Oct. 31, 1950 A. B. BRUSSE 2,527,526

EDGEWISE BRACKET FOR ORTHODONTIA

Filed April 16, 1945

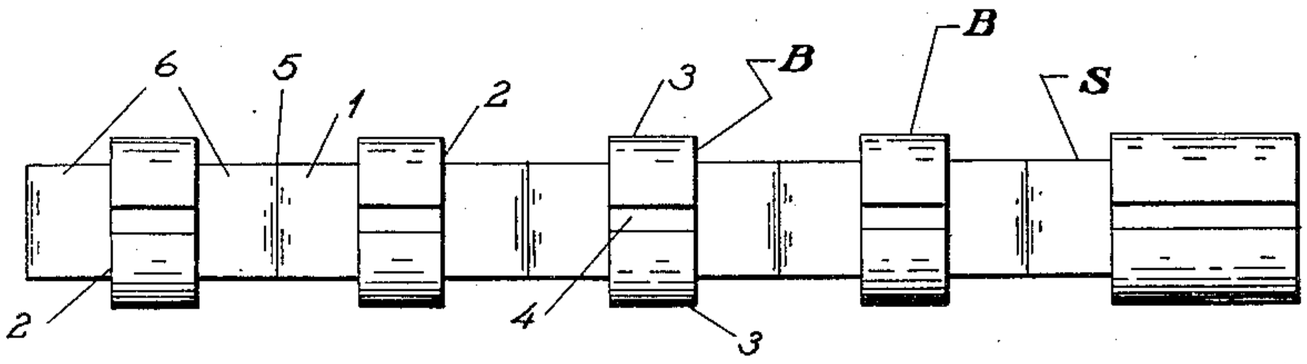

Fig. 1

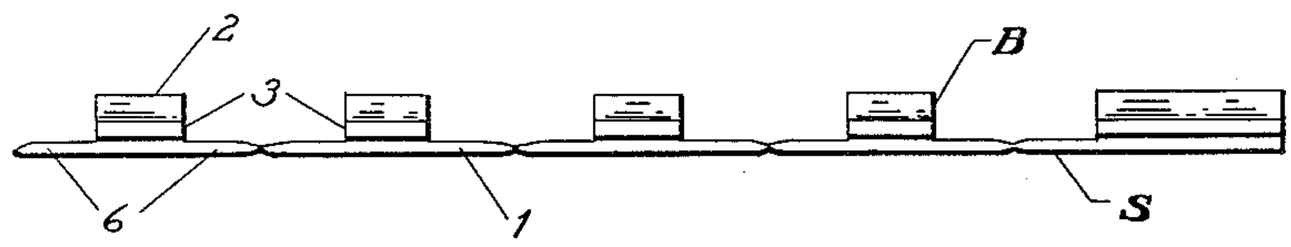

Fig. 2

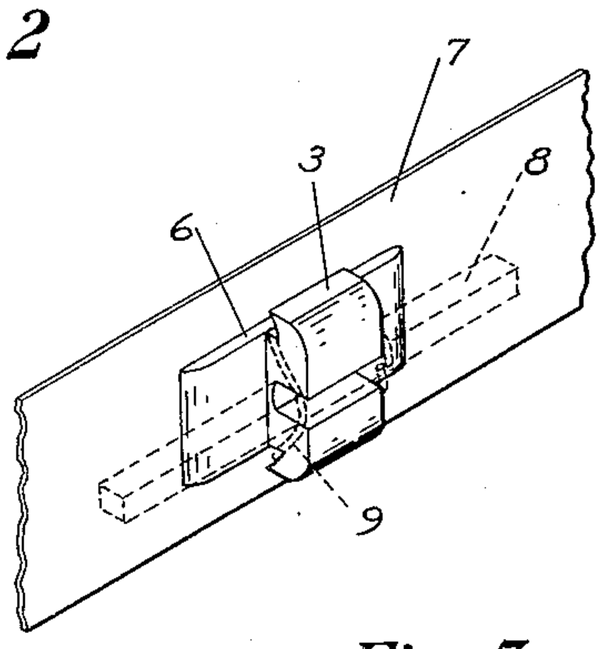

Fig. 3

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EDGEWISE BRACKET FOR ORTHODONTIA

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2 Claims. (Cl. 32—14)

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This invention relates to an orthodontic appliance and more particularly to a bracket for attachment to a tooth band whereby an arch wire may be supported.

One of the objects of this invention is to produce an improved bracket of the type disclosed by the United States Letters Patent to E. H. Angle, No. 1,584,500, issued May 11, 1926, for Orthodontic Appliance.

A more specific object is to so construct a bracket of the kind referred to so there will be provided lateral attaching flanges to facilitate the securing of the bracket, as by welding, to a tooth band.

A further object of the invention is to produce in a single strip a series of connected improved brackets, each of which is so constructed as to be readily and securely attached to a tooth band while still a unit of the strip and can then be subsequently detached from the strip by a single operation.

Other objects of the invention will become apparent from the following description taken in connction with the accompanying drawings in which:

Figure 1 is a top view of a strip embodying a series of brackets constructed in accordance with my invention;

Figure 2 is a side view of the strip of Figure 1;

Figure 3 is a perspective view of a single bracket showing details of construction and the manner of use.

Referring to the drawings in detail, Figures 1 and 2 show a strip or series of connected brackets made in accordance with my invention. The entire strip or series of connected brackets are indicated by the letter S and is made of a single length of suitable stock material such as stainless steel. The stock material is of a width as great as the desired over all width of a bracket and of a thickness as great as the desired over all thickness of the bracket.

In making the strip or series of brackets the stock of material is thinned down at portions 1 of the material, which portions are equally spaced apart. By making these thinned portions there is provided a plurality of spaced outwardly extending portions 2 on one side of the material. The width of the stock material is also decreased by cutting away material at opposite edges. In doing this cutting the material adjacent the edges forming the thinned portions 1 is cut away but not all of the material adjacent the edges of the spaced outwardly extending portions 2. As best shown in Figures 2 and 3, these portions 2 are

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undercut to a depth continuous with the edge of the portions 1. This manner of undercutting thus establishes opposed projections 3 on the portions 2 which extend beyond the edges of the thinned portions 1. The undercutting is of such depth that these projections are positioned to one side of the plane of the thinned portions. Each of the portions 2 are grooved centrally to provide a slot 4 which extends in a direction longitudinally of the stock of material. All the slots are aligned and can be cut by one operation. The thinned portions 1 between the outwardly extending portions 2 are also provided with lateral scores 5. This completes the construction of the strip or series of connected brackets indicated by the letter B. If desired, an unworked or partially worked portion of the stock may be left attached to the series of formed brackets to thereby provide a convenient handle for the strip of brackets.

In Figure 3 the manner of use of each bracket B is shown. By the scoring of the thinned portions 1 between the portions 2 each bracket may be severed from the strip and when so severed will comprise a slotted portion 2 provided with opposed laterally extending flanges, indicated at 6, and forming the attaching means for the bracket. By means of these flanges 6 the bracket is welded to a tooth band 7 in such manner that the slot 4 will extend in a circumferential direction with respect to the band. When a bracket is so attached to a band an arch wire or bar 8 can then be supported in the slot 4 and firmly connected with a tooth. To accomplish this there is employed a tie wire 9 which can be first looped around the arch wire and then each leg of the loop passed beneath a lateral projection 3 of the bracket. The end of the tie wire can either be hooked back alongside the portion 2, as indicated in Figure 3, or they may be twisted together if such is found desirable.

It is thus seen that a bracket constructed in accordance with my invention can be firmly secured to the tooth band in an easy manner by means of the provided flanges 6. This welding operation is accomplished while the bracket is still a unit of the strip S. The strip is held by the handle so that the opposite end bracket is in proper position against the surface of the band and when so positioned the welding is performed. After the end bracket is welded to the band it is severed from the strip by merely bending the strip relative to the welded bracket, thus breaking the strip at the score 5 adjacent the welded bracket. It is to be noted that the plurality of brackets

forming the strip are all simultaneously made by simple operations. All that need be done is cut away material from stock and then provide the scores which can be accomplished either by cutting, stamping, or otherwise.

Being aware of the possibility of modification in the particular brackets shown and the manner in which a series of connected brackets are embodied in a single strip, I do not intend that my invention be limited in any manner except in accordance with the appended claims.

What is claimed is:

1. An orthodontic device having a plurality of brackets integrally connected comprising an elongated flat thin strip, a plurality of spaced upwardly extending projections integrally formed on said strip, each of said projections having a web portion with edges coplanar with the edges of said strip, each of said projections having a top portion integrally formed on said web portion and providing overhanging portions extending laterally of said strip, said overhanging portions having a rounded upper surface and an outwardly and downwardly extending undersurface, a recess in each of said projections extending longitudinally of said strip, the bottom of said recess extending substantially to the top of said strip, oppositely-aligned transverse recesses on opposite faces of said strip intermediate said projections, and an enlarged projection on one end of said strip forming a handle thereon to facilitate

welding of the bracket on the opposite end of said strip.

2. An orthodontic device having a plurality of brackets integrally connected comprising an elongated flat thin strip, a plurality of spaced upwardly extending projections integrally formed on said strip, each of said projections having a web portion with edges coplanar with the edges of said strip, each of said projections having a top portion integrally formed on said web portion and providing overhanging portions extending laterally of said strip, said overhanging portions having a rounded upper surface and an outwardly and downwardly extending undersurface, a recess in each of said projections extending longitudinally of said strip, the bottom of said recess extending substantially to the top of said strip, and oppositely-aligned transverse recesses on opposite faces of said strip intermediate said projections.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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2,019,773	Wirt	Nov. 5, 1935
2,265,420	Brusse et al.	Dec. 9, 1941