(No Model.)

A. R. WIENS & G. J. BRANDS.

HAND GRIP.

No. 604,706. Patented May 24, 1898.

Fig. 1.

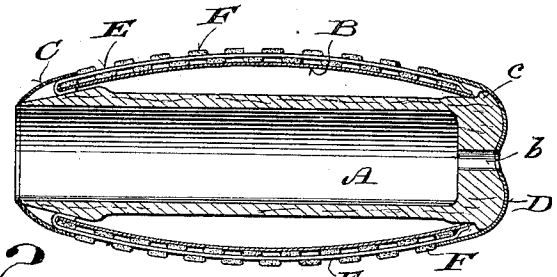


Fig. 2.

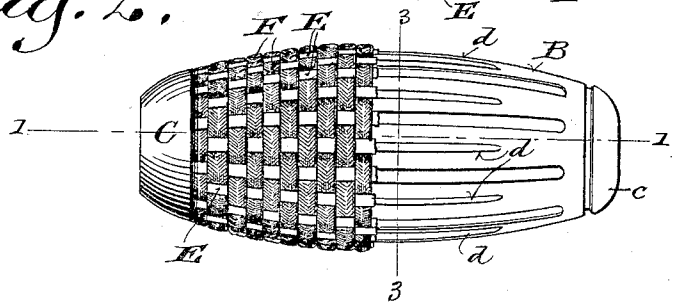
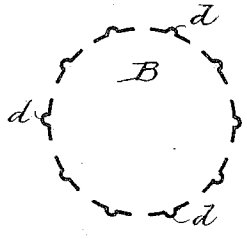


Fig. 3



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADOLPH R. WIENS AND GERHARD J. BRANDS, OF MILWAUKEE, WISCONSIN.

HAND-GRIP.

SPECIFICATION forming part of Letters Patent No. 604,706, dated May 24, 1898.

Application filed October 26, 1896. Serial No. 610,118. (No model.)

To all whom it may concern:

Be it known that we, ADOLPH R. WIENS and GERHARD J. BRANDS, citizens of the United States, and residents of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Hand-Grips; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention has for its object to provide simple, economical, and durable grips especially designed for use in connection with the handle-bars of bicycles to compensate for vibration, prevent heating or slip of the riders' hands, and to save the latter from becoming numb or callous. Hence it consists in certain peculiarities of construction and combination of parts hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a longitudinal section of one form of a complete hand-grip constructed according to our invention, the section being indicated by line 1 1 in the succeeding figure; Fig. 2, an elevation of said grip in an incomplete state; and Fig. 3, a transverse section of a spring-metal skeleton frame constituting part of the aforesaid grip, the section being indicated by line 3 3 in the preceding figure.

Referring by letter to the drawings, A represents a hollow cylindric core made from wood or other suitable material and designed for the engagement of a bicycle handle-bar, the outer end of this core being solid, except for a central aperture *b*, through which to run a screw into the wooden plug customary in the adjacent end of the aforesaid handle-bar. While we have shown the core-wall as being imperforate, it may be otherwise, if found convenient or desirable. The outer end of the core is provided with an external shoulder *c*, and its inner end is preferably tapered upon the exterior.

As herein shown, we employ a skeleton frame B in conjunction with the core A, and this frame is preferably a spring-metal grid made from spring-brass or by stamping out a thin flat piece of untempered steel, bending the product into cylindric form, afterward compressing it in a longitudinal direction to obtain an elliptic shape, and finally tempering the same to obtain the desired elasticity. As a further matter of detail we prefer to stamp the grid-bars so as to obtain stiffening-ribs *d*, and by the employment of these ribs we are enabled to utilize thinner gage material than would be the case were said ribs omitted. The skeleton frame being elliptical in shape it stands away from core A, to which it is made fast at the inner end, the outer end of said frame being free in order that there may be longitudinal play under pressure toward the shoulder *c* of said core.

A ferrule C and cap D are shown as constituting end pieces of the complete hand-grip, said end pieces being sheet metal secured in position to embrace the terminals of a pliable frame-jacket that is pervious to air on a structure organized with reference to air circulation.

The showing in the drawings represents a woven jacket having a warp of cane stakes E and a filling F, that is preferably braided horse-hair, the cane stakes or warp-strands being illustrated as recurved at their inner ends under the corresponding end of the preferably elastic skeleton frame and glued therewith to the core, the outer ends of said stakes being glued to the adjacent end of said frame.

It is well known that cane readily absorbs and gives off moisture. Hence the warp of the herein-described preferred form of jacket soon becomes soft and more than ordinarily pliable in the hand, but almost immediately attains its original condition when released. The hair filling of the jacket is soft to the hand, and while this filling will absorb moisture it also readily exhales the same, but does not shrink from normal dimensions nor suffer any loss in the matter of pliability. Hence the preferred form of jacket above specified has practically the same advantages of the all-cane jacket set forth in our allowed application for patent filed April 20, 1896, Serial No. 588,246, and is at the same time originally more pliable and soft to the hand, there being ample cane in the warp to prevent slip of said hand on the grip.

The jacket being pervious to air upon a structure organized with reference to air circulation, heating of a hand clutching the grip is avoided, and the elastic skeleton frame being employed in the make-up of said grip the

latter will yield in the hand to compensate for vibration, this yield also preventing said hand from becoming numb or callous where it bears on the aforesaid grip, these being the especial features of advantage with reference to the preferred construction of devices according to our invention utilized in connection with bicycle handle-bars.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A hand-grip comprising a hollow core provided at its outer end with an external shoulder, a compressible perforate frame on the core having longitudinal play under pressure toward said shoulder, a series of cane stakes recurved under the inner end of the frame and made fast therewith to said core, a filler of pliable material in weave with the stakes, and end pieces in the form of a ferrule and cap arranged to embrace terminals of the jacket resulting from the interwoven stakes and filler.

2. A hand-grip comprising a hollow core provided at its outer end with an external shoulder, a compressible perforate frame on the core having longitudinal play under pressure toward said shoulder, a series of cane stakes recurved under the inner end of the frame and made fast therewith to said core, a filler of hair-braid in weave with the stakes, and end pieces in the form of a ferrule and cap arranged to embrace the terminals of the jacket resulting from the interwoven stakes and filler.

3. A hand-grip comprising a hollow core provided at its outer end with an external shoulder, a spring-metal grid on the core having longitudinal play under pressure toward said shoulder, a series of cane stakes recurved under the inner end of the grid and made fast therewith to said core, a filler of hair-braid in weave with the stakes, and end pieces in the form of a ferrule and cap embracing the terminals of the jacket resulting from the interwoven stakes and filler.

4. A hand-grip jacket that consists of interwoven cane and hair-braid.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ADOLPH R. WIENS.
GERHARD J. BRANDS.

Witnesses:
N. E. OLIPHANT,
B. C. ROLOFF.