To all whom it may concern:

Be it known that I, William A. Vance, citizen of the United States, residing at Auxvasse, in the county of Callaway and State of Missouri, have invented certain new and useful Improvements in Auxiliary Handles for Tools, of which the following is a specification.

This invention relates to auxiliary handles for tools and more particularly relates to a resilient handle adapted to be provided for use in connection with all varieties of tool and lever handles or other instrument adapted to be gripped by the human hand.

As a principal object this invention contemplates, in the provision of a handle of the type set forth, the production of a grip adapted to absorb the shocks and jars incident to the use of the tool to which it is attached, such grip to be readily adjustable to handles of different sizes and to different positions upon any given handle as dictated by the comfort and convenience of the operator.

A further and coordinate object is to provide readily removable securing means for a shock absorbing grip of the character described which shall be removed from any contact with the flesh of the user's palm and which will directly insure the attainment of a firmer grip than would be otherwise obtainable.

It is an object of equal importance with the foregoing to provide a grip of this sort with oppositely disposed terminal abutments preventing dislodgement of the operator's hand therefrom when heavy blows are to be delivered by the tool or instrument.

A further object of major importance is concerned with the economical design of an auxiliary shock absorbing handle capable of attaining the preceding objects with facility while at the same time calling for a relatively low cost of manufacture.

The above and additional objects which will become apparent as this explanatory description proceeds, are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claims which are appended hereto and form a part of this application.

With reference to the drawings in which is illustrated the preferred embodiment of the device and in which like characters of reference refer to corresponding parts throughout the several views: Figure 1 illustrates in perspective the auxiliary handle of this invention as secured upon an instrument handle (in section) and gripped by the user, Fig. 2 is a longitudinal section through the handle, Fig. 3 is a transverse sectional view taken on the plane indicated by the lines 3—3 of Fig. 2, Fig. 4 is a plan of the grip blank as spread out before attachment, Fig. 5 is a section therethrough on the line 5—5, and Fig. 6 is a view in perspective and similar to Fig. 1 showing the grip assembled.

The grip comprehended by this invention is of the hollow ovoidal form in cross section shown in Fig. 3 having a relatively greater thickness at the rounded portions of shorter radius indicated by the numeral 10, the length of the grip being sufficient to accommodate the entire hand of the user as indicated in Fig. 1 with the extremities 11 of greater diameter than the central portion into which latter the former gradually merge in presenting that concavity of outline to be particularly noted in Figs. 2 and 6.

The material made use of is, preferably, rubber of a consistency affording a sufficient resilient grip as combined with the quality of durability, the entire device being capable of being molded at one operation. At the time of such molding there is formed at one extremity the raised arcuate abutment 12 which is adapted to conform exteriorly to what may be termed the rounded V produced between the thumb and forefinger of an operator's hand when gripping such a handle. Similarly there is provided upon the opposite portion of the other terminus of the auxiliary handle the abutment 13 which is designed to conform to that position assumed by the outer line of the little finger, so that dislodgment of a hand placed between these two abutments in gripping this handle is practically impossible.

The grip as manufactured and furnished to the ultimate user is in the approximately square form shown in the illustration of the blank in Fig. 4 and having the sectional conformation shown in Fig. 5 where the points of bending are indicated by the numerals 14 and the closure edges by the numerals 15. Spaced from these closure edges and in a series parallel thereto are the circular recesses 16 which are adapted to accommodate the heads 17 of screws 18 in the manner clearly shown in Fig. 2, such screws being the re-
movable fastening means for securing the grip of this invention to the tool, lever or other instrument, handle, and being thus obviously countersunk to prevent contact with the flesh of the user. Moreover it is designed to permit this invention to better accomplish the stated objects thereof by the utilization of these recesses 16 as vacuum cups tending to secure the operator's hand upon the grip in the well known manner, since the edges of these recesses are resiliently distortable for this purpose. It will thus be seen that the abutments 12 and 13 prevent longitudinal displacement of the user's hand while the mentioned vacuum cups 16 tend to prevent a loosening of the gripping action of the hand. Additional recesses 19 are provided for the portion of the handle opposite the closure edges to effect a distribution of the strain upon the rubber surrounding the screws 18 and to afford additional suction cups, screws 20 being accommodated in these added recesses.

From the foregoing it should be apparent that an auxiliary handle grip of the type above set forth is readily capable of attachment upon handles of various sizes due to the elasticity of the material composing such handle grip whereby the closure edges may be stretched toward each other to assume the contiguous relation desirable, in the case of larger handles while removal of the screws 18 and 20 will permit the handle grip to be adjusted to any longitudinal position upon a given tool, instrument or lever handle.

The remaining objects of this invention, it will be apparent, are also readily attainable, so that this invention may therefore be claimed as possessing the advantages and desirability set forth in such objects.

While in the foregoing there has been thus illustrated in the drawings and described in the specification the preferred embodiment of this invention, it is desired to emphasize the fact that certain minor changes in the matters of proportion and degree may be resorted to without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. A hand grip for tool handles, comprising a sleeve of relatively elastic compressible material having recesses formed therein with their outer ends open to serve as vacuum cups.

2. A hand grip for tool handles, comprising a sleeve of relatively elastic compressible material provided at its ends with abutments and having recesses formed therein between the abutments with their outer ends open to serve as vacuum cups.

3. A hand grip for tool handles, comprising a sleeve of relatively elastic compressible material provided at its ends with abutments extending laterally in opposite directions and having recesses formed therein between the abutments with their outer ends open to serve as vacuum cups, and attaching elements disposed in the bottom of certain of the vacuum cups for securing the sleeve to the handle.

4. A hand grip for tool handles, comprising a sleeve of relatively elastic compressible material provided at its ends with abutments extending laterally in opposite directions and having oppositely arranged sets of recesses formed therein between the abutments with their outer ends open to serve as vacuum cups, and attaching elements disposed in the bottom of certain of the vacuum cups for securing the sleeve to the handle.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. VANCE.

Witnesses:

L. E. MARTIN,
W. S. HOPKINS.