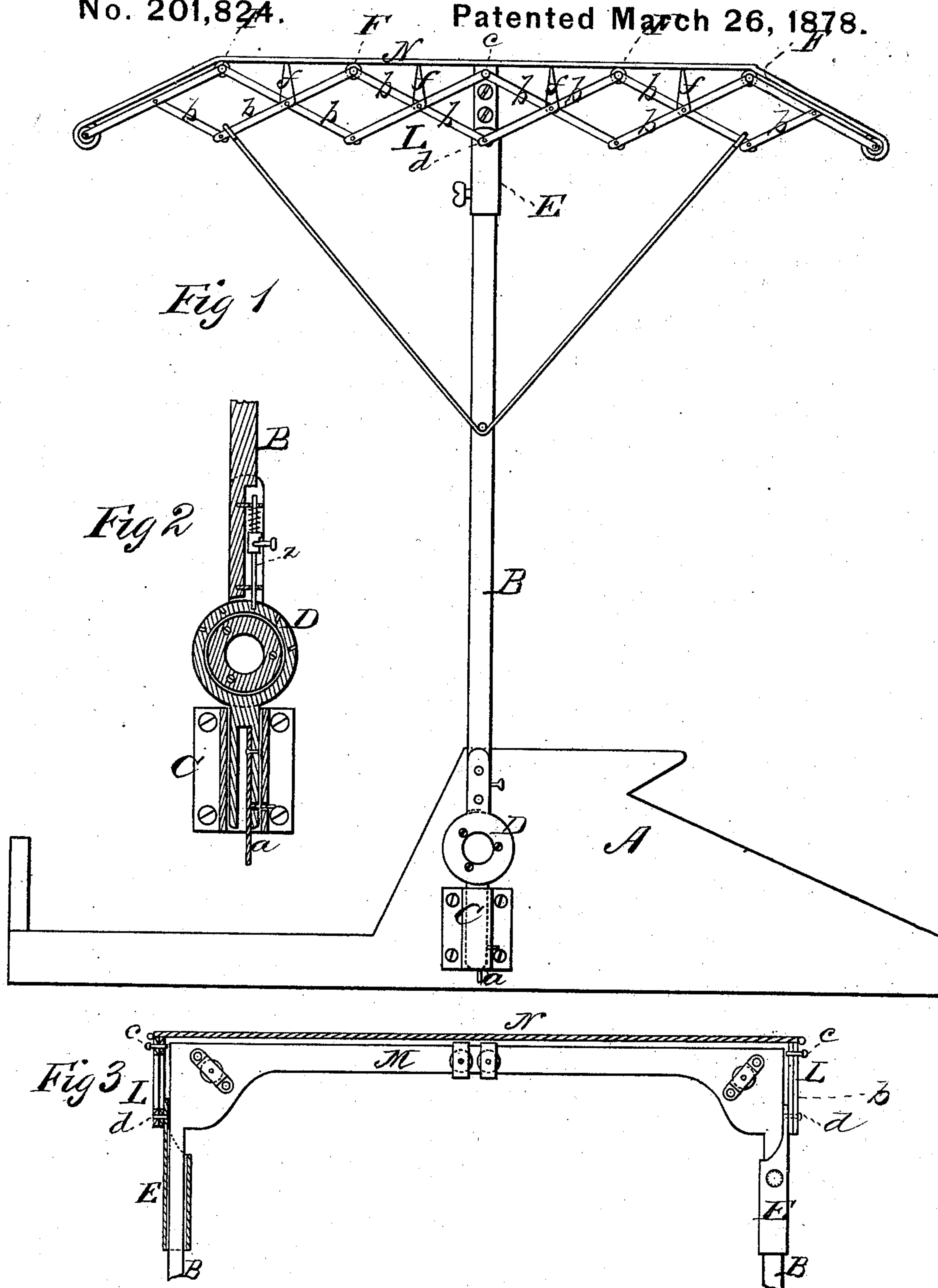


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Vehicle Top.

No. 201,824.

Patented March 26, 1878.



WITNESSES  
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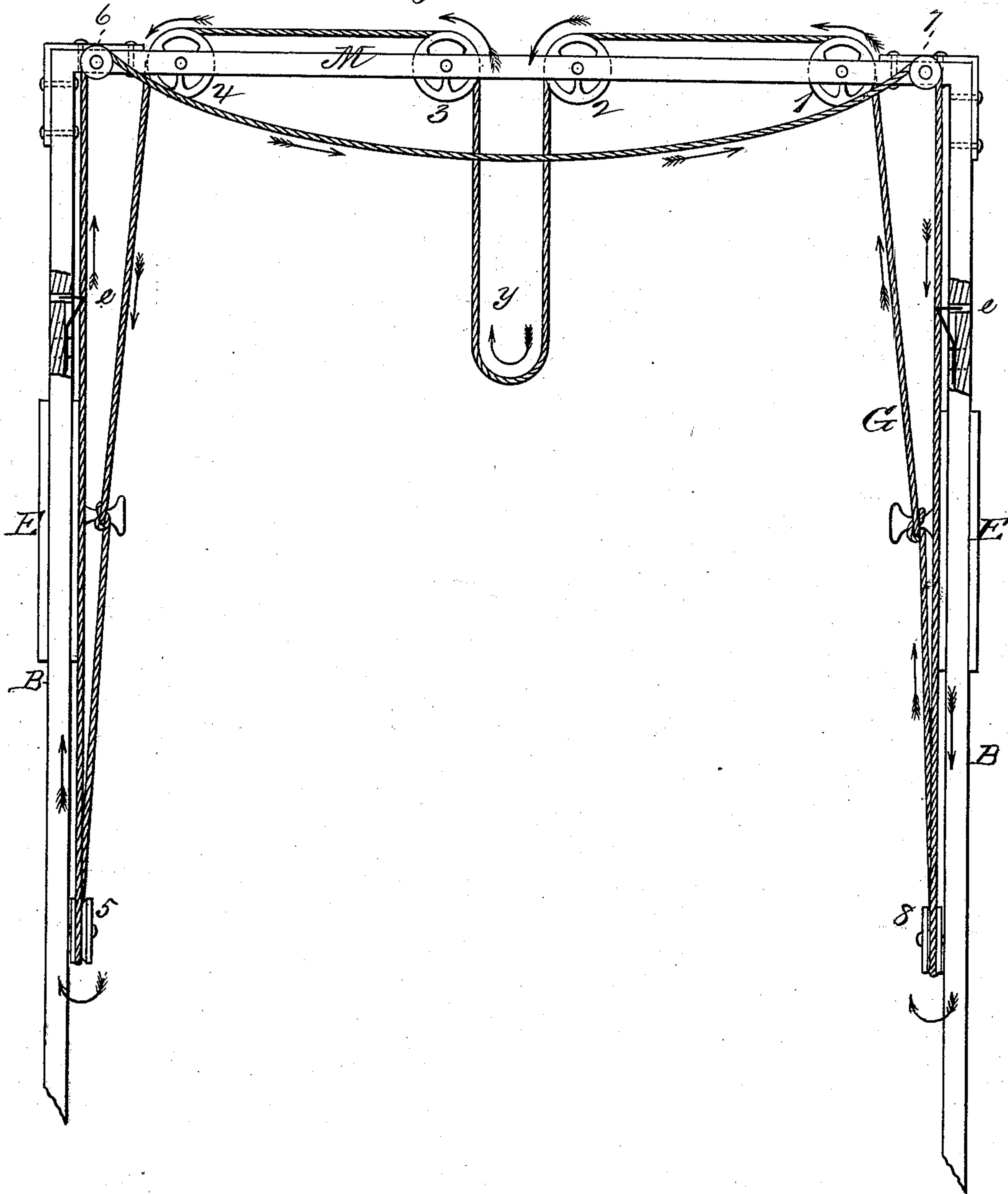
INVENTORS  
*Silas R. Owen.*  
*Frank M. Mahan.*  
*By E. W. Anderson*  
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*Fig 4*



WITNESSES

*Villette Anderson.*  
*A. J. Elasi*

INVENTORS

*Silas R. Owen,*  
*Frank M. Mahan*  
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# UNITED STATES PATENT OFFICE.

SILAS R. OWEN AND FRANK M. MAHAN, OF ST. JOSEPH, MISSOURI.

## IMPROVEMENT IN VEHICLE-TOPS.

Specification forming part of Letters Patent No. **201,824**, dated March 26, 1878; application filed March 2, 1878.

*To all whom it may concern:*

Be it known that we, SILAS R. OWEN and FRANK M. MAHAN, of St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and valuable Improvement in Vehicle Tops and Awnings; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved vehicle-top applied to a buggy-body. Fig. 2 is a sectional view of the ratchet-joint and socket. Fig. 3 is a sectional detail view; and Fig. 4, a front view, showing the pulleys and tackle for folding the canopy from the inside.

This invention has relation to improvements in folding tops for vehicles; and it consists in combining, with the uprights or bows of the vehicle, having a slide-sleeve thereon, of a lazy-tongs extension-frame carrying the tilt, and pivoted both to the bow and slide.

It also consists in pivoting the said bow to the socket-tongue, whereby it is removably applied to the vehicle-body by a pawl-and-ratchet mechanism, by which means the tilt may be adjusted in any position in front or rear of the body, according to the position of the sun.

It furthermore consists in other minor details of construction, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A represents a vehicle-body, and B B two strong uprights, the lower ends of which are stepped into sockets C, and confined therein by a suitable catch, *a*. The uprights B B above the socket are provided each with a ratchet-joint, D, of any known form, by means of which and a spring-actuated pawl, *z*, the tilt may be inclined at any desired angle forward or backward, or may be thrown back entirely out of the way, as circumstances may require.

In ordinary farm-wagons this joint may be dispensed with, as will also be the case in freight-vans and other similar heavy vehicles.

E E are flanged slides or sleeves applied upon the bows B, and playing up or down

freely thereon. L represents my improved extension-frame, composed of a suitable number of jointed rods, *b*, pivoted together after the manner of lazy-tongs, and pivoted by means of a headed bolt, *c*, to the upper ends of the said uprights. The lower edge of this frame is pivoted by a suitable pin to the thimbles E at *d*. One of these frames is applied at each side of the body, and, for convenience, as well as to provide means for securing the tilt thereto, the said frames will be connected by transverse ribs F at each upper joint. The frames being folded up, they may be extended simultaneously by thrusting up the said thimbles upon the uprights B until they pass above a spring-catch, *e*, when the latter will engage the lower end of the said thimbles and hold the tilt fully extended. *f* represents flexible thongs, of any suitable material, secured to the tilt between the upper joints of frames L, and to the point of intersection of the rods composing said frame next below said tilt. The thongs cause the tilt to fold regularly as the frames L are folded up, thereby causing the device to fold up in a comparatively small space.

M is a horizontal bar, which is coupled in any suitable manner to the uprights B B. The uprights and bar may be made in one piece by steaming and bending, however, if I so elect.

It will be clear from the above description that, by thrusting up the thimbles aforesaid, the frames L L will be extended, and that, by drawing them down, the said frames will be contracted, thereby folding up the tilt or canopy N. The slides being relieved of the spring-catches *e*, the same results may be obtained without dismounting from the body by means of the following devices or system of pulleys and tackle: A cord, G, rigidly secured to one of the slides, is passed up over a pulley, 1, at the corresponding end of the bar M. It extends thence to a pulley, 2, over which it passes, and a bight or loop, *y*, being formed, is extended upward over a pulley, 3. Pulleys 2 and 3 are at each side of the center of bar M. From pulley 3 the cord G is extended completely across the canopy to a pulley, 4, in a position corresponding to pulley 1, over which it passes, and, being carried downward, is se-



cured to the opposite slide. From this slide it is extended down and around a pulley, 5, having its bearings in the upright B, below the said slide, and from thence is carried up again over a pulley, 6, and from thence across to and over a pulley, 7, between the pulley 1 aforesaid and the upright B. From pulley 7 it is passed down to a roller, 8, in a corresponding position to pulley 5 on the opposite upright B, and, being carried around said pulley 8, is turned upward and secured to the slide where it commenced. Between pulleys 6 and 7 the cord G is slack, so that when the loop or bight *y* is seized and drawn upon, thereby extending the frames L and the canopy secured thereto, this slack would be simply taken up, and the branch of the said cord between pulleys 6 and 7 merely drawn taut. By drawing forcibly down upon this branch, between the said pulleys, the canopy and frame will be folded up without dismounting.

By buttoning curtains to the upper branches of the lazy-tongs arrangement above described the wagon-body may be completely inclosed, so as to protect its occupants from the weather.

It will be plain to those skilled in the art that many variations of this device may be employed, involving the same, or substantially the same, invention. We do not therefore confine ourselves to the precise construction herein explained and exemplified.

What we claim as new, and desire to protect by Letters Patent, is—

1. The combination, with the wagon or vehicle body A, provided with suitable uprights B B, of the extensible and contractible lazy-tongs frames L and a canopy secured thereto, substantially as specified.

2. The combination, with the lazy-tongs ex-

tensible frames L L and the supporting-bow or uprights B B thereof, of a slide or thimble on said uprights, pivoted to the said frames by means of bolts *c* and pins *d*, substantially as specified.

3. The combination, with the uprights B B and the extensible lazy-tongs frame L L pivoted thereto, and the slides or thimbles actuating said frames and applied on said uprights, of a system of block and tackle adapted to raise or lower said slides, thereby extending or contracting the canopy-frame, substantially as specified.

4. The combination, with the sockets C on the wagon or vehicle body sides, of the uprights or bows B B, adapted to enter said sockets, and having spring-catches adapted to engage said sockets, substantially as specified.

5. The combination, with a vehicle-body having sockets C and a catch, *a*, of the uprights or bows B B, having a ratchet-and-pawl joint, D, above said socket, substantially as specified.

6. The combination, with the extensible and retractible lazy-tongs frame L L and a tilt or covering secured thereto, of the flexible thongs *f*, substantially as specified.

7. The combination, with the lazy-tongs frames L L, of the transverse bracing-rods and a tilt or covering secured thereto, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

SILAS R. OWEN.  
FRANK M. MAHAN.

Witnesses:

JOHN P. ARNOLD,  
FRANK F. DUMKE.