the level of the foot 35.

The bracket 32, for rotatively supporting the core 5, is constructed as follows: The arm 31 of the bracket 32 is fixed to the lower end of a standard 36 which is rotatively mounted in one end of an arm 37, in this instance the standard 36 being of circular cross section and extending through a block 38 which is accommodated in a socket 39 of the arm 37. The block 38 is provided with a stud 40 and said stud is provided with a nut 41 bearing against a washer 42 on the stud. The standard 36 extends through a hole 43 in the arm 37. When the nut 41 is tightened up it causes binding of the block 38 on the standard 36 and binding of the standard 36 on the arm 37 so that the standard 36 will be frictionally held against rotation relative to the arm 37. The arm 37 is pivotally mounted to swing in a vertical path so as to adjust the slant or angle of the core 5 relative to the machine table 2 and sewing foot 35, and in this instance the arm 37, for this purpose, passes through a block 44 rotatively mounted in a bearing 45, a stud 46 extending from the block 44 through the bearing 45 and being provided with a nut 47. The arm 37 is adapted to bear against the adjacent face of the bearing 45 when the nut 47 is drawn up tight, in order that said face of the bearing will frictionally engage and bind upon the arm 37 so as to prevent said arm from endwise and rotary movements relative to the block 44 and so as to prevent rotary movement of the block 44 in the bearing 45. To adjust the arm 37 either endwise or angularly, all that is necessary is to loosen the nut 47 and move the arm into the desired position and then tighten said nut to hold the arm in the adjusted position.

The bearing 45 is rotatively mounted on the support 1 and this mounting may be constructed as follows: The bearing 45 extends upwardly from a swivel plate 48 pivoted by a bolt 49 which extends through a hole 50 in the plate 48 and into a base plate 51 that is attached by screws 52 or the like to the upper face of the support 1. When the bolt 49 is tightened the plate 48 is held against rotation and when the bolt 49 is loosened the plate 48 can rotate so that the bracket can be turned horizontally. The bearing 45 and plate 48 constitute portions of the bracket 32, the bolt 49 and plate 51 forming fastening means for the bracket.

The bracket 32 is further constructed as follows: The upper portion of the standard 36 is provided with an arm 53 which is held against rotation by a feather 54 adapted to slide in a way 55 extending longitudinally of the standard 36. The feather 54, though preventing relative rotation of the arm 53 and standard 55, permits vertical adjustment of the arm 53 on the standard 36. To hold the arm 53 in the adjusted position, it is provided with a set screw 56 having its inner end bearing against the key 54 so that when the screw 56 is tightened it forces the key 54 tightly against the bottom of the way 55 which thus frictionally holds the arm 53 in adjusted position. The arm 53 is provided at its free end with a bearing 57 in which is shiftably mounted a shaft 58. Rotatively mounted on the lower end of the shaft 58 is an upper rotative clamping plate 59. Means are provided to yieldingly hold the shaft 58 downwardly so as to press the clamping plate 59 toward the core 5 and such means are formed by a coil spring 60 surrounding the shaft 58 be-

tween the bearing 57 and a washer 61 which is held against downward movement relative to the shaft 58 by a pin 62 extending through the shaft 58 beneath the washer 61. The spring 60 thus presses downwardly on the washer 61. Means are provided to raise and hold the shaft 58 against the downward pressure of the spring 60 and such means may be constructed as follows: The shaft 58 is provided with a pin 63 which projects into a slot 64 in the bearing 57. The outer end of the pin 63 is adapted to be engaged, when in raised position, by a notch 65 in a latch member 66 which is pivoted at 67 to the bearing 57. When the latch is thrown down, as in Fig. 1, the pin 63 is free from the latch and the expansive force of the spring 60 on the washer 61 forces the shaft 58 downwardly so as to clamp the drum 6 between the plates 28, 59. The plate 13 is provided with a pin 72 engaging a hole 73 in the drum 6 to prevent turning of said plate.

To make a cover or jacket with the apparatus above described, it may be assumed at the start that the clamping plate 59, is in the raised position shown in Fig. 3, that the core 5 is detached from the other parts of the apparatus and that the clamping band 7 is removed from the drum 6. By one method of making the cover the operator will lift one end of the segmental member 13 of the core and place beneath it one end of the peripheral cover strip 8, which has been previously cut to the requisite size for forming the periphery of the cover, and will wrap said cover strip around the periphery of the drum and he will then raise the other end of the clamping member 13 and insert the other end of the strip 8 therebeneath. It is understood that the strip will have openings cut in it for the spout and whatever other projections there may be on the canteen or other article for which the cover is made. Then the operator will place the clamping band 7 around the periphery of the drum in contact with the strip 8 and he will connect the ends of the clamping band 7 with the clamping member 13 by engaging the hook 11 with the eye 12 and the hook 21 with the eye 20. By this means the strip 8 is smoothly held in position on the drum.

It is noted that the strip 8 is of greater width than the thickness of the drum and that the marginal portions 68 of the strip 8 extend sufficiently beyond the ends of the drum so that said marginal portions can be turned over upon the longitudinal margins of the band 7. The operator then takes a circular piece 69 of fabric previously cut to the requisite size for forming one side of the cover and places it against one of the heads of the drum, for instance the head 26 as in Fig. 8, and he places the clamping plate 28 upon the circular piece 69 and forces said fabric into the recess 27. When in this position the fabric piece 69 is of sufficient diameter to extend beyond the periphery of the core 5 so that if the marginal portion 68 be turned outwardly it will come into engagement with the marginal portion 70 of the fabric strip 69.

Then the operator will place the core together with the cover strip 8, cover side 69 and clamping plate 28 in position to bring the pin 29 into the bearing 30 and he will lower the latch 66.

Then the operator will bend outwardly and downwardly that portion of the margin 68 of the fabric which lies adjacent to the foot 35 of the sewing machine and he will lower the foot 35, in a manner well understood in the art pertaining to sewing machines, upon said outwardly bent marginal portion. The sewing machine will then be operated in the customary manner to stitch the marginal portions 68 and 70 together in a circular path, the material being fed to the sewing machine automatically by the feed plate thereof and this feeding of the material causing rotation of the core 5 in accordance with the speed of operation of the sewing machine. The sewing machine is operated to stitch the entire length of the strip 8 or as much thereof as desired and then the operator raises the clamping plate 59 and throws the latch 66 upwardly into latching position so as to hold the plate 59 in raised position. Then the operator will remove the core 5 and with it the strip 8 and cover piece 69 thus sewed together and he will also remove the plate 28. The operator will then place another circular piece 71 of fabric, which is to form the other side of the cover and similar to the cover piece 69, on the drum head 25 and then proceed as has been described above for assembling the plate 28 in position with the core, placing the core and the parts connected therewith in position beneath the plate 59, lowering the latch 66 and effecting the sewing operation to connect the second cover piece with the cover strip 8. Since it is necessary to remove the core, this last sewing will not extend entirely around the periphery of the drum and cover, thus leaving a relatively large opening. When the stitching has been thus effected the operator will pull the ends of the strip 8 from beneath the clamping member 13 and will unclamp the band 7 and withdraw the drum 5 from the cover through the large opening left therein. The cover is now ready to be applied to the canteen or other article which it has been made for. The cover will then be placed with the spout opening over the spout of the canteen and the other will be drawn over the canteen inside out so that the seams will be on the inside of the cover.

Then the large opening will be closed by sewing together the portions of the margins of the cover side 71 and strip 8 which were left unsewed when the cover was stitched on the sewing machine.

The above described series of operations need not be strictly adhered to since the cover may be made by somewhat different procedure with the apparatus described. The invention is not limited in its broader phases to the exact details of constructions described above and shown in the drawings but also includes such changes and modifications as lie within the spirit and scope of the appended claims.

I claim:

1. An apparatus for making covers comprising a drum, a segmental clamping member yieldingly connected with the drum, a clamping band at the periphery of the drum connected at its ends with the segmental clamping member, and means to hold a piece of fabric on one end of the drum.

2. An apparatus for making covers comprising a drum, a segmental clamping member movably connected with the drum, a clamping band at the periphery of the drum connected at its ends with the segmental clamping member, and means to hold a piece of fabric on one end of the drum.

3. An apparatus for making covers comprising a drum, a segmental clamping member movably connected with the drum, a clamping band at the periphery of the drum yieldingly connected with the segmental clamping member, and means to hold a piece of fabric on one end of the drum.

4. An apparatus for making covers comprising a drum, a segmental clamping member yieldingly connected with the drum, a clamping band at the periphery of the drum yieldingly connected with the segmental clamping member, and means to hold a piece of fabric on one end of the drum.

5. An apparatus for making covers comprising a drum having a head at each end, a band at the periphery of the drum, means connecting the ends of the band, and means to hold a piece of fabric on each of said heads.

6. An apparatus for making covers comprising a drum having a head, a clamping band at the periphery of the drum, means yieldingly connecting the ends of the band to one another, and means to hold a piece of fabric on said head.

7. An apparatus for making covers comprising a drum having a head and having a flange extending beyond the head to form a recess, a band of approximately the same width as the drum at the periphery thereof, means connecting the ends of the band, and a disk to fit in said recess.

8. An apparatus for making covers comprising a rotatably mounted disk and plate, a drum reversibly positioned between said disk and plate and having a head at each end, a clamping member at the periphery of the drum, and means to hold the clamping member toward the drum.

9. An apparatus for making covers comprising a core adapted to hold pieces of fabric for forming a cover, means to rotatively support the core at one end, a clamping plate, means to yieldingly hold the clamping plate toward the core, and means to hold the clamping plate retracted.

Signed at Los Angeles, California this 14th day of December 1920.

SIGMUND FREY.

Witnesses:
GEORGE H. HILES,
L. BELLE WEAVER.