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J. S. GOLDBERG.

FLANGE FOR RODS.

APPLICATION FILED JAN. 18, 1904.

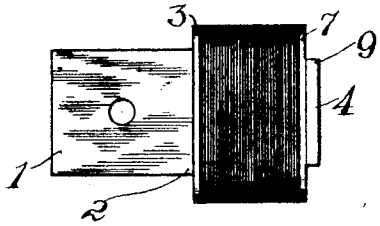


Fig. 5.

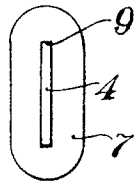


Fig. 6.

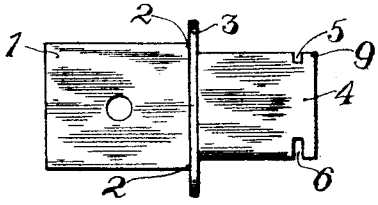


Fig. 1.

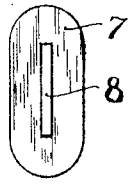


Fig. 2.

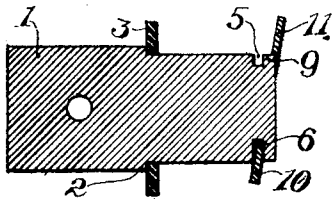


Fig. 3.

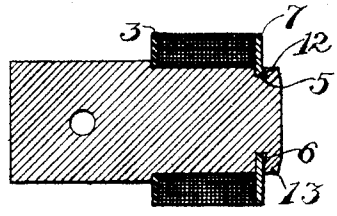


Fig. 4.

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FLANGE FOR RODS.

No. 799,156. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed January 18, 1904. Serial No. 189,448.

To all whom it may concern:

Be it known that I, JOHN S. GOLDBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Flanges for Rods, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improved means for applying flanges to rods or bars used for a great variety of purposes in the mechanical arts.

My invention is particularly useful in its application to rods or bars to which a thin flange is to be applied, especially when such rods or bars have a square or rectangular or other polygonal cross-section.

While my invention might equally well be applied to a great variety of specific devices, I have found it particularly useful in connection with electromagnet-cores and the flanges thereon, which constitute spools whereon insulated wire is wound.

In accordance with my invention I cut a pair of slits in opposite sides of the rod or bar at the point at which a flange is to be applied. I find it desirable to cut one of these slits or notches of a slightly greater depth or perhaps double the depth of the other slit; but this inequality in the depth of the slits is not essential. I further provide a flange having an opening cut therein corresponding to the cross-section of the rod to which it is to be applied, except that the distance across the opening in the flange is less than the corresponding distance between the points of the rod at which the slits are cut. Thus the opening in the flange is not large enough to permit the direct insertion of the rod therein; but since the diametrically opposite slits are cut rather near the end of the rod it is possible to insert one corner of the rod containing a slit within the opening. The adjacent bounding edge of the flange is then inserted within the slit, preferably the deeper slit. This permits a sufficient movement of the flange and its opening to allow the opposite side thereof to be slipped over the other corner of the rod. This other side of the flange is then slipped into the other slit. Thus the flange is retained upon the rod, and a longitudinal movement thereof is prevented by the engaging walls of the slit, it being necessary in order to remove the flange that it be given first a lateral motion corresponding in direction with the line between the oppositely-placed slits, then a tilting movement to disengage one side of the flange, then a reverse lateral movement to engage the other side from the other slit, whereupon the flange may be removed. Thus I provide a means of applying a flange near the end of a rod or bar which while readily applied and removed when desired is not likely to become disengaged, due to the customary usage to which such a device would be applied. The utility of my invention is further enhanced by the further fact that in many instances a light hammer-blow upon the end of the rod to which such a flange has been applied will close the slits sufficiently to retain the flange in position.

My invention will be best understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a magnet-core to which my improved flange is to be applied. Fig. 2 is a plan view of the flange to be applied to the said core. Fig. 3 is a central longitudinal sectional view illustrating the manner of application of the flange. Fig. 4 is a central longitudinal view illustrating a magnet-core with the flange in place thereupon and upon which wire has been wound. Fig. 5 is a side elevation of an electromagnet core and spool constructed in accordance with my invention and upon which wire has been wound. Fig. 6 is an end elevation of the same.

In all of the above figures similar parts are designated by like characters of reference.

I have illustrated the magnet-core 1 having a shoulder at 2 and against which is fitted the spool end 3. Near the end 4 of the core are provided the slit 5 and the slit 6, which may be desirably made of double the depth of the slit 5. The washer or flange 7 is provided with an opening 8, whose width corresponds with the width of the electromagnet-core and whose length may be only slightly greater than the distance between the bottom of the slit 6 and the opposite corner 9 of the core 1.

The method of applying the flange to the

core will be best understood by a reference to Fig. 3, where it will be seen that one side 10 of the flange is inserted within the slit 6, thereby allowing the other side 11 of the flange to pass over the corner 9 and come into register with the shallower slit 5. A downward movement of the entire flange will then bring it into position as shown in Fig. 4, where it will be seen that the flange is prevented from being removed from the end of the bar by any direct longitudinal movement or pressure. In order to further secure the flange in its position upon the core, I find it desirable to close the slits upon the flange, as best illustrated in Fig. 4, where it will be seen that the free ends 12 and 13 have been struck by a hammer in order to bend them, as illustrated. Thus the flange is held securely in place near the end of the magnet-core, where it forms a most satisfactory spool end against which to wind magnet-wire.

If it is desired that the magnet-coil be wound against a spool end of insulating material, a second washer like the washer 3 may be applied to the core before the flange. After the flange has been secured in place this washer may be slipped back, so as to be held in position between the flange and the wire wound upon the core, or, indeed, the flange itself may be made of vulcanized fiber or gutta-percha or other suitable insulating material.

It will be seen that my invention may profitably be employed in a great variety of instances where a flange is desired near the end of a rod or bar, and while it has been necessary to particularly describe one preferred embodiment thereof I do not wish to limit myself to the precise disclosure herein set forth; but,

Having described my invention, I claim as new and desire to secure by Letters Patent—

The combination with a plate 1 having a shoulder 2, of a washer 3 engaging said shoulder, a notch 5 in the upper edge of the plate, a deeper notch 6 in the lower edge of the plate directly below the notch 5, a washer 7 having a slot 8, said slot being less in length than the width of the part 4 of the plate, and the ends 12 and 13 for holding said washer in position on said plate after insertion in the slots 5 and 6.

In witness whereof I hereunto subscribe my name this 15th day of January, A. D. 1904.

JOHN S. GOLDBERG.

Witnesses:
LYNN A. WILLIAMS,
JOHN STAHR.