July 8, 1947. D. E. TURNER 2,423,533

WINDING APPLIANCE

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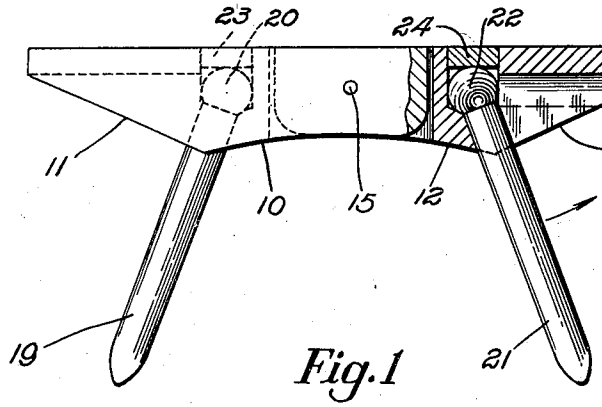


Fig. 1

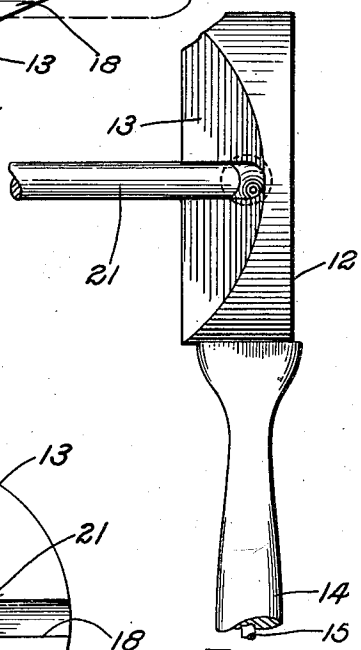


Fig. 2

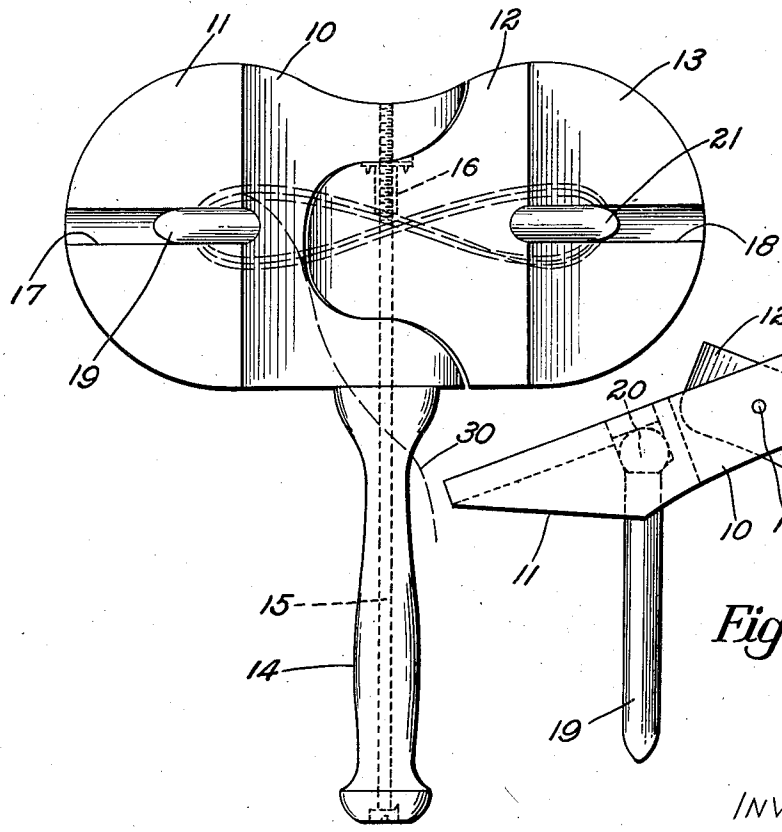


Fig. 3

Fig. 4

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WINDING APPLIANCE

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5 Claims. (Cl. 242—127)

1

This invention comprises a winding appliance for use in winding by hand a yarn package of elongated or oval contour as distinguished from the usual ball shaped package.

Many knitters prefer the oval shaped package because it will not roll about on the floor, and it makes both ends of the yarn available which is a convenience in knitting pairs of socks or mittens, particularly in that it permits equal amounts of yarn to be allotted to the two articles of the pair as the knitting process progresses. While the advantages of the oval package have been long appreciated, its formation has been difficult to effect by hand and so its general use has been somewhat restricted. The primary object of the present invention is to provide a simple and compact appliance by which an oval yarn package may be quickly and accurately wound and then removed in condition for immediate use.

To this end an important feature of the invention consists in a pair of body pieces hinged together for movement about a medial axis, each piece having an upstanding pin about which one node of the yarn may be passed, the arrangement being such that after the yarn package has been completed the body pieces may be swung and the pins thus moved together so as to free the package for removal. Going more into detail, the pins may be set to occupy a divergent winding position and then, when the winding operation has been finished, they may be moved into substantial parallelism for freeing the complete package. As herein shown, the individual pins are movably or adjustably mounted in the body pieces of the appliance so that they may be moved from an erect winding position to a collapsed inoperative position where they are disposed in compact relation to the body pieces.

Other features of the invention relate more particularly to details of construction whereby the appliance may be readily and economically produced in quantity and with sufficient accuracy to permit interchangeable manufacture.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawings, in which:

Fig. 1 is a view of the appliance in elevation, partly in section,

Fig. 2 is an end view,

Fig. 3 is a plan view, and

Fig. 4 is a view in elevation, partly in section,

2

showing the appliance in package removing condition.

The appliance herein illustrated may be formed of wood, plastic material, or light metal as desired, but will be herein described as being of wooden construction. It comprises a forked body piece 10 having a semi-circular outwardly beveled end portion 11 and arms or forks herein shown as having an ogee contour but which, of course, need not be limited to that precise shape. Interfitting with the forked body piece 10 is a tongued body piece 12 having a semi-circular outwardly beveled end portion 13 and a tongue of curved contour which coincides in contour with the space between the forks of the body piece 10. The two body pieces are hinged for limited movement about the transverse medial axis of the combined oval figure formed by the two complementary body pieces and are connected to a handle 14 by a threaded rod 15 which extends continuously through the handle, through the forks of the body piece 10, and through the tongue of the body piece 13. As herein shown, the side wall of the tongue of the body piece 13 remote from the handle is countersunk to receive a flanged tubular nut 16. The outer end of the threaded rod 15 is provided with a screw head which is received in a recess in the end of the handle 14. Accordingly, by turning the rod 15 any desired degree of frictional pressure may be developed between the fork and tongue of the body pieces. In practice, the amount of friction should be such as to prevent movement of the two body pieces under winding conditions while permitting them to be forcibly rocked with respect to each other when a winding operation has been completed. The tongue of the body piece 13 is rounded at one edge and left square at the other, thus permitting the two body pieces to be swung about the axis of the hinge in one direction as suggested in Fig. 4, but preventing them from being swung in the other direction out of their flat winding position.

The forked body piece 10 is provided with a channel 17 in its outwardly beveled face and the tongued body piece is provided with a corresponding channel 18 in its outwardly beveled face, the two channels being in longitudinal alignment and extending completely through the beveled faces of the body pieces and terminating in a socket of larger diameter than the channel. In the socket thus provided at the inner end of the channel 17 is mounted a pin 19 having a ball head 20, and in the socket terminating the channel 18 is mounted a corresponding pin 21 having a ball

head 22. The sockets may be conveniently formed by drilling into the outer flat face of each body piece a distance sufficient to intersect the channel therein and then plugging the holes by plugs 23 and 24 as shown in Figs. 1 and 4.

It will be seen that the woodworking operations of forming the appliance are very simple and may be accurately carried out; for example, holes for the channels 17 and 18 and for the corresponding sockets may be drilled into the blanks for the body pieces, and then the beveled faces 11 and 13 may be formed, thereby opening a portion of the channels 17 and 18 and leaving very little stock to be removed for carrying the channels fully into the sockets and for providing positive abutments in the material of the body pieces for determining the erect or winding position of the pins.

It will be understood that when the appliance is not in use, the pins may be swung into their collapsed horizontal position as indicated in dash lines in Fig. 1. The appliance is thus rendered compact and convenient for packing or storage. When the device is to be used for winding, the pins are swung into their erect and divergent position as determined by the abutments which are formed in the material of the body pieces at the inner ends of the channels 17 and 18. With the pins in this position as shown in Fig. 1, and the appliance held by the handle, the user may now proceed to wind the thread package, carrying the yarn in 8-shaped configuration about the pins, while the package as wound lies upon the body pieces 10 and 12. During the winding operation the outwardly beveled faces 11 and 12 furnish convenient clearance for the yarn as it is passed about the pins by the hand of the user. When the package has been completed the two body portions are forcibly rocked to locate the pins 19 and 21 in parallel relation as shown in Fig. 4, whereupon the complete package may be removed from the appliance and is ready for immediate use.

Having thus disclosed my invention and described in detail a preferred embodiment thereof, I claim as new and desire to secure by Letters Patent:

1. A winding appliance comprising a pair of outwardly tapering body pieces hinged together to swing about a medial axis and having flat yarn-supporting faces of substantial area, a handle disposed in alignment with said axis, an upstanding winding pin in each body piece supported in diverging relation one to the other, and a metallic rod extending through the handle and both of the body pieces and supplying the axis for the hinged movement thereof.

2. A winding appliance comprising two connected body pieces having yarn-supporting faces of substantial area and together forming a figure of approximately oval outline, projecting pins carried by the body pieces and disposed in divergent relation, and a hinged connection between the body pieces permitting them to be rocked into positions in which the pins are disposed in parallel relation.

3. A winding appliance comprising a forked body piece, a tongued body piece interfitting therewith, a winding pin projecting from each body piece, a handle, and a rod extending through the handle and the interfitting portions of both body pieces and constituting a common connection for them and the handle.

4. A winding appliance for winding by hand an oval yarn package, comprising complementary body pieces connected for hinged movement in one direction but not in the other and having flat yarn-supporting faces of substantial area, a pin having a swivel mounting in each body piece, a handle disposed in line with the axis of the hinged connection, and a rod extending through the handle and both of the body pieces and supplying the axis for the hinged movement thereof.

5. A winding appliance comprising a forked body piece, a complementary tongued body piece interfitting therewith, each of said pieces having an outwardly beveled semi-circular portion with a channel in its face, a winding pin having a swivel connection with each body piece at the inner end of the channel therein, an abutment for determining an erect position of each pin, and a hinged connection between said body pieces, whereby the pieces may be adjusted to dispose the pins in either divergent or in parallel relation.

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