

No. 696,022.

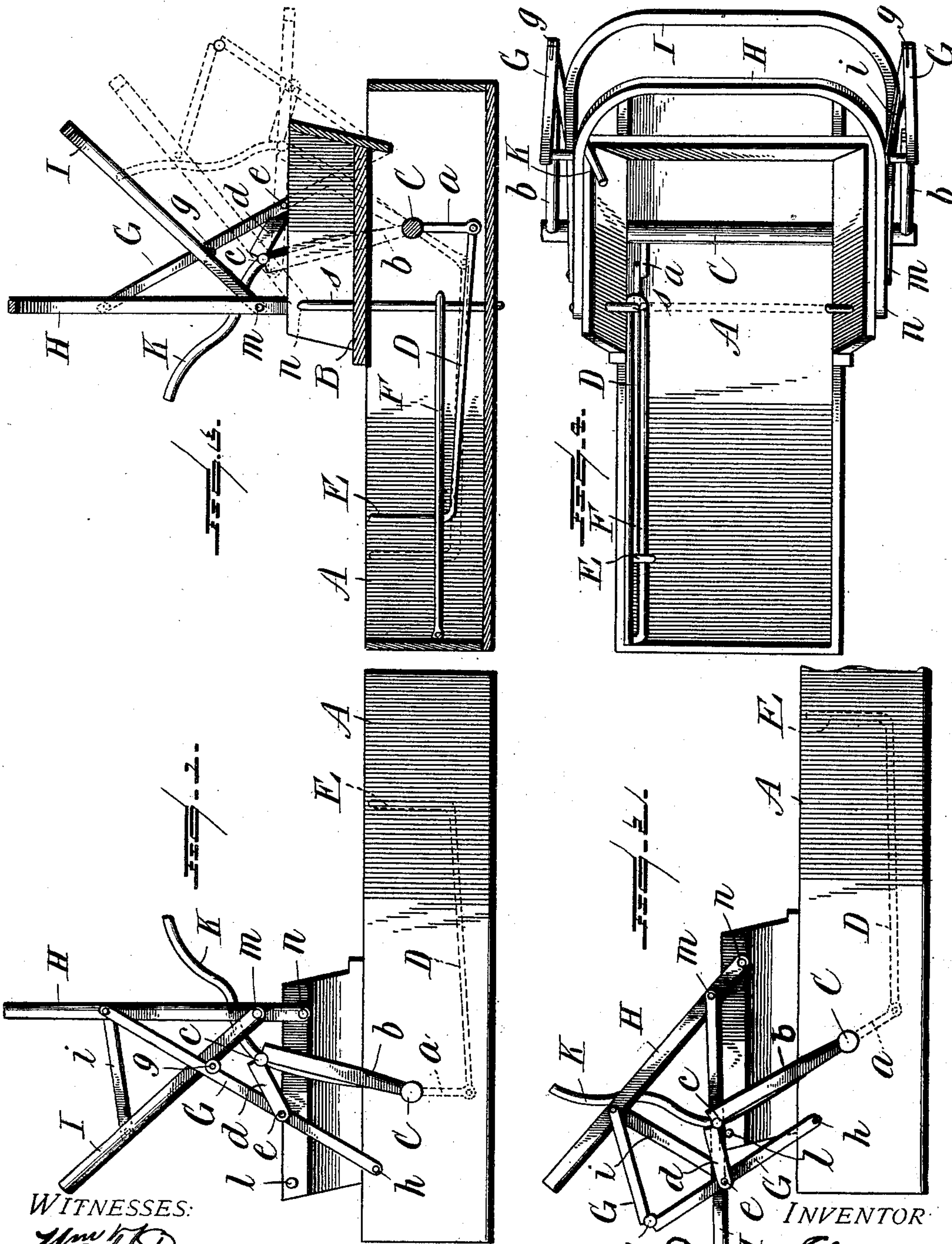
Patented Mar. 25, 1902.

D. ELWELL.

MEANS FOR RAISING OR LOWERING VEHICLE TOPS.

(Application filed Oct. 17, 1901.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

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MEANS FOR RAISING OR LOWERING VEHICLE-TOPS.

SPECIFICATION forming part of Letters Patent No. 696,022, dated March 25, 1902.

Application filed October 17, 1901. Serial No. 78,990. (No model.)

To all whom it may concern:

Be it known that I, DAVID ELWELL, a citizen of the United States, residing at Coal Creek, in the county of Fountain and State of Indiana, have invented certain new and useful Improvements in Means for Raising and Lowering Vehicle-Tops; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to buggy or vehicle tops; and it consists, substantially, in the improvements hereinafter more particularly described, and pointed out in the claim.

The invention has reference more particularly to that class or type of vehicle-tops denominated in the art as "movable" or "adjustable;" and the principal object of the invention is to provide simple and effective means or devices whereby the top may be raised and lowered or brought to intermediate positions of adjustment by the operator while seated in the vehicle.

A further object is to provide means or devices of the character referred to by which the adjustments or raising and lowering of the vehicle-top may be effected more quickly than in many instances heretofore and with less effort on the part of the operator or occupant of the vehicle.

A still further object is to provide the raising and lowering devices for the top of a positive and reliable character at all times and also to provide an exceedingly simple construction and arrangement of such devices.

Other objects of the invention will more fully hereinafter appear when taken in connection with the accompanying drawings, in which—

Figure 1 is a view taken from one side of a buggy or vehicle body having a top provided with raising and lowering devices constructed and arranged in accordance with my invention, said view indicating the top in its raised or elevated position. Fig. 2 is a similar view showing the top in its lowered position and indicating the corresponding changed position of the raising and lowering devices. Fig. 3 is a longitudinal sectional view through the vehicle-body and transversely of the rock-shaft by which to show the construction and

disposition of the sliding footpiece and the guide and connecting-rod therefor, the top being in raised position. Fig. 4 is a top plan view with the vehicle-top in its lowered position and the seat removed.

Before proceeding with a more detailed description it may be stated that in the practice of my invention I may employ any suitable form of box or vehicle-body provided, preferably at or near one end thereof, with the usual seat constructed in any suitable way. Having its bearings in the sides of the body and preferably beneath the seat is a rock-shaft projecting outwardly a suitable distance beyond said sides, and connecting with said rock-shaft is a movable or reciprocating rod extending longitudinally of the vehicle-body within and to one side of the same, said rod being formed or provided at or near its forward end with a footpiece or stirrup, which has a sliding movement forwardly and rearwardly of the vehicle in a suitable guide provided therefor inside of the vehicle-body. The rock-shaft is provided at or near each end exteriorly of the vehicle-body with a lever or arm connecting movably with a link, which in turn is also similarly connected with a side brace, which is movably or pivotally supported at its lower end on a rod or pin located to the rear of and above the said rock-shaft. Each of the said pivoted side braces for the top is in two parts or members jointed together, so as to fold rearwardly, and the upper parts or members thereof are movably connected with bolts or pins projecting from the sides of the foremost bow of the top, which bow is held the proper distance from the rearmost or adjacent bow by any suitable form of rigid connection, so as to cause both bows to work together in the adjustments or raising and lowering of the said vehicle-top. The rock-shaft is formed or provided at one side of the seat or vehicle-body with an operating hand-lever extending up to within convenient reach of the operator or occupant of the vehicle, and a stop is provided on the rear part of the seat for limiting the rearward movement of said lever and likewise limiting the rearward or downward movement of the said buggy or vehicle top. The forward movement of the top is limited by the straightening out of the

parts or members of the movable and jointed side braces referred to. It may be stated that the said vehicle-top may be both raised and lowered through the medium of the hand-lever; but preferably I have provided the footpiece and its operative connections referred to, so as to enable the top to be brought to one of its positions by the foot of the operator. Inasmuch as it usually requires a greater amount of strength and exertion to lower the top than it does to raise the same, I have constructed and arranged the foot operating devices in such relation to the top that the latter is lowered on imparting a forward movement to the said footpiece along its guide. If desired, of course, the parts may be so disposed as to render the operation the reverse of this, and also, if desired, the footpiece may be employed to effect both movements of the vehicle-top entirely by the foot of the operator. The embodiment of mechanism or devices herein shown is the preferred form, however. As will be understood, the details of construction of the several parts or elements may be varied in immaterial degree without departing from the spirit or scope of my invention.

Reference being had to the several parts by the designating characters on the drawings, A represents any ordinary form of buggy or vehicle body, and B the usual seat therefor. Beneath the seat is a transverse rock-shaft C, extending through and beyond the sides of the body, the same being formed or provided at a suitable inside point with an arm *a*, reaching nearly to the bottom of the said body. Movably connecting with the lower end of said arm *a* is the rearward end of a reciprocatory rod D, the forward end of which is turned upwardly and shaped into a footpiece or stirrup E, which works back and forth on a guide or rails F therefor arranged against one of the sides of the vehicle-body within. Secured to each projecting end portion of the rock-shaft is a lever or arm *b*, having connected thereto by a movable joint *c* a link *d*, which in turn is also movably connected at *e* with a side brace G. Said side braces are each constructed in two parts connected together by a movable knuckle-joint *g*, arranged to permit the parts to fold together rearwardly when the vehicle-top is carried backward or lowered. Each of said jointed side braces G is also pivoted or movably supported at its lower end on a rod or pin *h*, projecting from the vehicle-body, while the upper end thereof is in movable connection with a pin or projection on the foremost bow H of the vehicle-top. Another or

rearward bow is shown at I, and the two bows are held apart relatively by a rigid connection or plate *i*, which also causes the said bows to move together or in unison whenever the top is operated. Secured to one of the projecting ends of the rock-shaft is a curved operating hand-lever K, and projecting from the rear part of the seat at the same side is a stop *l* for limiting the rearward movement of said lever, said stop also serving as a rest or support for the vehicle-top in its lowered position.

It will be understood that whenever the footpiece is pushed forwardly to lower the vehicle-top the hand-lever is simultaneously carried to the proper position to be operated to raise the said top and also that whenever said top is raised the footpiece is likewise simultaneously brought into position to be again operated by the foot of the occupant to lower the said top. The parts are simple in character and always reliable in action, and it is thought the general embodiment and operation of my invention will be fully understood from the foregoing description and accompanying illustrations.

It should be remarked that the side pieces of the bows are united or joined together at *m*, and the ends of the foremost bow are fulcrumed or pivoted at *n* upon the ends of a strengthening-rod *s*, which pass through the sides of the seat, said rod being bent to extend down the inner sides of the body of the vehicle and beneath the same, as shown. It will thus be seen that the top is capable of being shifted in either direction and that no springs are employed in the construction.

Having thus described my invention, what I claim is—

The combination in a vehicle-top, of a rock-shaft having its bearings in the sides of the vehicle-body beneath the seat, said top having the jointed braces at the sides, vertical upstanding arms secured to projecting portions of said shaft and movably connected to said braces, an operating hand-lever secured to one part of the rock-shaft, a downwardly-extending arm secured to the shaft within the body, a footpiece, a guide therefor along one side of the body also within the latter, and a reciprocatory rod connecting said last-named arm with said footpiece, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID ELWELL.

Witnesses:

O. B. F. BANDY,
OLIVER P. LEWIS.