Dec. 10, 1957 C. F. ROBERTS 2,815,679

AIR COOLED HAND GRIP

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Fig. 1

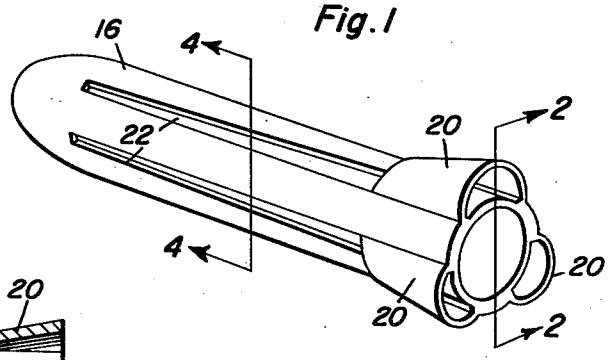


Fig. 5

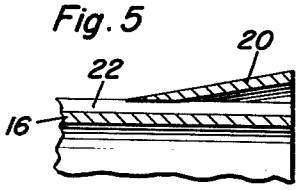


Fig. 2

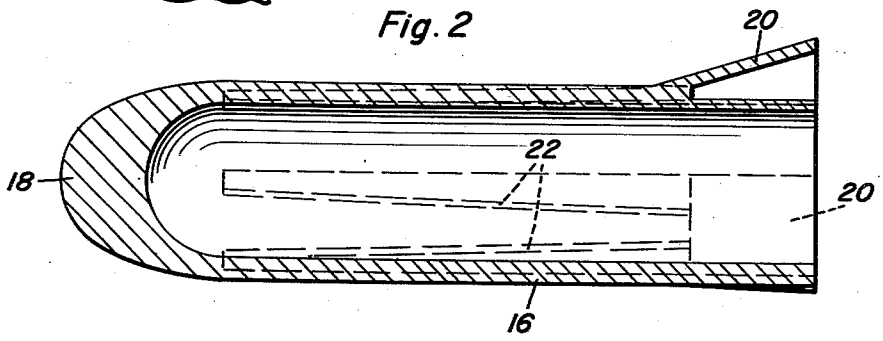


Fig. 3

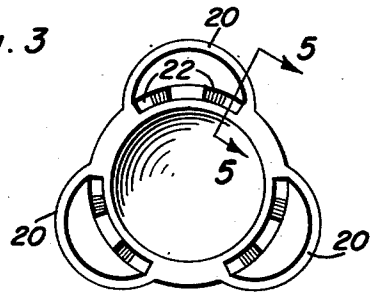


Fig. 4

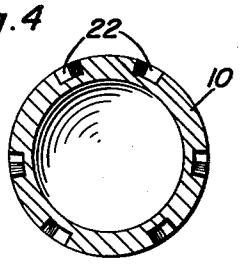
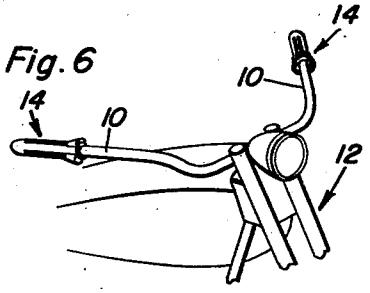


Fig. 6



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Fig. 7

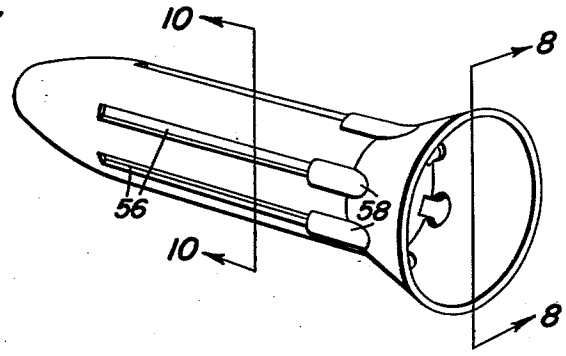


Fig. 8

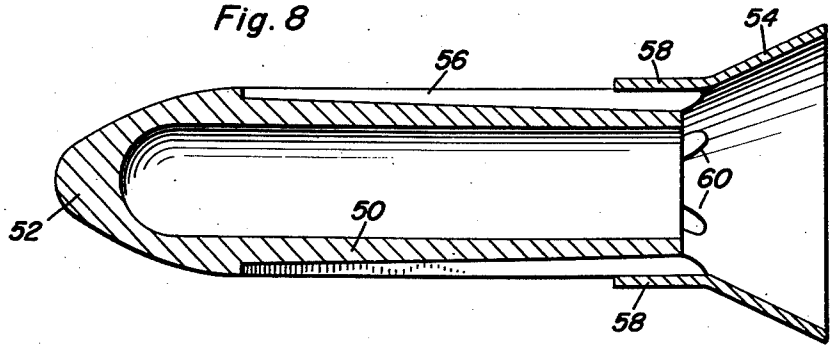


Fig. 9

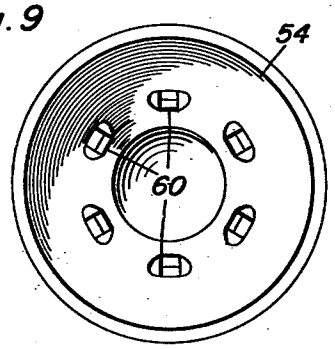
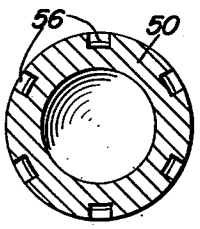


Fig. 10



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AIR COOLED HAND GRIP

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Application January 31, 1955, Serial No. 485,092

2 Claims. (Cl. 74—551.9)

This invention comprises novel and useful improvements in an air cooled hand grip, and more specifically pertains to a hand grip such as for the handle bars of motorcycles or the like and which is provided with means for cooling the hands of the user.

The primary object of this invention is to provide a hand grip having incorporated therein novel means whereby the grip and the hands of the user may be cooled by the flow of air, thereby increasing the efficiency and the safety of the grip.

A further object of the invention is to provide an improved hand grip in accordance with the preceding object which may be readily applied to handle bars of conventional bicycles, motorcycles or the like, without alteration being necessary in their structure.

A further object of the invention is to provide a sturdy hand grip in accordance with the preceding objects wherein a flow of air is induced upon the exterior surface of the grip and beneath the hands of the user.

A still further important object of the invention is to provide an improved hand grip for cooling the hands of the user in which the cooling operation shall in no way interfere with the sturdiness of the grip upon the handle bars of the vehicle, nor the clasping of the hand grip by the user.

A still further object of the invention is to provide an improved air cooled hand grip in which a plurality of streams of air are caused to flow evenly upon the exterior surface of the grip beneath the hands of the user.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a preferred embodiment of hand grip in accordance with the principles of this invention;

Figure 2 is a vertical central longitudinal sectional view through the hand grip of Figure 1, taken substantially upon the plane indicated by the section line 2—2 of Figure 1;

Figure 3 is a front elevational view taken from the right end of the grip of Figure 1 showing the plurality of air scoops on the forward end of the grip and the inlets for the air conduits communicating with the scoops;

Figure 4 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 1 and showing the relative arrangement of the channels formed in the exterior surface of the body of the grip;

Figure 5 is an enlarged detail view taken substantially upon the plane indicated by the section line 5—5 of Figure 3;

Figure 6 is a perspective view of a portion of a motorcycle and its handle bars and showing the manner in which the hand grips are associated therewith;

Figure 7 is a perspective view similar to Figure 1 but showing a slightly modified construction of the hand grip;

Figure 8 is a vertical central sectional view taken substantially upon the plane indicated by the section line 8—8 of Figure 7;

Figure 9 is a front view taken from the right end of Figures 7 and 8 of the embodiment of hand grip disclosed therein; and

Figure 10 is a vertical transverse sectional view taken substantially upon the plane indicated by the section line 10—10 of Figure 7.

Referring first to Figure 6, it will be seen that the novel hand grip in accordance with this invention is shown as mounted upon the handle bars **10** of a conventional form of motorcycle, bicycle or the like **12**, the hand grips being indicated generally by the numeral **14**. The hand grips **14** may be of either the construction shown in Figures 1–5 or of the slightly modified construction of Figures 7–10.

Referring first to the embodiment of Figures 1–5, it will be seen that each hand grip consists of a cylindrical body portion **16** which has a rounded rear end wall **18** and which at its front or forward end is provided with a plurality of conical-shaped scoops **20**. Conveniently, three such scoops may be employed as clearly indicated in Figures 1 and 3. Preferably, these scoops are formed integrally with the body **16** and terminate at their forward end in the same transverse plane as that of the forward end of the body, as will be apparent from Figure 2. It will thus be seen that the scoops are formed upon the exterior of the body and thus do not penetrate into the cylindrical interior cavity which is adapted to receive the handle bars **10**.

Formed in the exterior surface of the body and extending longitudinally thereof and substantially parallel with respect to each other are a plurality of open channels **22**. These channels at their rear end terminate inwardly of the rear end of the body and at their forward end, as shown in the detail view of Figure 5, extend into the rearward end of the scoops **20**, and if desired, may extend to the forward end of the body, as shown in Figure 5, and as indicated in dotted lines in Figure 2. Alternatively, the channels **22** may terminate at their forward ends within the scoops **20** adjacent the rearward ends of the scoops. In any event, it is intended that the channels shall be in communication with the scoops **20** whereby air inducted by the open forward ends of the latter may be delivered into the channels and passing longitudinally along the channels may emerge therefrom in a direction radially outwardly from the body.

As will be apparent from Figures 2–4 in particular, it is preferred to provide a plurality of the channels **22** communicating with each of the scoops **20**. Thus, six such channels are shown, two each communicating with each scoop. Since it is preferred that the rear ends of the channels shall be spaced substantially evenly about the circumference of the cylindrical body, it is preferred that the channels shall converge in pairs forwardly of the body in order that they may be disposed at opposite sides of the rear end of the scoop, as will be apparent from Figure 3.

The space between the channels upon the exterior of the body constitutes ridges which may be gripped by the hands of the user of the hand grip. It will thus be apparent that when the hand grip is in normal use, being encircled by the hands of the user, air induced by the forward motion of the motorcycle or the like will pass through the scoops and be distributed into the channels and from the open channels will pass radially outwardly between the hands and fingers of the user, thereby cooling the hands and preventing the formation of perspiration thereon, which, as is well known, constitutes a safety hazard in the use of such vehicles.

In the modification of Figures 7–10, a generally similar arrangement is shown including the cylindrical body portion **50** having its curved rearward closure wall **52** and having a single conical scoop or funnel **54** integral therewith. In this embodiment, there are provided a plurality of longitudinally extending channels **56** formed in the exterior surface of the cylindrical body, these channels being substantially parallel to each other and at their forward ends communicating with the interior of the scoop at its rear position. In this embodiment, it is preferred to provide conduits in the form of enlarged housings **58** which establish communication between the forward ends of the channels **56** and the interior of the scoop or funnel **54**, as through ports or the like **60** therein.

This form of the invention operates in the same manner as the previous form except that a single conical scoop is provided in place of the plurality of conical scoops **20**.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation as shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. An air cooled hand grip comprising a cylindrical body adapted to receive a handle therein, a plurality of open channels in the exterior surface of said body each extending longitudinally thereof and terminating forwardly of the rear end of said body, a plurality of air scoops upon the forward portion of the exterior surface of said body, means establishing communication between each air scoop and the adjacent ends of a pair of said channels.

2. The combination of claim 1 wherein each scoop comprises a forwardly and outwardly flaring funnel extending circumferentially about a portion of the circumference of the body whereby to embrace the pair of channels communicating therewith.

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