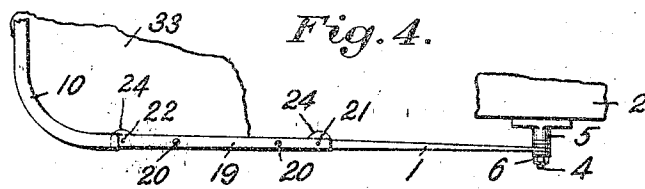
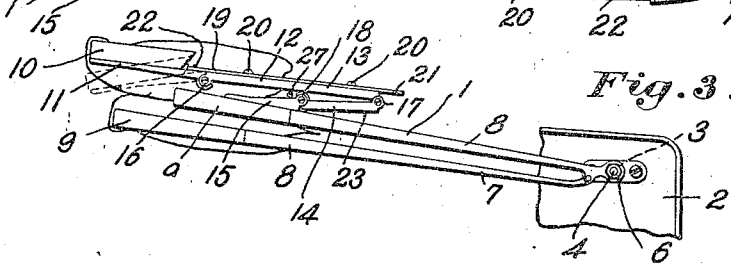
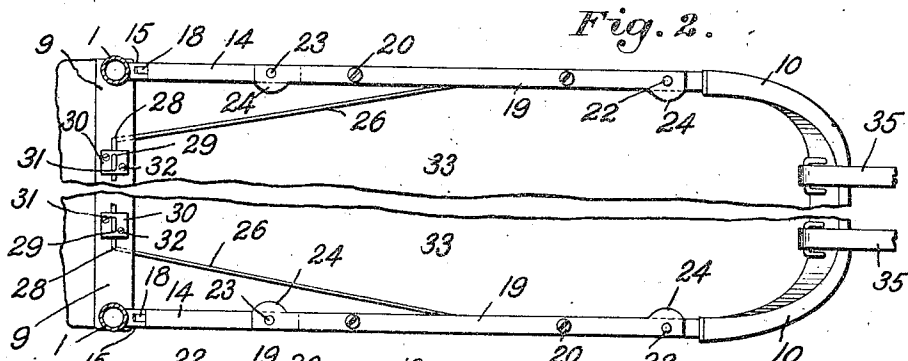
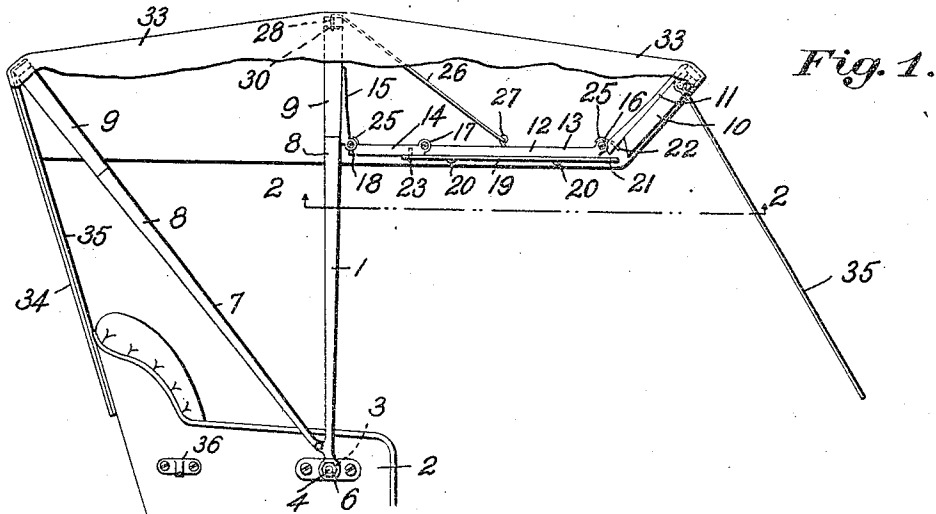


A. M. WINGATE.
VEHICLE TOP.

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1,007,168.

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Witnesses:
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ARTHUR M. WINGATE, OF REVERE, MASSACHUSETTS.

VEHICLE-TOP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR M. WINGATE, a citizen of the United States, and a resident of Revere, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Vehicle-Tops, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to vehicle tops and particularly to foldable tops, and aims to provide a top so constructed that when it is in its raised or open position it will permit free ingress to and egress from the seat of the vehicle.

In the drawings of one embodiment of my invention selected for illustration and description herein Figure 1 is a side elevation of my foldable top in raised or open position, the lower side edge of the top being broken away to show clearly the forward supporting member or bow and its positioning member; Fig. 2 is a view on an enlarged scale of the under side of that portion of the top forward of the central bow, portions of the central and forward bows and the top being broken away; Fig. 3 is a side elevation of the top in its lowered position; and Fig. 4 a view of the lower edge of one side member of the forward bow, as it appears when the top is in its folded or lowered position, as in Fig. 3.

Referring to the drawing, Fig. 1, my improved top is shown as comprising the usual central supporting member or bow 1, shown herein as secured to the ends of the seat 2, of an automobile or other vehicle,—a portion only of which is shown,—in any usual manner, as by means of eyes 3 at the lower ends of the bow, which receive the threaded ends 4 of studs 5, Fig. 4, about which the bow 1 is free to move, the bow being retained on said studs by any desired means as usual nuts 6. These studs 5 may be secured to the vehicle in any desired manner, or any other suitable device for movably securing the bow 1 to the vehicle body may be used.

At any suitable points upon the downwardly extended side members of the bow 1, and preferably near the ends thereof, said bow has hinged to it, in any suitable manner a similar rear bow 7, which latter obviously may be of any required height to give the desired outline to the top. The number

of these bows may be varied as desired and they may be of desired material and construction, those shown herein comprising hollow, metallic side members 8, into the top ends of which are inserted and suitably secured, the downwardly bent ends of the curved top members 9. I have also provided a forward short bow 10, preferably positioned at the same angle relative to the central bow 1 as the rear bow 7, its ends being cut, preferably angularly, at substantially the points where its ends would otherwise be inserted in the tops of side members 8, were such members used. These angular ends of the short bow 10 are suitably secured, as by screws, to end sections 11 of the collapsible positioning members 12, of which there are two, Fig. 2, which, in their extended positions, serve to hold the short forward bow 10 in its extended position as clearly shown in Fig. 1. Each of these collapsible positioning members 12 comprises, herein four sections, 11, 13, 14 and 15, respectively flexibly joined one to another by any preferred means, herein the hinge joints 16, 17 and 18. These members 11, 13, 14 and 15 may be of any desired material and of any suitable form in cross section but I have found sections substantially rectangular in form and made of iron or brass to give satisfaction. The rear end sections 15 of the members 12 are suitably secured, as by screws not shown, preferably to the front edge of the central bow 1, and preferably at a point that will position the members 12 at substantially right angles to the bow 1, when the top is in its extended position.

Each positioning member 12, preferably at section 13 thereof, is provided, herein at its under edge, with a spring member 19, secured to said section 13 by screws 20. The ends of each of said spring members 19 are provided, Figs. 1 and 3 with apertures 21, one of which is adapted to receive the pin 22 suitably secured to section 11, when said section 11 and section 13 are in their extended positions shown in Fig. 3, while the opposite aperture 21 is adapted to receive pin 23 similarly secured to section 14, when the sections 13 and 14 are in extended positions as in Fig. 1. The ends of each spring member 19 are each preferably provided with ears or thumb pieces 24 to facilitate the springing of these ends to unlock the same from engagement with the pins 22—23. The sections 11 and 14 of the positioning mem-

bers 12 are each provided at one of their ends with segmental stops 25 to prevent the section of which they are a part from folding too far back upon the opposite jointed section. Without these stops, when the top is folded back the section 11 of the member 12, with its attached top might fold in between the two bows 1 and 10 and be again infolded when the section 13 is folded back upon section 14. The stop upon the section 14 prevents the section 14 from folding back against section 15 which would extend the folded top too far back for convenience.

To assist in retaining the positioning members 12 in their extended positions Fig. 1, and also to more securely support the forward end of the cover, I provide suitable auxiliary supporting means, herein two cords 26, or chains, of any suitable material, each having one of its ends secured in any desired manner to the vehicle or the bows 1 and 7, herein the crown 9 of the bow 1, and preferably a short distance in from either side member thereof, Fig. 2, while the opposite end of each cord is suitably secured, as by a screw-eye 27, to one section, preferably 13, of the adjacent positioning member 12, at any suitable point thereon. These cords may be conveniently adjustably secured to the crown 9 of the bow 1, by carrying the ends of the cords down through apertures 28 in said crown thence through apertures 29 in clamping plates 30, back through other similar apertures 31 and then securing the cord ends in position by clamping the plates 30, as by screws 32, to the bow 9.

The usual foldable top 33 and the usual rear curtain 34 of any desired construction and material are suitably secured to the bows 1-7-10. The top 33 is provided, if desired, with any suitable means, securing said top at suitable points on the vehicle, usually the dasher, not shown, and to the back of the seat—for instance the usual straps 35 suitably secured to the forward and rear bows 10 and 7 respectively.

To support the top when in its collapsed or folded position I have provided suitable rests 36 on the ends of the seat.

When it is desired to lower the top or canopy the front securing straps 35 are first detached or unbuckled. The rear ends of the locking springs 19 at the joints of the sections 13 and 14 of the positioning members 12 should then be depressed sufficiently to unlock said members from engagement with the pins 23 on the sections 14. This will permit the positioning members 12 to collapse at the joints of sections 14, 15, the section 14 turning down against the legs of the central bow 1 and the section 13 and forward bow 10 turning upward also against the legs of said central bow 1. The top will now fall naturally back into its collapsed

position in the usual manner, as shown in Fig. 3, the bows 1 and 7 closing together as shown. As the top falls backward the bow 10 will rest in the slightly inclined position shown by dotted lines, Fig. 3, until it is, if desired, raised into the same plane with the positioning members 12, as shown in full lines, Fig. 3, when the locking pins 22 will enter the apertures 21 in the locking springs 19 and securely hold said bow 10 in such position. The forward bow and the positioning members 12 thus locked have the appearance of a bow consisting of one rigid member and may now be inserted compactly in the usual cover if desired.

When the top is to be raised the locking springs 19 are first unlocked from the pins 22 on sections 11, and the top may then be easily raised to its upright position, Fig. 1. The sections 13-14 are next forced upward until the rear apertures 21 in the locking springs engage the pins 23 on the section 14. This straightening of the positioning members 12 carries the forward bow 10 also forward, its weight and that of the top secured to it causing it to fall naturally into approximately its position, Fig. 1. The front and back securing straps 35 are then adjusted to hold the canopy firmly in desired position on the vehicle.

While I have shown my improved top as applied to a single seated vehicle, it is obvious that it may be applied to a vehicle having more than one seat by supplying additional supporting members or bows similar to the bow 1, in the customary manner. In such case if it were desired to lower the top, after the positioning members 12 had been collapsed and the forward bows had been pushed back as before, the several members 1 would be transferred from their respective studs 3 to similar studs on the rear seat in the usual manner, and then the entire top could be dropped down into collapsed position as desired.

One of the most important advantages of my improved construction is the elimination of the usual forward slanting bow which so seriously interferes with the ease and safety of entrance and egress from the front or single seat. As these tops are now made one is obliged to bend almost to a stooping position before he can crawl under the forward bow and then he must at once change almost to an upright position before he can pass the usual steering wheel.

Claims:

1. In a vehicle folding top supporting members including a half-bow; a multipart collapsible positioning member for said half-bow, locking means thereon normally acting to lock a plurality of said parts at a plurality of points thereon in selected position upon said positioning of said member, an auxiliary supporting member for said

positioning member and half-bow extending from said positioning member to one of said supporting members, and automatically effective on the locking of said positioning member in extended position to support said positioning member and half-bow, and a securing member extending from said half-bow to said vehicle to secure said extended top in desired position relative to the vehicle.

2. In a vehicle folding top, a cover, supporting members therefor comprising a half-bow, means to open the top comprising a multipart positioning member movably secured to and for relatively positioning said half-bow, locking means comprising a stud on two of said parts of said positioning member, a spring member on one part of said positioning member adapted to engage either of said studs, and to positively lock two of said parts of said positioning member in raised position and to lock two of said parts in collapsed position, and auxiliary supporting means for said positioning member adapted automatically to become effective upon the extending of said multipart positioning member.

3. In a vehicle folding top, supporting members for the top comprising a half-bow, means to open the top comprising a multipart, collapsible, self-locking positioning member for relatively positioning said half-bow in raised position and relatively positioning and rigidly locking said half-bow and positioning member in collapsed position, supporting means connecting said positioning member to the arched portion of

one of said supporting members and means extending from said half-bow to the vehicle to secure said top in position thereon.

4. In a vehicle top the supporting member 1, half-bow 10, multipart positioning member 12 to adjustably secure said half-bow to said supporting member, auxiliary supporting member 26 for supporting an intermediate part of said positioning member and said half-bow from said supporting member, a locking member 19 on said positioning member for locking a plurality of the parts of said positioning member in a plurality of positions and a securing member 35 for said half-bow and supporting member.

5. In a vehicle folding top a cover, braceless cover supporting members comprising a half-bow and means to raise the top comprising a multipart, collapsible, self-locking positioning member for relatively positioning said half-bow in raised position and relatively positioning and rigidly locking said half-bow in lowered position, securing means to secure said half-bow to the vehicle and means on at least one part of said multipart member to determine the position thereof relative to adjacent parts thereof and to position said half-bow without the folds of the cover when the top is lowered.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ARTHUR M. WINGATE.

Witnesses:

EVERETT S. EMERY,
ARTHUR E. CARSON.