No. 710,273. Patented Sept. 30, 1902.

T. F. HORNE.

LOCKING BRACE FOR BUGGY TOPS.

(Application filed Feb. 20, 1902.)

(No Model.) 3 Sheets—Sheet 1.

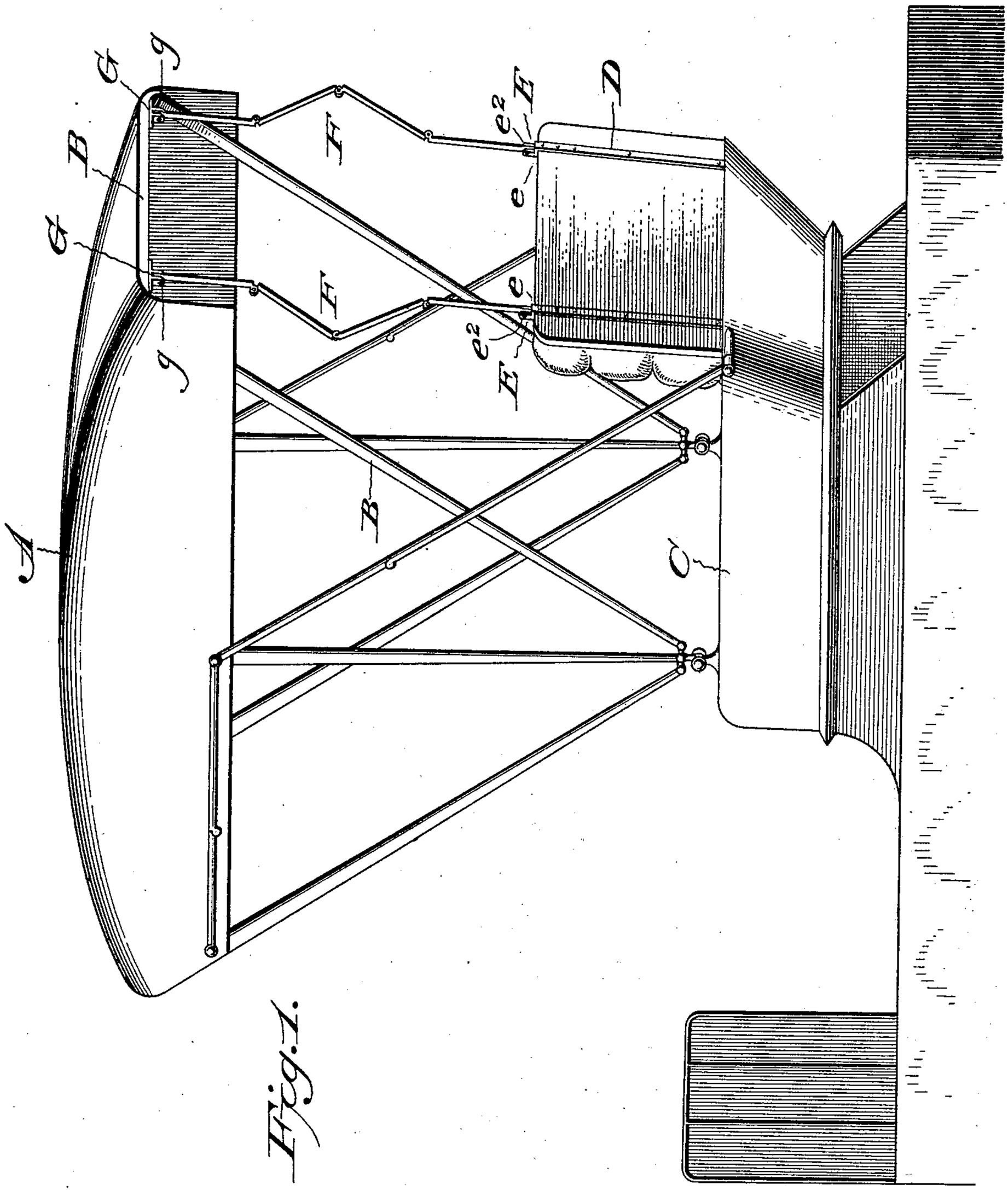

Fig. 1.

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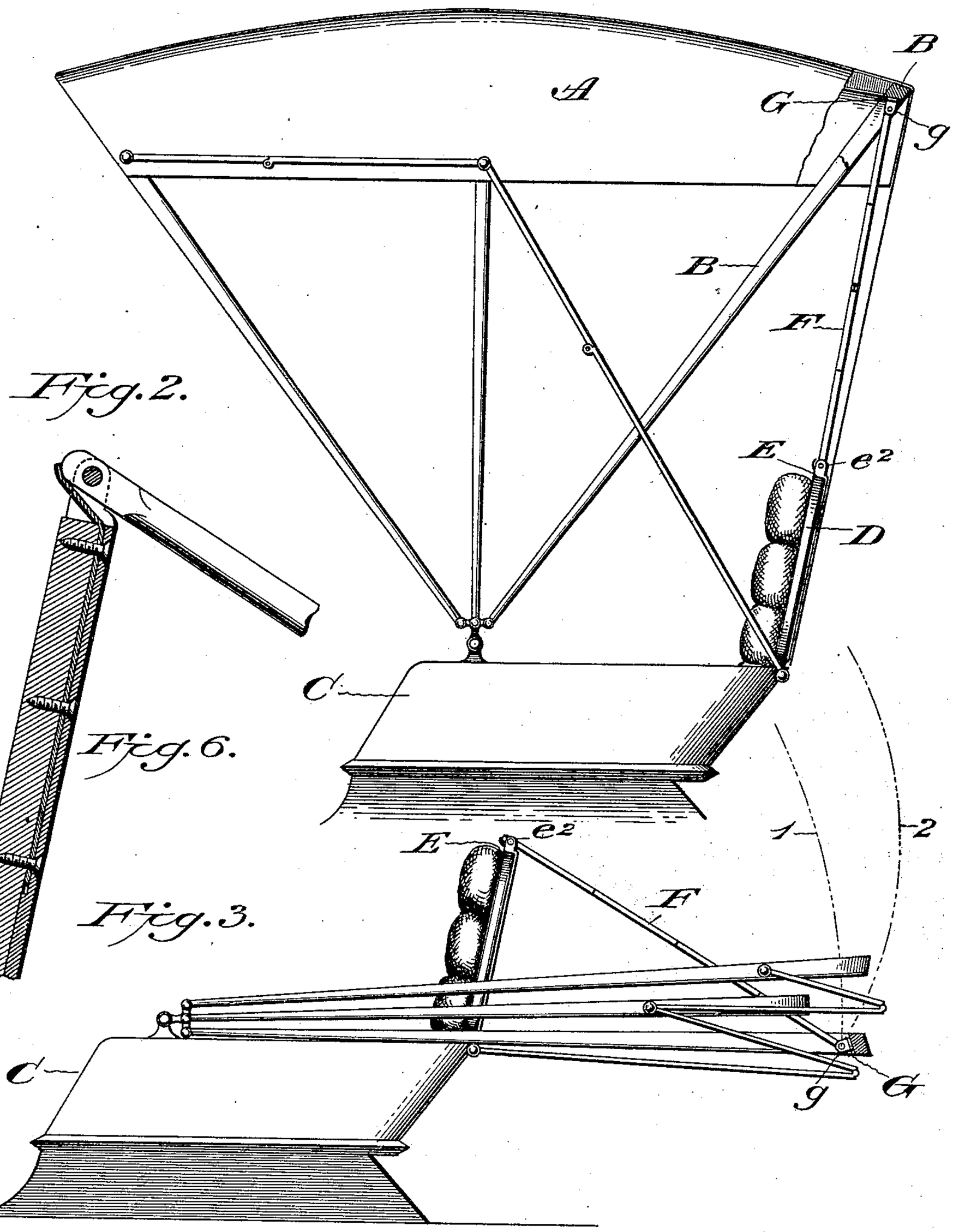

Fig. 2.

Fig. 6.

Fig. 3.

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(No Model.) 3 Sheets—Sheet 3.

Fig. 4.

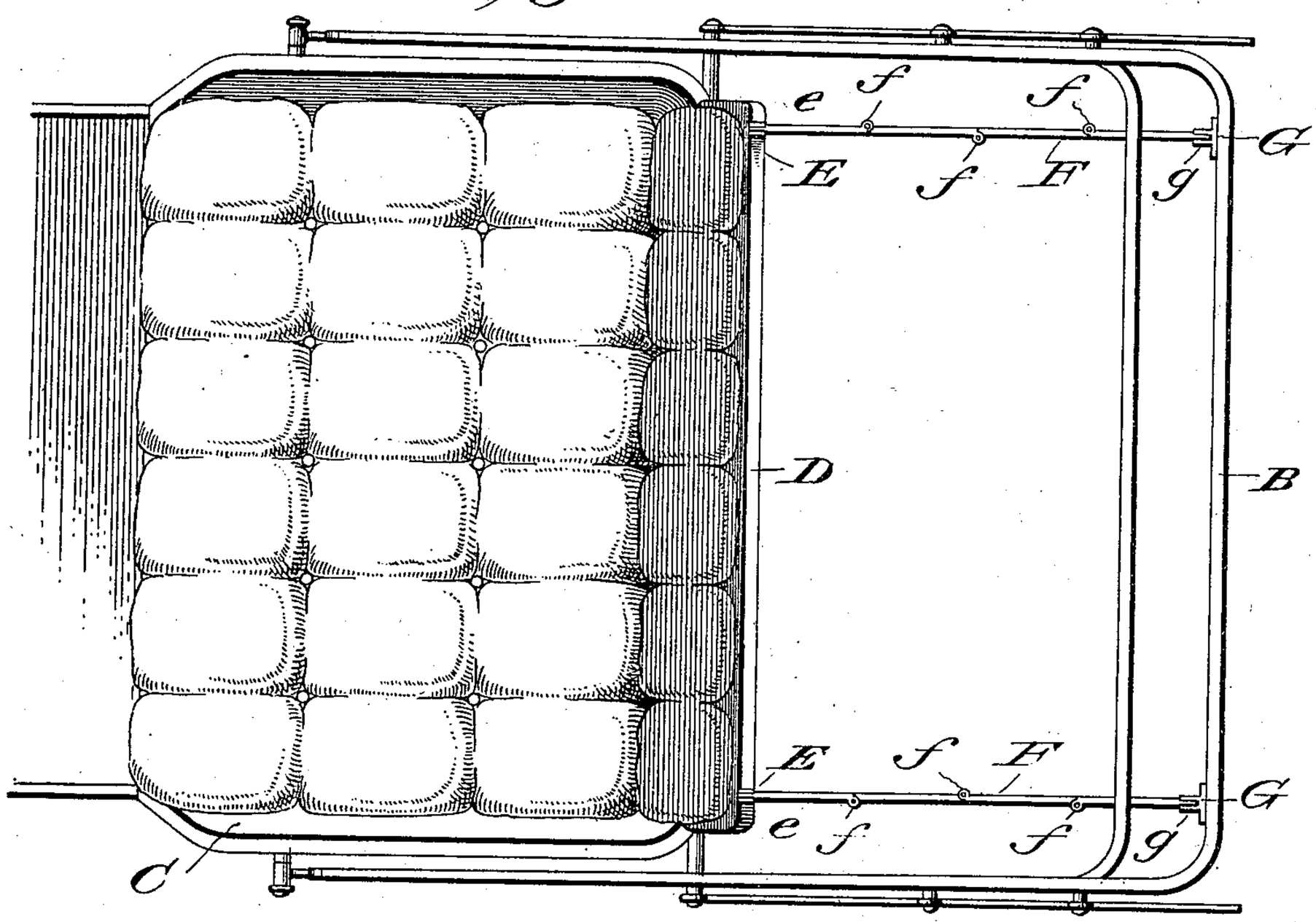


Fig. 5.

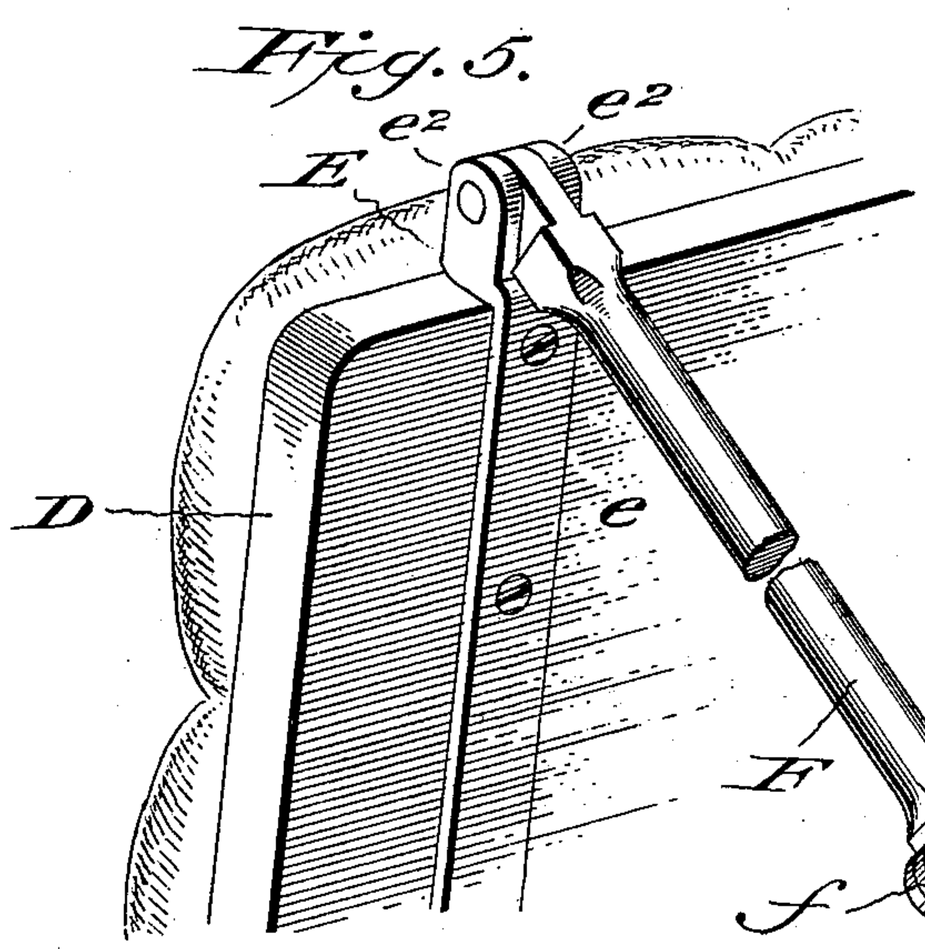


Fig. 7.

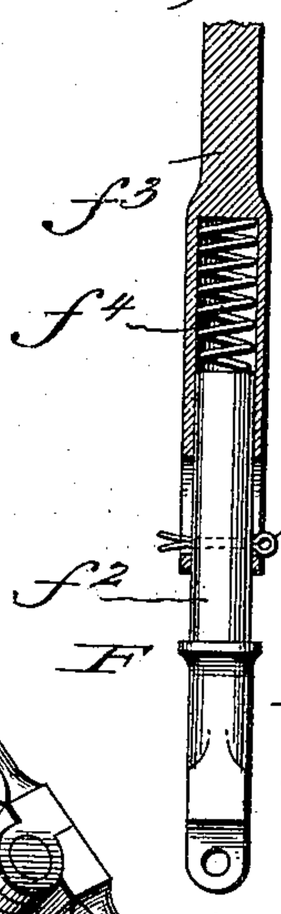


Fig. 8.

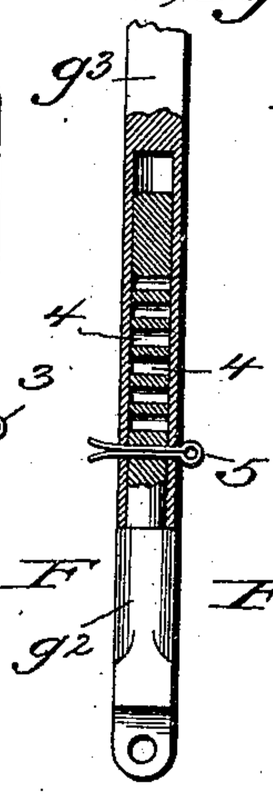
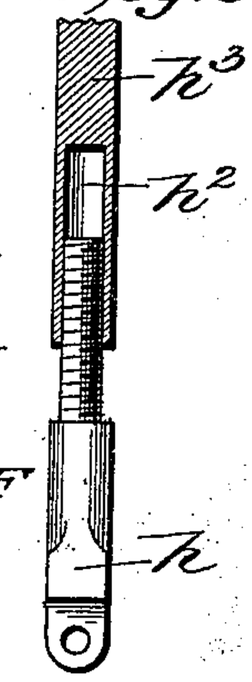


Fig. 9.



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Inventor:
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UNITED STATES PATENT OFFICE.

THOMAS F. HORNE, OF DENVER, COLORADO.

LOCKING-BRACE FOR BUGGY-TOPS.

SPECIFICATION forming part of Letters Patent No. 710,273, dated September 30, 1902.

Application filed February 20, 1902. Serial No. 94,965. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. HORNE, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Locking-Braces for Buggy-Tops; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in locking-braces for buggy-tops.

The object of the invention is to provide means whereby the top when lowered is held against upward or sliding movement caused by the jolting or bouncing of the buggy, and to this end I provide a pair of braces which are provided with lock or knuckle joints and which are hinged at one end in brackets secured to the seat-back and at the other end to the under horizontal portion of the rear bow in such a manner that when the buggy-top is lowered the braces will extend at a downward incline from the top of the seat-back to the bow and the joints will be locked, making a straight rigid brace, which will effectively prevent the top from bouncing up during the movement of the buggy and at the same time prevent undue sidewise movement of the same, the said braces being unlocked or "broken" when the top is raised, so as not to interfere with the movement thereof.

The invention further consists in certain novel features of construction, as will be clearly set forth in the accompanying specification and claims.

In the accompanying drawings, Figure 1 is a perspective view of the top portion of a buggy, the same being in its raised position and the locking-braces being shown in the positions they will assume when the said top is in this position. Fig. 2 is a side elevation of the same, the top being in its raised position. Fig. 3 is a side elevation, the top being in its lowered position and the locking-braces operating to prevent the upward or sliding movement of the said top and assisting the rear bow to sustain the weight of the top. Fig. 4 is a plan view, the top being lowered, as in Fig. 3. Fig. 5 is an enlarged detail perspective view of a portion of the seat-back, showing the manner of hinging the locking-braces to brackets secured to the said back. Fig. 6 is a sectional view through the seat-back and bracket, showing a spring which assists in holding the brace in its lowered position and prevents rattling of the same. Figs. 7, 8, and 9 are views of one end of the brace, showing how the same may be adjusted to accommodate itself to tops of varying heights.

Like characters of reference indicate corresponding parts in the several views.

Referring to the drawings, the letter A indicates the top of a buggy; B, the rear bow; C, the seat, and D the seat-back. Upon the rear side of the seat-back and adjacent to each end thereof is rigidly secured a strap-iron E, which extends from the iron frame of the seat to the top of the back, where it bends so as to rest upon the said back and is provided with vertical ears e^2, between which the lower end of one of the braces F is pivoted, the said ears being provided with holes which register with a hole in the end of the said brace and through which a pin is passed which retains the brace in swinging engagement with the said clip E. The brace F is in the form of a jointed rod, and its other end is pivoted between the ears g of a clip G, secured to the under side of the rear bow B, said clip G being identical with the clip E. Each brace-rod F is provided, preferably, with three equidistant hinge-lock joints f, the center one being arranged to open outward, while the other two open in the opposite direction, or inward, as shown in Fig. 4. These brace-rods F are designed to be operative only when the buggy-top is lowered, at which time the rods are extended to their full length and the hinge-joints locked, making a practically rigid brace of each rod; but when the top is raised the rods perform no function and are in the position clearly shown in Fig. 1.

When the buggy-top is up or in its raised

position, the distance between the top edge of the seat-back and the horizontal member of the rear bow B is less than the length of the brace-rods F when they are in their extended positions, and this necessitates the "breaking" of the central hinge-joint in each rod, which will cause the said rods to assume the position shown in Fig. 1, in which position they will be out of the way of the head of the occupant of the buggy; but when the buggy-top is lowered the distance between the seat-back and rear bow is greater than in the former or raised position and is practically equal to the length of the brace-rods when they are extended. This permits the said hinge-joints to be locked, making a practically rigid brace of each rod and providing means for preventing the upward or sliding movement of the buggy-top consequent upon the jolting of the buggy.

The manner in which the braces operate to prevent the upward or sliding movement of the buggy-top and assist in supporting the weight of the same will be fully understood by reference to Fig. 3. The position of the pivotal or swinging point of the bow B causes its outer member when being raised to describe an arc, (indicated by the dotted line 1 in Fig. 3,) while the pivotal connection of the brass rod will cause its outer end, which is attached to the said outer member of the bow, to describe an arc, (indicated by the dotted line 2,) which arc is considerably outside that described by the bow. Thus any upward movement of the bow will be checked by the rods, which, though attached to the said bow, would describe an arc opposed to that in which the bow moves, effectively preventing upward movement of the same. When it is desired to raise the buggy-top, the middle hinge-joint in each rod is broken, when the top may be raised and the brace-rods will assume the position shown in Fig. 1, as before mentioned.

In order that the brace-rods F may be fitted to tops of varying heights, I have provided means for adjusting the said rods so that they can be lengthened or shortened, as may be required. In Fig. 6 the lower section of the rod is made up of two members f^2 and f^3, the member f^2 fitting telescopically in the member f^3, the said member f^3 being limited in its upward movement by a cotter 3, which passes through a hole in the member f^2 and a slot in the member f^3. Within the upper member f^3 is a strong helical spring f^4, against which the upper end of member f^2 contacts, the said spring providing for an automatic adjustment of the rod. In Fig. 7 the adjustment is made by providing the lower member g^2 with a plurality of holes 4 and the upper member g^3, into which it fits, with a single hole. A cotter 5 is passed through the upper member and through one of the holes in the lower member, and the required adjustment is obtained. In Fig. 8 the lower member h is threaded and is screwed into a threaded opening h^2 in the upper member h^3, and by moving the lower member either in or out the desired adjustment is obtained.

In order to assist in holding the rods F in their lowered or braced position and to prevent the same from rattling, I form a recess E^2 in the rear side of the upper end of the strap-clip E, and in this recess is secured a spring E^3, the upper end of which is bent so as to contact with the lower end of the brace-rod, which projects slightly beyond its pivotal point, so as to exert an upward pressure against the same, which will tend to assist in bracing the rod and prevent rattling of the same, as previously mentioned. The end of the said spring will be close to the lower end of the brace when the top of the buggy is raised, so as to be out of the way of the occupant of the buggy.

This improvement, as set forth in the foregoing specification, is simple and cheap, easily attached and manipulated, and presents an effective means for preventing the upward movement of buggy-tops due to jolting.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the seat-back and rear bow of a buggy of clips secured to the same, jointed rods connecting the said clips and pivotally engaging the same, the said rods operating to hold the buggy-top in its lowered position and prevent jolting of the same during the movement of the said buggy, and springs carried by the clips which contact with the lowered end of the brace-rods, and assist in holding them in this braced position, substantially as shown.

2. In a buggy, the combination with the rear bow and seat-back of clips secured to the same; rods pivotally secured at their ends to the said clips so as to connect them, the said rods being made up of sections which are connected by hinge-joints which break in opposite directions the object of the rods being to hold the buggy-top in its lowered position and prevent jolting of the same during the movement of the said buggy, and springs secured in recesses formed in the clips which are attached to the seat-back, the said spring contacting with the lower ends of the said brace-rods, so as to assist in holding them in their braced position, substantially as shown.

3. In a buggy, the combination with the seat-back and rear bow, of clips secured thereto; rods pivotally attached at one end, to the clip secured to the seat-back and at their other end to the corresponding clip, attached to the bow; the said rods being made in sections which are connected by lock or knuckle joints which break in opposite directions, the length of said rods when extended being greater than the distance between the seat-back and rear bow when the top is raised,

but substantially equal to the distance between these points, when the top is lowered, the said rods when locked in their extended positions serving to hold the buggy-top lowered and prevent any upward jolting or sidewise movements of the same during the movement of the buggy, and springs secured in recesses formed in the upper end of the seat-strap clip, which bear upon the lower ends of the brace-rods, and assist in holding them in their braced position, substantially as shown.

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

THOMAS F. HORNE.

Witnesses:
G. SARGENT ELLIOTT,
BESSIE THOMPSON.