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ATTACHMENT MAGNETICALLY SECURED TO A HARD HAT

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Fig. 1

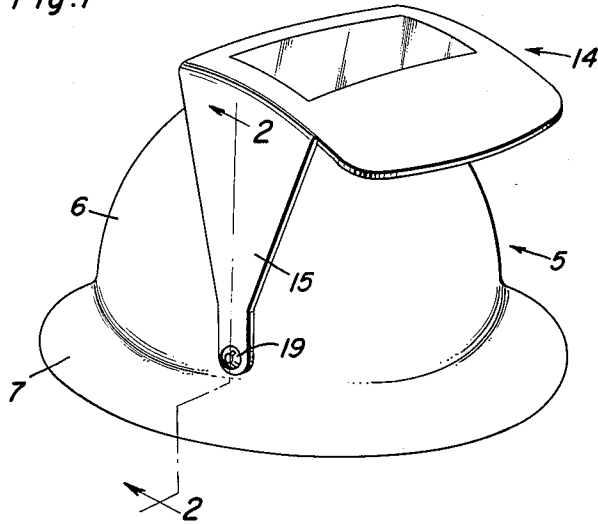


Fig. 2

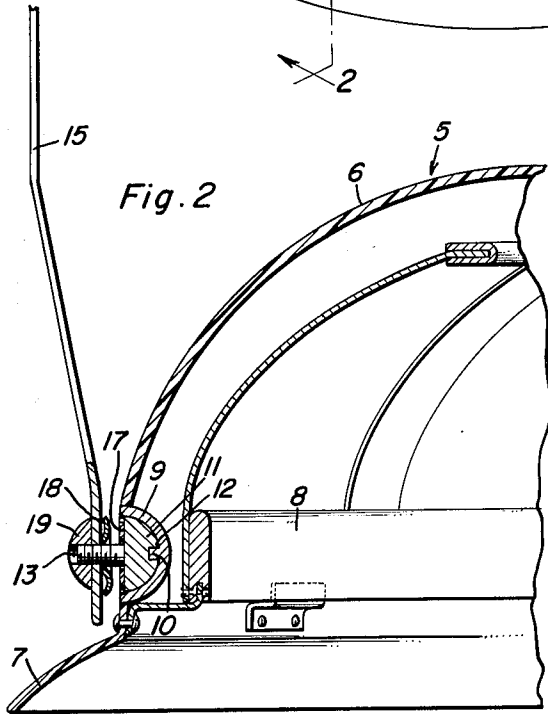


Fig. 3

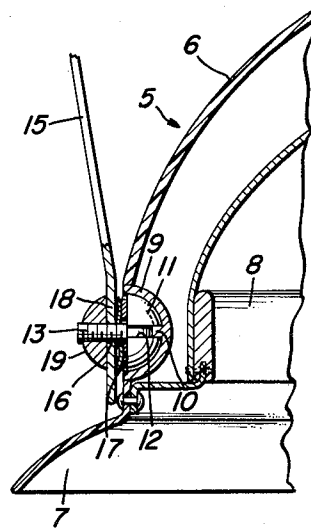
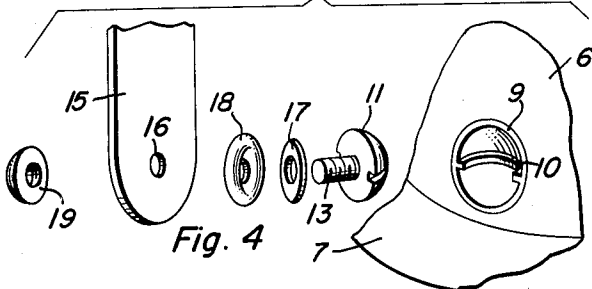


Fig. 4



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**ATTACHMENT MAGNETICALLY SECURED
 TO A HARD HAT**

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1 Claim. (Cl. 2—10)

This invention relates generally to new and useful improvements in hard hats of the type in widespread use on construction jobs and has for its primary object to provide, in a manner as hereinafter set forth, novel means for magnetically securing welders' visors, helmets, shields and other attachments on such hats.

Another important object of the present invention is to provide a fastening means of the aforementioned character which permits the visor or other attachment to be readily swung to operative and inoperative positions.

A further object of the invention is to provide a hard hat attachment fastening means wherein the attachment is retained in an inoperative position by friction, the device being adjustable whereby the friction may be adjusted or regulated as desired.

Another object is to provide a hard hat attachment fastener of the character set forth which permits the attachment to be readily mounted for use on the hat and removed therefrom without the use of tools.

Another important object is to provide a frictional fastening means of the character set forth which permits the attachment to be swung downwardly from an inoperative position to an operative position in response to the forces of gravity and inertia, the latter being produced by movement of the head.

Other objects of the invention are to provide a fastening means of the character set forth which is comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

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 drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view, showing an attachment secured on a hard hat by fastening means embodying the present invention;

FIGURE 2 is a fragmentary view in vertical section and on an enlarged scale through one side portion of the invention, taken substantially on the line 2—2 of FIGURE 1, showing the frictional clutch means loose or open;

FIGURE 3 is a fragmentary view in vertical section substantially similar to FIGURE 2 but showing the frictional clutch means tightened or closed; and

FIGURE 4 is an exploded perspective view, showing the component parts of the fastening means.

Referring now to the drawing in detail, it will be seen that reference numeral 5 designates a hard hat of suitable material. The hat 5 includes the usual crown 6, brim 7, an inwardly spaced sweat band 8 for ventilation, etc.

Mounted in the side portions of the crown 6, adjacent the brim 7, is a pair of metallic sockets or cups 9. The cups 9 have formed therein integral ribs 10. The metallic cups or sockets 9 are for the reception of generally hemispherical permanent magnets 11. The permanent magnets 11 have formed in their peripheries

grooves, channels or ways 12 for the reception of the ribs or keys 10. Thus, the permanent magnets 11 are positively retained against rotation in the cups or sockets 9. Pivot pins or trunnions in the form of threaded shanks 13 project outwardly from the flat faces of the permanent magnets 11.

Reference numeral 14 designates generally an attachment in the form of a welder's visor which is mounted for vertical swinging movement on the hat sides. The free end portions of the arms 15 of the visor 14 are provided with apertures 16 which receive the pivots 13.

A friction washer or ring 17 of suitable material is mounted on the pivot pin or shank 13 in abutting engagement with the flat surface of each of the magnets 11. Spring washers 18 are mounted on the pivot pins or shanks 13 between the friction washer 17 and the attachment arms 15. Then, rounded retaining nuts 19 are threaded on the pivot pins or shanks 13 for drawing the assembly together.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Briefly, the fastening elements 11, 17, 18, 19, etc., are mounted on the arms 15 of the attachment 14. Then, to mount the attachment 14 on the hat 5, it is only necessary to straddle said hat with said attachment and snap the permanent magnets 11 into the metallic cups or sockets 9. Thus, the magnets 11 are magnetically retained in an obvious manner in the cups or sockets 9. Also, the arms 15 of the attachment 14 are resilient and tensioned when the attachment is applied for further retaining the magnets 11 in the cups or sockets 9. The assembly comprising the elements 17, 18, etc., constitutes a clutch device for frictionally securing the attachment in the desired position and for controlling the swinging movement thereof. The frictional resistance to swinging movement of the attachment 14 may be regulated as desired by adjusting the nuts 19. As hereinbefore stated, the keys 10 in the cups 9 engage in the grooves or ways 12 in the permanent magnets 11 for positively retaining said magnets against rotation. In FIGURE 1 of the drawing the visor 14 is shown in raised or inoperative position. By leaning the head forwardly and then jerking the head upwardly and rearwardly the visor 14 may be caused to swing forwardly and downwardly to operative position by the force of inertia. Of course, to remove the attachment 14 it is only necessary to spread the arms 15 for disengaging the permanent magnet 11 from the cups 9.

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 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:

In combination, a hard hat comprising a rigid crown, and a pair of outwardly opening hemispherical cups mounted at diametrically opposed points in the side portions of the crown, said cups projecting inwardly of the crown and having their outer open ends coplanar with the exterior surface of the crown, each cup having a projecting elongated rib diametrically therein; and an attachment, said attachment having a pair of spaced generally parallel arms, each arm having an inwardly ex-

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tending hemispherical magnet rotatably mounted on the end portion thereof, each magnet having an elongated groove on the inner end diametrically thereof, said magnets being receivable within said cups with said ribs being received within said grooves, the distance between the inner ends of said magnets being such so as to require an outward flexing of the arms in order to engage the magnets within the cups, said magnets being rotatable in said cups prior to reception of said ribs in said grooves.

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