The invention relates generally to the art of buffing and polishing and has reference more particularly to a sectional buffing wheel of improved construction wherein the various sections have interlocking relation to prevent relative rotation.

An object of the invention is to provide a practical and economical buffing wheel of sectional construction wherein the number of sections can be readily increased or decreased to change the width of the wheel, wherein the sections are similar in size and shape and have identical securing elements for securing the tufts of cotton or other material, and wherein the sections comprise stampings, preferably of aluminum or other strong and light weight material.

Another object of the invention is to provide a buffing wheel which will consist of a plurality of sections with each section having interlocking relation with adjacent sections. This results from a novel constructional feature characterizing the sections, namely, the alternate bending of the securing fingers so that an equal number of fingers are disposed on both sides of each metal disc. When the discs are assembled, the securing fingers alternate whereby each finger with the material secured thereby is disposed between two fingers on an adjacent disc.

Another object is to provide a sectional buffing wheel wherein the sections comprise disc-like stampings having fingers and which are bent for securing a plurality of cotton or other material comprising the buffer. The fingers alternate on respective sides of each disc-like stamping so that the fingers of one stamping interlock with the fingers of an adjacent stamping when assembled, and by clamping the assembled sections in an axial direction a unitary buffing wheel is produced wherein the sections are interlocked by the axial pressure and which is applied to all sections equally.

With these and various other objects in view, the invention may consist of certain novel features of construction and operation as will be more fully described and particularly pointed out in the specification, drawings and claims appended hereto.

In the drawings which illustrate an embodiment of the invention, and wherein like reference characters are used to designate like parts—

Figure 1 is an elevational view of a buffing wheel embodying the improved structural features of the invention;

Figure 2 is an end view of the buffing wheel of the invention;

Figure 3 is an elevational view of the buffing wheel of the invention with parts broken away to illustrate the details of the improvement;

Figure 4 is an elevational view of a metal stamping from which the sections are formed according to the invention;

Figure 5 is an elevational view of the stamping of Figure 4 showing the alternate arrangement of the bent fingers on the respective sides of the disc; and

Figure 6 is a fragmentary elevational view showing a finger of a disc in bent securing relation with strands of material which form the buffing wheel when combined with the strands from other fingers.

Referring to the drawings, the embodiment of the invention selected for illustration essentially consists of a plurality of individual sections mounted on an arbor 10 and which extends centrally through the sections, having a slotted head 11 at one end and a threaded extension 12 at the opposite end. The plurality of individual sections on the arbor 10 are confined between metal washers 13 and 14, washer 13 being retained on arbor 10 by means of head 11, whereas pressure is applied to washer 14 by the adapter 15 which is threaded to the projecting end of the arbor.

The individual sections of the present buffing wheel essentially consist of a disc 18 formed of aluminum or other suitable material and which is stamped to provide a plurality of fingers 20 equally spaced around the periphery thereof. The slots 21 stamped in each metal disc are substantially rectangular with parallel sides, and as a result of such slots the fingers are substantially keystone in shape and which is the preferred shape for the fingers since they contribute to the gripping and holding of the tufts 22 when interlocked upon assembly of the individual sections on the arbor. Each section is provided with a central opening 23 of a size permitting the arbor 10 to pass through.

Figures 5 and 6 illustrate the manner in which the fingers are bent to an arcuate shape against the disc so as to retain a plurality of strands of cotton material or the like, comprising the tufts 22 and which are held by each bent finger substantially midway of the length of the strands so that they project outwardly on the respective sides of each finger. In accordance with the invention the fingers when bent have a spiral formation and said bent fingers alternate considering both sides of a disc, thereby providing sufficient space between adjacent fingers on either side for the strands of material. Another important feature results from this alternate dis-
position of the fingers and which concerns the interlocking of each section when assembled to prevent relative rotation of the individual sections. The alternate disposition of the fingers as regards each disc makes it possible for a finger to lie between two fingers on an adjacent disc. This constructional feature has been shown in Figure 3 and in order to clearly illustrate the same only the fingers are shown, it being understood that each finger will retain a tuft of material which in combination with other tufts comprise the buffing wheel. With the fingers of each disc in interlocked relation it will be appreciated that the wedge-shaped formation of the fingers materially increases the locking action which the fingers have with respect to the strands in contact therewith. In other words, said fingers as a result of axial pressure applied to the sections of the buffer, are in fact wedged into a firm and secure holding relation with the strands of material which they contact and this helps to lock the strands and prevents them from being pulled out during use of the buffer.

The buffer of the invention may have any width desired, depending on the number of sections combined. By screwing the adapter 15 onto the threaded projection 12 of the arbor 10 sufficient axial pressure is applied to the sections to hold them assembled in interlocking relation wherein the tufts 20 are securely locked so that they do not come loose and pull out during operation of the buffing wheel. Also the interlocking of the sections prevents relative rotation of the same during operation. When it is desired to change the width of the buffing wheel or if certain sections should wear and it is desired to replace them, it is relatively easy to release the sections by releasing the adapter 15. The desired section can be replaced or additional sections can be added and by re-threading the adapter 15 the buffing wheel is again ready for use.

The invention is not to be limited to or by details of construction of the particular embodiment thereof illustrated by the drawings as various other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

What is claimed is:

1. In a buffing wheel, the combination with a central shaft, of a plurality of sections of substantially similar construction mounted on the shaft and held by axial pressure applied by members at the respective ends of the shaft and between which the sections are confined, each section comprising a disc, a plurality of fingers stamped from each disc, being disposed around the periphery thereof and having a substantially keystone shape in plan, each finger when bent having a spiral formation to retain a tuft of stranded material, said bent fingers alternating on respective sides of each disc, whereby the sections interlock when assembled by each finger being disposed between two fingers on an adjacent disc, and whereby said axial pressure directed against the spirally bent fingers increases the holding pressure of the fingers in retaining its tuft of stranded material.

2. In a buffing wheel of the character described, comprising a plurality of sections of substantially similar construction, each section including a metal stamping having a plurality of fingers stamped from the same and disposed around the periphery thereof, said fingers being keystone shape in plan and having their maximum width along their outer edge, each finger being bent inwardly of the stamping toward the center and when bent having a spiral formation, and said bent fingers alternating on respective sides of each disc.

WILLIAM F. SHEPPARD.

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