

[54] **BEAVERTOOTH CUTTING EDGE**

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175/379

[51] Int. Cl. **B26d 1/00**

[58] Field of Search 172/437, 719, 747;
37/142 R, 141 T; 175/379; 76/82; 83/174, 651

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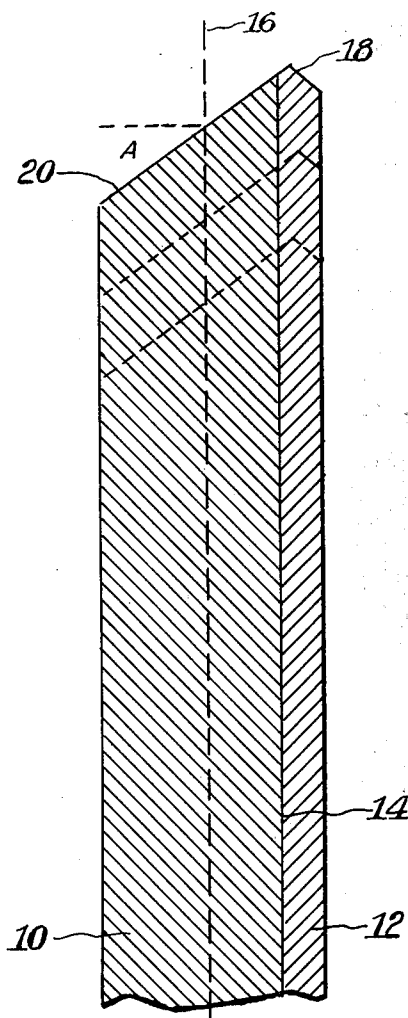
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[57]

ABSTRACT

A cutting member employs an elongated body composed of at least two separate elongated sections disposed side by side and bonded together along a common interface, one section being relatively thick, the other being relatively thin. One end of the body defines a cutting edge which defines a line intersecting the longitudinal axis of the body at an acute angle. The cutting edge has a lead region or point disposed in the thin section. The thick section is characterized by rapid wear during cutting. The thin section is characterized by slow wear during cutting. Both sections are formed from dissimilar metals or alloys.

3 Claims, 2 Drawing Figures



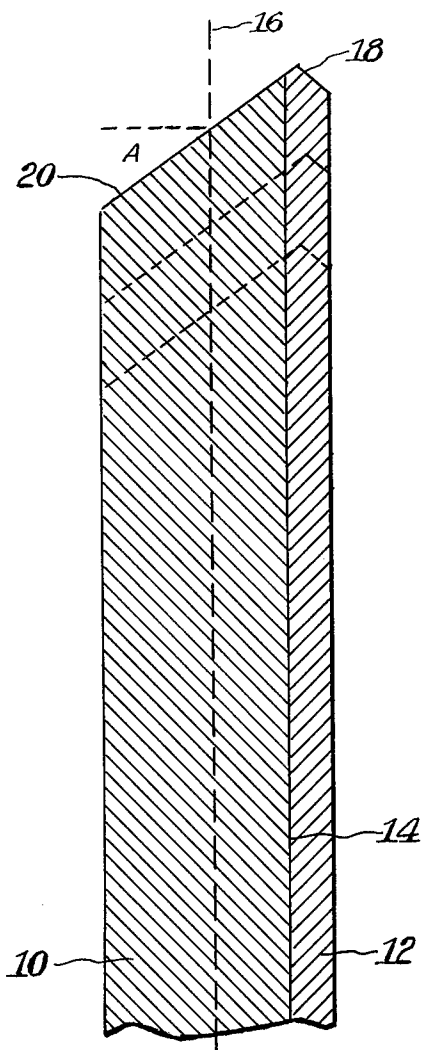


FIG. 1

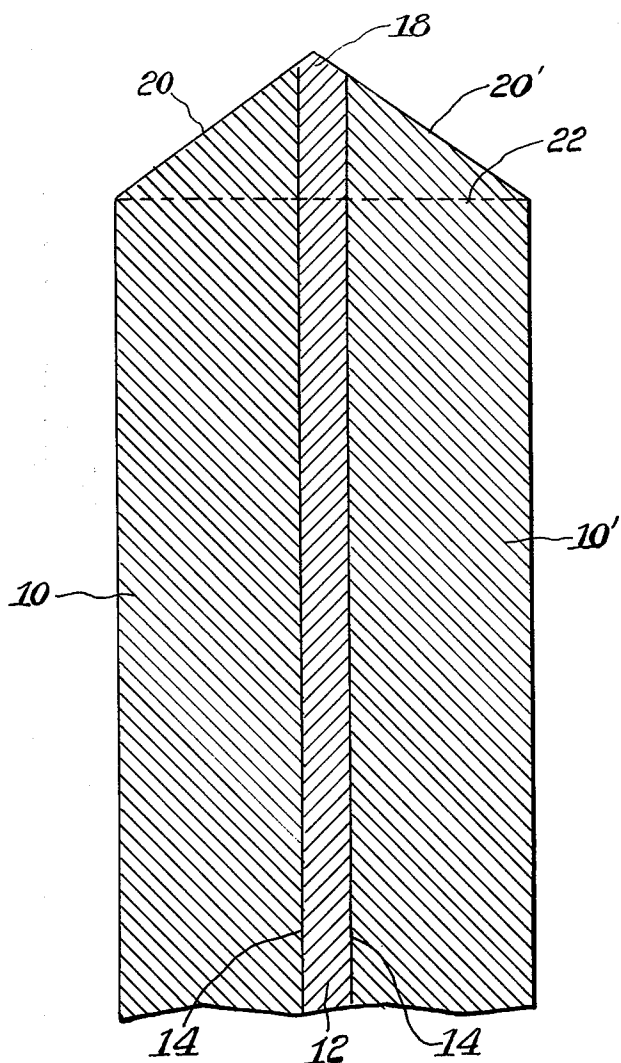


FIG. 2

BEAVERTOOTH CUTTING EDGE

SUMMARY OF THE INVENTION

This invention is directed toward a member having a cutting edge which provides a chisel-like cutting action which is self sharpening and maintains its "chisel" as it wears down.

In larger sizes the member can define bucket teeth for various types of earth excavating equipment or for gardening tools of all kinds while in smaller sizes the member can be used in various hand tools, cutlery, tool bits and the like. In general the member can be used in any application which can make use of this self sharpening feature.

To this end the member can take the form of an elongated body composed of at least two separate elongated sections of different metals or alloys disposed side by side and bonded together along a common interface.

One section is relatively thick and is characterized by rapid wear when the member is used in cutting as described below. The other section is relatively thin and is characterized by slow wear when the member is used in cutting.

One end of the body has a cutting edge which defines a line intersecting the longitudinal axis of the body at an acute angle. The cutting edge has a lead region or point disposed in the thin section. This edge thus provides the desired chisel-like cutting action. Due to the relative wear properties, the edge is self sharpening and maintains its original chisel orientation as the body wears down.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is a cut away side view of one form of the invention; and

FIG. 2 shows a modification thereof.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring first to FIG. 1 an elongated body has two parallel elongated sections 10 and 12 disposed side by side and bonded together along a common interface 14. These sections are formed from dissimilar metals or alloys which can be bonded by welding, co-diffusion or

other known means.

Section 10 is relatively thick. Section 12 is relatively thin. One end of the body is formed into a cutting edge 20 which intersects the longitudinal center line or axis 16 at an acute angle A as shown. The lead region or point 18 is disposed in section 12.

Section 10 is formed from a relatively rapid wearing material such as (copper or copper alloy?). Section 12 is formed from a relatively slow wearing material such as (a tool steel?). The invention can then be used as previously described.

In FIG. 2, section 10' is bonded to the other side of section 12 along a parallel common interface 14'. Section 10' is parallel to and identical to section 10 and has cutting edge 20'. Edges 20 and 20' define an isocles triangle with base 22 as shown. The structure of FIG. 2 maintains the original V shaped cutting surface as shown throughout operating life as previously described.

While I have described my invention with particular reference to the drawings, such is not to be considered as limiting its actual scope.

Having thus described this invention what is asserted as new is:

1. An elongated cutting member composed of at least two separate elongated sections of different and dissimilar metals or alloys disposed side by side, extending in the longitudinal direction of the member and bonded together along a common interface, which extends in said direction, one section being relatively thick and characterized by rapid wear during cutting, the other section being relatively thin and characterized by slow wear during cutting, one end of the member defining a cutting edge, said edge defining a line intersecting the longitudinal axis of the member at an acute angle and having a lead region or point disposed in said other section, the edge being formed from exposed portions of both sections.

2. The member of claim 1 wherein there are two relatively thick like sections disposed on opposite sides of the thin section, said edge defining two oppositely disposed cutting edges which are mirror images of each other and have a common lead region disposed in the thin section.

3. The member of claim 2 wherein both relatively thick sections are formed from the same metal or alloy.

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