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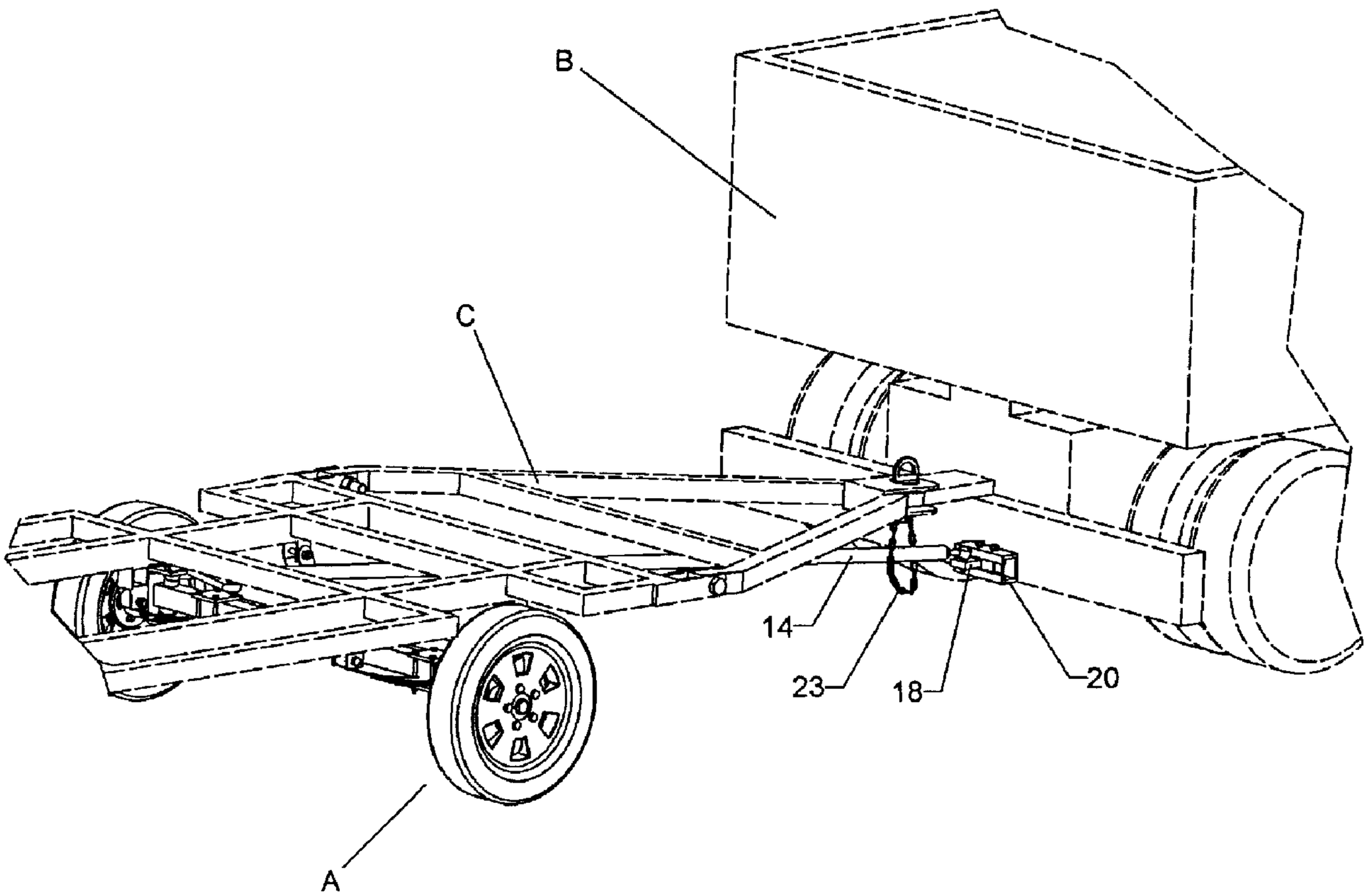
(54) Title: STEERABLE TRAILER ASSEMBLY



(57) Abrégé/Abstract:
A system for trailer mounted to bumper of a towing vehicle, which allows the directional movement of the wheels, and which the system comprising: - means for connecting system to the steerable wheels of the trailer; - means for fixing system to bumper of the towing vehicle; and - means for driving the steerable wheels in the same direction as the towing vehicle. The means for driving the steerable wheels in the same direction as the towing vehicle, resulting that the bumper applies a pressure against the extending arm for turning the steerable wheels of the trailer.

ABSTRACT OF THE DISCLOSURE

A system for trailer mounted to bumper of a towing vehicle, which allows the directional movement of the wheels, and which the system comprising:

- means for connecting system to the steerable wheels of the trailer;
- means for fixing system to bumper of the towing vehicle; and
- means for driving the steerable wheels in the same direction as the towing vehicle.

The means for driving the steerable wheels in the same direction as the towing vehicle, resulting that the bumper applies a pressure against the extending arm for turning the steerable wheels of the trailer.

Steerable trailer assembly

BACKGROUND OF THE INVENTION

Field of the invention:

This invention relates to steerable trailers and more particularly to a system that allows the directional movement of the wheels.

Description of the related art:

A search of prior art records has unveiled the following patents:

1. CA 1,042,939 issued in 1978 to Wade; and

2. CA 2,152,245 registered in 1995 to Chagnon;

A great difficulty in the operation of articulated vehicles is control the steerable wheels of trailer. Divers of large trailer vehicles develop a high degree of skill only after training and substantial driving experience.

Summary of the invention:

In accordance with the teachings of the present invention, there is disclosed a system for trailer mounted to bumper of a towing vehicle, which the system allows the directional movement of the wheels, and which the system comprising:

- means for connecting system to the steerable wheels of the trailer;

- means for fixing system to bumper of the towing vehicle; and

- means for driving the steerable wheels in the same direction as the towing vehicle.

The system includes a body member that is fixed by the use of bolts to bumper of the towing vehicle so as to engage a part member being connected to one first end of an extending arm, and of which the second end of the extending arm is connected to a part member welded to a first camber angle.

Again, a first end of an elongated rod is connected to the first camber angle, and of which the second end of the elongated rod is connected to a second camber angle.

Since again, each end of a bar is joined by a smaller connecting rod and fixed by a bolt and nut to each camber angle being engaged to a hub wheel connected to a directional wheel being fixed thereby a plurality of connecting bolts.

And finally, when the towing vehicle turns to the left or right, the bumper applies a pressure against the extending arm for turning the steerable wheels of the trailer in the same direction as the towing vehicle.

Brief description of the several views of the drawing(s):

Having thus generally described the nature of the present invention,

reference will now be made to the accompanying drawings, showing by way of illustration a preferred embodiment thereof and in which:

Figure 1 is a view showing the system for trailer being fixed to bumper of a towing vehicle and attached to trailer hitch assembled to towing vehicle;

Figure 2 is a top view of the system for trailer allowing the directional movement of the wheels;

Figure 3a is a view showing the wheels turning to the right of the trailer and the position arm;

Figure 3b is a view showing the wheels in straight line and the position arm;

Figure 3c is a view showing the wheels turning to the left of the trailer and the position arm; and

Figure 4 is an exploded view showing the components en position for assembly.

Detailed description of the invention:

Now referring to the accompanyings drawings, and in particular to figures 1 to 4, there is shown a system for trailer (C) mounted to bumper of a towing vehicle (B), and which allows the directional movement of the wheels (A).

The system includes a body member (20) which is fixed by the use of bolts (22) to bumper of the towing vehicle -as shown in phantom lines- so as

to engage a part member (21) being connected to one first end of an extending arm (14) by a fastening means (17) therethrough hole (18) and fixed thereby a nut (19). The second end of the extending arm (14) is connected by a fastening means (16) therethrough hole formed thereon a part member (15) and fixed thereby a nut, and of which the part member (15) is welded to a first camber angle (4). A first end of an elongated rod (10) is connected by a fastening means (11) therethrough hole formed thereon a part member (9) and fixed thereby a nut, and of which the part member (9) is fixed to the first camber angle (4). The second end of the elongated rod (10) is connected by a fastening means (12) therethrough hole formed thereon a part member (13) and fixed thereby a nut, and of which the part member (13) is fixed to a second camber angle (4). Again, each end of a bar (1) is joined by a smaller connecting rod (3) and fixed by a bolt and nut to each camber angle (4) being engaged to a hub wheel (8) connected to a directional wheel (A) being fixed thereby a plurality of connecting bolts (24).

And finally, when the towing vehicle (B) turns to the left or right, the bumper applies a pressure against the extending arm (14) for turning the steerable wheels (A) of the trailer (C) in the same direction as the towing

vehicle (B).

Accordingly, while the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made in the invention and the appended claims are intended to cover all such modifications which may fall within the spirit and scope of the invention.

CLAIM(S):

The embodiments of the invention for which an exclusive property or privilege is claimed, are defined as follows:

1. A system for trailer mounted to bumper of a towing vehicle, which allows the directional movement of the wheels, and which said system comprising:

- means for connecting system to the steerable wheels of the trailer;

- means for fixing system to bumper of the towing vehicle; and

- means for driving the steerable wheels in the same direction as the towing vehicle.

2. The system according to claim **1**, includes a body member (20) which is fixed by bolts (22) to bumper of the towing vehicle so as to engage a part member (21) being connected to one first end of an extending arm (14) by a fastening means (17) therethrough hole (18) and fixed thereby a nut (19).

3. The system according to claim **1**, wherein the second end of said extending arm (14) is connected by a fastening means (16) therethrough hole formed thereon a part member (15) and fixed thereby a nut.

4. The system according to claim **1**, wherein said part member (15) is welded to a first camber angle (4).

5. The system according to claim **1**, wherein a first end of an elongated rod (10) is connected by a fastening means (11) therethrough hole formed thereon a part member (9) and fixed thereby a nut.

6. The system according to claim **1**, wherein said part member (9) is fixed to the first camber angle (4).

7. The system according to claim **1**, wherein the second end of said elongated rod (10) is connected by a fastening means (12) therethrough hole formed thereon a part member (13) and fixed thereby a nut.

8. The system according to claim **1**, wherein said part member (13) is fixed to a second camber angle (4).

9. The system according to claim **1**, wherein each end of a bar (1) is joined by a smaller connecting rod (3) and fixed by a bolt and nut to each camber angle (4) being engaged to a hub wheel (8) connected to a directional wheel being fixed thereby a plurality of connecting bolts (24).

10. The means for driving the steerable wheels according to claim **1**, resulting that the bumper of the towing vehicle applies a pressure against the extending arm (14) for turning the steerable wheels of the trailer in the same direction as the towing vehicle.

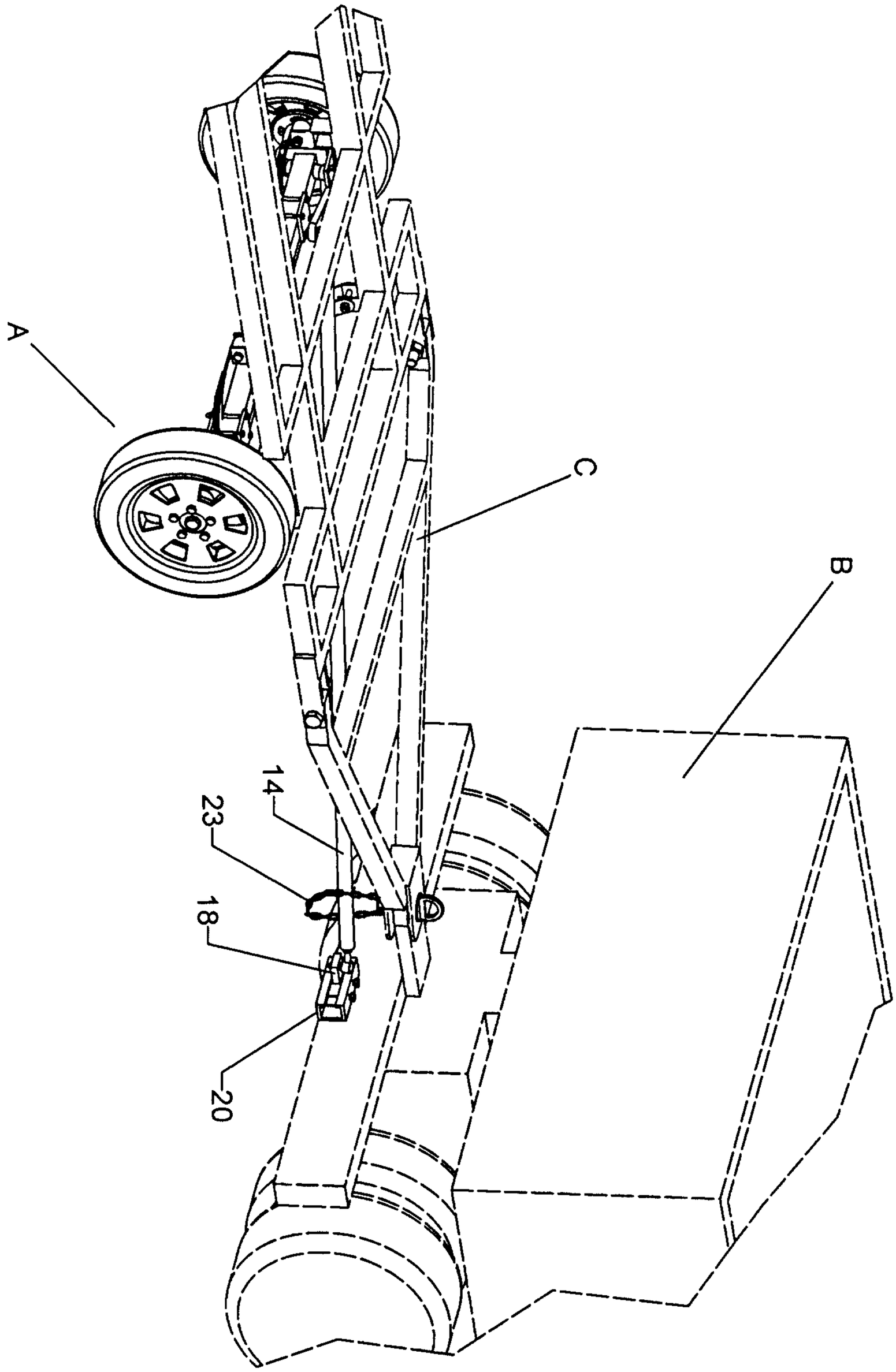


Fig. 1

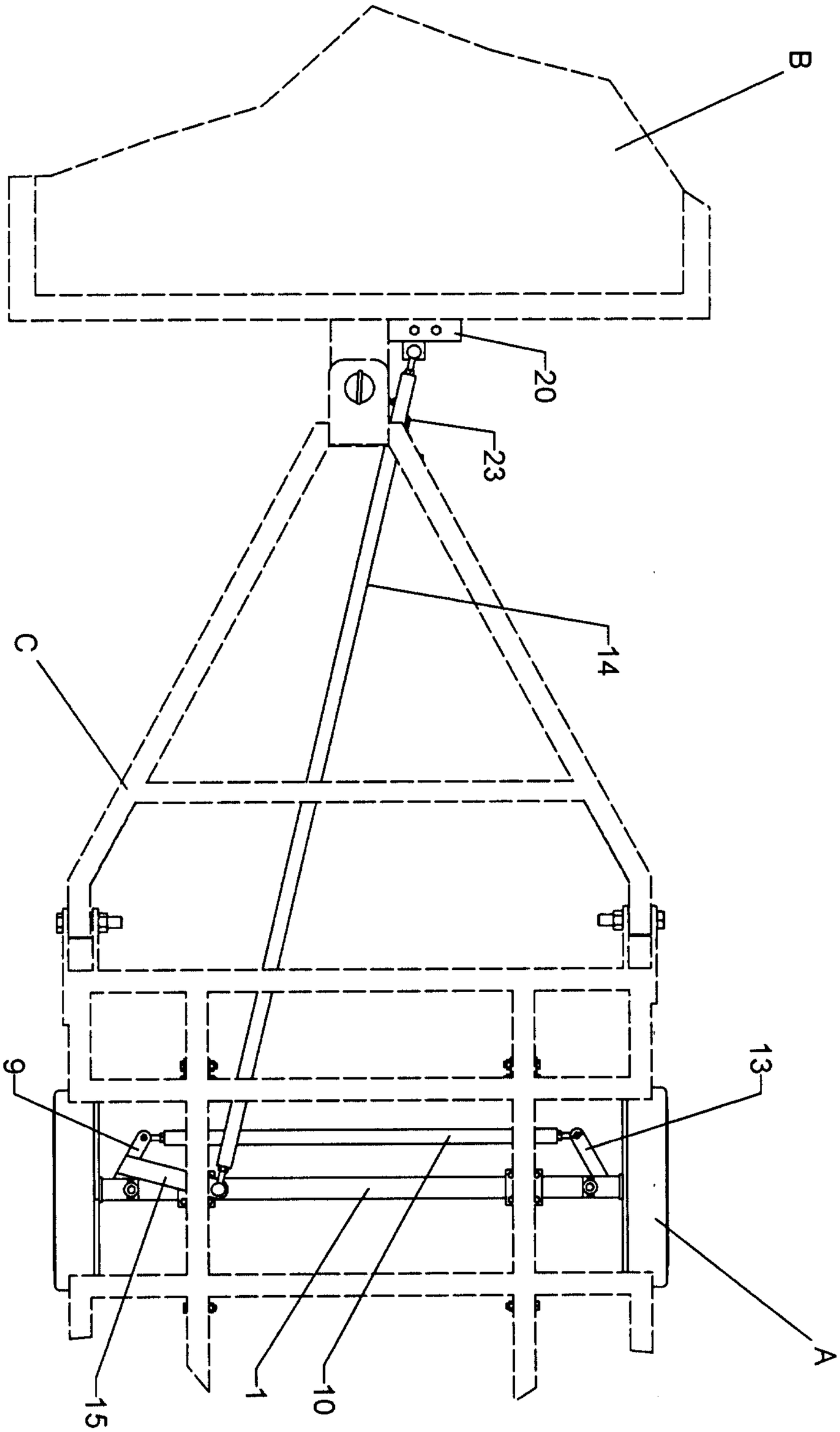
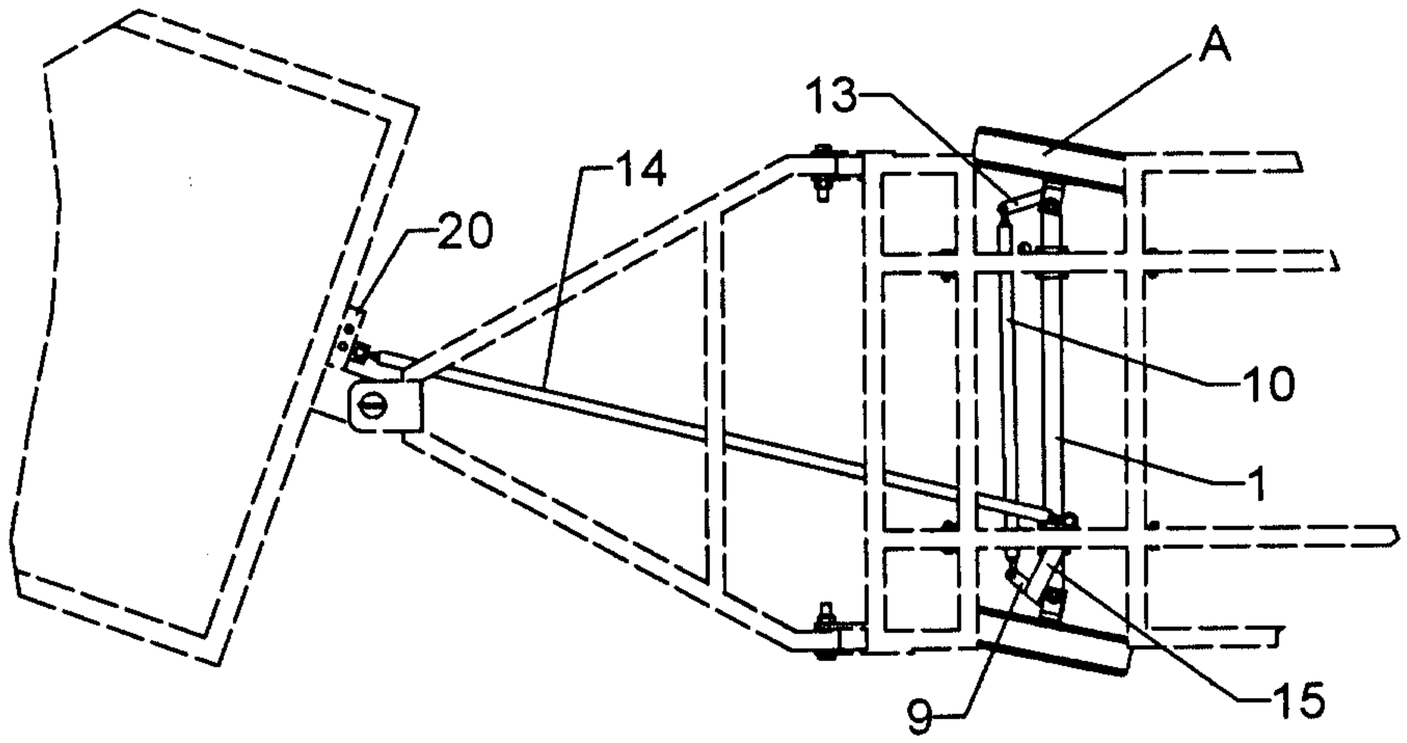
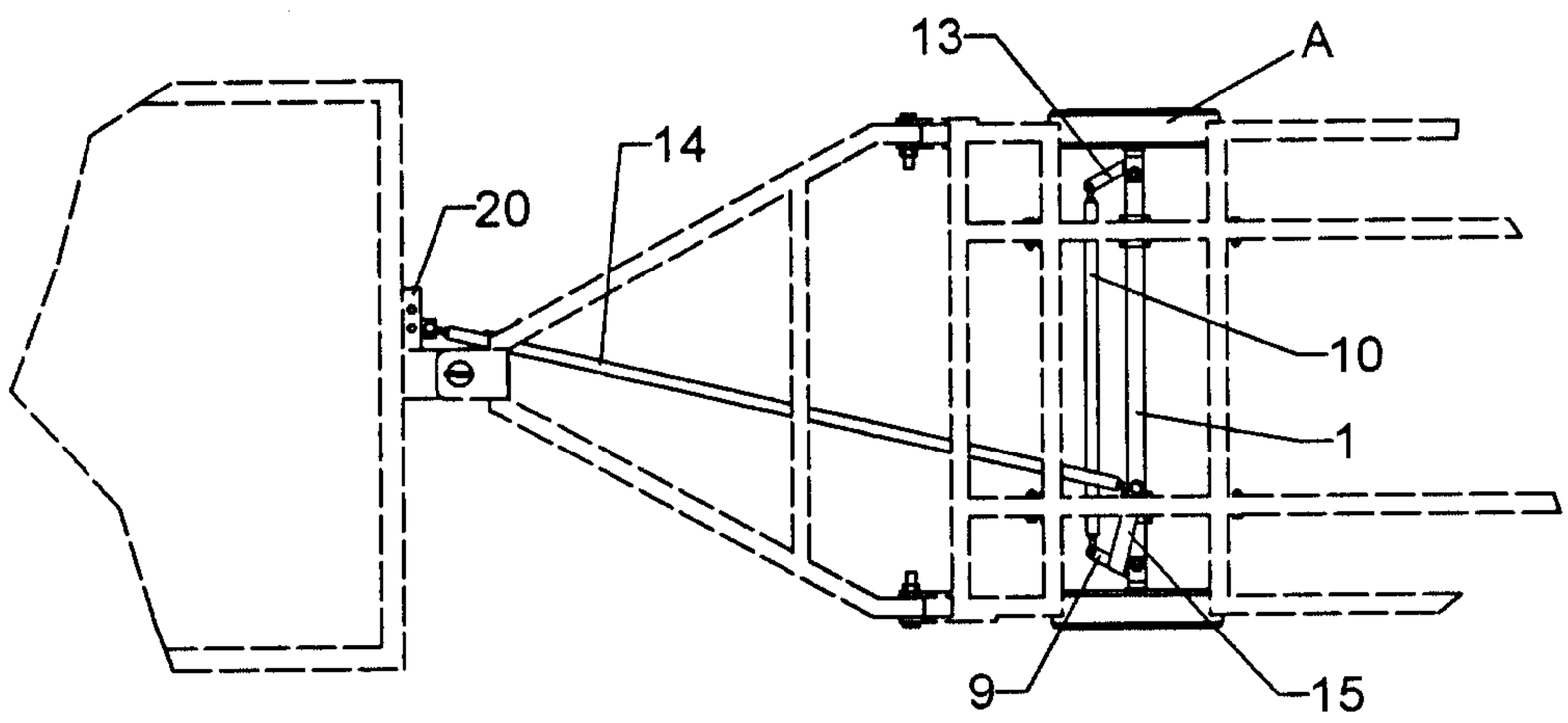


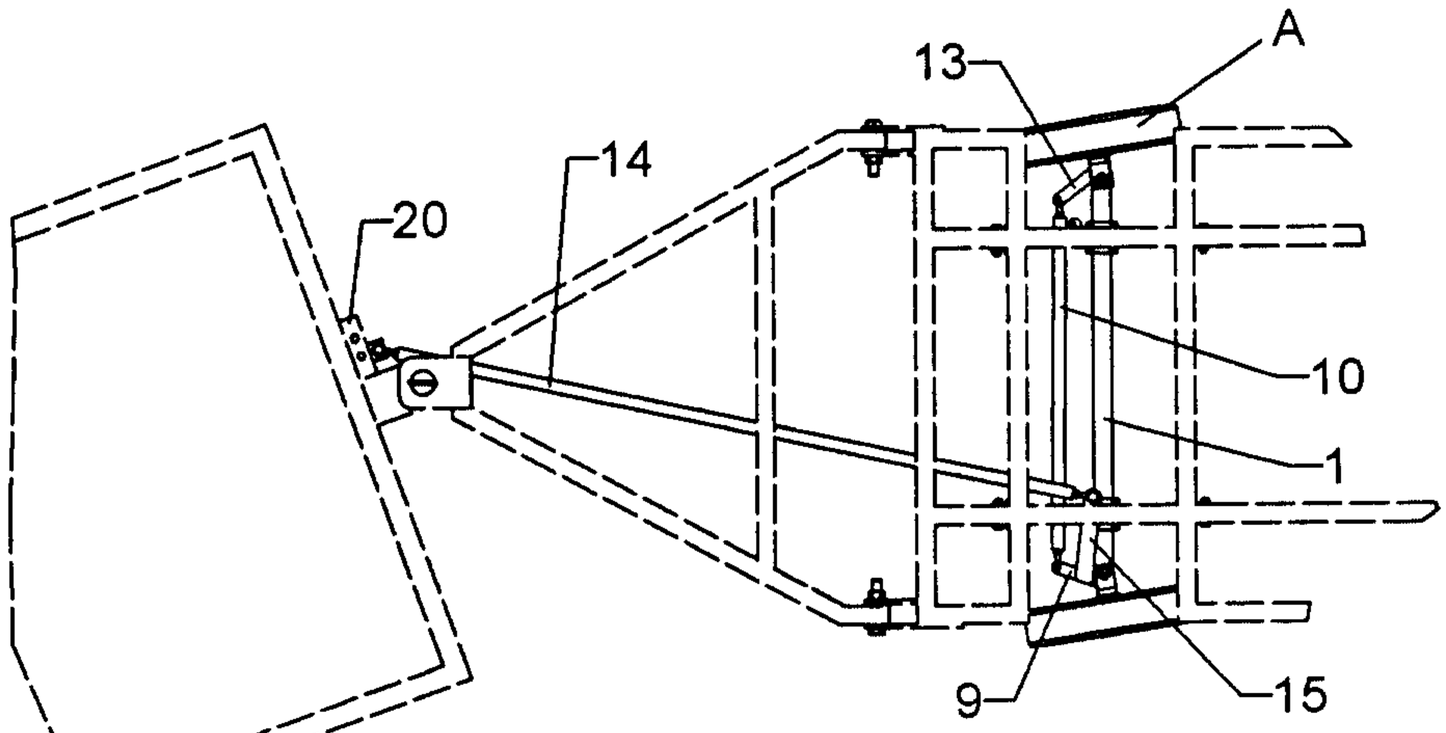
Fig. 2



Flg. 3a



Flg. 3b



Flg. 3c

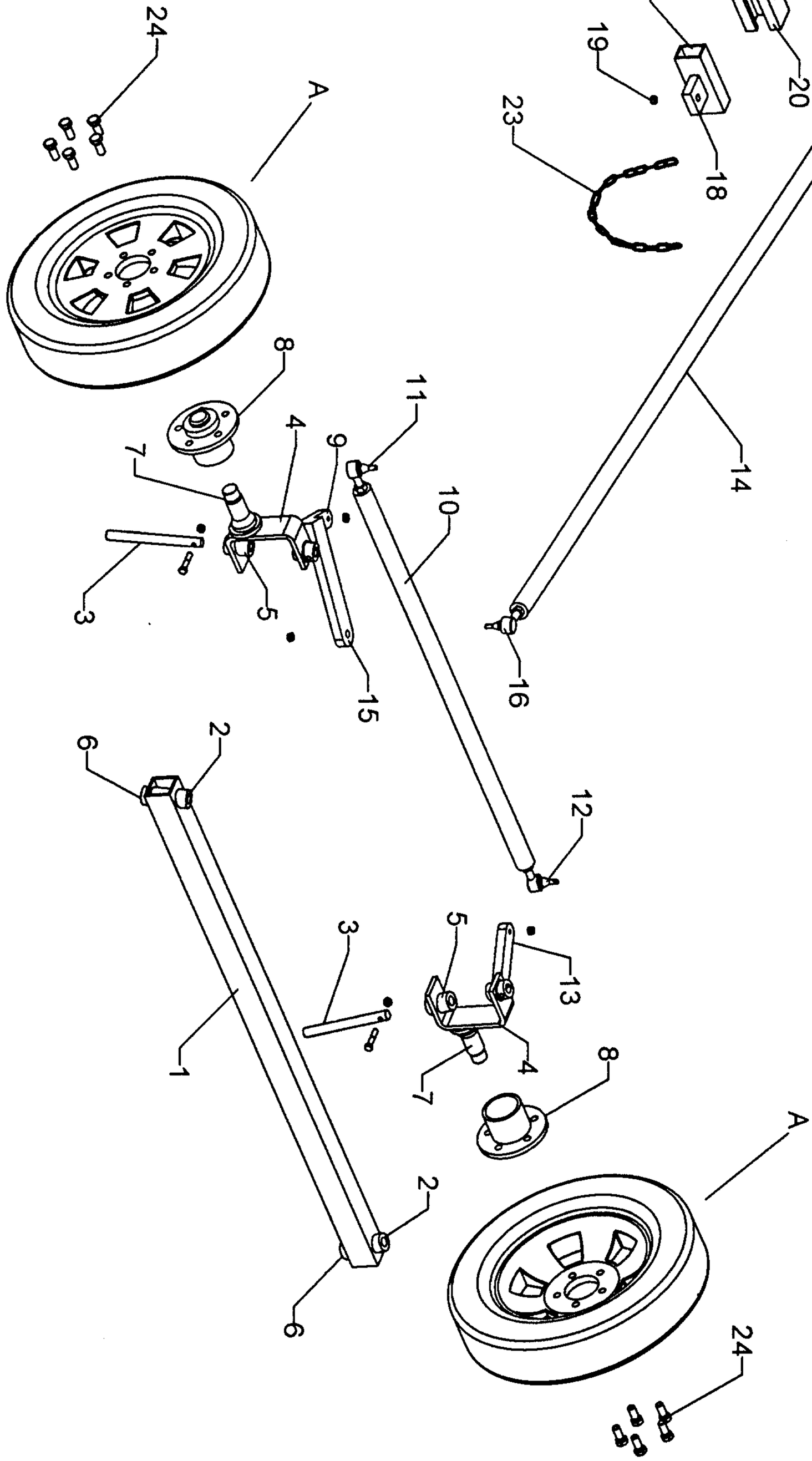
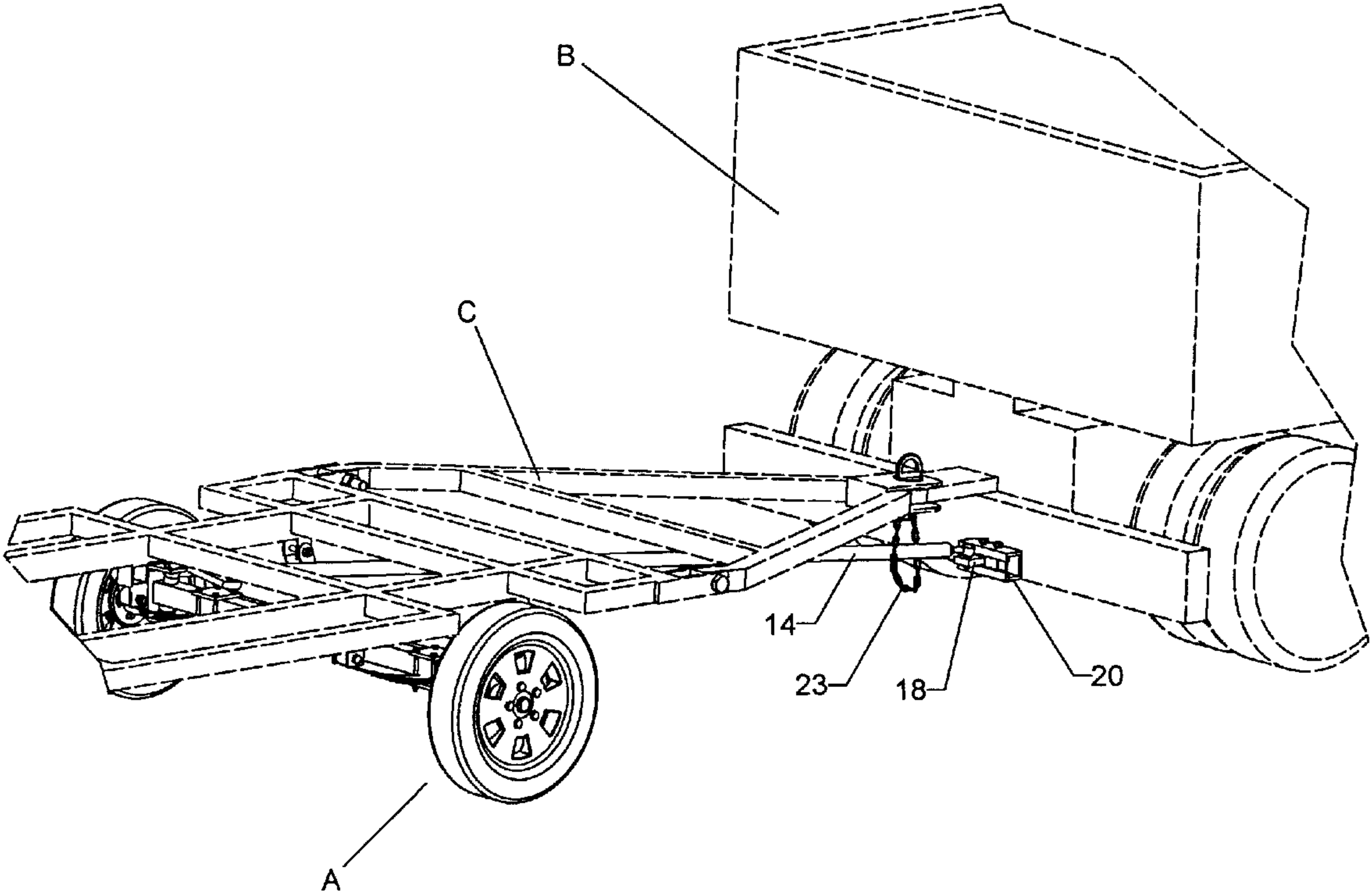


Fig. 4


B
C
14
23
18
20
A