

No. 870,908.

PATENTED NOV. 12, 1907.

Z. G. SHOLES.
ATTACHMENT FOR AUTOMOBILES.

APPLICATION FILED DEC. 14, 1906.

2 SHEETS—SHEET 1.

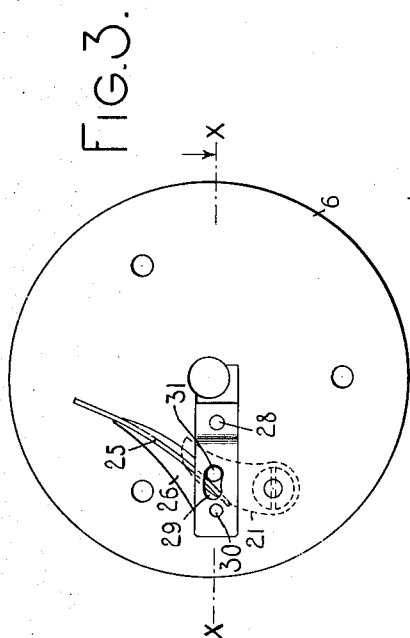


FIG. 3.

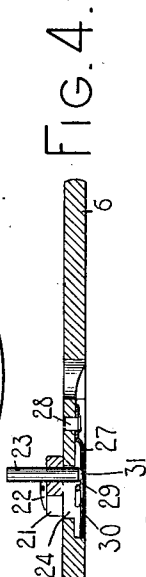


FIG. 4.

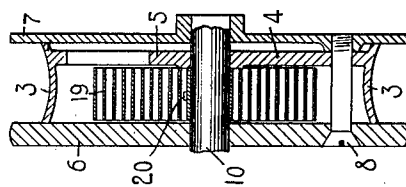


FIG. 6.

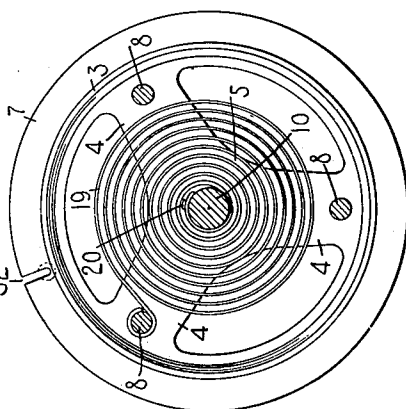


FIG. 5.

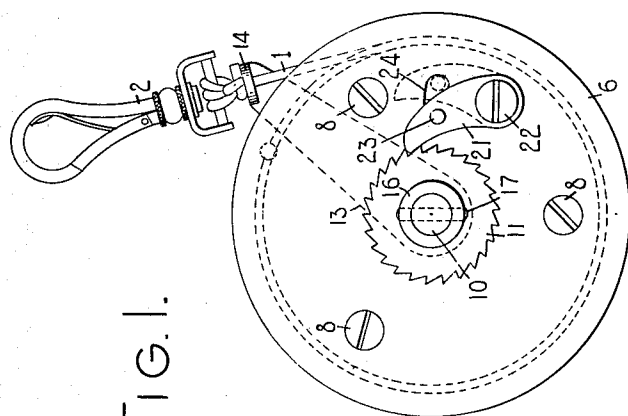


FIG. 1.

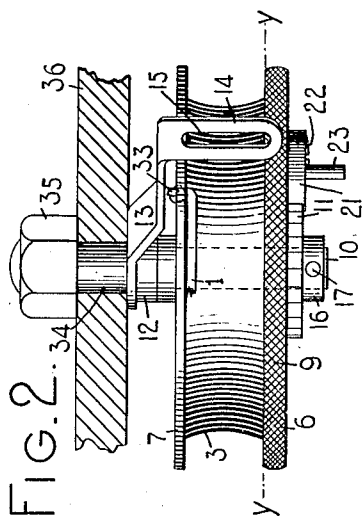


FIG. 2.

WITNESSES:

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ATTACHMENT FOR AUTOMOBILES.

No. 870,908.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ZALMON G. SHOLES, a citizen of the United States, and a resident of the borough of Manhattan and of the county, city, and State of New York, have invented a certain new and useful Attachment for Automobiles, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, forming part of this specification.

10 This invention relates to improvements in stays for the folding tops of automobiles and to the combination with such stays of means to facilitate their use.

The invention consists of an attachment including a flexible stay and a drum and having the features of 15 construction and containing the combinations and arrangements of parts which are hereinafter described and specified in the claims.

On the accompanying sheets of drawings, on which like reference-numerals designate like parts in different views, Figure 1 is a side view of the attachment in its preferred form; Fig. 2, a top view of the drum and other visible parts of the attachment, except the stay of which only a small piece is shown in this view; Fig. 3, a view of the inner face of one of the 20 heads of the drum; Fig. 4, a cross-section of this head on the plane *x, x*, Fig. 3; Fig. 5, a section of the drum at right angles to its axis, the parts shown being on and above the plane *y, y*, in Fig. 2; Fig. 6, a cross-section of the drum on a plane containing its axis; 25 Fig. 7, a side outline of the top and other parts of an automobile, and of the attachment as it appears when it is in use; and Fig. 8, a plan of a fragment of the chassis showing an attachment at each side thereof.

The object of the invention is to provide improved 30 means for connecting the folding top of an automobile with portions of the framework in front of the top, so as to prevent the top from being blown backward, or forced backward by air-pressure when the vehicle is in motion, the heavy straps which are commonly used for this purpose being objectionable because it is quite troublesome to handle and adjust them, and because they impair the view of persons 35 riding in the vehicle, and because they occupy much space within the vehicle when they are not in use, and for other well known reasons.

The flexible stay 1 of the attachment in which the invention is shown embodied, is preferably a small steel-wire cable coated with copper to prevent it from rusting, and provided at one end with a snap-hook 2. 40 The drum is preferably made of or coated with brass. It is shown as composed of three parts fastened together by screws, one of these parts being a ring 3 formed on the arms 4 of a spider-like plate from whose central portion 5 the arms radiate (Figs. 5 and 6).

This part constitutes the body of the drum. The 55 other two parts are the heads 6 and 7. The screws, 8, pass through the head 6 and the arms 4, and extend into threaded holes in the head 7. The outer edge 9 of the head 6 is knurled, as appears by Fig. 2.

The drum is to be mounted on a support adapted to 60 be attached to some part of the framework of an automobile, the support shown being the axle 10. The drum is confined on the axle 10 between a toothed disk, such for example as the ratchet-wheel 11, and the hub 12 of a device which includes also the arm 13 65 fast on the hub 12 and extending thence over the drum, the part 14 of this arm having in it a slot 15. The hub 12 is fast on the axle 10, and the ratchet-wheel has on it a hub 16 which is fastened to the axle by a pin 17. Within the drum is a spring 19 70 which is coiled around the axle 10, one end of this spring being attached by a stud 20 to the axle and its other end being secured to one of the screws 8.

A detent, shown as a pawl 21, is mounted on the head 6 of the drum and so arranged that it may be engaged 75 with the ratchet 11, as appears by Fig. 1, the screw 22 being the pivot of the pawl. In this pawl is a pin 23 which extends into a slot 24 in the head 6 of the drum, and a spring 25, secured in a recess 26 in the inner face of the head 6, bears on the pin 23, tending to force it 80 towards the ratchet. The pawl is movable to an inoperative position; which is indicated by dotted lines in Fig. 1, and when it is so moved the pin 23 travels from the inner to the outer end of the slot 24. The recess 26 85 also contains a flat spring 27 which is affixed at one end by a rivet 28 to the head 6, and which contains a slot 29 and a hole 30. The pin 23 is tapered next to its inner end, and this tapered part 31 normally extends into the slot 29 or hole 30 in the spring 27. When the pawl is 90 in its inoperative position, the pin 23 extends into the hole 30, and when the pawl is moved to or from this position the spring 27 is forced to yield slightly. The action of this spring on the pin 23 holds the pawl in the inoperative position indicated whenever the pawl is 95 moved to and left in that position, the pressure of the spring 25 not being great enough to force the pin 23 out of the hole 30. The length of the slot 29 is such that when the pawl is engaged with the ratchet the spring 27 does not interfere with the action of the pawl when the drum is rotated. 100

The head 7 of the drum has in it a slot 32 through which the stay passes, and at the end 33 of the stay (Fig. 2) is an enlargement, such as a knot, which fits in a depression in the outer face of the head close to the inner end of the slot 32. By this means the end 33 of the stay 105 is secured to the drum. The axle 10 includes a part 34 formed thereon, and on the part 34 is a nut 35. The device 12, 13, 14 forms a guide for the stay, as well as

means coöperative with the stay to limit the rotation of the drum as will be hereinafter explained. The stay passes through the slot 15 in this guide.

The attachment described is intended to be applied to one of the side beams 36 of the chassis of an automobile, as shown by Figs. 2 and 7. The axle, which supports all of the other parts of the attachment, is to be tightly fastened to the beam by means of the part 34, which is to be passed through a hole in the beam, and of the nut 35 and arm 13 of the guide between which the beam is to be firmly clamped as indicated by Fig. 2. The top 37 of the automobile is to be provided with an eye 38 adapted to be engaged by the hook 2 of the stay.

When the stay is not in use it is to be wound on the drum and the relations to one another of the stay, drum, spring 19, and the guide, are to be such that the spring will tend to wind the stay on the drum and will keep the hook 2 close to the part 14 of the guide, so that the guide will coact with the holding-device, as indicated by Fig. 1, to limit the rotation of the drum by the stay. The pawl may then be in its inoperative position. The stay may be drawn from the drum, and connected with the top 37 of the automobile by engaging the hook 2 with the eye 38, when the pawl is in its inoperative position, and as the drum is thus rotated by the stay the spring 19 is tightened. After the hook has been snapped into the eye 38, the pawl may be moved by the handle 23 into engagement with the ratchet, and the drum may then be turned with the hand if the knurled edge 9 of the head 6 is grasped by the fingers, so as to render the stay taut, and the ratchet and pawl will thereafter prevent the drum from being turned by the stay, to whatever strain the stay may be subjected.

When the pawl has been disengaged from the ratchet and the hook 2 disconnected from the eye 38, the drum will be turned by the spring 19 and the stay, guided by the edges of the slot 15, will be wound on the drum.

It will be understood that to the other side beam 39 of the chassis of the automobile another attachment 40, similar to that above described, may be applied, as indicated by Fig. 8, and that the stay of the attachment 40 may also be connected with the top 37 of the vehicle. Obviously the parts of the attachment 40 can be so constructed and arranged that the stay would pass from the front of the drum through the guide and would be wound on the drum by the spring 19, whereas the stay would be operative to turn the drum and tighten the spring as described, and that the ratchet and pawl would then be operative to prevent the drum from being turned by the stay when the attachment was in use.

Attachments embodying the invention may be made in various forms, differing more or less in details of construction and arrangements of parts from that specifically described above, and the flexible stay of any of the attachments might differ in form or structure from a wire cable, although such a cable is preferred because it may safely be made small enough to render it comparatively inconspicuous when it is in use and to cause it to occupy but little space when it is wound on the drum.

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

1. In an attachment for automobiles the combination of a flexible stay including a device for connecting the stay

at one end with the top of an automobile, the length of the stay adapting it to extend from said top forward and downward to the framework of the automobile, a drum to which the stay is secured at its other end, a support on which the drum is mounted, said support including a part formed to fit on and be made fast to said framework, a spring tending to turn the drum and to wind the stay on the drum, and means operative on the drum and coöperative with said support and framework to prevent the drum from being turned by the action of the top on the stay when the attachment is in use.

2. In an attachment for automobiles the combination of a flexible stay including a device for connecting the stay at one end with the top of an automobile, the length of the stay adapting it to extend from said top forward and downward to the framework of the automobile, a drum to which the stay is secured at its other end, an axle on which the drum is mounted, said axle being formed at one end to fit on and be made fast to said framework, a spring tending to turn the drum and to wind the stay on the drum, and means operative on the drum and coöperative with said axle and framework to prevent the drum from being turned by the action of the top on the stay when the attachment is in use, said means including a device on the outer end of the axle and a complementary device on the adjacent head of the drum.

3. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a disk fast on said axle, a detent mounted on the drum and coöperative with different parts of said disk to prevent the drum from being turned by the stay, and means operative to retain the stay properly coiled on the drum when the stay is not in use.

4. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a spring tending to rotate the drum and to wind the stay on the drum, a disk fast on said axle and having teeth, a detent mounted on the drum and coöperative with said disk to prevent the drum from being turned by the stay when the detent is engaged with any of the teeth of said disk, and means operative to limit the rotation of the drum by the spring.

5. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a disk fast on said axle, a detent mounted on the drum and coöperative with different parts of said disk to prevent the drum from being turned by the stay, the detent being movable to an inoperative position, means for holding the detent in said position, and means operative to retain the stay properly coiled on the drum when the stay is not in use.

6. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a spring tending to rotate the drum and to wind the stay on the drum, a disk fast on said axle, a detent mounted on the drum and coöperative with different parts of said disk to prevent the drum from being turned by the stay, the detent being movable to an inoperative position, means for holding the detent in said position, and means operative to limit the rotation of the drum by the spring.

7. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a guide through which the stay passes, said guide being fast on the axle, a spring tending to rotate the drum and to wind the stay on the drum, a toothed disk fast on said axle, and a detent mounted on the drum and coöperative with each tooth of said disk to prevent the drum from being turned by the stay.

8. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a guide through which the stay passes, said guide being fast on the axle, a spring tending to rotate the drum and to wind the stay on the drum, a toothed disk fast on the

axle, a detent mounted on the drum and coöperative with each tooth of said disk to prevent the drum from being turned by the stay, said detent being movable to an inoperative position, and means for holding the detent in said
5 position.

9. In combination with the top of an automobile, an attachment comprising a drum, a flexible stay secured at one end to the drum, a spring tending to wind the stay on the drum, and means to prevent the drum from being

turned by the stay when the attachment is in use, the 10 drum being mounted on a part of the framework of the automobile, and the top and stay being provided with holding-devices adapted to be engaged with and disengaged from one another.

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Witnesses:

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