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(56) Documents cited
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(58) Field of search
UK CL (Edition J) A5R RDJ
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(54) **Artificial tooth and socket**

(57) An artificial tooth socket (Fig. 2) is implanted in the jaw. Into this socket an artificial tooth (Fig. 1) or teeth may be mounted using an adhesive. The socket is fixed using a screw thread or a biocompatible cement substance such as hydroxylapatite. The artificial tooth or teeth is glued in the socket, and if a flexible adhesive is used the bond between the tooth and the socket will be similar to the periodontal membrane which retains the tooth in a natural socket.

Fig 1

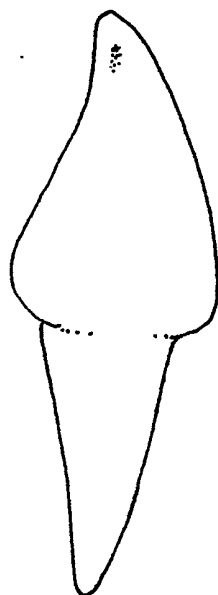
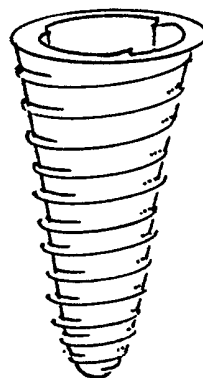


Fig 2



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DRAWING - ARTIFICIAL TOOTH AND SOCKET

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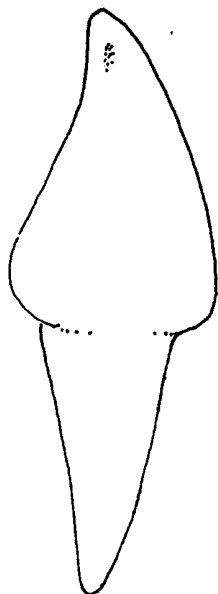


Fig 1

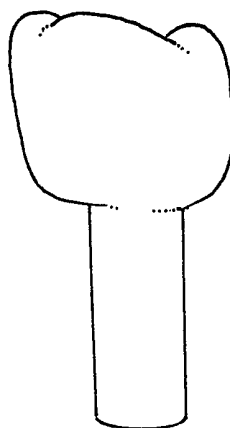


Fig 3

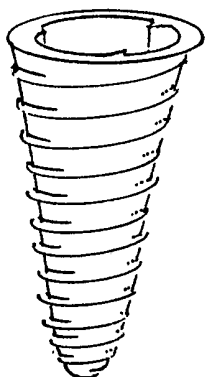


Fig 2

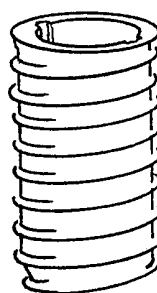


Fig 4

ARTIFICIAL TOOTH AND SOCKET

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This invention refers to an artificial tooth which is fixed in an implantable socket.

Artificial teeth are well known in the form of dentures. A recent development has been the insertion of an artificial tooth, mounted on an implant in the jaw, so that it becomes united with the bony structures of the jaw.

A drawback is the rigid attachment of the artificial tooth, which becomes functionally an extension of the jaw bone. The mounting of a tooth with a rigid cement onto an implanted base in the jaw is a poor imitation of the situation in life, for in the natural tooth there is some flexibility between the tooth and its socket.

According to the present invention there is an implantable socket made of a biocompatible material which is inserted permanently into the jaw-bone. This prosthetic socket is hollow, and into this cavity is inserted the replacement tooth or teeth. The artificial root(s) are held in place by means of a polymer adhesive, thus allowing the prosthesis to be slightly flexible in its mount.

A specific embodiment of the invention will now be described with reference to accompanying diagrams in which:-

Figure 1 shows in projection an artificial incisor;

Figure 2 shows a tapering socket into which a tooth is be mounted;

Figure 3 shows in projection an artificial molar tooth;

Figure 4 shows a cylindrical socket into which a tooth is mounted.

Referring to the drawings the invention comprises a socket and an artificial tooth. The socket is inserted into the jaw by, for example, a screw thread which is used in conjunction with a screw-driver. The socket may be held in place with a biocompatible compound, for example hydroxylapatite, which serves to assist its uniting with the bony structure of the jaw. In this manner the socket becomes fixed within the jaw in imitation of a natural socket.

After the socket has become firmly implanted in the jaw the artificial tooth is inserted.

Referring to the drawing the tooth (which may comprise one or more crowns) is inserted into the socket and is held in place with a polymer or other adhesive. The nature of this bond is to offer a slightly flexible interface between the socket and the tooth, in imitation of the periodontal membrane which, in the living tooth, provides this function.

Should the tooth be damaged or require replacement it is intended that it be removed and a new prosthetic crown inserted into the socket. The socket itself is to be regarded by the dentist as an implant in the bone.

CLAIMS

1 An implanted socket within the jaw into which is fixed an artificial tooth.

2 A socket as claimed in Claim 1 into which is fixed a crown or crowns representing one or more artificial teeth.

3 A socket as claimed in Claim 1 or Claim 2 which is fixed to the bony jaw structure with the aid of a biocompatible cement or cement-like substance such as hydroxylapatite.

4 A socket as claimed in Claim 1, Claim 2 or Claim 3, into which an artificial tooth or teeth is fixed using a slightly flexible cement or adhesive.

5 A socket as claimed in Claim 1, Claim 2, Claim 3 or Claim 4, into which the root of an artificial tooth is fixed with any adhesive.