No. 880,777. PATENTED MAR. 3, 1908.

B. BOYD.

LORRY.

APPLICATION FILED AUG. 16, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

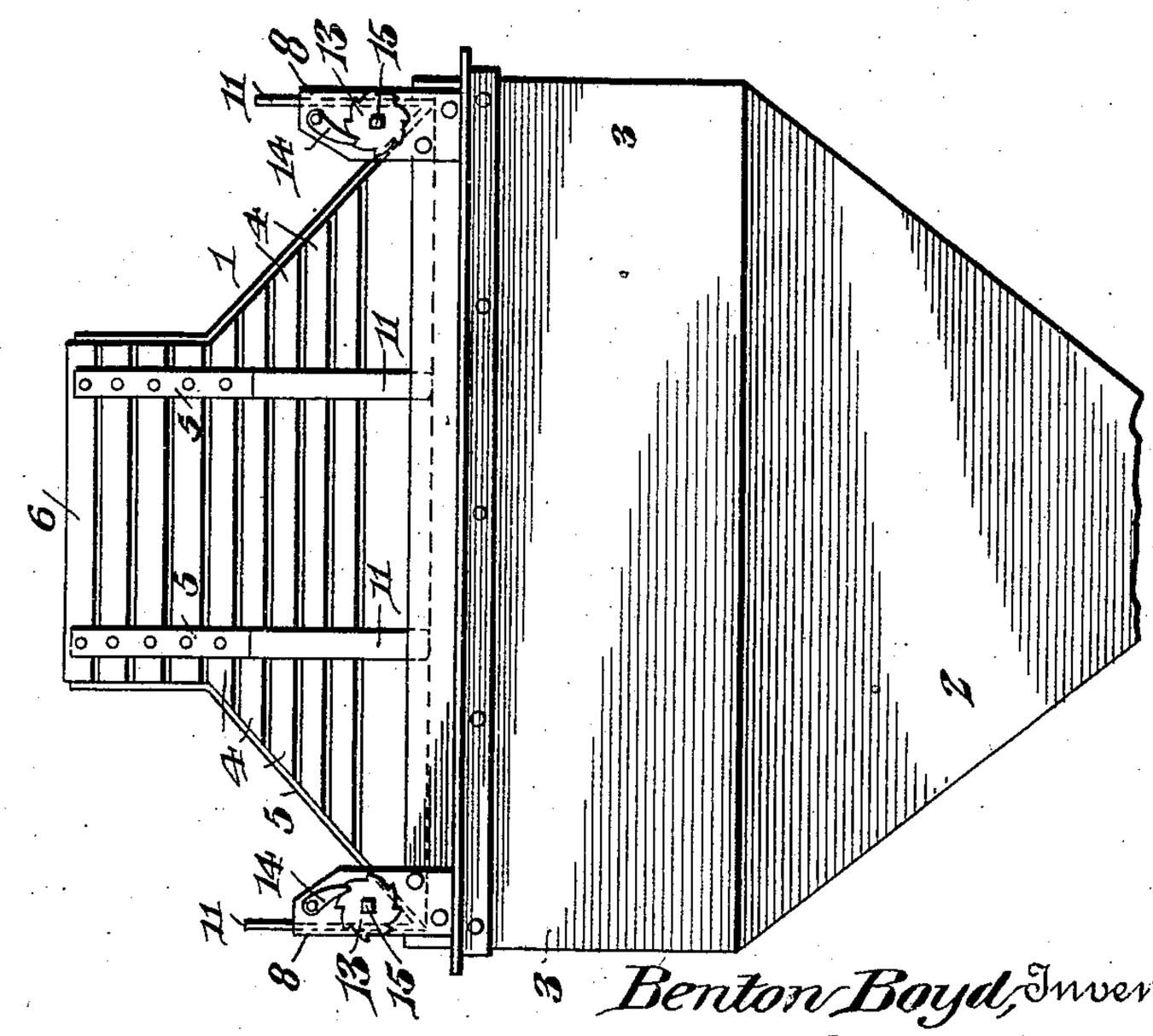
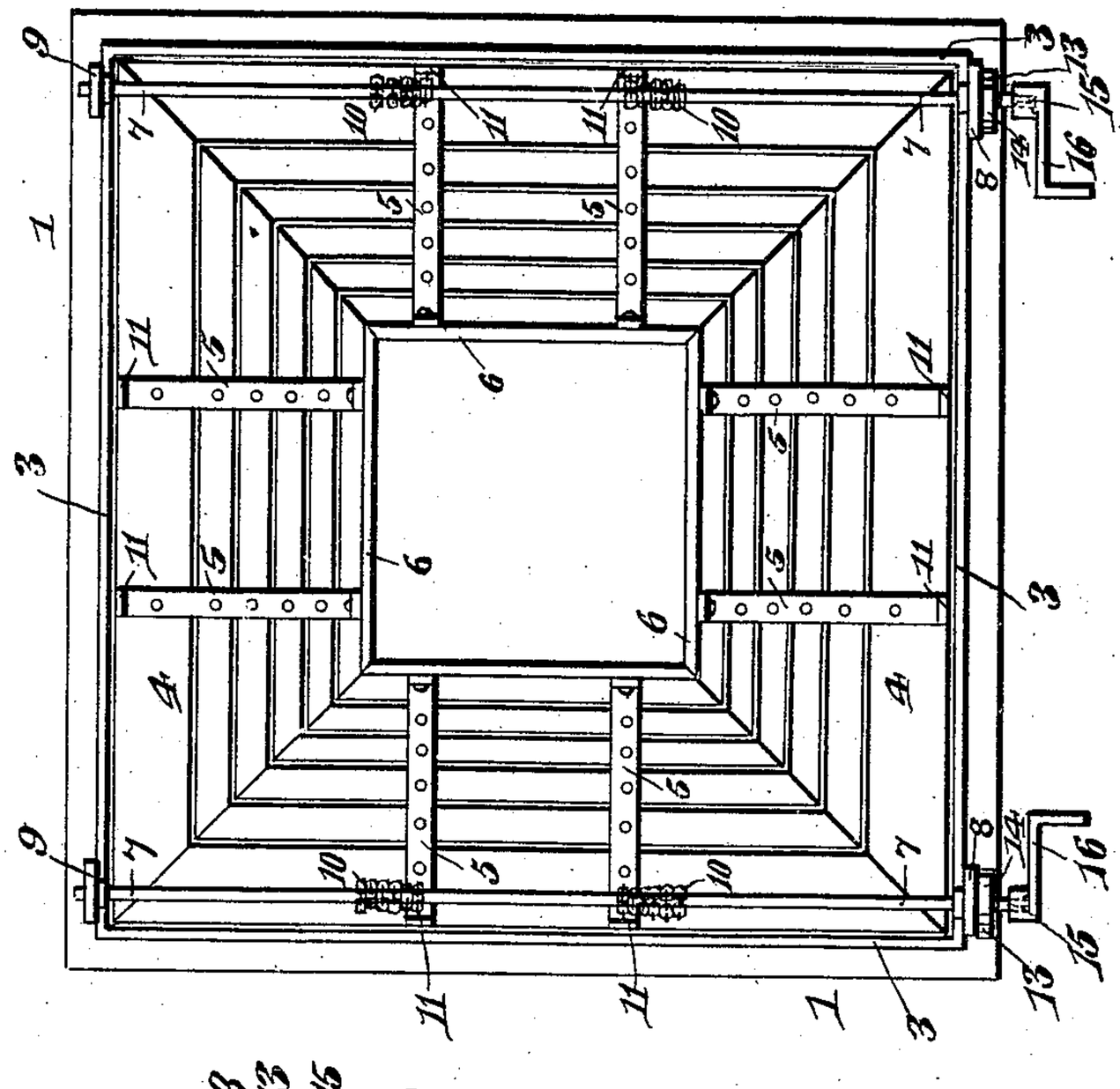


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

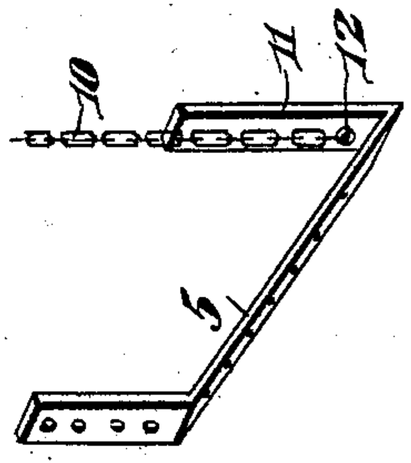


Fig. 4.

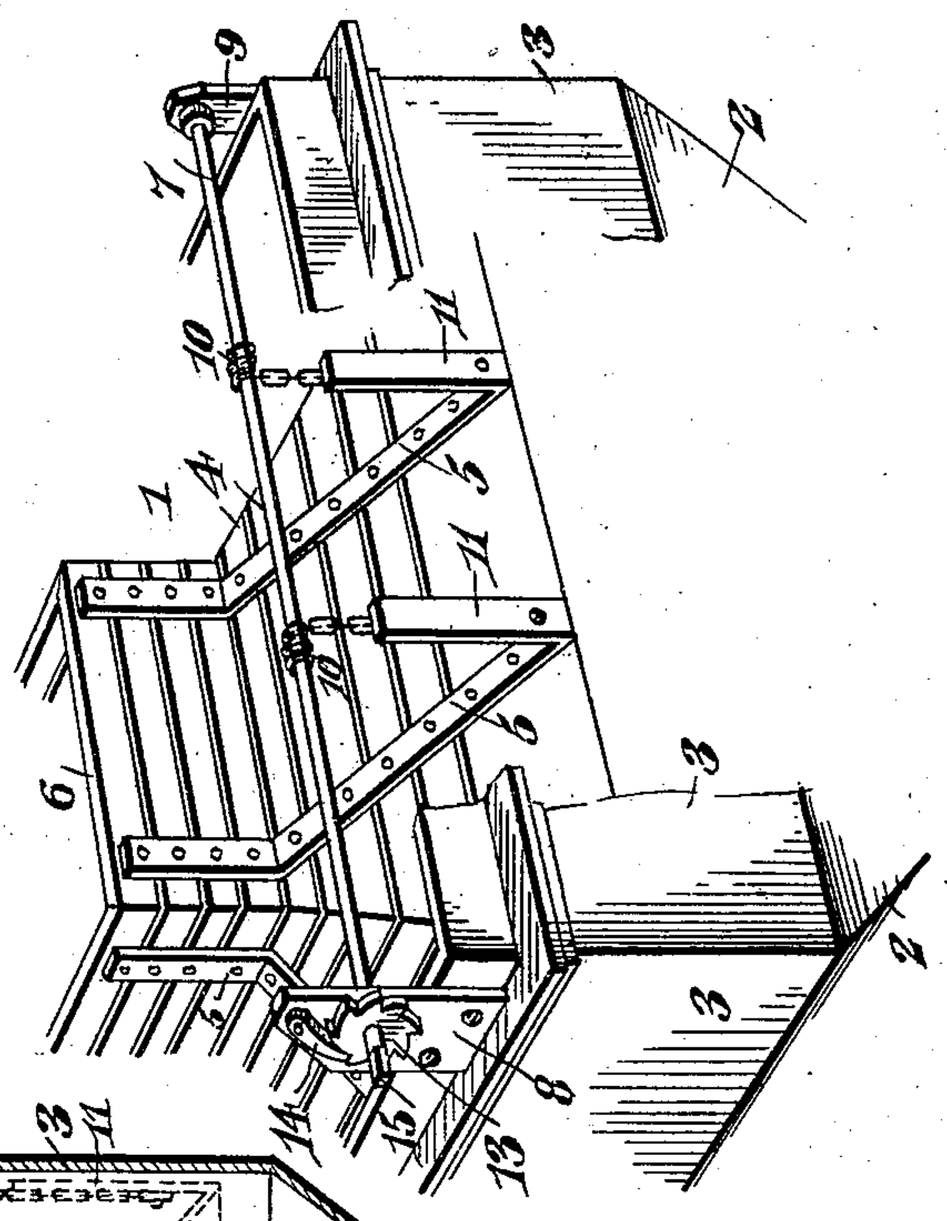
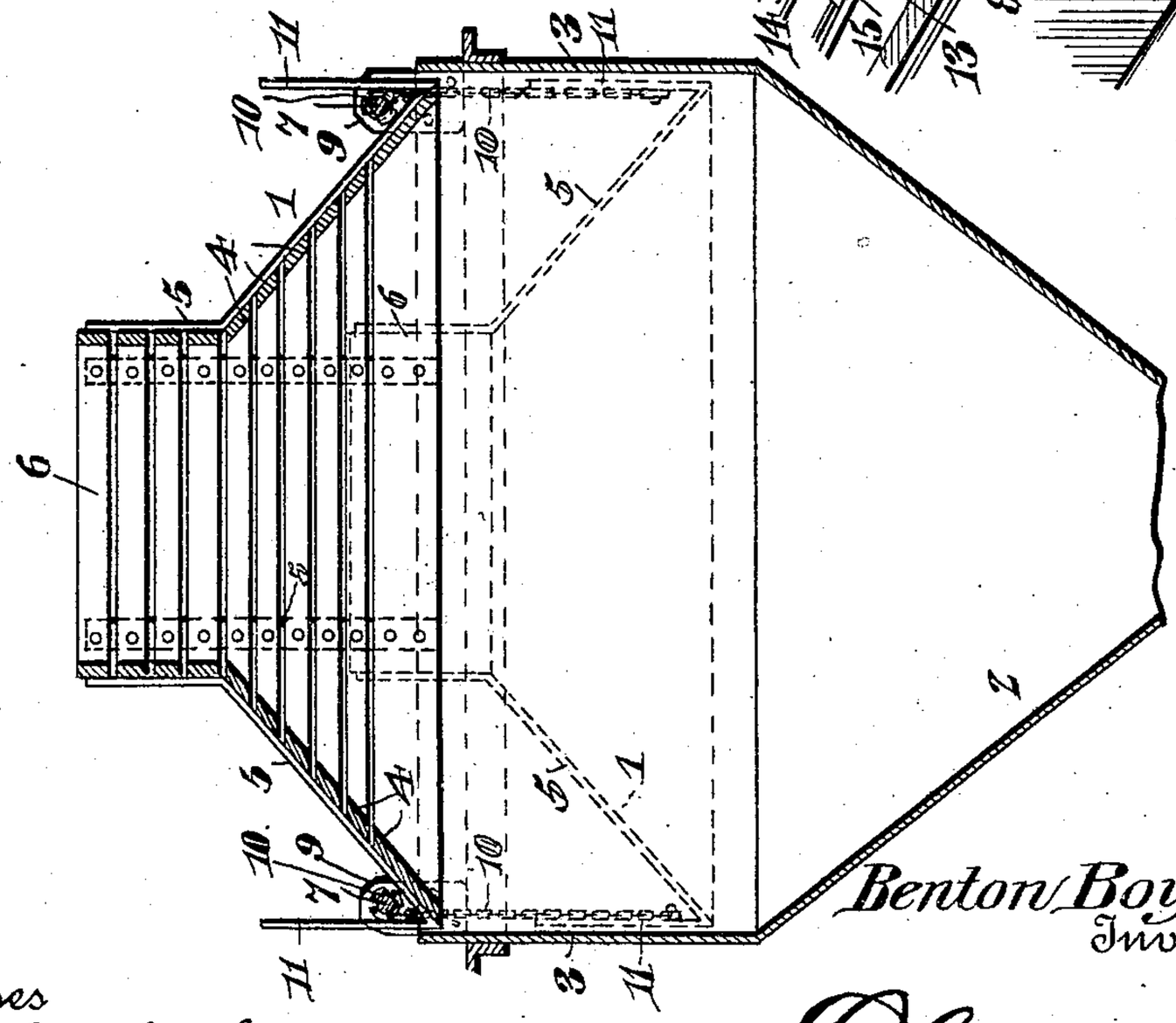


Fig. 3



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UNITED STATES PATENT OFFICE.

BENTON BOYD, OF UNIONTOWN, PENNSYLVANIA.

LORRY.

No. 880,777. Specification of Letters Patent. Patented March 3, 1908.

Application filed August 16, 1907. Serial No. 388,910.

To all whom it may concern:

Be it known that I, BENTON BOYD, a citizen of the United States, residing at Uniontown, in the county of Fayette and State of Pennsylvania, have invented a new and useful Lorry, of which the following is a specification.

The invention relates to improvements in lorries.

Heretofore the amount of coal delivered to a lorry for charging a coke oven has been measured with the eye, and it has been found by experience that the charges, when measured in this manner, vary from five to fifteen bushels even with an experienced person, who is always necessary in the present construction of lorries.

The object of the present invention is to provide a lorry having a measuring device, adapted to accurately measure a charge of coal, and thereby do away with the uncertainty of the present system of filling lorries.

A further object of the invention is to provide a measuring device of this character capable of adjustment for varying the capacity of the lorry and the consequent size of the charge, and adapted to enable the measuring device to be readily set for a forty-eight hour or seventy-two hour charge.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is an elevation of the body of a lorry provided with a measuring device, constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a central vertical sectional view, the adjustable measuring device being shown raised in full lines and lowered in dotted lines. Fig. 4 is a detail perspective view of a portion of the lorry and the measuring device, illustrating the adjustable means for suspending the latter within the former. Fig. 5 is a detail perspective view of one of the metallic straps of the adjustable measuring device.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The measuring device 1 is in the form of an inverted funnel-shaped cap, and is suspended within the body 2 of a lorry by adjustable means for enabling the measuring device to be raised and lowered to vary the capacity of the lorry and the size of the charge of coal. The body of the lorry, which may be of any preferred construction, is hopper-shaped, and is provided at the upper portion of it with vertical walls 3 into which upper portion the adjustable measuring device telescopes. The body 2 of the lorry is shown rectangular in the accompanying drawings, and the adjustable measuring device, which tapers upwardly, corresponds in shape to the lorry and while it may be constructed of any suitable material, it preferably consists of wooden bars 4 and connecting metallic straps 5, which provide a relatively light construction, which is easily handled in adjusting the measuring device. The bars 4 are spaced apart to expose the coal as it rises within the cap, so that the operator may see when the lorry is full.

The measuring device, which has inclined sides, is provided with a central opening, and it has an upwardly projecting extension or neck 6, into which the coal is fed for filling the lorry. As the lorry is filled to the top of the neck, it will be apparent that it will not require the services of a skilled operator to fill the lorries, so that each lorry will be supplied with a charge of the same amount of coal.

The coal is generally delivered to the coke ovens in forty-eight hour charges, seventy-two hour charges being supplied to the ovens to run the same over Sunday. In order to enable the lorry to be adjusted for either of these amounts of coal, the measuring device is adjustably supported by means of opposite windlass shafts 7, journaled in suitable bearings 8 and 9 of the lorry, and connected with the measuring device by means of chains 10, arranged in pairs and secured at their lower ends to vertical arms 11, consisting of extensions of the metallic straps, which are secured exteriorly to the wooden bars of the adjustable measuring device. The arms 11 extend upwardly from the opposite lower edges of the measuring device, and are located contiguous to the opposite walls of the lorry, when

the measuring device is lowered within the same, as illustrated in dotted lines in Fig. 3 of the drawings. The lower ends of the chains are attached to the inner faces of the arms 11 near the lower ends thereof by means of eyes 12, or other suitable fastening means. The arms 11 form guides for steadying the measuring device, and they are adapted to project above the windlass shaft 7, when the measuring device is raised. The upper ends of the chains are attached to and wound around the windlass shafts, which are provided with ratchet wheels 13, located adjacent to the bearings 8 and engages by pawls 14, pivotally mounted on the said bearings 9 and located above the windlass shafts. Each windlass shaft has its end 15 adjacent to the pawl and ratchet mechanism squared to receive a crank 16, or other suitable means for rotating the shaft, for raising and lowering the measuring device. By means of the windlass shafts the position of the measuring device may be quickly changed.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A lorry open at the top and provided with an adjustable cap extending over the top of the body of the lorry and having an opening, and adjustable means connected to the cap and mounted on the body of the lorry for raising and lowering the cap to vary the capacity of the lorry.

2. A lorry open at the top and provided with an adjustable cap mounted on and forming a closure for the open top of the lorry and adapted to vary the capacity of the same, and means for raising and lowering the cap including chains connected to the cap at the outer sides thereof for suspending the cap within the body of the lorry.

3. A lorry open at the top and provided with an adjustable cap mounted on and forming a closure for the open top of the lorry and adapted to vary the capacity of the same, said cap being composed of bars spaced apart to expose the contents to view.

4. A lorry open at the top and provided with an adjustable cap mounted over the top of the body of the lorry and adapted to vary the capacity of the same, means for raising and lowering the cap including chains connected to the cap, and guide bars for guiding the cap in its vertical movement.

5. The combination with a lorry, of a measuring device consisting of a cap having an opening for the passage of the material, windlass shafts mounted on the lorry, and flexible connections extending from the windlass shafts to the measuring device and adapted to be wound around and unwound from the former for raising and lowering the latter.

6. The combination with a lorry, of a measuring device consisting of a tapered cap provided with arms extending upwardly from the bottom of the cap, and adjusting means having flexible connections for suspending the measuring device within the lorry, said flexible connections being attached to the arms.

7. The combination with a lorry having vertical walls at its upper portion, of a measuring device consisting of a tapering cap provided with arms extending upwardly from the lower edges of the cap and arranged contiguous to the opposite vertical walls of the lorry, and adjusting means having flexible means secured to the said arms near the lower ends thereof.

8. The combination with a lorry having vertical walls at its upper portion, of a measuring device consisting of an upwardly tapered cap having a central opening and provided thereat with a reduced extension or neck, arms extending upwardly from the lower edges of the cap, windlass shafts mounted on the lorry, and flexible connections extending from the windlass shafts to the arms and secured to the same at the lower portions thereof.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BENTON BOYD.

Witnesses:
RAY D. MILLWARD,
JNO. W. MEANS.