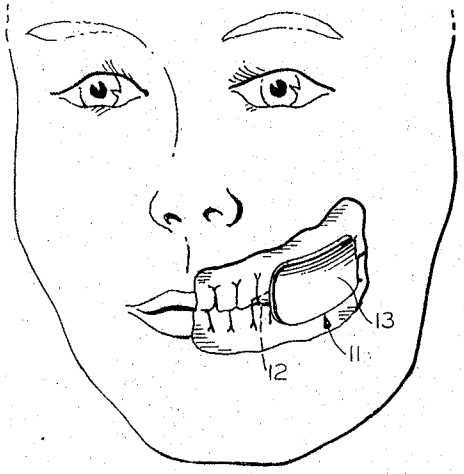
March 7, 1967 G. A. PETERSEN 3,307,539

CHEEK AND TOOTH PROTECTOR

Filed Sept. 21, 1964

FIG_1



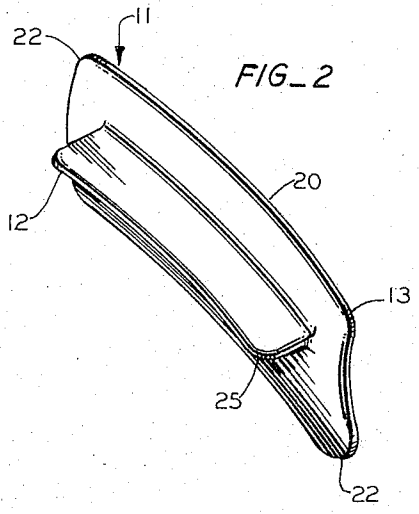


FIG_2

FIG_3

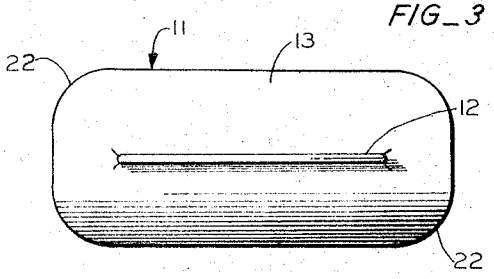


FIG_4

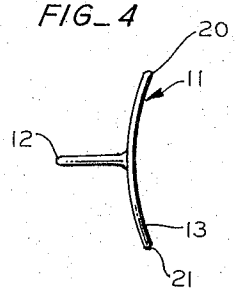
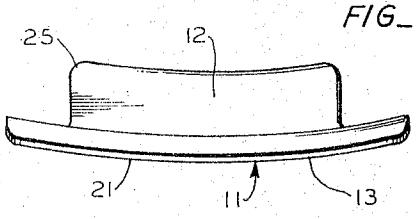


FIG_5



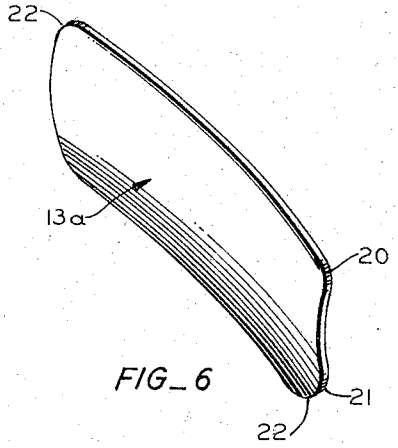


FIG_6

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CHEEK AND TOOTH PROTECTOR

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3 Claims. (Cl. 128—136)

This invention relates to a new and improved device to protect cheek and teeth from injury or wear. More particularly, the invention relates to a device to be worn in the mouth to prevent the wearer from accidentally or unconsciously biting or otherwise irritating the inside of the mouth and from grinding the upper and lower jaws against one another to wear the teeth.

It is well-known that a great number of persons have the unconscious habit of grinding their teeth together, especially during sleeping hours. This habit can cause serious dental problems, including wearing down the teeth. In addition, this grinding action also acts to irritate the inside of the cheeks, especially when a lesion or irritated area is already present, and can cause lucoplakia and other disease, including the possibility of mouth cancer. The present invention serves to prevent this grinding action of the teeth as well as acting to prevent irritation of the inside of the mouth. A principal feature of the invention is the provision of a device formed to fit in either side of the wearer's mouth inside the cheek to protect the cheek and may have a stem adapted to be placed between the upper and lower sets of teeth, to prevent frictional action caused by unconscious grinding of the teeth and thus preventing wearing down the teeth.

A further feature of the present invention is the fact that the cheek liner is formed arcuate outwardly from the wearer's jaw, to prevent any rubbing action on the wearer's gums and to retain the device in place.

Another feature of the invention is the fact that the cheek and tooth protector is formed of a thin, pliable material such as rubber or plastic to provide an effective, yet comfortable protector to be worn in the mouth.

A still further feature of this invention is that the protector is slightly curved from end to end along its length, to conform with the curve of the wearer's jaw, thus providing a more comfortable fit and effective action along its entire length.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings in which similar characters of reference represent corresponding parts in each of the several views.

In the drawings:

FIG. 1 is a perspective view of one form of a cheek and tooth protector made according to the present invention, shown in place in the mouth of the wearer.

FIG. 2 is a perspective view of a protector, showing the T-shaped construction.

FIG. 3 is a side elevation thereof.

FIG. 4 is an end elevation of the protector of FIG. 3.

FIG. 5 is a top plan of the protector of FIG. 3.

FIG. 6 is a perspective view of a modified form of a protector made in accordance with the present invention.

The cheek and tooth protector **11** of FIGS. 1–5 is of a size appropriate to be easily placed in the wearer's mouth, while at the same time adequately providing an intercepting portion **12** formed as the stem of the T-shaped protector **11** and a holding surface **13** formed as the top or cap of the T-shaped protector **11**. Holding surface **13** is arcuate in shape, being concave facing away from the wearer's jaw, as best shown in FIG. 1. This arcuate shape results in two extreme margins **20** and **21** which bear against the wearer's inner cheek to provide a holding action which tends to keep protector **11** in place, once it

has been inserted. Holding surface **13** is concave away from the wearer's jaw so as to avoid any rubbing or abrasive action on the wearer's gums. The pressure of the wearer's cheek against margins **20** and **21** of holding portion **13** will hold protector **11** in position such that intercepting portion **12** will prevent frictional contact between the wearer's teeth even while the wearer's jaw is moving.

In addition, holding portion **13** and intercepting portion **12** are slightly arcuate in shape along the major axis, as shown in FIG. 5. This shape permits protector **11** to conform to the general shape of the wearer's mouth along the sides, as shown in FIG. 1. Intercepting portion **12** does not extend fully along the major axis of holding portion **13**, but extends for a substantial distance thereon, and is located equidistance from margins **20** and **21**. The corners **22** of holding portion **13** and corners **25** of intercepting part **12** are rounded so as to present no sharp edges which would irritate the wearer's mouth.

Holding portion **13**, in addition to acting to keep protector **11** in place, also functions separately to protect the wearer's inside cheek from irritation, rubbing or biting resulting from unconscious grinding or chewing action of the jaws and teeth. Thus, protector **11** has a dual function: that of protecting the teeth from grinding action and that of protecting the inside of the cheek from rubbing or biting of the teeth.

Cheek and tooth protector **11** is formed of a thin, pliable material such as rubber or plastic to provide a protector with a certain amount of resiliency and pliability, but which will still effectively function to protect the teeth and cheek.

A modification is shown in FIG. 6 which consists of cheek protector **13*a***. This modification is designed to protect the wearer's inside cheek from irritation or biting resulting from unconscious grinding or chewing. Protector **13*a*** is particularly useful when the wearer's inside cheek is afflicted with a lesion such as a sore or blister which must be protected from irritation if it is to heal properly. Protector **13*a*** is substantially of the same form and construction a holding portion **13** of protector **11**, and is arcuate, being concave facing away from the wearer's jaw. In addition, protector **13*a*** is slightly arcuate in shape along the major axis, so as to conform with the shape of the wearer's mouth.

Although the foregoing invention has been described in some detail, by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be practiced within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A cheek and tooth protector comprising a thin elongated holding portion of resilient material shaped to fit between the wearer's teeth and inner cheek, to prevent physical contact between said teeth and said cheek;

and a tooth intercepting portion, formed to project from said holding portion at substantially a right angle, said intercepting portion being substantially rectangular in shape and formed of thin and resilient material, said intercepting portion shaped to fit between the wearer's teeth to prevent physical contact between said teeth, said intercepting portion being held in place in the wearer's mouth by said holding portion.

2. A cheek and tooth protector according to claim **1**, in which said holding portion is slightly arcuate in end elevation and shaped concave-outward to provide upper and lower margins to bear against the wearer's inner cheek, and in which said holding protector portion is slightly arcuate about its length, from end to end, being concave inward, to fit along the curve of the wearer's jaw, said holding portion being oblong with rounded corners, and in which said tooth intercepting portion projects in-

ward from said inwardly facing concave surface, to extend between the wearer's jaws and to prevent contact between said jaws.

3. A cheek protector comprising a substantially rectangular portion of thin and resilient material shaped to be worn between the wearer's teeth and inner cheek to prevent physical contact between said teeth and said inner cheek, said protector being concave inwardly in end elevation, to provide upper and lower margins to bear against the wearer's inner cheek, said protector also being slightly convex outward in plan to fit along the curve of the wearer's jaw, and a tooth intercepting portion formed to project inward from said first-mentioned portion at substantially a right angle to fit between the wearer's teeth to prevent physical contact between said teeth, said first mentioned portion and said intercepting portion cooperating to retain said cheek protector in the wearer's mouth.

References Cited by the Examiner

UNITED STATES PATENTS

2,627,268 2/1953 Lippich ---------- 128—136

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