Dec. 20, 1955 R. MALCOM, JR 2,727,237

GOGGLES

Filed June 4, 1954

Fig. 1.

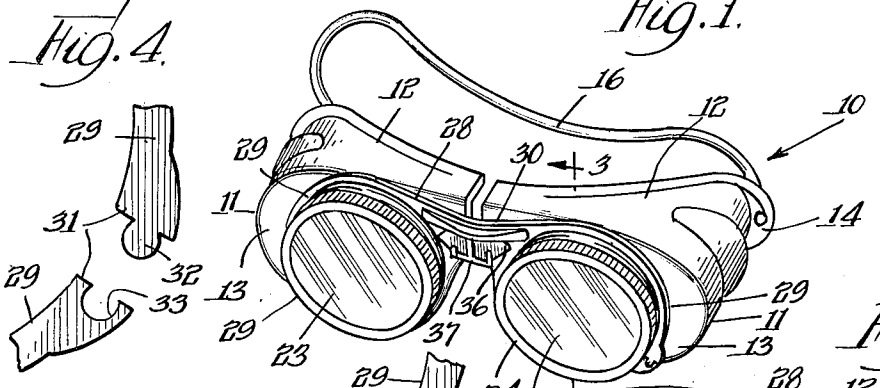


Fig. 4.

Fig. 5.

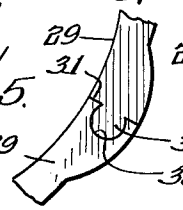


Fig. 3.

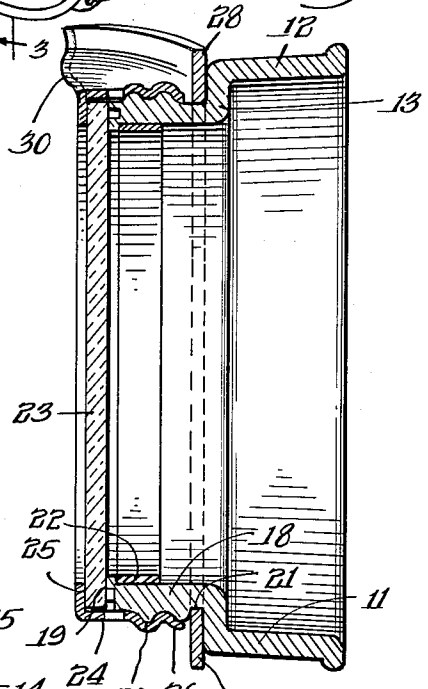


Fig. 2.

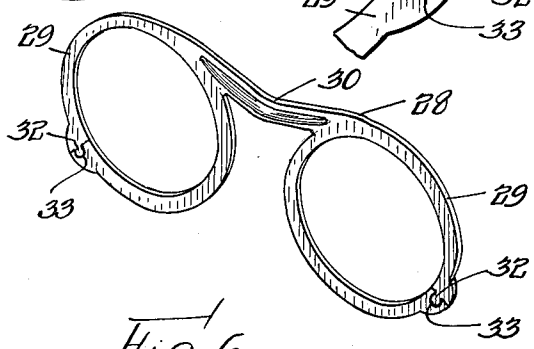


Fig. 6.

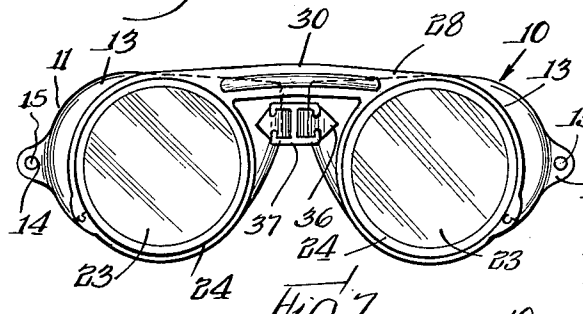


Fig. 8.

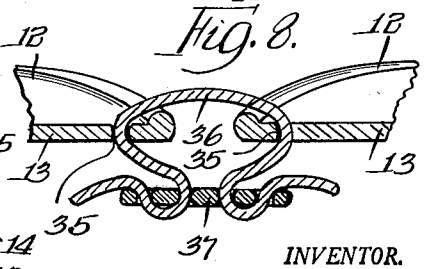
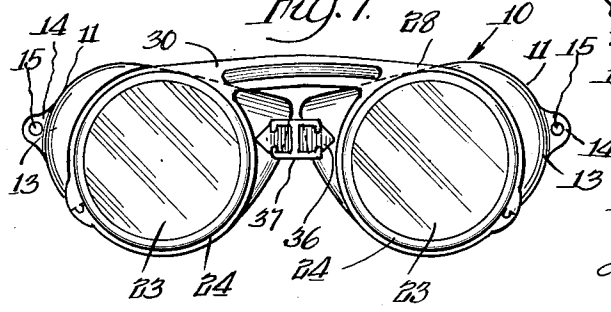


Fig. 7.



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GOGGLES

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7 Claims. (Cl. 2—14)

This invention relates to goggles such as for use in industry for welding, burning, chipping and the like.

The principal object of this invention is to provide an improved goggles having a pair of lens boxes wherein the lens boxes are secured together by a bridging device, wherein the lens boxes are adjustably carried by the bridging device for rotation substantially in one plane and for movement substantially normal to said plane closely to fit the face of the wearer, and wherein the desired adjustments of the lens boxes may be readily and simply accomplished without the use of tools.

Briefly, the goggles of this invention include a pair of separate lens boxes wherein each lens box has a marginal rearwardly extending flange portion to fit the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with a reduced diameter portion adjacent the frontal portion. A bridging device is provided for adjustably connecting together the separate lens boxes. This bridging device includes a ring portion received in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the rim portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer.

Preferably, the ring portions of the bridging device are split and provided at their ends with interlocking means so that the ring portions may be applied in spread condition over the lens receiving flanges of the lens boxes and then interlocked in closed position in the reduced diameter portions thereof. This greatly facilitates the manufacture and assembly of the goggles. Also, the bridge portion of the bridging device is preferably bendable to provide further adjustment of the goggles to fit closely the face of the wearer.

The lens receiving flanges of the lens boxes are preferably provided with external screw threads for receiving screw threaded rings for clamping the lenses in place on the lens receiving flanges. These screw threaded rings extend adjacent to the ring members to prevent unlocking of the interlocking means on the ring portions of the bridging member but at the same time they do not clamp the ring portions so that the lens boxes may at all times be freely rotated with respect to the bridging device.

Further objects of this invention reside in the details of construction of the goggles and in the cooperative relationships between the component parts thereof.

Other objects and advantages will become apparent to those skilled in the art upon reference to the accompanying specification, claims and drawing, in which:

Fig. 1 is a perspective view of the goggles of this invention;

Fig. 2 is a perspective view of the bridging device utilized in the goggles of this invention;

Fig. 3 is an enlarged sectional view taken substantially along the line 3—3 of Fig. 1;

Figs. 4 and 5 are enlarged sectional views of the ring portions of the bridging device showing the same in unlocked spread condition and in locked closed position, respectively;

Figs. 6 and 7 are front elevational views of the goggles of this invention illustrating the same in two different adjusted portions;

Fig. 8 is an enlarged partial sectional view illustrating the strap and buckle arrangement for effectively bridging or closing the space between the lens boxes.

The goggles of this invention is generally designated at 10 and it includes a pair of lens boxes 11 which may be formed of any suitable material such as synthetic plastic or the like. Each lens box 11 includes a marginal rearwardly extending flange portion 12 for engaging the face of the wearer and also a frontal portion 13. The marginal rearwardly extending flange portion 12 is provided with an ear 14 having a suitable opening 15 in which is secured a head band 16 for securing the goggles to the face and head of the wearer.

The frontal portion 13 of each lens box 11 is provided with a forwardly extending annular lens receiving flange 18 having a forward annular lens seating surface 19 which may be provided with staggered ventilating openings. This forwardly extending annular lens receiving portion 18 is preferably externally provided with screw threads 20, and adjacent to the frontal portion 13 and between the frontal portion and the screw threads 20, it is also provided with a reduced diameter portion 21. The mouth of the lens receiving flange 18 may be provided with a reinforcing ring 22 inbedded therein for strengthening the same. A single lens 23, or a plurality of lenses if desired, overlie the annular surface 19 of the lens receiving flange 18 and the lenses are clamped to the lens receiving flange 18 by a lens retaining ring 24. This lens retaining ring 24 includes a flange 25 for engaging the lenses 23 and also screw threads 26 for engaging the screw threads 20 of the lens receiving flange 18. In this way, the lenses 23 are readily removably secured in place on the lens boxes 11.

The lens boxes 11 are adjustably connected together by a bridging device 28 which may be formed of any suitable material such as aluminum or the like. The bridge member 28 includes a pair of ring portions 29 connected together by a bridge portion 30. Each ring portion 29 is split as indicated at 31 and the ends of each ring portion are provided with an interlocking means such as a dovetail interlocking means including a male portion 32 and a female portion 33. These portions 32 and 33 are laterally displaceable so that the ring portions 29 may be spread apart as indicated in Fig. 4 or closed and interlocked as indicated in Fig. 5.

The ring portions 29 are spread apart and applied over the screw threads 20 of the lens receiving flanges 18 and are then closed and interlocked in the reduced diameter portions 21. In this way, the lens boxes are firmly secured to the bridging device and are freely rotatable therein so that the lens boxes may be rotated to any desired position, as illustrated in Figs. 6 and 7, closely to fit the face of the wearer. The lens retaining rings 24 lie closely adjacent to the ring portions 29 of the bridging device 28 and they operate to prevent accidental lateral displacement and unlocking of the interlocking means. At the same time, they do not engage or clamp the ring portions 29 so that the lens boxes may at all times be freely rotated to the desired adjusted positions. The bridging portion 30 is bendable so that the lens boxes may be further adjusted in order closely to fit the face of the wearer.

To close the space between the lens boxes to prevent entrance of foreign matter therebetween, the adjacent

edges of the frontal portions 13 of the lens boxes are provided with slots 35 for receiving a flexible strap 36 such as a leather strap. The strap is adjustably secured in place by a buckle 37.

Thus, it is seen that the lens boxes 11 are permanently secured together by the bridging device 28 and the lens boxes may be completely adjusted to fit the face of the wearer. The lens boxes may be readily replaced by merely manipulating the interlocking means on the ring portions 29 of the bridging device 28. The lenses 23 may also be readily replaced merely by manipulating the lens retaining rings 24 and in so doing this has no effect upon the bridging device which connects together the lens boxes.

While for purposes of illustration one form of this invention has been disclosed other forms thereof may become apparent to those skilled in the art upon reference to this disclosure and, therefore, this invention is to be limited only by the scope of the appended claims.

I claim as my invention:

1. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a ring portion received in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place.

2. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a ring portion received in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place and arranged to be free from the ring portions of the bridging device so as not to clamp the same.

3. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a split ring portion having interlocking means on the ends thereof which is applied in spread condition over the screw threads of and interlocked in closed position in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place.

4. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a split ring portion having interlocking means on the ends thereof which is applied in spread condition over the screw threads of and interlocked in closed position in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place and arranged adjacent the ring portions of the bridging device to prevent unlocking of the interlocking means thereof but to permit relative rotation between the lens boxes and the bridging device.

5. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a flat split ring portion having laterally displaceable dovetail interlocking means on the ends thereof which is applied in spread condition over the screw threads of and interlocked in closed position in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place.

6. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a flat split ring portion having laterally displaceable dovetail interlocking means on the ends thereof which is applied in spread condition over the screw threads of and interlocked in closed position in the reduced diameter portion of the lens receiving flange of each lens box and a bridge portion connecting together the ring portions whereby the lens boxes are adjustably rotatably carried by the bridging device closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place and arranged adjacent the ring portions of the bridging device to prevent lateral displacement and unlocking of the dovetail interlocking means thereof but to permit relative rotation between the lens boxes and the bridging device.

7. Goggles having a pair of separate lens boxes, each having a marginal rearwardly extending flange portion for engaging the face of the wearer and a frontal portion including a forwardly extending annular lens receiving flange provided with external screw threads and a reduced diameter portion between the screw threads and the frontal portion, a bridging device for adjustably connecting together the separate lens boxes including a ring portion received in the reduced diameter portion of the lens receiving flange of each lens box and a bendable

bridge portion connecting together the ring portions whereby the lens boxes are adjustably carried by the bridging device for rotation in substantially one plane and for movement substantially normal to said plane closely to fit the face of the wearer, lenses overlying the forward ends of the lens receiving flanges, and screw threaded lens retaining rings screwed onto the screw threaded lens receiving flanges for removably clamping the lenses in place.

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