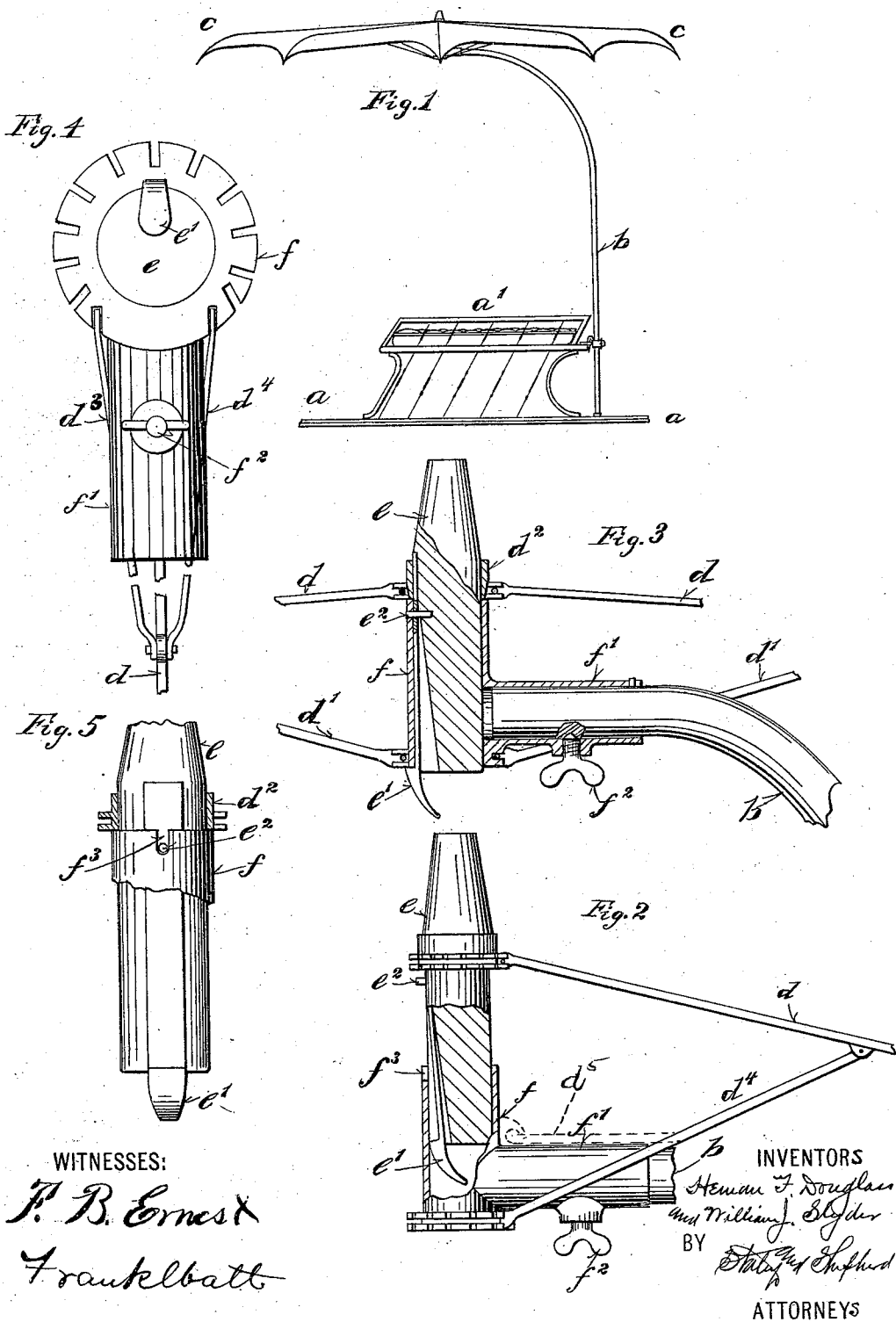


(No Model.)

H. F. DOUGLASS & W. J. SLYDER.
FOLDING TOP FOR VEHICLES.

No. 542,999.

Patented July 23, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HEMAN F. DOUGLASS AND WILLIAM J. SLYDER, OF TROY, OHIO, ASSIGNORS
TO TROY CARRIAGE SUN SHADE CO., OF SAME PLACE.

FOLDING TOP FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 542,999, dated July 23, 1895.

Application filed October 12, 1893. Serial No. 487,972. (No model.)

To all whom it may concern:

Be it known that we, HEMAN F. DOUGLASS and WILLIAM J. SLYDER, citizens of the United States, residing at Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Folding Tops for Vehicles, of which the following is a specification.

Our invention relates to improvements in folding tops for vehicles; and the object of our invention is to provide a top or cover in the nature of a canopy-top, which may be readily attached to or detached from any ordinary vehicle, and when detached may be folded up for storage or transportation and when attached may be opened out and supported to form a full-size canopy vehicle-top. We attain these objects by the constructions shown in the accompanying drawings, in which—

Figure 1 is a side elevation view showing a portion of a vehicle to which our folding top has been applied. Fig. 2 is a side elevation, partly in section, of a portion of the top, showing the construction of the same to permit it to be folded and unfolded. Fig. 3 is a partial sectional view of the same, showing the construction which permits the top to be readily detached from its supporting-standard and showing the means for supporting the same in proper position over the vehicle-seat. Fig. 4 is a bottom plan view, and Fig. 5 is a side elevation, of a portion of the same.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, *a a* represent the bed of an ordinary vehicle; *a'*, the seat thereof. To this seat, or any other convenient portion of the vehicle, is detachably connected a supporting-standard *b*, preferably curved at the top to form a right-angled bend, as shown.

c c is the top, which consists essentially of a folding frame formed with ribs *d* and braces *d'*, after the manner of an ordinary umbrella, said ribs and braces being adapted to support a suitable cover of any suitable size or shape. The ribs *d* are connected to a collar *d²*, which is permanently attached to a block or stem *e*, and the braces are pivotally connected at one end to a moving sleeve or collar *f*, said sleeve or collar *f* being provided at the bottom with

suitable openings to receive said ribs in the usual manner.

To provide for connecting the top to the supporting-standard, so that the same may be supported properly over the seat and still have the standard in a convenient position and out of the way of the occupants of the vehicle, we provide the moving sleeve *f* with a right-angled projection *f'*, also formed in the nature of a sleeve and adapted to receive the laterally-projecting end of the support *b*, a set-screw *f²* being preferably provided to hold the parts firmly together. The sleeve *f* is adapted, when the top is spread, to engage over the stem or block *e*, and held in this position by a spring-catch *e'*, connected to said block and adapted to engage with the bottom of said sleeve when the same is raised onto the stem or block *e*, as shown in Fig. 3. The sleeve *f* is further provided at the top with a notched opening *f³*, adapted to engage over a stationary projection *e²*, projecting over said stem or block, and thus hold said sleeve against rotative movement about said stem or block, the parts being preferably round.

In order that the top may be supported by the proper number of ribs, and at the same time have each rib properly braced without interfering with the proper folding of the top, we construct that rib *d* which stands opposite the auxiliary sleeve *f'* with two braces *d³* *d⁴*, adapted to drop down on opposite sides of the sleeve and be connected to the bottom of the sleeve *f*, as shown in Fig. 4, the other braces being connected to the said sleeve at an angle in such a manner that they will properly support the ribs and at the same time permit the sleeve *f'* to descend through said braces in folding; or, if desired, a single brace *d⁵* may be hinged to the sleeve *f* above the auxiliary sleeve *f'*, as indicated in dotted lines in Fig. 2.

The operation of the device, it is thought, will be understood from the above description. To fold the top, the spring-catch is pressed back until it disengages the sleeve *f*. The sleeve is then withdrawn from the stem or block *e* and the top folded up in the nature of an ordinary umbrella, the sleeve *f'* having been first detached from the support *b*. The support *b* may then be removed, and an open-top vehicle is the result. To replace the top,

the ribs are pressed downwardly and the sleeve *f* and the block *e* pressed toward each other until said stem or block fits said sleeve, after which said sleeve is pressed firmly onto
 5 said stem, with the notched opening *f*³ engaging over the stationary projection *e*², after which the spring-catch engages with the sleeve and holds the parts firmly in their positions. The top may then be replaced on the support
 10 *b* and fastened thereon by the set-screw *f*², said support being preferably countersunk to receive the end of said support, as shown in Fig. 3.

A device as above constructed, it will be
 15 seen, is very simple. At the same time it is quite effective, which permits the top to be removed or replaced at will, and when removed to be folded up out of the way.

These tops may be made in any desired
 20 shape or size and of such materials as will best answer the purpose, and when lined and trimmed in the proper way have the same appearance as an ordinary stationary top.

By having the supporting-standard connected to the angular sleeve, which is formed
 25 integral with the movable sleeve, the length of the stem or connecting-block is reduced to the minimum. In fact, in practice the stationary and movable sleeves when in their
 30 operative positions rest in contact, so as to form practically a continuation one with the other. The braces are connected to the sleeve below the lateral projecting support, which not only

partially conceals the support, but makes the same extremely rigid and compact.

Having thus described our invention, we claim—

1. In a folding top for vehicles a central stem having stationary connecting devices to which are pivoted ribs as described, pivoted
 40 braces on said ribs and a runner on said stem to which the other ends of said braces are connected, said runner being substantially of the same length as the portion of said stem which is below said stationary connecting devices,
 45 a laterally extending projection formed on said runner at a point between the inner connections of said ribs and braces, and a support adapted to be connected to said projection, substantially as specified.

2. The combination with a central stem, ribs pivoted thereto, a movable runner on said stem and braces extending from said runner to said ribs, a laterally projecting sleeve formed on said runner and arranged above
 55 the inner ends of said braces, a spring catch on said stem to engage said runner and a supporting standard to engage in said laterally projecting sleeve, substantially as specified.

In testimony whereof we have hereunto set
 60 our hands this 7th day of August, A. D. 1893.

HEMAN F. DOUGLASS.

WILLIAM J. SLYDER.

Witnesses:

E. C. BROWN,

A. Y. STOUDEK.