No. 871,965. PATENTED NOV. 26, 1907

G. F. STEWART.

PAD COVER.

APPLICATION FILED FEB. 6, 1907.

Fig. 1.

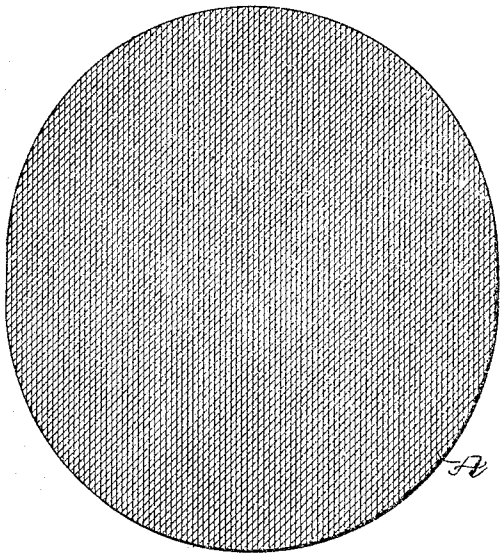


Fig. 2.

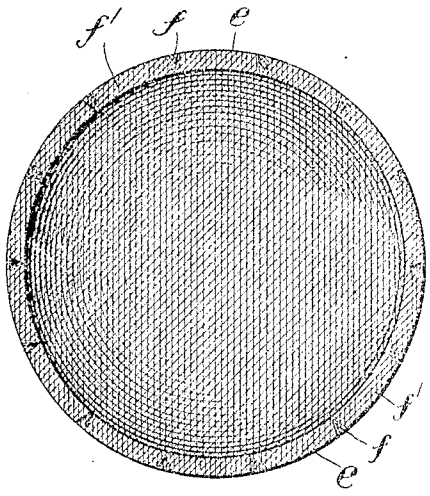
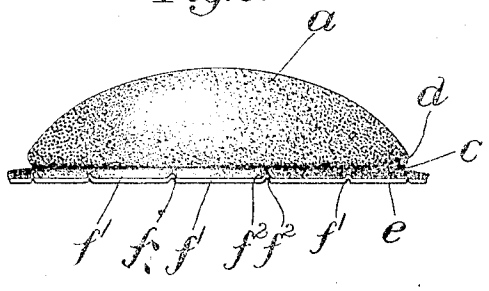


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PAD-COVER.

No. 871,965. Specification of Letters Patent. Patented Nov. 26, 1907.

Original application filed July 13, 1906, Serial No. 326,147. Divided and this application filed February 6, 1907. Serial No. 356,034.

To all whom it may concern:

Be it known that I, GEORGE F. STEWART, a citizen of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, have invented an Improvement in Pad-Covers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention to be hereinafter described relates to covers for buffing machine pads and more particularly, though not necessarily, to that general type known as "Naumkeag machines;" the present invention being presented as a division of my application Se. No. 326,147, filed July 13, 1906.

As well understood by those skilled in the art, the buffing element of such machines is usually supplied with a detachable cover of abrading or other material, which, acting upon the work at high speed, is subjected to great wear and in consequence, rapid destruction or injury. It becomes necessary from time to time to remove a worn or injured cover, and apply a fresh one to the pad, and having this and other conditions of use in mind, it is the object of the present invention to provide a cover for buffing pads, which shall present a shaped or molded contour in conformity with the operative condition of the pad to be covered, be readily adaptable to the pad without injurious distortion of either, and have provisions for strengthening the marginal portions thereof while yet facilitating its circumferential contraction.

With the above and other considerations in view, as will hereinafter appear, the invention comprises the subject-matter and features as defined in the claims herewith presented, which will best be understood from the following description in connection with the accompanying drawings, wherein one of the various embodiments of the invention is selected for elucidating the invention.

In the drawings,—Figure 1 shows in plan view a form of blank from which the completed cover may be produced; Fig. 2 is a plan view of a completed cover looking in the direction of the arrow, Fig. 3; and, Fig. 3 is a side elevation of the cover as it appears ready for application to a pad.

Referring to Figs. 2 and 3, the pad cover comprises preferably a molded or shaped covering portion *a*, conforming substantially to the non-deflated pad to which it is to be applied, and may be formed of abrading or other material suitable to the conditions of use. At the margin or base of the covering portion *a* is formed an encircling channel *c*, the bottom of which extends inwardly or towards the center as shown (Fig. 3), forming the outwardly flanging walls *d* and *e*, which, for identification, may be termed the inner and outer walls or lips, respectively, of the channel *c*. The outer flaring wall *e* extends beyond or is of greater extent than the inner flaring wall *d*, and its peripheral edge forms the outward flaring perimeter of the cover, whereby the cover may be readily applied to the buffing pad, inasmuch as such construction prevents the margin of the cover from being bent under during the application thereof to the pad. It will be understood, of course, that the invention is not restricted to the relative proportions of the inner and outer flaring walls as shown, as obviously these, as well as the degree of flare given the walls may vary according to the circumstances of use.

A pad cover of the general character so far described having a shaped or molded covering portion, and the inner and outer walls radiating from a channel between them, is found well adapted to maintain its shape, to be readily applicable to and detractable from the pad, and by the continuity of the outward flaring wall, present a continuous clamping lip to engage the pad holder. The continuous and uninterrupted character of the outward flaring wall or lip, also facilitates the ready application of the cover to the pad without liability of injury thereto, by splitting or otherwise, and avoids the necessity of infolds or irregular accumulations of surplus material at intervals along its perimeter.

Extending transversely of the outwardly flaring wall or lip *e* are a series of corrugations, ribs, or ridges *f*, *f* desirable in some cases, such corrugations, ribs, or ridges preferably extending from the channel *c* to the outer perimeter of the wall or lip *e* and separated by plain flaring or uncorrugated portions *f'*. These corrugations, ribs, or ridges may be varied more or less in number, and may extend throughout the entire circumferential area of the wall or lip *e*, alternating with plain flaring portions; or such corruga-

tions, ribs, or ridges may extend throughout a portion only of such wall or lip, as circumstances of use may dictate; but in any event they partake of the flaring nature of the lip or wall *e* and serve to set the lip or wall in position and strengthen the same, impart circumferential elasticity adapting the cover to be readily applied to the pad, and permit a close clamping fit of the wall or lip to the holder.

In the form of the invention selected for illustration, it will be noted that the corrugations *f*, *f* extend from a surface of the lip *e*, that is, the walls f^2, f^2 (Fig. 3) of any corrugation or rib do not overlie each other in the general plane of the lip *e*, as would be the case of a mere infold or plait, but preferably project from the plane of the lip *e*, the walls *f*, *f* assuming more or less parallel relation, according to the expansion or contraction of the lip *e*, thereby augmenting the lip setting effect of such corrugations, and enabling the other uninterrupted surface of the lip to have a substantially continuous bearing upon the holder. This form of corrugation, rib, or ridge is desirable, but obviously the invention is not circumscribed by this detail.

As stated in my application hereinbefore referred to the pad cover is preferably formed by molding it to the desired condition, and it has been discovered that to produce a cover for a buffing pad having the form that it must assume in operation, the blank to be operated upon should not be truly circular, but essentially elliptical, as shown in Fig. 1. Experience has shown that a truly circular blank results in a deformed pad cover when molded, owing to the fact that the blank stretches unevenly during the molding operation. Such uneven stretching is due to the fact that some of the threads of the emery cloth or other material employed, tend to stretch during the molding action more than others. For this reason I have found it expedient to form the pad hereinbefore described of an elliptically shaped blank A (Fig. 1), though it is to be understood, of course, that the present invention is not in any sense restricted to the use of such a blank. The manner of manipulating such blank and the machine for converting it into the pad cover hereinbefore described, are fully and completely set forth in my application hereinbefore referred to, and further description thereof is unnecessary.

Claim.

1. A molded buffing pad cover having an outturned molded edge provided with shape retaining means molded therewith.

2. A molded buffing pad cover having an out-turned molded edge provided with transverse shape retaining corrugations.

3. A molded buffing pad cover having a face molded to operative form and having a molded unbroken edge provided with an outward encircling reinforced channel, and having a flaring margin provided with radial corrugations.

4. A molded buffing pad cover having a continuous edge molded to conform to the edge of the pad to which it is to be applied, the perimeter of said edge being outwardly flared to facilitate the application of said cover to the pad.

5. A molded buffing pad cover having a molded face to conform to the operative shape of a pad and having a channel *c*, and flanking inner and outer walls *d* and *e*, respectively, the outer wall *e* being flaring and provided with molded strengthening means.

6. A molded buffing pad cover having a channeled margin crimped at intervals.

7. A cover for a buffing pad, composed of a working face, a marginal portion contiguous to said working face molded to extend inward from the periphery of the working face, and an outwardly flaring continuous edge portion, said outwardly flaring edge portion being provided with molded corrugations.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE F. STEWART.

Witnesses:
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