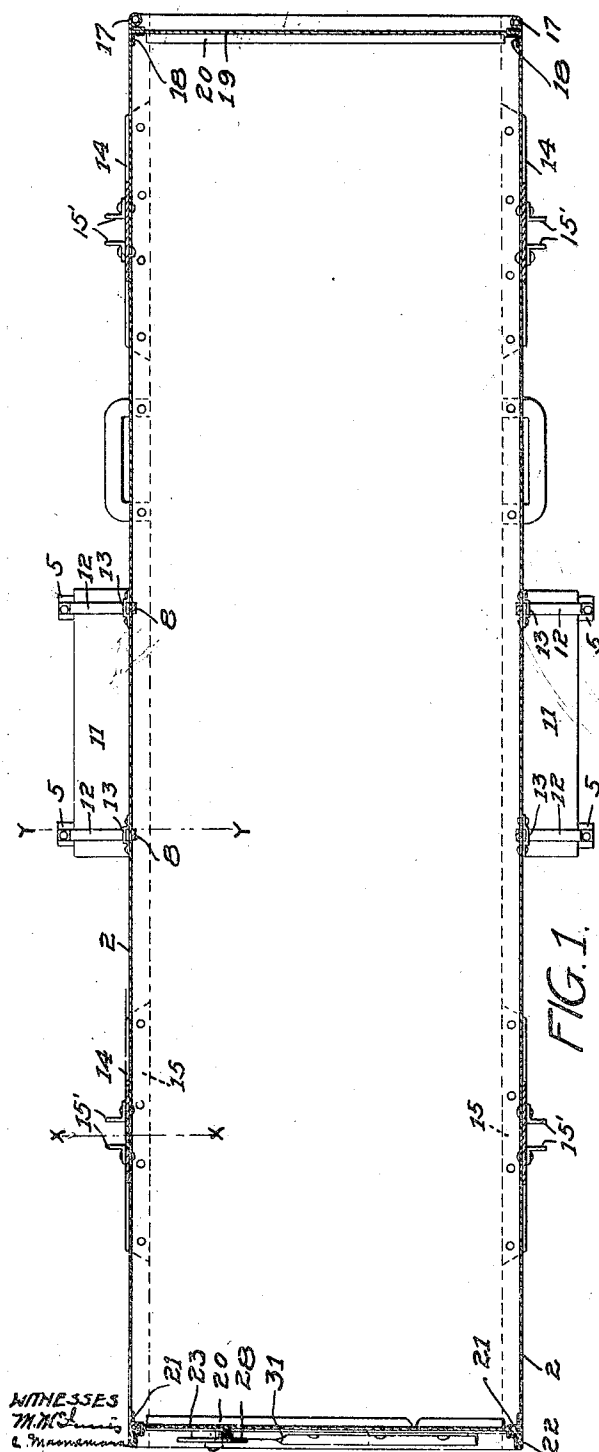
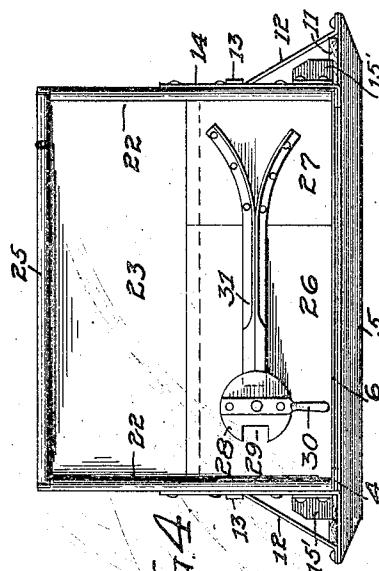


No. 828,032.

PATENTED AUG. 7, 1906.

P. KIEF.
METAL WAGON BOX.
APPLICATION FILED DEC. 13, 1905.

2 SHEETS—SHEET 1.



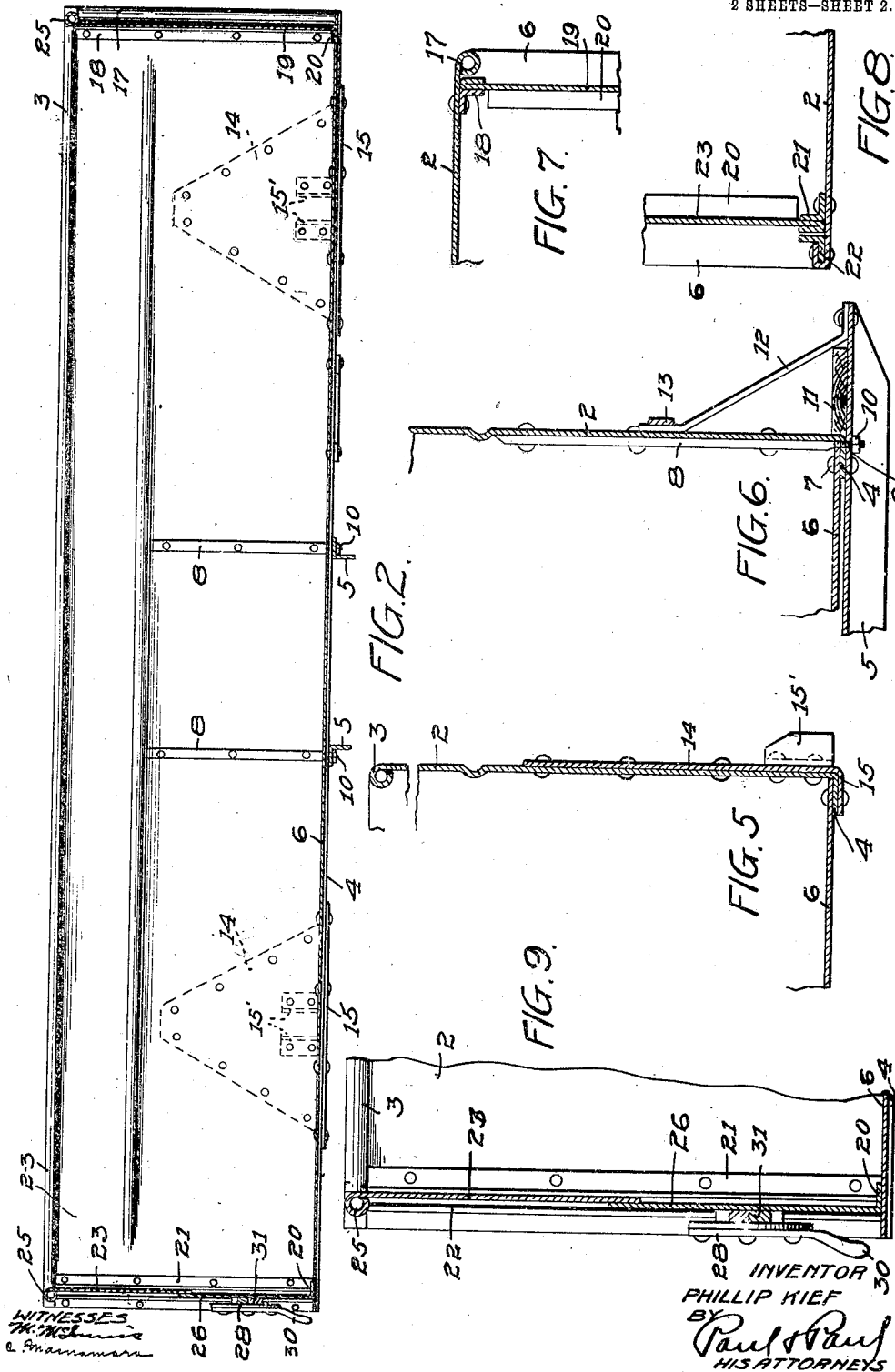
INVENTOR
PHILLIP KIEF
BY
Paul H. ...
HIS ATTORNEYS

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE

PHILLIP KIEF, OF LOURISTON, MINNESOTA.

METAL WAGON-BOX.

No. 828,032.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed December 13, 1905. Serial No. 291,510.

To all whom it may concern:

Be it known that I, PHILLIP KIEF, of Louriston, Chippewa county, Minnesota, have invented certain new and useful Improvements in Metal Wagon-Boxes, of which the following is a specification.

The object of my invention is to provide a metal wagon-box which will be strong and durable in construction and of comparatively light weight and inexpensive to manufacture.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a metal wagon-box embodying my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a front end elevation. Fig. 4 is a corresponding view of the rear end. Fig. 5 is a detail sectional view on the line *z z* of Fig. 1. Fig. 6 is a similar view on the line *y y* of Fig. 1. Fig. 7 is a detail view of one of the forward corners of the box. Fig. 8 is a similar view of one of the rear corners. Fig. 9 is a plan view of the rear end of the box.

In the drawings, 2 represents the side walls having an inwardly-turned upper edge forming a bead 3 and a flange 4 at its lower edge turned inwardly substantially at right angles to the vertical portion of the walls. Angle cross-bar pieces 5 are provided near the middle of the box, and between these cross-pieces or bars and the bottom plate 6 the flanges 4 are secured by rivets 7. Vertical straps 8 are riveted to the side walls 2 on the inside and have threaded lower ends projecting through holes 9 in the cross-bars and secured therein by lock-nuts 10. The ends of the cross-bars project beyond the sides of the wagon-box on each side, and support-steps 11 and braces 12 connect the outer ends of the cross-bars with the side walls and are secured to said walls by means of clips 13. In front and in the rear of the cross-bars 5 near the ends of the box I prefer to provide triangular plates 14, having flanged lower edges 15, which extend in under the flanges 4 of the side walls and are riveted thereto and to the bottom plate. The edges of the triangular plates are riveted to the side walls, and each plate is provided on each side of the box with a pair of brackets 15', between which a space is formed to receive the stake of the wagon-rack usually provided to hold the box in place on the run-

ning-gear. The employment of the plates 14 greatly strengthens the box and particularly the lower corner of the same at the point where the brackets are secured. The side walls at the forward end have inwardly-turned edges 17, forming a curl or bead at that point, and angle-bars 18 are arranged parallel with said beads and spaced therefrom and secured to the side walls of the box, forming with said beads guideways to receive the ends of the gate 19, the said gate ends being folded or seamed to strengthen the edges of the gate, and the lower part having a horizontal flange 20, which rests upon the wagon-box bottom when the gate is in place. This flange is cut away at the ends, as indicated in Fig. 7, to allow the gate to be slipped into the guideways without the flange coming in contact with the angle-bars 18. At the rear end of the box angle-bars 21 are provided on each side, and similar angle-bars 22 are arranged near the bars 21 and secured to the side walls by rivets in a similar manner and spaced from said bars 21 to form guideways for the rear gate 23. The extreme rear end of the side walls 2 are preferably turned inwardly and bent around the flanges of the bars 22 for the purpose of holding the said bars more securely and finishing the rear end of the box. The gate 23 has a flange corresponding to the one described with reference to the forward gate, and the ends of the gate are folded to provide a double thickness between the guideways, as described with reference to the gate 19. I prefer also to provide a roll or fold 25 on the upper edge of each gate to strengthen it and form a smooth finished appearance at that point. The lower half of the rear gate is preferably divided vertically into two parts 26 and 27, the former having a disk 28 pivoted thereon, provided with a recess 29 and a handle 30, and the latter having a bar 31, one end of which extends between the disk 28 and the gate 26, and whereby the gates are normally locked in their closed position. Upon grasping the handle 30, however, and revolving the disk until the recess therein is opposite the end of the bar 31 the gate-sections may be swung outwardly and separated.

I claim as my invention—

1. A metal wagon-box, comprising side walls having inwardly-turned lower edges, in combination with cross-bars arranged beneath said side walls and whereon said inwardly-turned edges are supported, a bot-

tom plate secured to said cross-bars through said inwardly-turned edges, and straps secured to said side walls and having their lower ends projecting through said inwardly-turned edges and said cross-bars and secured therein, substantially as described.

2. In a metal wagon-box, the combination, with the side walls having inwardly-turned lower edges, plates secured on said side walls and also having inwardly-turned lower edges fitting snugly against the corresponding edges of said side walls, a bottom plate provided between said side walls and means securing its longitudinal edges to the edges of said walls and said plates, substantially as described.

3. The combination, in a metal wagon-box, with the side walls having flanges at their lower edges extending inwardly substantially at right angles to the main portion of said walls, of cross-bars arranged beneath said side walls, a bottom plate secured to said cross-bars through said flanges, straps secured to said side walls and having threaded lower ends projecting through said flanges and said cross-bars and provided with lock-nuts, the ends of said cross-bars projecting outwardly beyond said side walls, and braces connecting the ends of said cross-bars with said side walls.

4. In a metal wagon-box, the combination with side walls having inwardly-turned lower edges forming flanges, plates secured on said side walls and having inwardly-turned lower edges fitting snugly against the corresponding edges of said side walls, a bot-

tom plate provided between said side walls and having its longitudinal edges secured to the edges of said walls, and a pair of brackets secured to each of said plates on the outside of the box and having a space between them, substantially as described.

5. The combination with the side walls having inwardly-turned vertical edges at their ends, of angle-bars secured to said side walls parallel with said edges and spaced therefrom, and an end-gate having vertical edges fitting between said angle-bars and the folded ends of said side walls and vertically slidable between them, substantially as described.

6. The combination, in a metal wagon-box, with the side walls having inwardly-turned rear ends, of angle-bars having one flange fitting between said inwardly-turned ends and said side walls and secured thereto, the other flange being substantially at right angles with the side walls of the box, angle-bars secured to said side walls in front of said first-named bars and spaced therefrom and forming guideways therewith, a bottom plate and an end-gate having edges vertically slidable between said angle-bars and having a flanged lower edge to engage the bottom of the box, substantially as described.

In witness whereof I have hereunto set my hand this 5th day of December, 1905.

PHILLIP KIEF.

Witnesses:

DELIA LEE,
LLOYD G. MEYER.