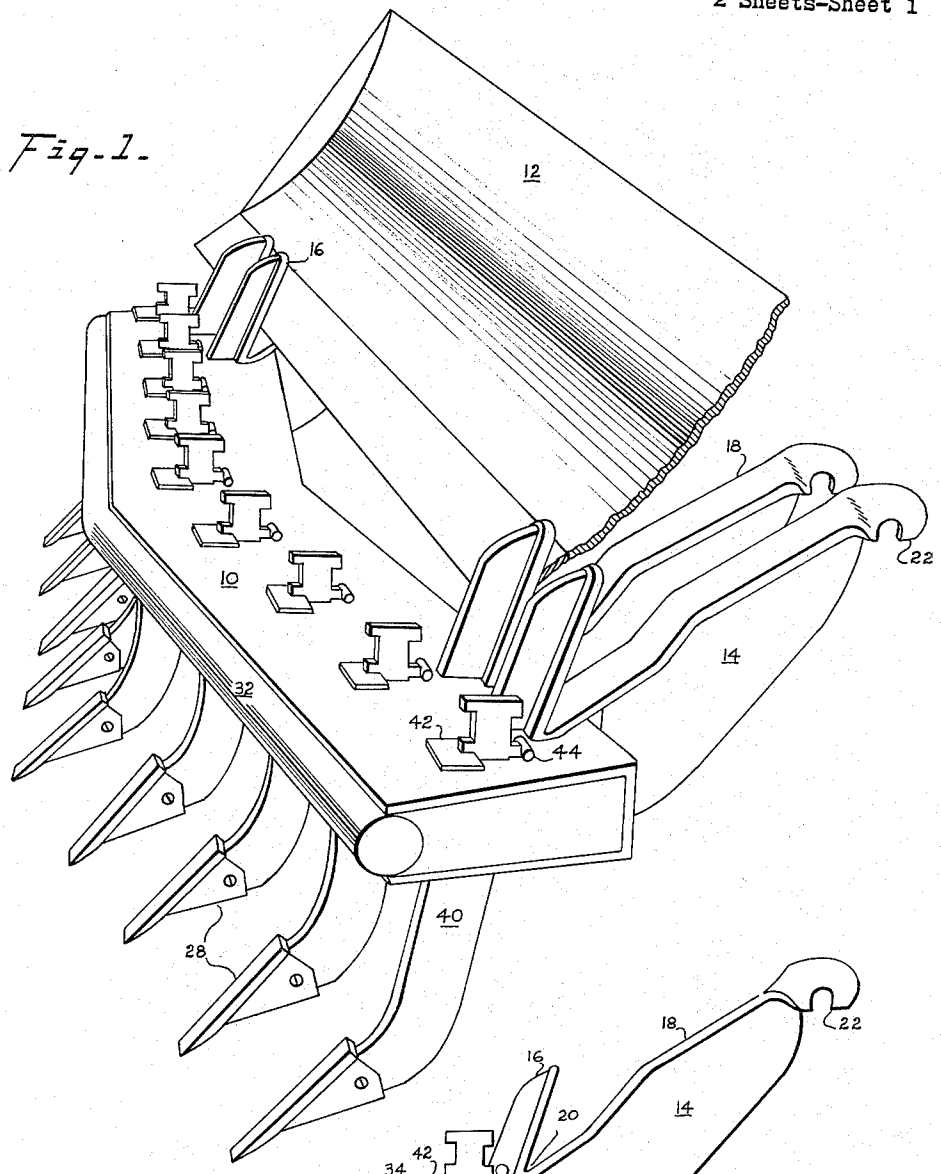
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ATTACHMENT FOR BULLDOZERS

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Fig-1.



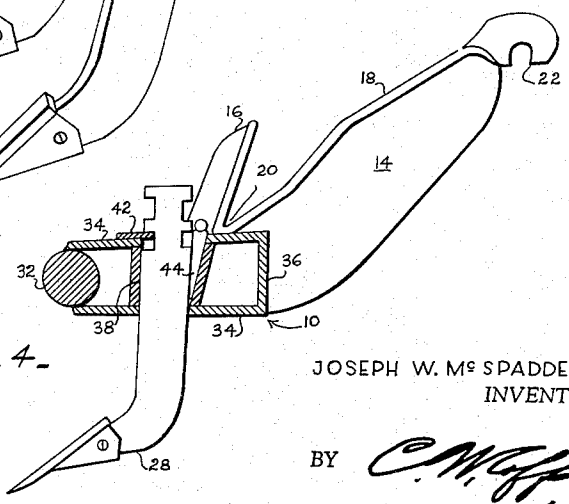


Fig-4.

JOSEPH W. McSPADDEN
INVENTOR.

BY C. M. Coffee
Aty.

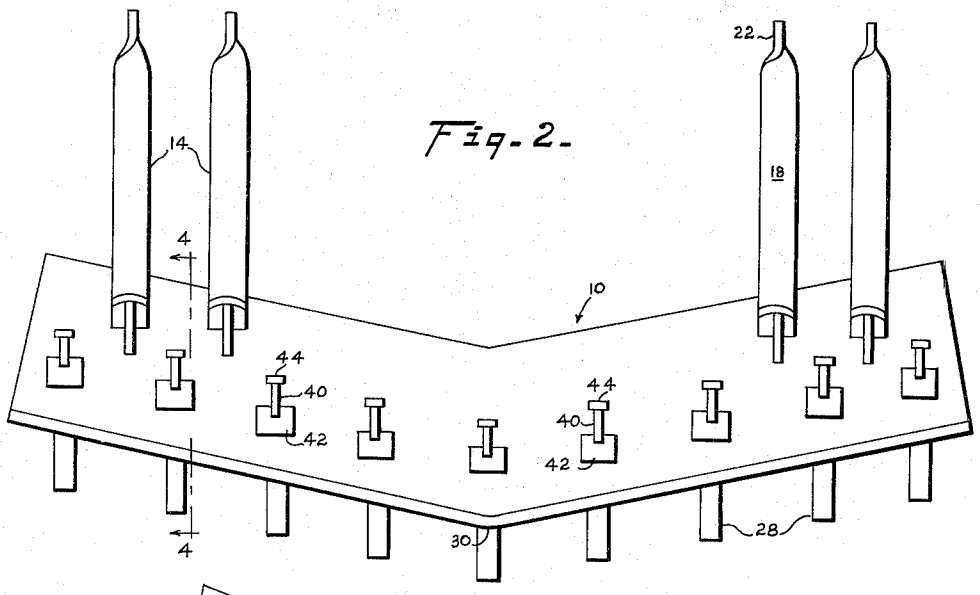
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Fig. 2.



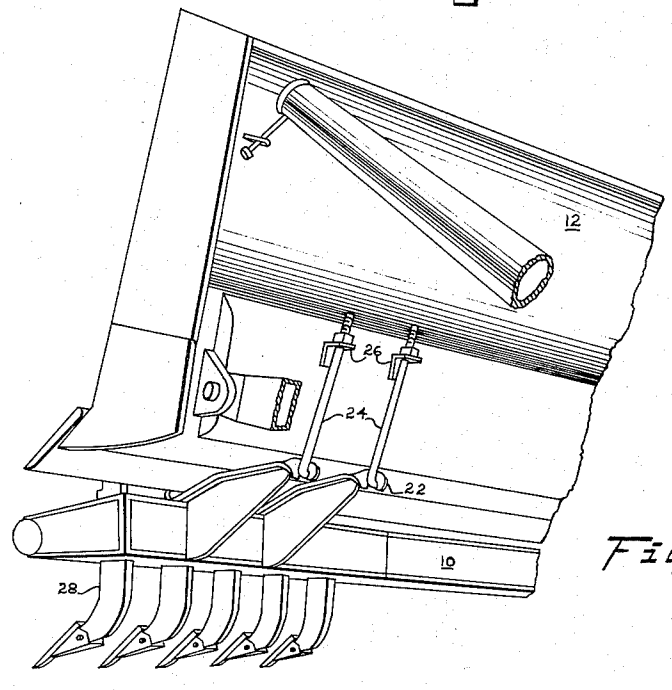


Fig. 3.

JOSEPH W. McSPADDEN
INVENTOR.

BY C. M. Coffee
Atty.

United States Patent Office 2,992,499 Patented July 18, 1961

2,992,499

ATTACHMENT FOR BULLDOZERS

Joseph W. McSpadden, 2706 Dartmouth, Lubbock, Tex., assignor of one-fourth to A. C. Melton, one-fourth to Lewis D. Lane, and one-fourth to Robert S. Gentry, Lubbock, Tex.

Filed Aug. 24, 1959, Ser. No. 835,784
3 Claims. (Cl. 37—145)

This invention pertains to pavement ripping and more particularly to a device for attaching ripping teeth to the bottom of a bulldozer blade.

It has previously been suggested that teeth could be attached to a bulldozer blade in the method disclosed by Hensley in U.S. Patent 2,705,380, issued April 5, 1955. However this has the disadvantage that if a plurality of teeth are to be attached, there must be several individual attachments of several individual elements to the blade. Also it has the disadvantage of the fact that the teeth are in a line of advancement, i.e. each of the teeth breaks up pavement as much as every other tooth. This tends to break the pavement out in large chunks and permit the pavement chunks to ball up in front of the tool.

I have invented an attachment for a bulldozer blade which carries the teeth on a beam. This has the advantage that the teeth may be quickly assembled to the blade. Also my teeth are not in line. They have a V-shaped arrangement in a horizontal plane. One leading tooth begins breaking the pavement; following this on each side and behind the leading tooth are other teeth which break it up. I have found with this arrangement that the pavement is broken in smaller pieces, the pavement tends to pass between the teeth better, and less power is required.

An object of this invention is to provide a simple and expedient method and means for attaching a plurality of teeth to a bulldozer blade.

Another object of this invention is to provide pavement ripping teeth which are arranged in a V-shaped pattern so that the teeth are not on the same line of advancement as the pavement is ripped.

Further objects are to achieve the above with a device that is sturdy, compact, durable, simple, and reliable, yet inexpensive and easy to manufacture.

The specific nature of the invention as well as other objects, uses, and advantages thereof will clearly appear from the following description and from the accompanying drawing, in which:

FIG. 1 is a perspective view of the beam and teeth on the blade.

FIG. 2 is a plan view of the beam and teeth detached from the blade.

FIG. 3 is a partial perspective view of the back of the beam and blade.

FIG. 4 is a cross-sectional view of the beam taken on line 4—4 of FIG. 2.

As seen in the drawings, composite beam **10** is attached below the bulldozer blade **12**.

This attachment is accomplished by four brackets **14**, one of which is located adjacent each end of the beam which extends substantially the length of the blade **12**. The beam lies in a horizontal plane as does the straight bottom edge of the blade. Each bracket lies in a vertical plane parallel to each other and traverse the beam. Each bracket has forward member **16** which angles back from vertical and after member **18**, which angles rearward from vertical at a greater angle than the forward member, thus forming V-shaped notch **20**. The forward and after members are secured to the beam by welding and the vertex of the V is adjacent the beam and all the vertexes aligned.

The forward and after members extend along the forward lower edge and bottom of the blade when in use. Hook **22** is integral with the rear of each after member. J-bolt **24** extends from each hook to lug **26** attached to the back of the blade. Thus to attach the beam and all of teeth **28** carried thereon, the blade is lowered into the aligned V-notches of the four brackets and the four J-bolts attached and tightened.

The beam **10** is V-shaped in a horizontal plane. Center **30** of the beam is about six inches forward of the ends of the beam, the beam being about 80 inches long. The beam has a solid shaft **32** as the forward edge with heavy metal plates **34** welded thereto to form the top and bottom. A third plate **36** is welded between plates **34** to form the back of the composite box beam.

A plurality of rectangular apertures **38** are equal distance from the forward edge of the beam. Vertical shank **40** of each tooth extends upward through one of the apertures. A plurality of fingers **42** are welded to the top of the top plate **34** and extend over each aperture. Each finger fits within a square notch in the forward face of the shank of each tooth and co-operates with wedge **44** to hold the shank in place.

As the teeth **28** are thus secured in apertures **38** which are equal distance from the V-shaped forward edge of the beam, the teeth form a V-shaped pattern in a horizontal plane. The center tooth is first in a line of advancement, each other tooth being to one side and behind an adjacent tooth.

As may be seen, the working portion of each tooth angles forward from the shank like a plow and may be covered by a shoe as is customary in this art.

It will be apparent that the embodiment shown is only exemplary and that various modifications can be made in construction, materials, and arrangement within the scope of the invention as defined in the appended claims.

I claim as my invention:

1. In a pavement ripping attachment for a bulldozer blade having a beam for attachment to the blade and a plurality of teeth depending from the beam, the improvement comprising: a plurality of attachment brackets secured to said beam, each of said attachment brackets lying in a vertical plane transverse to the beam, an attachment bracket located adjacent each end of said beam; each attachment bracket having a notch at the forward edge thereof, the notch being formed by a forward member which angles rearward from the vertical and after member which angles rearward from the vertical at a greater angle than the forward member, thus forming a V-shaped notch, the bottom of all of said notches being aligned so that the lower edge of said bulldozer blade may fit within these notches; and the back of each bracket having a means for attaching a bolt between the bracket and the bulldozer blade; so arranged and constructed that the beam with the plurality of teeth may be attached to the bulldozer blade in a simple and expedient manner.

2. A pavement ripper comprising the combination of: a bulldozer blade, said blade having a straight lower edge, a horizontal beam disposed below the bulldozer blade and extending substantially the length thereof, a plurality of brackets attached to the beam, each of the brackets having a V-notch in the upper surface thereof, said bulldozer blade fitted within said V-notches, the back of each bracket having means for attaching a bolt between the bracket and the bulldozer blade, said beam having a plurality of teeth therein, the tooth at the center being forward of the others, each of the other teeth being arranged so that it is to one side behind an adjacent tooth.

3. A pavement ripper comprising the combination of: a bulldozer blade having a straight lower edge, a composite beam located below said blade, said beam being V-shaped in a horizontal plane, said beam having a solid shaft at the forward edge thereof and welded plates at the top, bottom and back thereof, said beam having a bracket near each end thereof, said bracket having a V-shaped notch on the top thereof, said notch being formed by a forward member which angles rearwardly and fits snugly against the lower forward face of said bulldozer blade, and an after member which angles rearward from the vertical at a greater angle than the forward member and fits the bottom of the bulldozer blade, the after member of each bracket having a hook, a J-bolt extending from the hook on the bracket to bulldozer blade, a lug on the bulldozer blade to which the bolt fits, a plurality of apertures extending through the beam, the apertures being extending vertically through

said beam, said apertures forming a V-shaped pattern in a horizontal plane, a plurality of teeth, each tooth having a shank fitted into one of said apertures, and a plurality of wedges fitting between the shank of the tooth and the back of the aperture to firmly wedge the tooth in place, so arranged and constructed that the teeth lie in a V-shaped pattern and may be easily and expediently attached to the blade.

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