United States Patent

Tomanek

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[54] FLOATING CARRIER

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[52] **U.S. Cl.** **172/573,** 172/551

[51] **Int. Cl.** **A01b 21/08**

[58] **Field of Search** 172/551, 573, 574, 575; 111/85, 87, 88

[56] **References Cited**

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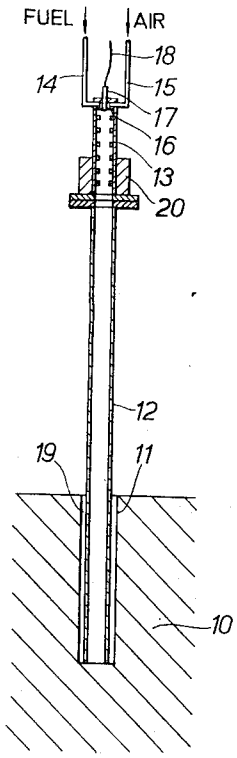
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Primary Examiner—Clyde I. Coughenour

[57] **ABSTRACT**

A frame designed to be hitched to a tractor, the frame supporting a plurality of pairs of bars connected at their one ends pivotally free to the frame, the opposite ends of the bars depending diagonally downwardly and being supported springingly to the frame, and the ends of the bars being adaptable to support a large rotary hoe.

1 Claims, 2 Drawing Figures



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Fig. 1

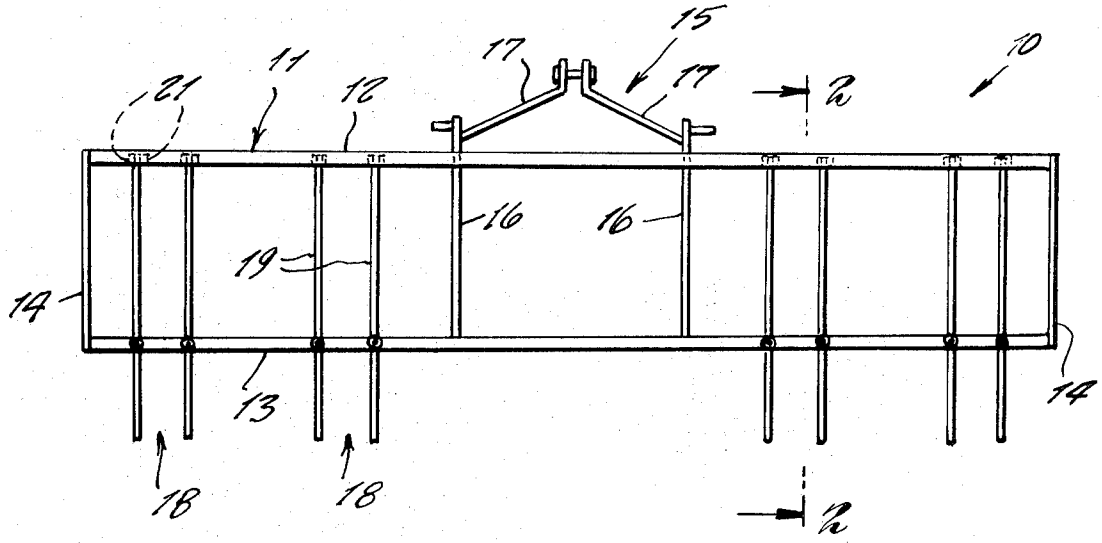
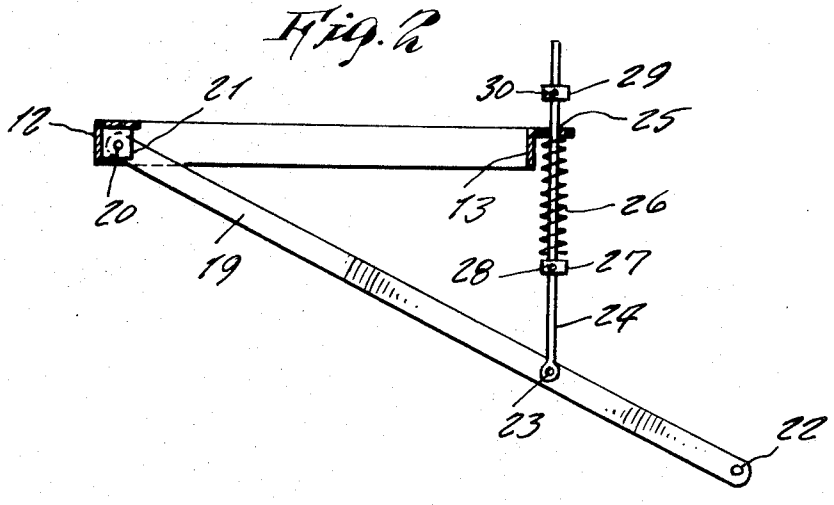


Fig. 2



INVENTOR

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FLOATING CARRIER

This invention relates generally to agricultural equipment.

A principle object of the present invention is to provide a carrier comprising a frame which allows each individual rotary hoe to work on independent spring tension.

Another object of the present invention is to provide a carrier wherein each individual rotary hoe working on spring tension thus is allowed to perform its full function of breaking up the crust and still not effect the underlayer of the earth.

Still a further object of the present invention is to provide a floating carrier wherein flexibility permit each row to work near the same depth even when the rows are uneven in depth.

Other objects of the present invention are to provide a floating carrier which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a top plan view of a floating carrier incorporating the present invention, and

FIG. 2 is a side cross-sectional view taken on the line 2—2 of FIG. 1 and shown relatively enlarged.

Referring now to the drawing in detail, the reference numeral **10** represents a floating carrier according to the present invention wherein there is a frame **11** of generally rectangular configuration and wherein there are a front beam **12** and a rear beam **13** in parallel spaced-apart relation thereto, the front and rear beams each being made of 3-inch angle iron and being 13 feet 10 inches in length.

The opposite ends of the front and rear beams **12** and **13** are enjoined by a ½ by 3-inch flat iron **14**. The members **12**, **13** and **14** are rigidly welded together into a unitary structure, as shown in FIG. **1**.

A hitch structure **15** extends forwardly of the front beam **12**, the hitching structure **15** including a pair of 3-inch by 24-inch-angle irons **16** together with pins welded to the front beam, and a pair of ½ by 3-inch flat irons welded to the angle iron near the pin so to extend upwardly 19 inches, as shown at **17**.

The frame **11** supports a plurality of sets **18** each set **18** being comprised of a pair of bars **19**, each of the bars **19** being supported pivotally free at their one ends about a pin **20** supported between a pair of blocks **21**, the blocks being welded to the front beam **12**, as shown in FIG. **2** of the drawing.

Each of the pair of blocks **21** is dimensioned 2½ by 2½ inch by ½-inch thick. The blocks are spaced apart so that the end of the bar **19** is fitted there between, the bar **19** several inches thick and measuring 2 inches in width by 32 inches in length, the bar **19** being made of flat iron.

The freely depending end of the bars **19** are provided with an opening **22** transversely therethrough so that a rotary hoe may be individually supported by each bar **19**.

Intermediate the opposite ends of the bar **19**, a pin **23** is secured thereto, the pin **23** being fitted with a bushing, and the bushing being fitted into an eye formed at the lower end of a vertically depending rod **24**.

The upper portion of the rod **24** extends through an opening **25** formed in the rear beam **13**, and a compression coil spring **26** is fitted around the rod **24** and positioned below the rear beam **13** so that the upper end of the spring bears there against. The lower end of the spring **26** bears against a lower collar **27** secured by a setscrew **28** or the like to the rod **24**.

Another collar **29** is secured by means of a setscrew **30** to the upper portion of the rod **24** which extends upwardly of the rear beam **13**.

In operative use, the frame will allow each individual rotary hoe to work on spring tension. This lets each rotary hoe to perform its full function of breaking up the crust and still not effecting the material below. The flexible frame lets each row to work near the same depth even when the rows are uneven in depth.

What I now claim is:

1. In a floating carrier, the combination of a frame, means for hitching said frame to a tractor, and said frame supporting a plurality of bars, each of said bars being individually spring loaded, each of said bars supporting a rotary hoe, said spring-loaded bars each letting said rotary hoe to perform its full function of breaking up earth crust, said frame comprising a rectangular member having a pair of parallel spaced-apart front and rear beams made of angle iron, the opposite ends of said angle irons being enjoined to a pair of side flat irons welded there to, and said means for hitching to said tractor comprising a pair of forwardly extending angle irons supporting a pair of flat irons so to form a hitch extending forwardly of said rectangular frame, each one of said bars comprising one of a pair of bars forming a set, a space between said sets that is larger than a space between said bars within each set, said frame-supporting a plurality of said sets, each of said bars being attached pivotally free at its one end to a transverse extending pin supported between a pair of blocks affixed to said forward beam of said frame, said beam extending diagonally rearwardly down from said supporting pin, a rear end of said bar having an opening transversely there through for securement of said rotary hoe there to, and an intermediate portion of said bar having a pin secured there to, said pin being fitted into a bushing supported at a lower end of a rod provided with an eye at the lower end thereof, said rod extending vertically upwardly through an opening through said rear beam, a compression coil spring being positioned under said rear beam and fitted around said rod so that an upper end of said spring bears against the under side of said rear beam, a lower end of said spring bearing against a lower collar secured by a setscrew around said rod, and an upper collar being secured by a set screw to an upper portion of said rod extending upwardly of said rear beam.

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