United States Patent

[11] 3,563,608

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[21] Appl. No. **807,359**
[22] Filed **Mar. 14, 1969**
[45] Patented **Feb. 16, 1971**

[54] **RIPPING MACHINE**
5 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **299/37;** 15/93
[51] **Int. Cl.** **E04d 15/00**
[50] **Field of Search** 299/36, 37; 15/93; 254/18, 104

[56] **References Cited**
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ABSTRACT: An attachment for a tractor is provided which is used to thrust along the surface of a deck to break loose and remove old roofing paper from a roof. The machine, in addition to the tractor, consists of a thrust distributor assembly and a fork assembly. The fork is provided with a plurality of tapered teeth to break loose and remove the paper when driven forward by the tractor.

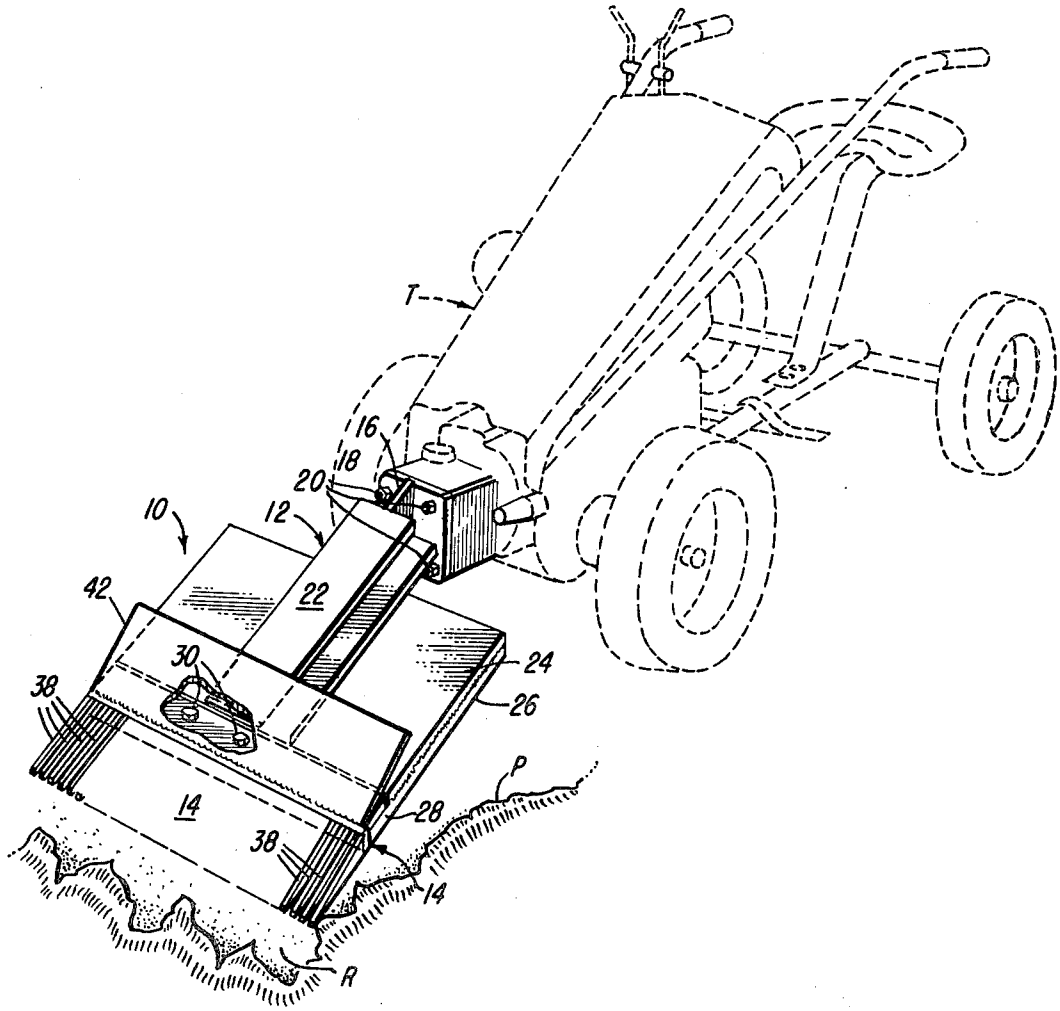


FIG. 4

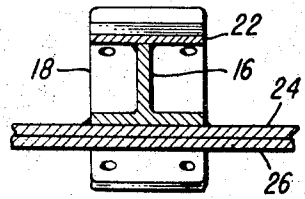
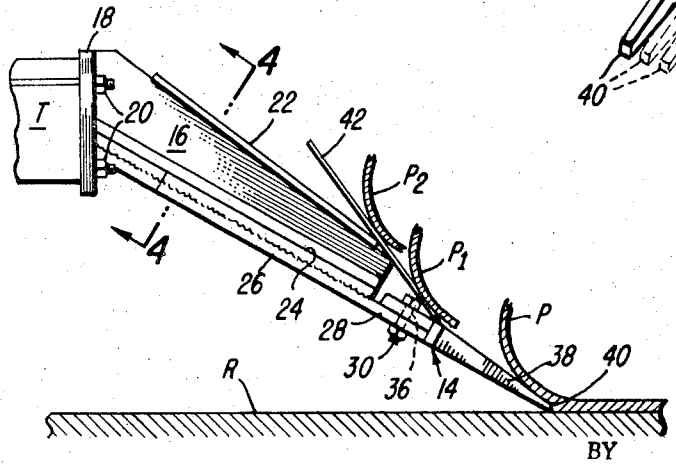


FIG. 1

FIG. 3

FIG. 2



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RIPPING MACHINE

This invention relates generally to surface treating apparatus, and more particularly it pertains to a ripper implement for old surfacing separation and removal.

In the past, ripping of deck covering has been done with chisel bars which were manually thrust under the surfacing to be removed, which was then prized upward to break the bonding. Only small areas could be so removed with each operation and the covering was usually broken into small pieces which cluttered the working area.

With the present invention manual labor is much reduced and larger strokes are possible because of the power assistance.

It is an object of this invention, therefore, to provide an implement for attachment to a tractor for thrusting under and peeling away old surfacing sheet, roofing felts, rigid insulation, an foam glass, and lightweight concrete, and to roofing laid on all types of roof decks, including wood.

Another object of this invention is to provide a toothed implement for ripping sheet which has less tendency to bind than a continuous blade implement.

Still another object of this invention is to provide a simple, strongly reinforced thrusting blade attachment capable of heavy duty service on a tractor.

Other objects and attendant advantages of this invention will become more readily apparent and understood from the following detailed specification and single sheet of drawings in which:

FIG. 1 is a perspective view of a ripping implement arrangement incorporating features of this invention;

FIG. 2 is a side elevation of the implement of FIG. 1;

FIG. 3 is a fragmentary exploded perspective view illustrating the strong abutting feature of the assembly; and

FIG. 4 is a cross section taken on line 4–4 of FIG. 2 and viewed in the direction of the arrows.

Referring now to the details of the invention as shown in FIG. 1, reference numeral 10 indicates generally a ripping machine shown attached to a tractor T. The purpose of this machine 10 is to break the bond of a surface sheet such as roofing paper P from a deck or roof R.

The machine 10, in a typical embodiment comprises a thrust distributor assembly 12 and a fork assembly 14. The thrust assembly 12 is made up of a vertical web T-beam member 16 cut off at an angle at one end and then welded to the center of a coupling plate 18. The latter is suitably drilled for bolts 20 with which it is attached to the front of the tractor T. A flat plate 22 is welded to the web of the T-beam member 16 or optionally the latter may be made from I-beam stock cut away at the top and end as shown in FIGS. 1 and 4.

Two plates 24 and 26 are welded together face-to-face with the upper plate 24 displaced from the lower plate 26 at one edge to form a flange 28 as best shown in FIG. 2. With this

flange 28 remote from the coupling plate 18, the assembly of plates 24 and 26 is welded to the bottom of the member 16.

A fork assembly 14 is mounted with bolts 30 to the flange 28. This assembly 14 consists of a horizontal bar 32 and vertical bar 34 welded together to form an ell as shown best in FIG. 3. Holes 36 are provided for the bolts 30 in both the horizontal bar 32 and the previously mentioned flange 28.

A plurality of forwardly tapered long teeth 38 are welded to the face of bar 34 in spaced relationship. Each tooth 38 has a beveled point 40. A deflector plate 42 is welded to the top edge of bar 34 extending backward over the bolts bolts 30 and a considerable portion of the thrust assembly 12 essentially in continuation with the slope of the tapered teeth 38 as shown in FIG. 2.

In use, the ripping machine 10 is used much in the manner of a snow plow with the tractor T thrusting the points 40 of the teeth between the roof R and the paper P to break the bond therebetween at multiple spaced places and then elevate the loosened paper over the tapered teeth 38 and up the ramplike deflector plate 42 as shown in the successive depiction P, P_1, P_2.

Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

I claim:

1. A deck-covering ripper attachment for tractors and the like, comprising means for separating a covering from a deck at multiple-spaced places, means for distributing thrust to said separating means at said multiple-spaced places, means for thrusting said thrust distributing means, means for deflecting said covering on separation from the deck by said separating means, and separating means including a fork assembly having a plurality of laterally related teeth; said thrust distributing means including a plate member affixed to the fork assembly in the plane of said teeth, a beam member affixed to the plate member and projecting parallel thereto away from said teeth; and a coupling plate affixed angularly to said beam member, said coupling plate having means therein for attachment to a said tractor for thrusting of said attachment by the tractor.

2. A deck-covering ripper attachment as recited in claim 1, wherein said fork assembly includes a transverse bar carrying all said teeth, and said bar is detachably affixed to said plate member.

3. A deck-covering ripper attachment as recited in claim 1, wherein said teeth are tapered on the upper surfaces thereof.

4. A deck-covering ripper attachment as recited in claim 1, wherein said covering deflecting means is affixed to said transverse bar and is detachable therewith from said plate member.

5. A deck-covering ripper attachment as recited in claim 4, wherein a portion of said deflecting means is supported in assembly by contact with said beam member.