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- [54] **WIRE MESH DISPENSING APPARATUS AND METHOD**
3 Claims, 5 Drawing Figs.

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[56]

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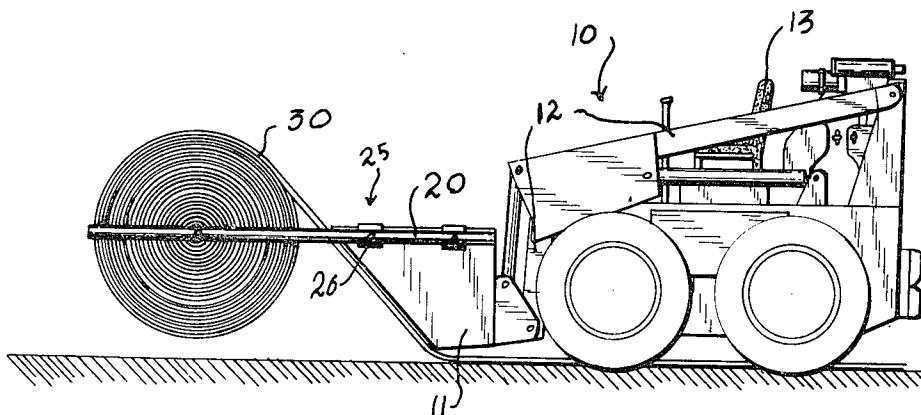
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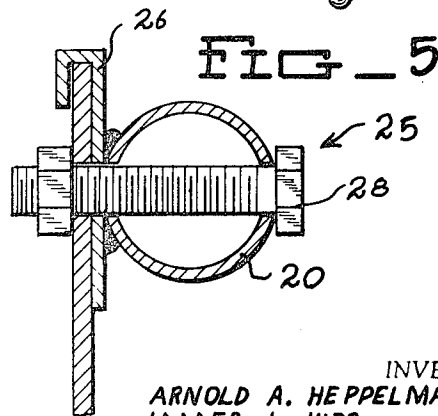
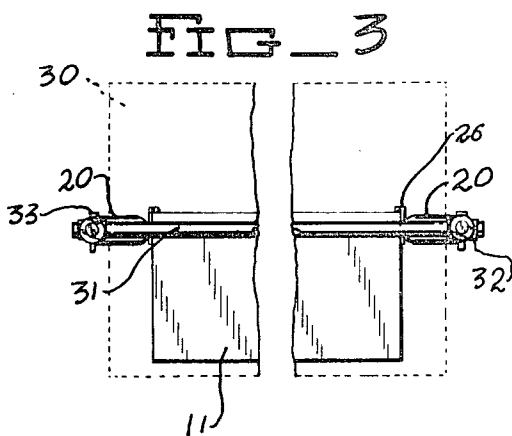
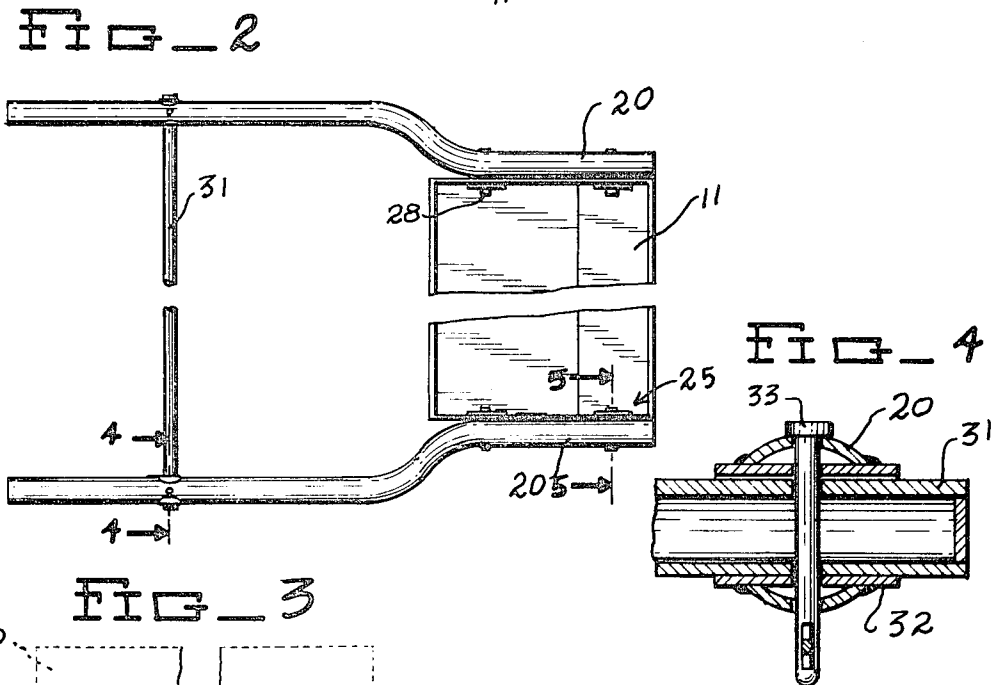
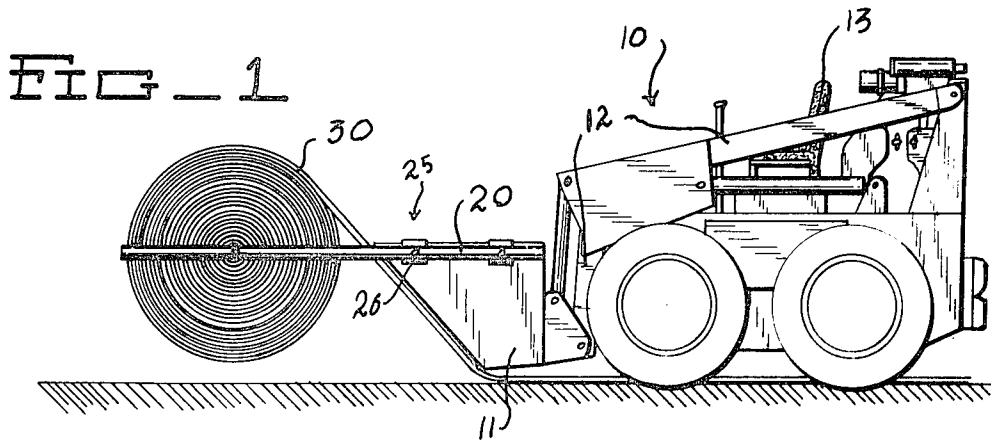
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ABSTRACT: Dispenser apparatus mountable on the bucket of a front end loader for holding a roll of reinforcing wire mesh so that it will unroll in a direction opposite to the direction of movement beneath the loader as the loader is propelled thereover.





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WIRE MESH DISPENSING APPARATUS AND METHOD

BACKGROUND OF THE INVENTION

1. Field of the Invention

Reinforcing wire mesh is utilized in substantially all concrete construction, such as roads and the like. This wire mesh is relatively heavy and difficult to handle. Further, because the wire mesh is provided in relatively large rolls, when the roll of wire mesh is unwound the wire mesh as a memory or tendency to return to the rolled condition. This memory in the wire mesh greatly complicates the correct positioning thereof.

2. Description of the Prior Art

In the prior art many types of devices and apparatus have been constructed for the dispensing or positioning of wire mesh. In general, these devices and apparatus include mechanism for mounting a roll of wire mesh behind a vehicle whereupon one end of the wire mesh is held fixedly in position and the vehicle is propelled in a forward direction to unroll the wire mesh. These devices and apparatus are unsatisfactory because it is difficult to anchor one end of the wire mesh while the remainder is unrolled, it is difficult to correctly position the wire mesh when it is attached behind the vehicle and generally out of the line of sight of the operator, and the wire mesh has tendency to return to the rolled position because of the memory therein.

SUMMARY OF THE INVENTION

The present invention pertains to apparatus and a method of affixing a roll of reinforcing wire mesh to a vehicle and dispensing the wire mesh beneath the vehicle as it is propelled over the surface so that the position of the wire mesh and the movement of the vehicle thereover substantially eliminate the tendency of the wire mesh to reassume a rolled position.

It is an object of the present invention to provide improved apparatus for dispensing reinforcing wire mesh and the like.

It is further object of the present invention to provide improved apparatus adapted to be connected to the bucket of a front end loader for dispensing wire mesh and the like.

It is a further object of the present invention to provide a new method of dispensing a roll of reinforcing wire mesh so that the tendency of the wire mesh to reassume a rolled position is substantially eliminated.

These and other objects of this invention will become apparent to those skilled in the art upon consideration of the accompanying specification, claims and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Referring to the drawings, wherein like characters indicate like parts throughout the figures:

FIG. 1 is a view in side elevation of the present dispensing apparatus affixed to the bucket of a front end loader with a roll of wire mesh positioned therein;

FIG. 2 is an enlarged view in top plan of the apparatus illustrated in FIG. 1, portions thereof broken away and the roll of wire mesh removed;

FIG. 3 is an enlarged view in front elevation of the apparatus illustrated in FIG. 1, portions thereof broken away;

FIG. 4 is an enlarged sectional view as seen from the line 4—4 in FIG. 2; and

FIG. 5 is an enlarged sectional view as seen from the line 5—5 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the figures, the numeral 10 generally designates a vehicle commonly referred to as a front end loader. While many other types of vehicles can be utilized in connection with the present apparatus and method, the front end loader 10 is illustrated in the preferred embodiment because of its many advantages, all of which will become apparent presently. The front end loader 10 has a bucket 11 mounted at the front end thereof by means of hydraulically

movable arms 12. Operation of the hydraulic mechanism affixed to the arms 12 produces generally vertical movements of the bucket 11. An operator's seat 13 is provided on the front end loader 10 so that an operator of the front end loader can have a clear unobstructed view of the bucket 11.

A tubular elongated support member 20 is connected to each side of the bucket 11 in generally parallel forwardly extending relationship by affixing means generally designated 25. The affixing means 25 includes two plates 26 fixedly attached to each of the elongated support members 20 in spaced-apart relationship so that the rearmost end of each of the elongated support members 20 generally coincides with the rear of the bucket 11 and the plates 26 are adjacent the front and rear edges of the bucket 11. The upper edge of each of the plates 26 has a generally U-shaped flange integrally attached thereto which extends inwardly and downwardly to engage the upper edge of the bucket 11 therein. The plates 26 are fixedly attached to the support members 20 by some convenient means such as welding or the like. Horizontally extending holes are formed through the support members 20 and the plates 26 and holes are formed in the bucket 11 adjacent the upper edges thereof which are axially aligned with the holes through the support members 20 and the plates 26 when the support members 20 are correctly positioned. Bolts 28 are engaged through the holes in the support members 20, plates 26 and bucket 11 to hold the support members fixedly in the desired position.

The elongated support members 20 are formed with diverging curves adjacent the forward end of the bucket 11 so that the forwardmost ends thereof are spaced apart a distance sufficient to receive a roll 30 of reinforcing wire mesh or the like. Adjacent the forwardmost ends of the elongated support members 20 a spindle is formed by extending a rod 31 between the support members 20. Referring specifically to FIG. 4 an opening is formed transversely through each of the support members 20 and a tubular insert 32 is fixedly engaged therein by some convenient means such as welding or the like. The inner diameter of each of the inserts 32 is slightly larger than the outer diameter of the rod 31 and the inserts 32 in each of the support members 20 are axially aligned so that the rod 31 may be inserted easily therethrough. Generally vertical holes are provided through the support members 20, inserts 32 and rod 31 so that a locking pin 33 can be inserted therethrough to maintain the rod 31 correctly positioned.

In the operation of the present apparatus the support members 20 are affixed to the bucket 11 with the locking pins 33 and rod 31 removed therefrom. The front end loader 10 and bucket 11 are manipulated so that a roll of reinforcing wire mesh 30 is correctly positioned between the support members 20. It should be noted that correct positioning of the roll 30 includes not only the axial orientation thereof but the direction in which it is rolled. Referring to FIG. 1, when the roll 30 is correctly positioned it is oriented so that the roll 30 encircles the rod 31 in a generally clockwise spiral with the free outer end thereof extending generally toward the loader 10 and downwardly past the bucket 11. With the roll 30 correctly positioned between the support members 20, the rod 31 is inserted through the inserts 32 and the center of the roll 30 and fixedly pinned in this position by the locking pins 33. The bucket 11 is then raised slightly so that the roll 30 is spaced from the surface of the ground.

With the roll 30 rotatably mounted on the spindle or rod 31 the loader 10 is propelled to the position at which the wire mesh is to be utilized. The roll 30 is then unrolled sufficiently so that the free end thereof passes angularly downwardly past the bucket 11 and beneath the wheels of the loader 10 (as shown in FIG. 1). With the free end of the roll 30 firmly anchored beneath the wheels of the loader 10 the loader 10 is propelled in a forward direction and the wire mesh is stretched out in the desired position. Because the loader 10 is traveling in a forward direction the operator in the seat 13 can accurately position the wire mesh as the loader 10 is propelled forwardly. As the loader 10 is propelled in a forward direction

the roll 30 unrolls beneath the loader 10 and rotates in a direction generally opposite to the rotary direction of the wheels of the loader. That is, the wire mesh is unrolled so that it lies on the ground in a position that counteracts the tendency of the wire mesh to reassume a rolled position. Further, the movement of the loader 10 over the wire mesh as the roll 30 unrolls eliminates much of the memory or tendency of the wire mesh to reassume the rolled position. Thus, the present apparatus and method dispense rolls of wire mesh accurately and easily while substantially eliminating the tendency of the wire mesh to reassume a rolled position.

What is claimed is:

1. A front end loader adapted to dispense reinforcing wire mesh and the like comprising:
 - a. a front end loader having a generally vertically movable bucket affixed to the front end thereof;
 - b. a pair of elongated support members;
 - c. means connected to said support members and affixing said support members to both sides of said bucket so as to extend forwardly from said bucket;
 - d. said support members lying in a substantially horizontal plane and diverging sufficiently to allow the insertion of a roll of reinforcing wire mesh axially therebetween;
 - e. a spindle for receiving a rotatably mounted roll of reinforcing wire mesh thereon mounted between said support members adjacent the forwardly extending ends thereof; and
 - f. a roll of reinforcing wire mesh rotatably mounted on said spindle with the free end thereof extending rearwardly

from the top of the roll, under said bucket and the wheels of said loader.

2. Dispensing apparatus as set forth in claim 1 wherein the affixing means include a plurality of plates fixedly connected to the inwardly directed portions of the support members, each of said plates having an inwardly directed U-shaped flange along an upper edge thereof engaging the upwardly directed edges of the bucket.

3. A method of dispensing a roll of reinforcing wire mesh comprising the steps of:

- a. affixing a frame mounting a removable spindle to the bucket of a front end loader so that the spindle is spaced forwardly of the bucket;
- b. manipulating the vertical height of the bucket and the position of the loader to position the roll on the spindle in a rotatable position spaced from the ground and further oriented so that unrolling action produces rotary movement of the roll in a direction generally opposite to the rotary direction of the wheels of the loader;
- c. unrolling a sufficient amount of the reinforcing wire mesh to move the loader thereon; and
- d. propelling the loader in a forward direction longitudinally along the reinforcing wire mesh to unroll the roll and cause the loader to travel over substantially the entire length thereof, the position of the wire mesh and the movement of the loader thereover substantially eliminating the tendency of the wire mesh to reassume a rolled position.

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