April 6, 1965 A. J. PERRY 3,176,314

HARD HAT WITH FLEXIBLE RIM

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Fig. 1

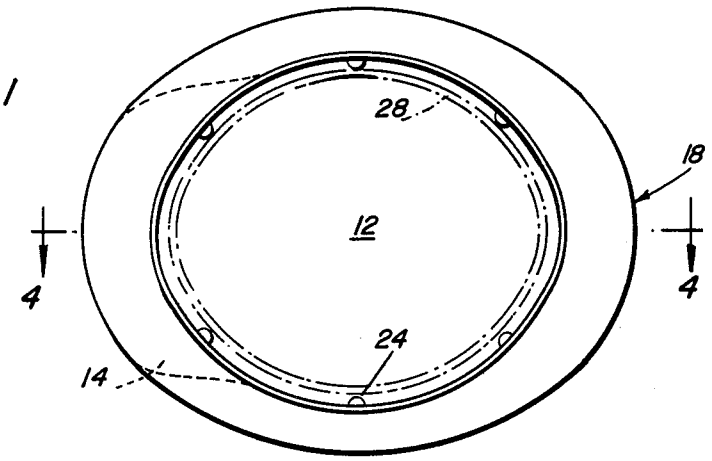


Fig. 2

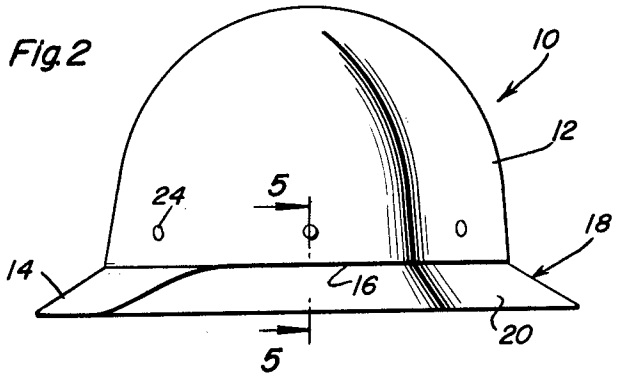


Fig. 3

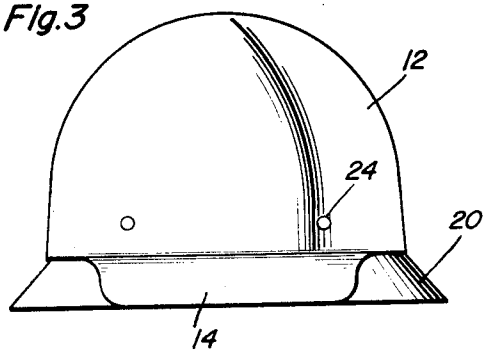
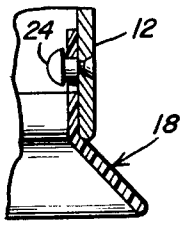


Fig. 5



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Fig. 4

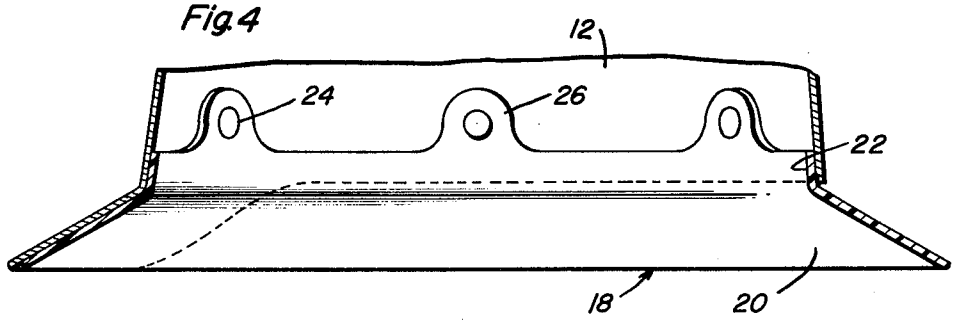


Fig. 6

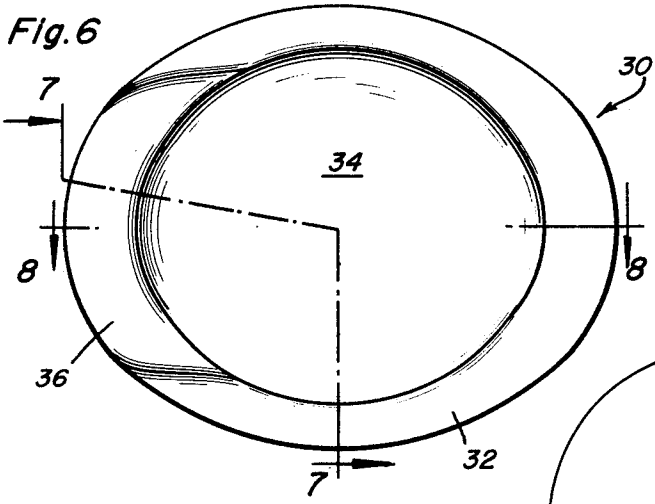


Fig. 7

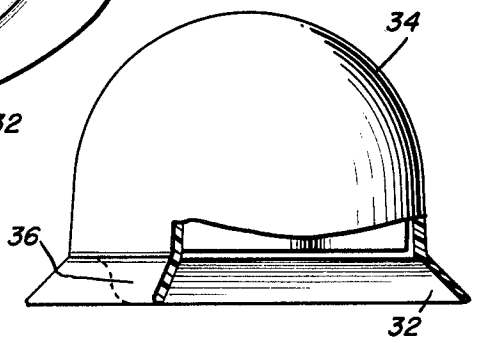
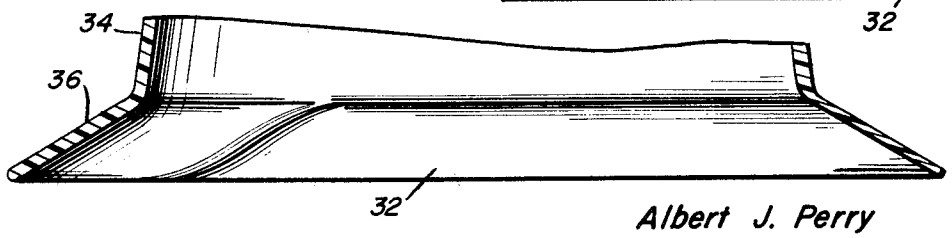


Fig. 8



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HARD HAT WITH FLEXIBLE RIM

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7 Claims. (Cl. 2—3)

The instant invention is generally concerned with protective head gear and is more specifically directed to the provision of a hard hat including both conventional impact resistant features and novel shock-absorbing features.

It is a primary object of the instant invention to provide a safety hat including a hard crown and a hard forwardly and downwardly projecting visor, both being capable of sustaining a substantial impact without damage thereto, along with a flexible downwardly and outwardly extending rim surrounding at least that portion of the lower edge of the rigid crown not occupied by the rigid visor.

This flexible projecting rim is considered particularly useful in that, in addition to providing increased protection by expanding the effective area of the hat, it provides a means for absorbing any unexpected blow or force which, if a rigid rim were used, would most likely result in the knocking of the hat from the wearer thus exposing his head to subsequent blows or falling objects.

Another object of the instant invention is to provide that the flexible rim be removably secured to the hat, thus, at the option of the wearer, allowing for the use of hat either with or without the flexible rim as circumstances might dictate.

In conjunction with the above object, it is also an object of the instant invention to provide a modified form of hard hat wherein the flexible rim is integrally formed with the rigid crown and visor.

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 bottom plan view of the hard hat with a flexible rim comprising the instant invention;

FIGURE 2 is a side elevational view of the hat and rim combination comprising the instant invention;

FIGURE 3 is a front elevational view of the hard hat of FIGURE 2;

FIGURE 4 is an enlarged partial cross-sectional view taken substantially on the plane passing along line 4—4 in FIGURE 1;

FIGURE 5 is an enlarged cross-sectional view taken substantially upon a plane passing along line 5—5 in FIGURE 2 illustrating one manner of securing the flexible rim to the rigid crown;

FIGURE 6 is a bottom plan view of a slightly modified form of hard hat with rigid rim;

FIGURE 7 is a view taken substantially on a plane passing along line 7—7 in FIGURE 6; and

FIGURE 8 is an enlarged partial cross-sectional view taken substantially on a plane passing along line 8—8 in FIGURE 6.

Referring now more specifically to the drawings, reference numeral **10** is used to generally designate the hard hat or safety hat comprising the instant invention. This hat **10** consists basically of a rigid or hard impact resistant crown **12**, a rigid or hard impact resistant visor **14** integral with the crown **12** and projecting outwardly and downwardly from the forward portion of the lower edge **16** of the crown **12**, and a flexible and resilient rim **18** fixed to the crown **12** and extending outwardly and downwardly therefrom peripherally thereabout at substantially the same angle as the bill or visor **14**.

With particular reference to FIGURES 4 and 5, it will be noted that the rim **18**, possessing sufficient flexibility so as to flex with and absorb a major portion of the force of a relatively hard blow, consists of an endless length of material having, in addition to the outwardly and downwardly angled lower portion **20** projecting beyond the crown **12** as illustrated in FIGURE 2, a substantially vertically extending integral upper portion or flange **22** telescopically receivable within the lower end of the crown **12**. The flexible rim **18** is to be releasably secured to the rigid crown **12** by any suitable releasable fastening means such as buttons **24** secured to the crown **12** and engageable with, for example, upstanding tabs **26** integrally formed with the rim **18** and positioned at circumferentially spaced points about the upper edge of the upper portion or flange **22**. Upon releasably securing the rim **18** in this manner, it will be noted that the forward portion thereof is positioned below and in engagement with the lower surface of the hard visor or bill **14** with the remainder of the rim **18** forming in effect a continuation of the visor peripherally about the lower edge of the crown **12**, the rim extending downwardly and outwardly at substantially the same angle as the visor **14** and for approximately the same distance.

Referring again to the means **24** for releasably securing the rim **18**, it should also be noted that the instant invention also contemplates the possibility of utilizing the means which are normally provided for securing the webbing and bands conventionally provided in safety hats. One such band **28** has been illustrated in phantom lines in FIGURE 1, this band centering the hat **10** and spacing the head from the fastening means **24**.

Referring now to FIGURES 6–8, it will be noted that a slightly modified form of hat **30** has been illustrated therein. In this form, it is contemplated that the flexible rim **32** be formed integral with the rigid impact resistant crown **34** and the rigid impact resistant visor **36**, this rim **32** extending downwardly and outwardly in the same manner as the rigid visor **36** and in effect forming a continuation thereof about the lower edge of the crown **34**. It should be appreciated that the integral forming of the flexible rim **32** with the rigid crown **34** and the visor **36** can be done at the time of the actual forming or molding of the crown and visor, or by subsequently permanently bonding the rim **32** to the crown **34** and visor **36** along all meeting edges thereof.

From the foregoing, it will be appreciated that a novel safety hat has been defined incorporating all of the desirable features of a conventional rigid impact resistant hard hat with the additional significant feature of the provision of a flexible outwardly extending rim about the sides and back thereof so as to absorb any unexpected blows which would normally dislodge a hat having a rigid rim thereabout. In addition, by providing for a rigid visor at the front of the hat a convenient means has been provided for allowing the positioning of and removal of the hat, it being deemed particularly significant that the instant invention combines both the rigid fore piece or visor and the flexible rim throughout the remainder of the lower edge of the crown.

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 inevntion to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A safety hat comprising a hard impact resistant crown, a hard impact resistant visor fixed to said crown

and projecting outwardly in a forward direction from the lower edge of the hard crown, and a flexible resilient, shock-absorbing rim fixed to the crown, said rim projecting laterally outwardly from the lower edge of the hard crown about the entire portion of the lower edge of the crown between the sides of the visor.

2. The structure of claim 1 wherein said flexible rim is formed integral with the opposite sides of the visor and the lower edge of the crown rearward of the visor.

3. A safety hat comprising a hard impact resistant crown, a hard impact resistant visor fixed to said crown and projecting outwardly in a forward direction from the lower edge of the hard crown, and a flexible rim fixed to the crown, said rim projecting outwardly from the lower edge of the hard crown peripherally about the lower edge of the crown, the forwardly extending portion of the flexible rim being positioned beneath and in engagement with the lower surface of the projecting hard visor.

4. The structure of claim 3 including means releasably securing said flexible rim to the hard crown.

5. The structure of claim 1 including means releasably securing said flexible rim to the hard crown.

6. In a safety hat, a hard impact resistant crown and a downwardly and outwardly projecting rim peripherally thereabout, the forward or visor portion of the rim being of a hard impact resistant nature, the remainder of the rim being flexible, resilient and shock absorbing in nature.

7. The structure of claim 3 wherein said rim is resilient and of a transverse width substantially equal to the transverse width of the visor.

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JORDAN FRANKLIN, *Primary Examiner.*