July 30, 1957 C. E. GREVER 2,800,866

METHOD FOR SEWING COVERS ON BASEBALLS

Filed June 24, 1954

Fig. 1

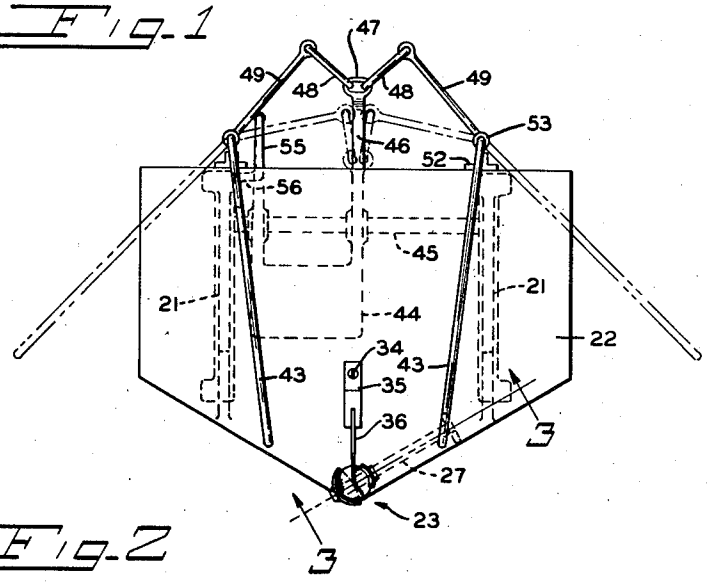


Fig. 2

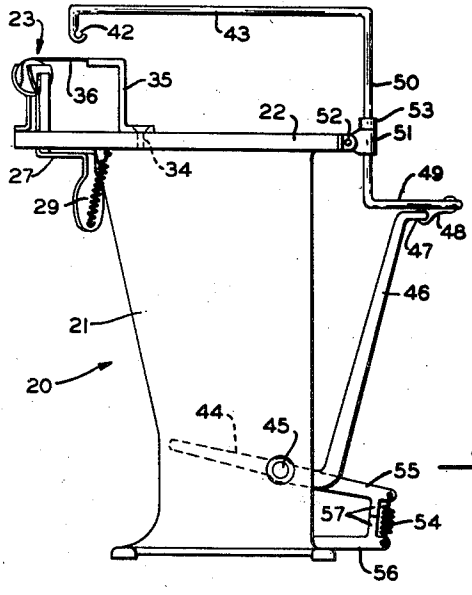


Fig. 3

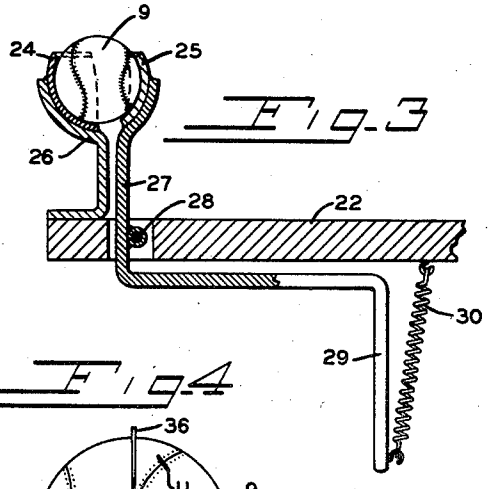


Fig. 4

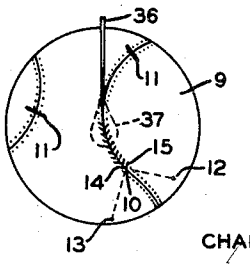
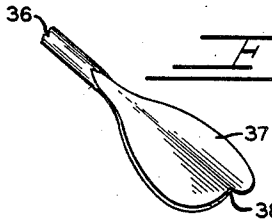


Fig. 5



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United States Patent Office 2,800,866 Patented July 30, 1957

2,800,866

METHOD FOR SEWING COVERS ON BASEBALLS

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Application June 24, 1954, Serial No. 438,910

2 Claims. (Cl. 112—262)

This invention relates to a novel method of sewing covers on baseballs and to an apparatus for facilitating the handling of the needles and thread in the sewing operation.

In the past, it has been the custom to sew baseballs entirely by hand there being no suitable apparatus known for aiding the artisan in the performance of this difficult and tedious task. Also, it has been the practice in sewing baseballs to insert the needles through the seam between the covers and to come out through the perforations, that is, to sew from the inside out. This method is slow and tedious since the workman must hunt with the points of the needles for the perforations on the underside of the covers. After the needles are brought up through the perforations, the arms must be widely extended to draw the long sewing threads through the perforations and thereby draw up the stitches.

In order to facilitate and speed up the sewing operation, I have devised a novel method of stitching the covers and have devised an apparatus for enabling my method to be performed in a rapid, easy manner. In accordance with my method the covers are stitched from the outside in, that is, the points of the needles are inserted in the perforations on the outside of the covers and brought out through the seam ahead of the stitching. To facilitate this method of stitching, a shield is disposed beneath the seam to prevent the points of the needles from entering the wound body of the ball when they are pushed in through the perforations. I have also devised means for enabling the workman to pull the strings through the perforations, after the needles have been brought out, without any sidewise movement of the arms whatsoever. All the workman need do is hook the threads over a pair of mechanically operated elements by a circular movement of his hands and then actuate the device to cause the elements to draw the thread through the covers while he holds the needles in his hands. The threads will thereby be drawn throug the covers and the stitches drawn up without the necessity of a wide sweep of the arms.

To further expedite the sewing operation, improved means is provided for holding the ball in place in front of the operator in either a yieldable manner or in a tightly clamped condition in which the ball will be rigidly held in position when the needles are inserted in the perforations and when the stitches are being pulled up and tightened.

Accordingly, it is an object of my invention to provide an improved method of sewing covers on baseballs.

Another object of my invention is to provide an apparatus for facilitating the operation of sewing on the covers.

Another object of my invention is to provide a sewing shield for insertion beneath the seam being stitched.

Another object of my invention is to provide a device for pulling the threads through the perforations after the needles have been pulled through.

Another object of my invention is to provide an improved type of vise for enabling th eball to be held either tightly clamped or yieldably retained.

Further objects and objects relating to details of construction and modes of operation will readily appear from the detailed description to follow. In one instance, I have accomplished the objects of the invention by the method and apparatus disclosed in the following specification. The invention is clearly defined and pointed out in the appended claims.

In the drawings which accompany and form a part of this application:

Fig. 1 is a top plan view of my baseball sewing apparatus.

Fig. 2 is a side view of the apparatus shown in Fig. 1.

Fig. 3 is a sectional elevation taken along the line 3—3 in Fig. 1.

Fig. 4 is an enlarged view of certain of the parts shown in Fig. 1.

Fig. 5 is an enlarged perspective view of the sewing shield.

As heretofore mentioned, my invention concerns a novel method of sewing covers on baseballs as well as an apparatus for aiding the operator in carrying out the method. The novel stitching method which I have devised involves a sewing procedure which is just the reverse of that which has always been used in the past in sewing covers on balls. Heretofore it has been customary to form the stitches by inserting the points of the needles through the seam and then into the perforations from the underside of the covers, after which the needles are pushed out through the covers and then pulled through from the outside. In this method the workman cannot see the perforations into which he must insert the points of his needles and it is necessary for him to search with the points of the needles until he feels them enter the perforations.

In accordance with my method, the points of the needles are inserted in the perforations from the outside of the covers which is easily and quickly done since the perforations are in plain sight of the workman. The points of the needles are then brought out through the seam ahead of the stitching after which the needles are pulled through and the stitches tightened. The points of the needles are then inserted in the next pair of perforations and the needles again brought out through the seam as before. This procedure is followed until the entire ball has been stitched. To facilitate the stitching of the covers from the outside in, I insert a thin metal plate or shield beneath the seam and between the covers and the ball so as to prevent the point of the needles from catching in the threads constituting the winding of the ball. This shield may be of small width and length since it need extend only a short distance beyond the perforations on either side of the seam and a short distance along the length of the seam in advance of the stitching to assist in guiding the needles up through the seam. The shield may be moved ahead as the stitching proceeds to maintain it in position beneath the perforations.

The manner in which the stitching is commenced and carried on around the seam of a ball 9 is indicated in Fig. 4 where reference numeral 10 indicates the point on the seam where the stitching is commenced. Before the sewing operation begins, the covers are moistened in the customary manner and placed in position on the ball where they are held by staples 11 which are driven through the covers and into the ball on opposite sides of the seam at spaced intervals along the seam. To start the sewing operation, the stitching needles are struck into the ball on opposite sides of the seam at some distance away from the point where the stitching is to

commence. For example, the points of the needles may be inserted at positions indicated by reference numerals 12 and 13 and pushed through the body of the ball until the points emerge through the seam at the position indicated by reference numeral 10. The needles are then brought out through the seam and the points inserted in the perforations indicated by reference numerals 14 and 15 and the points again brought out through the seam at a point beyond the stitches just made. After the needles are pulled out of the seam, the threads are pulled through so as to tighten the stitches. The needles are then inserted in the next pair of perforations and the points brought out through the seam ahead of the stitching. The threads are then pulled through and tightened to form the next pair of stitches. This procedure is followed around the seam until the entire ball has been stitched.

To facilitate this method of sewing on baseball covers I have devised the apparatus shown in Figs. 1 to 3, inclusive. As herein shown, the apparatus comprises a stand 20 (Fig. 2) which includes a pair of pedestals 21 and a top or table 22 supported on the pedestals. A vise 23 for holding the ball to be stitched is mounted on the front of the table, this vise including a stationary jaw 24 and a movable jaw 25. The jaw 24 is secured to the upper end of a bracket 26 which is secured to the top of the table. The movable jaw 25 is secured to the upper end of a lever 27 which is pivoted on a stud 28 fastened to the table 22 as indicated in Fig. 3. Beneath the table, the lever 27 is provided with a depending knee plate 29 on which pressure may be applied by the knee of the workman in order to manipulate the movable jaw of the vise. A tension spring 30 is connected between the knee plate 29 and the bottom of the table for exerting constant pressure on the ball 9 placed between the jaws of the vise. Hence, the ball will always be held in place in the vise under the yieldable pressure applied by the spring 30. When it is desirable to tightly clamp the ball in the vise, pressure may be applied by the knee to the plate 29 to supply additional clamping force to the movable jaw 25 of the vise.

As illustrated in Fig. 3 the jaws 24 and 25 are shaped to conform to the spherical shape of the ball 9. Inasmuch, however, as it is not desirable to clamp too great a surface of the ball in the vise since to do so would interfere with the stretching of the covers around the ball as the stitching proceeds, the jaws 24 and 25 are formed with a radius slightly larger than that of the ball 9 so that pressure is applied to only a small area on each side of the ball by the jaws. Hence, the edges of the jaws will not apply any substantial pressure to the ball covers and the covers will be free to stretch as the stitches are pulled tight.

Secured by a pivot screw 34 to the table 22 behind the vise 23 is a bracket 35 to which is fastened one end of a spring arm 36 which projects forwardly toward the vise. The spring arm 36 has mounted on its forward end a substantially flat blade or shield 37 formed of a thin, hard metal such as steel. The arm 36 may be made of any suitable material and is preferably made from round stock so as to be free to flex in any direction. Flexibility of the spring arm permits the shield 37 to be maintained beneath the seam being stitched even though the ball be moved about somewhat in the vise. As best shown in Fig. 5, the shield 37 has a pear-shaped contour with the narrow end thereof attached to the end of the spring arm 36. As shown in Fig. 5, the shield is formed up in the middle to provide a central rib 38 which assists in guiding the points of the needles up through the seam.

After needles have been inserted in the perforations on the outside of the covers and guided by the shield 37 up through the seam between the covers, the needles are pulled clear of the perforations and the threads behind the needles are passed about hooks 42 on arms 43 by a circular movement of the hands. Thereafter, a foot pedal 44 pivoted on a rod 45 extending between the pedestals 21 of the stand is depressed by the left foot of the operator to move the upper end of a lever 46 integral with the pedal 44 toward the front of the apparatus. The lever 46 is terminated in a bight 47 which engages with eyes formed on the ends of a pair of links 48. The other end of each link 48 is linked through an eye formed in the end of a crank arm 49 which is integrally connected with one of the arms 43 through a vertical shaft 50. Each vertical shaft 50 is journaled in a bearing 51 attached to a bracket 52 secured to the rear edge of the table as shown in Figs. 1 and 2. The arms 43 are maintained at the elevation shown in Fig. 2 by means of collars 53 fastened to the shafts 50 immediately above the bearings 51. Hence, when the foot pedal is depressed, the upper end of the lever 46 will pull the cranks 49 forwardly and cause the arms 43 to be swung outwardly to the positions shown in dot and dash outline in Fig. 1. The thread which has been engaged over the hook 42 will be thereby pulled through the perforations while the hands grasping the needles are held in the vicinity of the vise. The threads will be yieldably pulled taut by reason of the flexibility of the arms 43 and the torsional spring effect of the vertical shafts 50. When the foot pedal is released, spring 54 (Fig. 2) tensioned between an extension 55 on the foot pedal and an extension 56 on the left-hand pedestal will return the foot pedal and the arms 43 to their initial positions as determined by the abutment members 57 (Fig. 2) formed on the arms 55 and 56.

The operation of my apparatus is as follows:

The ball to be stitched is placed in the vise by moving the lever 27 counterclockwise about its pivot against the tension spring 30 to spread the jaws apart and allow the ball 9 to be placed therebetween after which the lever is released to permit yieldable retention of the ball between the jaws. As previously explained in connection with Fig. 4, stitching is commenced by inserting the needles at points 12 and 13 and piercing the covers and body of the ball to come out through the seam at the point 10. While this operation is being performed, the knee is held against the plate 29 so as to clamp the ball tightly between the jaws of the vise and prevent movement thereof. The shield 37 is then inserted beneath the seam after which pressure on the plate 29 is released and the ball rotated toward the shield to move the forward end of the latter beneath the perforations 14 and 15. The workman then places his knee against the plate 29 to tightly clamp the ball and places the points of the needles in the perforations 14 and 15. The needles are passed through the covers and guided up through the seam. The operator then grasps the ends of the needles and pulls them free of the covers and with a circular motion of the hands engages the thread over the hooks 42. Then, holding the needles close to the vise 23, he depresses the foot pedal 44 with his left foot to swing the arms 43 outwardly to thereby draw the thread through the covers and pull the stitches tight. The foot pedal 44 is then released to enable the spring 54 to return the arms 43 to the positions shown in Fig. 1. As the arms return, the threads will drop off the hooks 42 and fall to the table 22. Any final tightening of the stitches is now accomplished in the customary manner after which the pressure on the vise is released by moving the knee away from the plate 29. The ball is now rotated backwards slightly if need be to maintain the perforations over the shield 37. The needles are then inserted in the next pair of perforations and guided out through the seam as before. The needles are then pulled clear of the ball and the threads looped over the hooks on arms 43 after which the foot pedal is depressed to pull the threads through the covers. The foot pedal is then released to allow the arms to return to their initial position and pressure

is removed from the plate **29** to free the ball in the vise. The ball is now repositioned in the vise, if necessary, and the stitching operation is continued. As the stitching proceeds the staples **11** are removed one after the other as they are approached by the shield. The last few stitches must, of course, be made without the aid of the shield **37** which will have to be removed from beneath the seam before the final stitches are taken. Upon removal of the shield for this purpose, it may be swung out of the way by rotating the bracket **35** about the screw **34** by which it is secured to the table **22**.

While I have described my invention in connection with one possible form or embodiment thereof and have used, therefore, certain specific terms and language herein, it is to be understood that the present disclosure is illustrative rather than restrictive and that changes and modifications may be resorted to without departing from the spirit or the scope of the claims which follow.

Having thus described my invention, what I claim as new and useful, and desire to secure by United States Letters Patent, is:

1. The method of sewing covers on baseballs using two sewing needles and two threads comprising the steps of first striking the needles through the body of the ball so as to come up through the seam in the direction of stitching, inserting a sewing shield beneath the seam between the covers and the body of the ball, inserting the points of the sewing needles in the outside faces of the covers on opposite sides of the seam, pushing the needles through the covers and against the shield so as to deflect the points upwardly through the seam ahead of the stitching, pulling the needles through the covers, tightening the stitches thus formed, and then advancing

the shield beneath the seam preparatory to forming the next pair of stitches by again inserting the points of the needles in the outside faces of the covers on opposite sides of the seam and pushing them through the covers, against the shield and up through the seam.

2. The method of sewing covers on baseballs using two sewing needles and two threads comprising the steps of inserting a sewing shield beneath the seam between the covers and the body of the ball, inserting the points of the sewing needles in the outside faces of the covers on opposite sides of the seam, pushing the needles through the covers and against the shield so as to deflect the points of the needles upwardly through the seam ahead of the stitches, pulling the needles through the covers, tightening the stitches thus formed, and then advancing the shield beneath the seam preparatory to forming the next pair of stitches by again inserting the points of the needles in the outside faces of the covers on opposite sides of the seam and pushing them through the covers, against the shield and up through the seam.

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