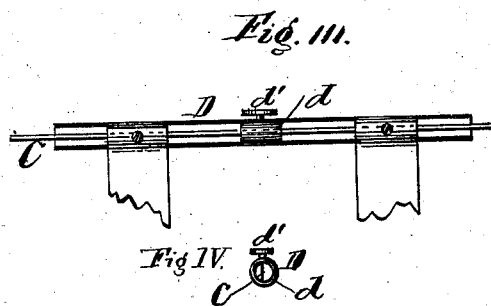
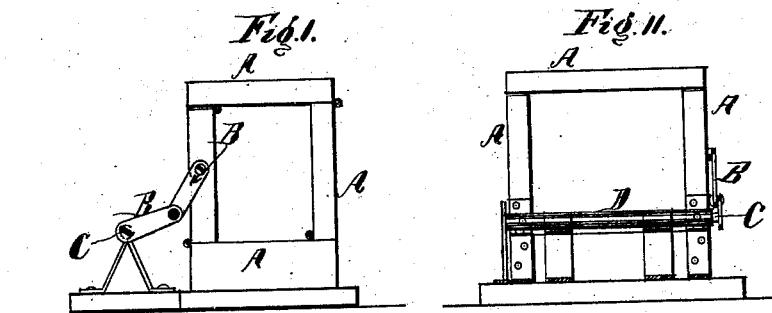


R. DUNN.
 LANDAU CARRIAGE-TOP.

No. 192,115.

Patented June 19, 1877.



Witnesses:
 Franklin Barrett.
 Richard Germer.

Inventor:
 Robert Dunn.
 Per: Henry Germer,
 Atty.

UNITED STATES PATENT OFFICE.

ROBERT DUNN, OF SOUTH BEND, INDIANA.

IMPROVEMENT IN LANDAU-CARRIAGE TOPS.

Specification forming part of Letters Patent No. **192,115**, dated June 19, 1877; application filed December 19, 1876.

To all whom it may concern:

Be it known that I, ROBERT DUNN, of South Bend, county of St. Joseph and State of Indiana, have made a certain new and useful Improvement in Carriage-Tops, of which the following is the specification:

The object of this invention is to construct a carriage-top with a spring-lift to balance or assist to raise the top of a landau or similar carriage, when it is thrown down.

The invention will be readily understood by reference to the accompanying drawings, of which—

Figure I is a side elevation of a part of one of the improved carriage-tops. Fig. II is an end elevation of the same. Fig. III is an enlarged sectional plan of the spring. Fig. IV is an enlarged transverse section of the spring-bar.

The top A of the carriage and the jointed braces B are similar to the corresponding parts now in use in ordinary carriages, with the exception of the lower end of the said brace, which, in the present instance, is attached to a spring, C, which is so arranged as to press against the brace in the direction to push it up, so as to raise the top into its erect position. A tube or holder, D, is firmly secured to some suitable part of the carriage-body, and forms a rest and hold for the spring C. There will, preferably, be two of

the springs C, one at each side of the carriage-top, for attachment to the braces on that side of the carriage. The inner ends of the springs C, or, if only one spring be used, the central part of it, will be fixed to a central stop or hold, *d*, which is fixed in a central position in the tube or rest D by means of the set-screw *d'*. This stop or hold will firmly secure in place the spring or springs at that point, while the outer ends of the spring or springs will be permitted to rotate, so as to allow the braces to fold down with the top or to rise up with it. The pieces C will be of flat spring-steel, so as to cause the said pieces to act as springs to throw, or assist to throw, the top into an erect position. There should be journals formed on the springs C near their outer ends, so as to bear against and keep them concentric with the tube or bearing D.

Having described my invention, I claim—

The spring C, as described, when held in the rest D, and the stop *d*, in combination with the braces B, substantially as and for the purpose set forth.

This specification signed this 4th day of November, 1876.

ROBERT DUNN.

Witnesses:

ISAAC FRAME,
JAMES JORDAN.