July 19, 1966 J. N. COLETTA 3,261,028

NOISE ATTENUATING DEVICE

Filed Aug. 14, 1962

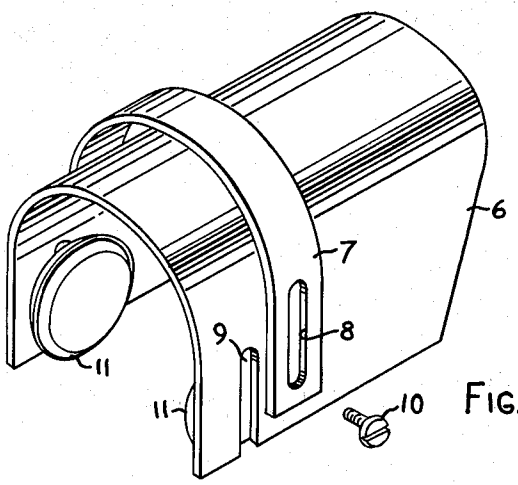


FIG. 1

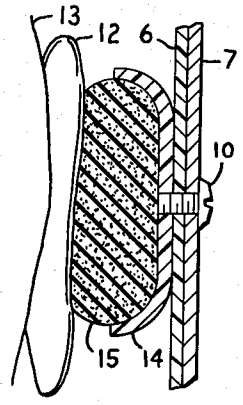
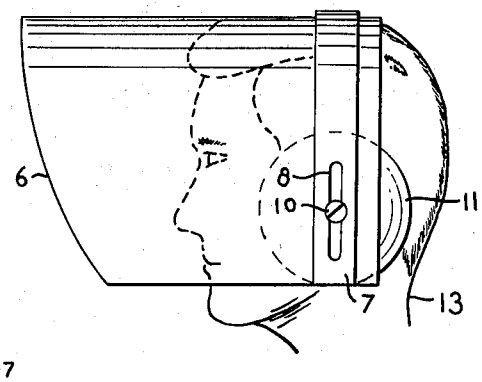


FIG. 4

FIG. 2



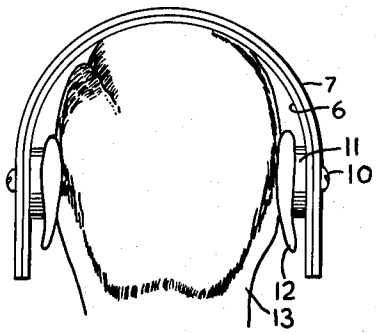


FIG 3

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NOISE ATTENUATING DEVICE

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1 Claim. (Cl. 2—209)

The present invention relates broadly to wearing apparel for the head and more specifically to a device to be used when extreme concentration is required.

It has been found by teachers and psychologists, particularly in the education profession, that there are many situations which call for extreme concentration in noisy and distracting surroundings. In some classrooms, there may be as many as 40 to 50 students trying to concentrate on some learning material. Obviously, distractions are numerous and, as a result, learning efficiency decreases to a low level. What is needed then is some device that will eliminate noise and limit the visual field such that concentration will be improved.

This invention thus has as an object the reduction of outside distractions from a student's visual field. A further object is the reduction of noise reaching a student trying to concentrate. A still further object is the reduction of other outside distractions such as bright sunlight, etc. Another object of this invention is to provide a device to help concentration which will be situated on the wearer's head, being adjustable to accommodate many differently shaped heads, said device being of such construction that it may be easily put on and off, and also taken apart and cleaned when desired. Yet another object of this invention is to provide a concentration device that is made of inexpensive materials such that the device can be economically disposed of after a single usage.

Other objects will be apparent from the following description of the invention, which is illustrated in the accompanying drawings. In the drawings:

FIG. 1 is an isometric exploded view of the device.

FIG. 2 is a side view of the device shown on the head of the user.

FIG. 3 is a back or end view of the device situated on the head of the user.

FIG. 4 is an enlarged side view showing the detail of the earpiece.

Referring to the drawings, in FIG. 1 the body **6** is situated between the band **7** and sound deadening device or earpiece **11**. A screw or suitable fastener **10** connects the band **7** and earpiece **11** through a longitudinal slot **8** in band **7**, said fastener then going through a slot **9** in body **6** and then fixed into the earpiece **11**. Referring to FIGURE 4, as an example, the earpiece consists of a suitable thin wall plastic shell **14** containing a sponge rubber filler **15**. In the center of the shell **14** is located a hole **16** which is tapped such that screw **10** may be screwed into the earpiece. The earpiece fits circumferentially around or upon the outside ear **12**, of the head **13**, such that the earpiece prevents outside noise from reaching the sensory eardrum inside the head.

The body **6** of the device consists of a rectangular sheet of suitable material, being easily bent and of a sturdy thickness having the front shaped in a convenient fashion. The body may be made of plastic, aluminum, tin, steel, etc. as would be suitable. The width is determined by placing the body around the head as in FIGURES 2 and **3** such that the body **6** completely covers the head **13** with the ends disposed below the earlobes. The back of the body **6** of the device is situated on the head of the wearer as in FIGURE 2 such that it covers the wearer's head. The body **6** of the concentration device is positioned on the wearer's head by a spring steel or metal band **7**. This band comprises a long rectangular sheet having two slots on both ends. The sheet is permanently

bent into a U shape, such that when placed around the body **6** and secured to the earpiece **11**, the whole apparatus is comfortably situated on the wearer's head (FIGURES 2 and 3), the band holding the body **6** in the bent configuration seen in FIG. 3. The slots **8** of the band and slots **9** of the body render the device adjustable for all sizes and shapes of human heads since the earpieces can be moved along the length of slots **8** and **9**.

It can easily be seen that the earpieces or sound deadening devices might be made in any configuration and of material such that said earpieces eliminate noise from reaching the ear while providing a receiver that will affix fastener **10** securely to the earpiece. The body **6** may conceivably be made of paper or cardboard, etc. such that the device could easily be disposed of for convenience or health reasons. Likewise the band **7** could be made of some suitable plastic or other readily manufactured material that would hold the body **6** in place and at the same time render the device economical and disposable.

The invention could also be applicable to learning Morse code, listening to music, learning foreign languages, etc. which in such cases, the sound deadening devices would be replaced by earphones. The device might also be constructed without the use of earphones or earpieces if the elimination of sound or noise was undesirable. In this case the device would consist of a body similar to that described heretofore in the specification and a band also similar to that described in this specification. A suitable fastener would then affix the band to the body and the whole device would be worn in much the same manner as the firstly described device with the exception that there would be no earpieces to affix the device over the ears.

It is noted by the inventor that the front of the body **6** might be cut away such that the desired visual field is obtained by the wearer.

It is well-known by psychologists and others concerned with the problem of deep concentration that as one's ability to concentrate increases, one's awareness of outside distractions decreases. It is also known that for some people concentration is extremely difficult when accompanied by outside noise and movement. It was thus assumed that if outside distractions were eliminated, concentration would be improved. The aforedescribed device eliminates distractions by deadening the sound through the earpieces (sound deadening devices) and by limiting the visual field by means of a shield (the body). With these two modes of distraction disposed of, the ability to concentrate is noticeably improved.

While the foregoing description was conceived by the inventor as the best embodiment of the principles of the device, it is to be understood that the inventor does not intend to be limited to specific details of structure or methods of manufacture otherwise than as specifically set forth in the appended claim.

What I claim is:

A headpiece comprising a U-shaped thin wall body adapted to be removably secured around the top and sides and forwardly of the head of the wearer; said body having an elongated configuration with two transversely aligned slots at one end and a sloped front end opposite to the slotted end; a permanently bent U-shaped rectangular metal band with a slot at each end; said band situated circumferentially around the body so that the band slots are aligned with the body slots; screws passing through the aligned slots and securing said band to said body; earpieces disposed on the inner face of said body opposite each other; said earpieces being tapped to accommodate said screws and thereby said earpieces are held in position to cover the ears of the wearer when the device is situated on the wearer.

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