H. W. CALDERWOOD.

WAGON-TOP.

No. 189,840. Patented April 24, 1877.

Fig. 1.

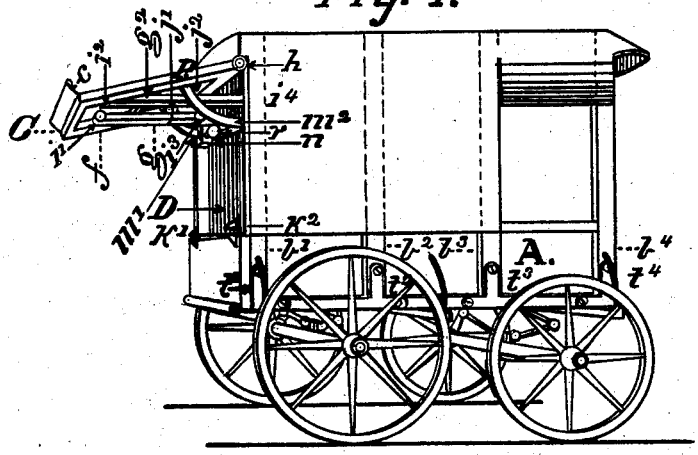



Fig. 2.

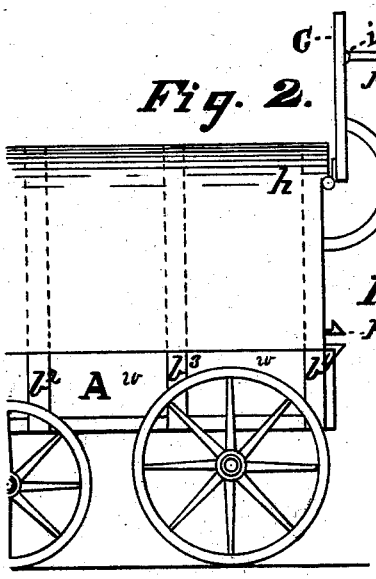



Fig. 3.

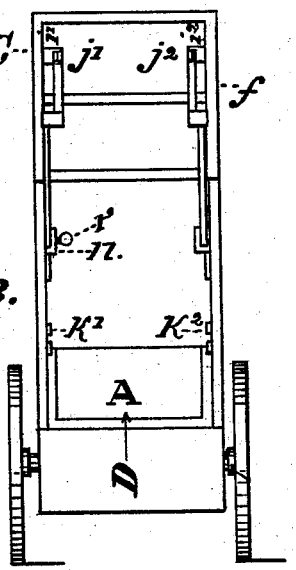



Fig. 4.

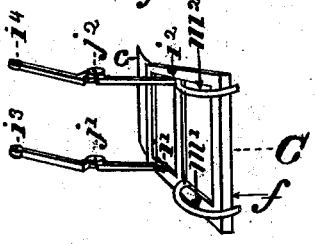
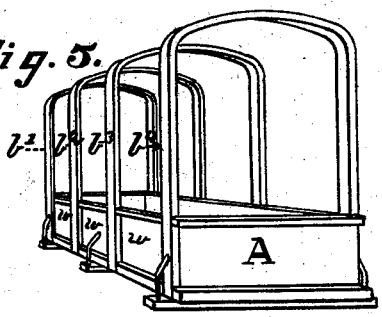



Fig. 5.

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# UNITED STATES PATENT OFFICE.

HUGH W. CALDERWOOD, OF WILKINSBURG, PENNSYLVANIA.

## IMPROVEMENT IN WAGON-TOPS.

Specification forming part of Letters Patent No. **189,840**, dated April 24, 1877; application filed August 23, 1876.

*To all whom it may concern:*

Be it known that I, HUGH W. CALDERWOOD, of Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Wagons, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to so arrange the rear curtain of a delivery-wagon that it may be raised and lowered easily and conveniently by persons delivering goods, the ordinary mode of rolling up and unrolling the curtain repeatedly at short intervals of time being inconvenient in wet or stormy weather.

My invention consists in adding a hinged frame to the rear bow of the wagon, and of combining it with the curtain by stretching the curtain across or over the frame in such a manner that the framed curtain may be swung upward or downward on the hinges to open or close the rear end of the wagon, and the said frame being provided with one or more supports, having knuckle-joints similar in construction to those used in buggy-tops, the said support holding the curtain and its frame in place when raised, and bending at the joint when the frame and curtain are being lowered; and the said frame also provided with certain curved arms for guiding and keeping the curtain and frame from vibrating when the wagon is in motion.

My invention further consists in running the bows of the bed down vertically along the sides of the bed to its bottom in such a manner that the bows shall form the frame of the bed and the paneling thereto, the bows being riveted or bolted to the bed, so that the bows and bed shall form a firm and rigid combination to prevent the bows vibrating, which they do when attached to the bed in the ordinary way.

Figure 1 is a perspective view of a delivery-wagon having my improvements connected therewith. Fig. 2 is an elevation of the rear portion of a delivery-wagon, showing the framed curtain raised up vertically. Fig. 3 is an end view of the same with the end-board thrown open. Fig. 4 is a perspective view of the framed curtain detached from the wagon. Fig. 5 is a perspective view of the wagon-bed with the covering removed from the bows.

Like letters of reference in all the figures indicate the same parts.

A is the wagon-bed, having the bows $b^1$, $b^2$, $b^3$, and $b^4$, and C is the framed curtain, in which $c$ is the curtain, $f$ the frame, $g^1$ and $g^2$ the knuckle-jointed supports, and $h$ the hinge attached to the rear bow $b^1$ of the wagon, upon which the curtain C swings upward and downward to open and close the delivery end D of the wagon. The supports $g^1$ and $g^2$ are hinged to the frame $f$ at $i^1$ and $i^2$, and to the bow $b^1$ at $i^3$ and $i^4$, and have knuckle-joints $j^1$ and $j^2$, similar in construction with those used in falling-top buggies, by which means the curtain C may be raised and supported in position by the knuckle-joints, and also lowered and closed conveniently by the bending of the joints, when desired, at which time the lower side of the frame $f$ shall compress the springs $k^1$ and $k^2$ while passing over them, the said frame $f$ slipping over notches in the springs on its lower side at the point of closing, by which means the framed curtain C is secured in its closed position. The said frame $f$ also has curved guiding rods or plates $m^1$ and $m^2$, which are arranged to slide inward and outward through guiding-loops $n$, attached to the bow $b^1$, the said guides $m^1$ and $m^2$ being curved to correspond with the segment of a circle described by the frame $f$ at the point P while opening and closing, the object of the said guides $m^1$ and $m^2$ being to prevent the frame $f$ vibrating when the wagon is in motion. The said guides $m$ also answer the purpose of supporting the frame $f$ up vertically, as shown in Figs. 2 and 3, to allow the wagon being backed up close to a building or other place, with the curtain C open for loading up the goods, in which case the supports $g^1$ and $g^2$ can be detached at the hinges $i^3$ and $i^4$, and a thumb-screw, $r$, in the loops $s$ will secure the frame $f$ in its vertical position by being tightened up against the guides $m^1$ and $m^2$ in their loops.

The bows $b^1$, $b^2$, $b^3$, and $b^4$ pass down vertically along the sides of the bed A, to form the frame of the bed and its panels, and are screwed or bolted firmly to the bed by means of the plates $t^1$, $t^2$, $t^3$, and $t^4$, or in any suitable

manner, so that the bed and bows shall form a firm and rigid combination to prevent the bows vibrating, which they do when the bows and bed are independent and separate parts, as ordinarily constructed.

By means of my improvement butchers, bakers, and others delivering goods to their customers in wet or stormy weather, and at other times, may raise and lower the rear curtain of their wagon conveniently, and the persons receiving the goods may be sheltered from the rain by means of the raised curtain while making selections of goods.

What I claim as my invention is—

The combination and arrangement of the frame *f*, curtain *c*, supports *g*, guides *m*, loops *n*, springs *k*, hinge *h* $b^1$, and bed A, substantially in the manner and for the purpose specified.

HUGH W. CALDERWOOD.

Witnesses:
WILLIAM S. DEEDS,
JAMES A. DEEDS.