D. ARGERBRIGHT.

STORM FRONT FOR VEHICLES.

APPLICATION FILED AUG. 29, 1907.

916,089.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

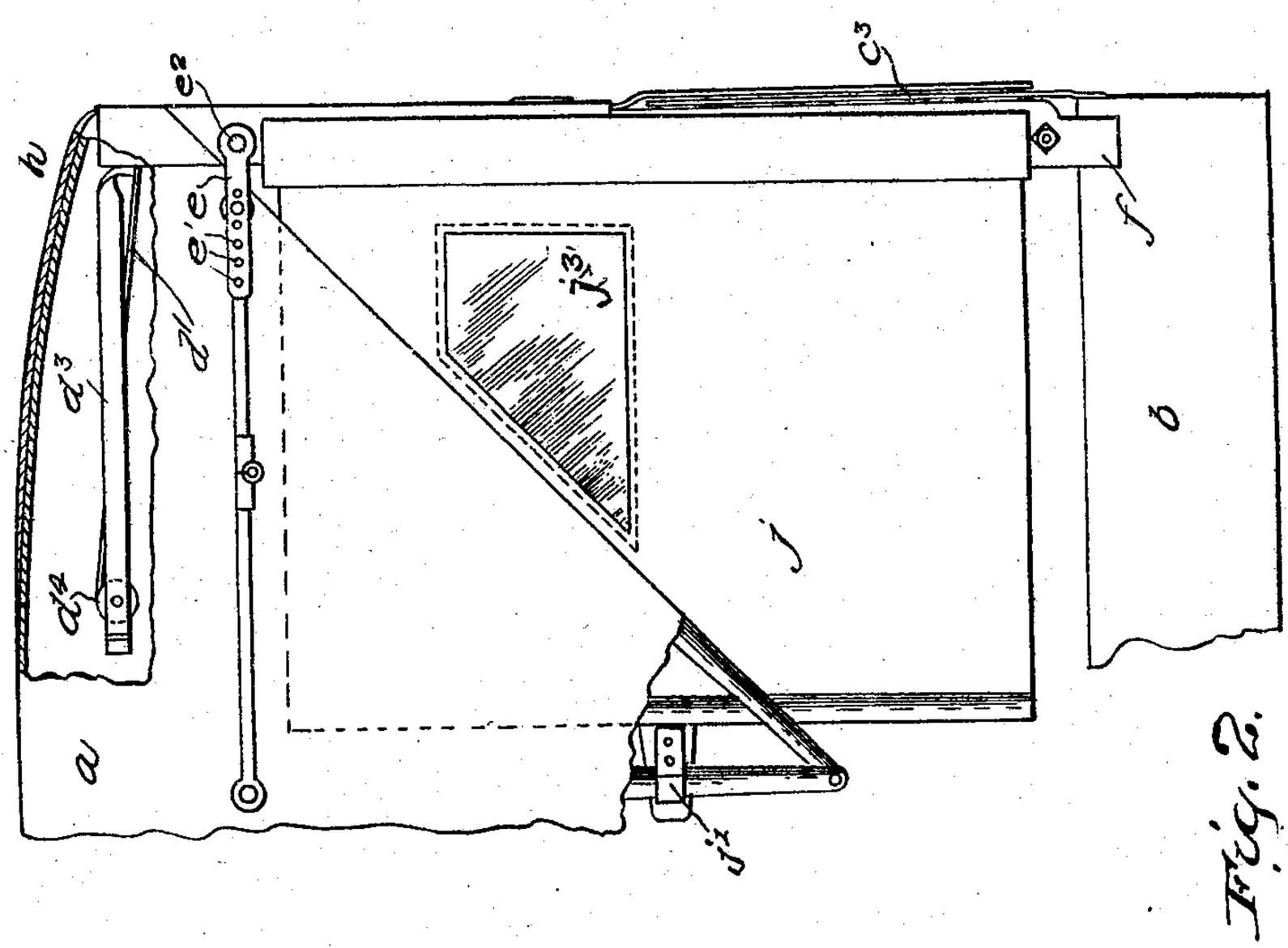

Fig. 2.

Fig. 1.

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Fig. 3.

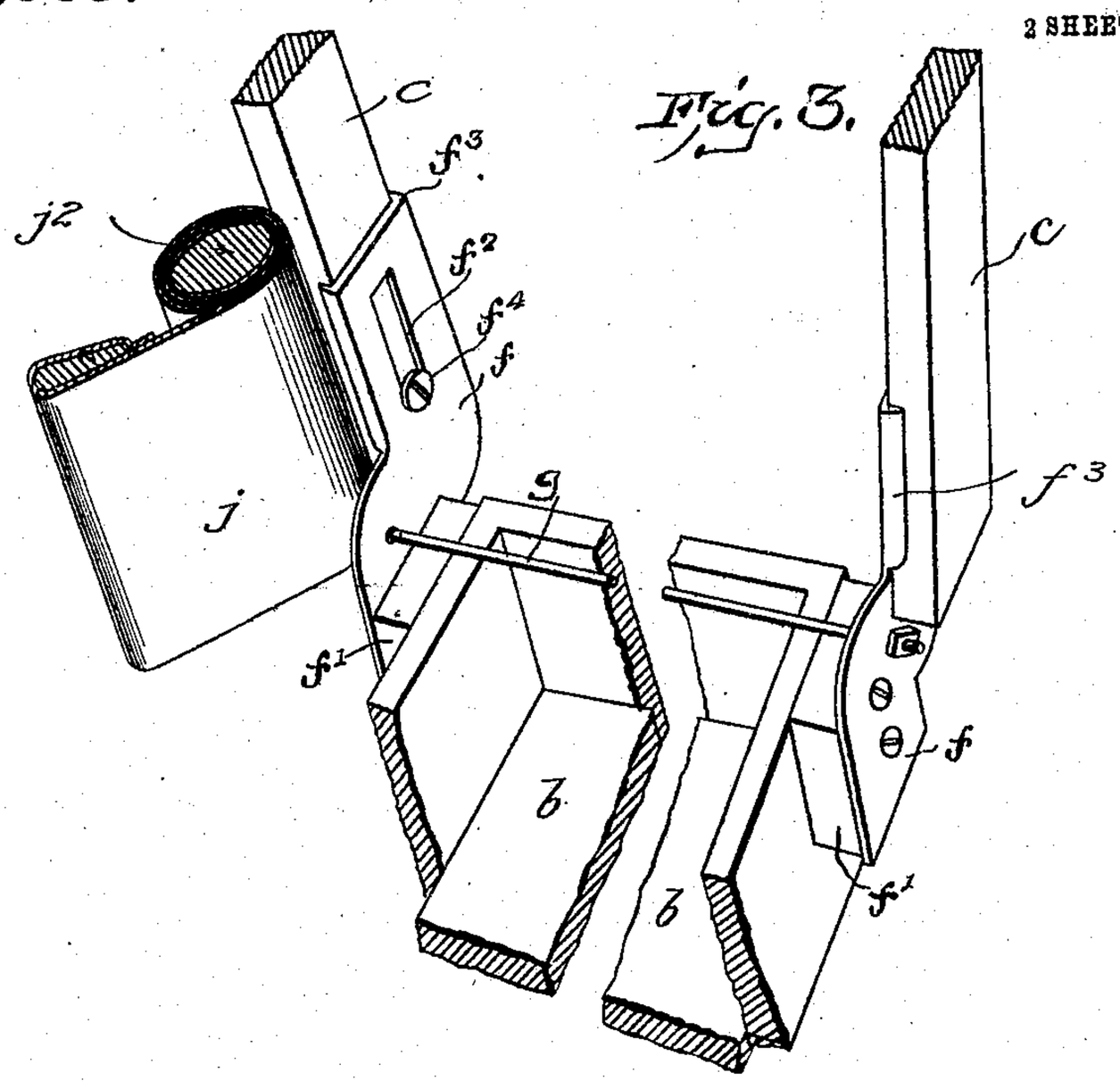
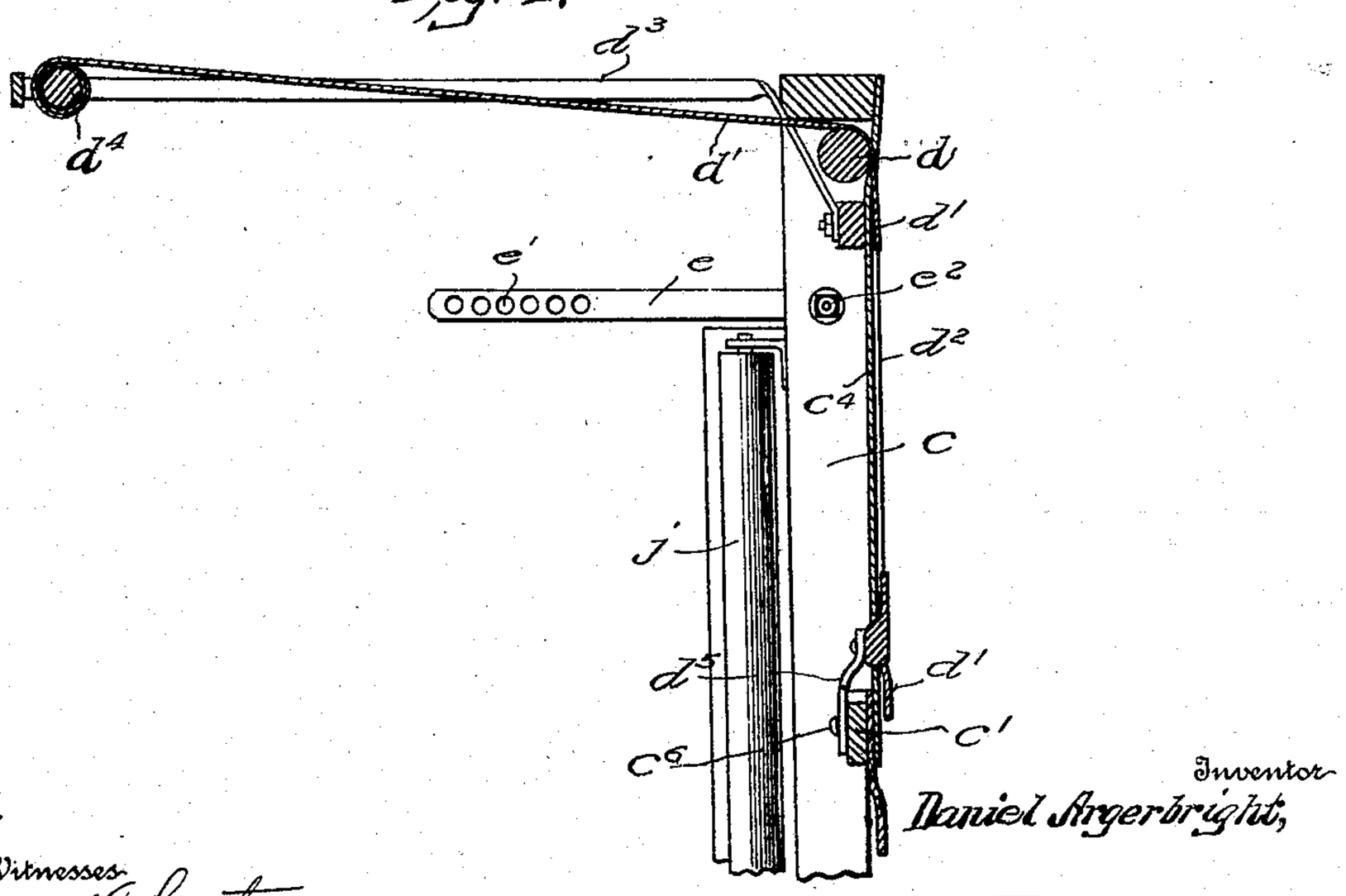


Fig. 4.



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UNITED STATES PATENT OFFICE.

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STORM-FRONT FOR VEHICLES.

No. 916,089. Specification of Letters Patent. Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, DANIEL ARGERBRIGHT, a citizen of the United States, residing at Troy, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Storm-Fronts for Vehicles, of which the following is a specification.

My invention relates to improvements for storm fronts for vehicles, the object of my invention is to provide a simple and effective storm front which can be readily attached to and detached from ordinary vehicles and adjusted to the different sizes of vehicles to which it may be desirable to apply the same.

My invention consists in constructions and combinations of parts here set forth.

In accompanying drawings Figure 1 is an elevation of my improved storm front, the view being taken from the inside of the vehicle looking toward the front. Fig. 2 is a side elevation of a portion of the same showing so much of the vehicle top as is necessary to show the attachment thereto and some of the parts being broken away for clearness. Fig. 3 is a perspective view of the lower portion of the front showing means and mechanism for attaching same to the vehicle body and the means for adjusting the same, parts of same being broken away. Fig. 4 is a sectional elevation showing the upper portion of the storm front detached.

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

In the said drawings, *a a*, represent an ordinary vehicle top and, *b*, the bed or body of the same.

My improved storm front consists essentially of a frame, *c c*, which may be formed of any suitable material, preferably wood, and bent at the top to conform in a general way to the top of the vehicle. The respective sides of this frame are connected together by the cross-bar, c^1, and this cross-bar is formed at the top with a recess, c^2, extending throughout the middle portion thereof. The frame is covered in front by a suitable weather-proof fabric, c^3, from the bar, c^1, down to near the lower portion thereof, and is also covered from the bar c^1, upwardly to the top at the respective sides as is shown at, c^4 c^4, an opening c^5, being left between the portions, c^4 c^4, which opening is substantially as wide as the recess, c^2, of the bar, c^1, is long. The front covering, c^4, also preferably extends downwardly from the top of the frame to a suitable distance to form a framing for the opening, c^5.

Just above the opening, c^5, and suitably supported within the frame *c c*, is a roller, *d*, over which extends a curtain, d^1, of suitable water-proof fabric which includes a large transparent window, d^2, of suitable material to pass over the roller, *d*. In proximity to each end of the roller, *d*, there are extensions, d^3, which extend backwardly from the frame, *c c*, to a point within the vehicle top and under the roof of the same, and at the ends of these extensions, d^3, there is mounted a spring roller, d^4, to which the end of the curtain, d^1, is attached and upon which it is adapted to be wound by the action of the spring after the manner of the ordinary shade rollers. The curtain, d^1, is preferably provided with an extension piece d^5, adapted to fit over a suitable button, c^6, on the cross-bar c^1, to hold the curtain in place and close the opening, c^5, in the storm front. By unhooking the extension, d^5, from the button, c^6, the curtain may be permitted to roll about the roller, d^4, passing over the roller, *d*, so that the transparent portion of the window, d^2, will lie in a horizontal position between the respective rollers, *d* and d^4, at the top of the vehicle and under the roof of the same; the window thus being stored when not in use in a horizontal and unrolled condition so as to not become broken as it is apt to be when a piece of celluloid or similar substance is rolled into the narrow limitations required by the usual spring roller.

While I have shown the extension pieces d^3 as lying substantially horizontal or at right angles to the main frame, *c c*, they may be placed in a slightly upwardly inclined position with reference thereto so that their ends will lie close under the vehicle top to bring the curtain, *d*,' entirely out of the way of the occupant of the vehicle. The distance between the roller, *d*, and the top of the frame *c c* is only sufficient to permit the passage of the curtain and to prevent the passage of the extension, d^5, of the curtain, or the enlarged portion at the bottom of the curtain, and thus provide a stop against the action of the spring roller upon the curtain.

For attaching the storm front and frame portion of the vehicle at the top I preferably employ two pivoted arms, *e e*, one at each side of the frame *c c*. These parts are pierced with series of openings, e^1, which are adapted

to fit over the top-prop when the top-prop nut is removed, these arms being preferably of thin metal so as to lie between the nut and the end of the top-prop and thus be held securely in place by replacing the top-prop nut, thus clamping the arms firmly in position. The arms being pivoted at e^2 to the frame and being secured at one point only to the top-prop may be adjusted to any suitable angle to bring the top of the frame front into the proper relation with the vehicle top.

To provide for securing the bottom of the front to the vehicle and also for adjusting the same to different heights of vehicles as well as to different widths of bodies I employ two adjustable clamping plates, *f*. These clamping plates are preferably off-set as shown in Fig. 2 and have at the lower portion thereof suitable buffers, f^1, of leather, rubber or other suitable substance to rest against the outer surface of the vehicle body and to prevent marring the same. The upper or off-set portion of these plates are provided with slotted openings, f^2, and also preferably with flanges, f^3. The flanges f^3, are adapted to rest on the opposite sides of the frame pieces *c*, and thus securely hold the same from movement with relation to the plates. The fastening bolt or screw, f^4, extending through the slot, f^2, is adapted to securely fasten the frame pieces, *c*, to the plates, *f*, but to permit the vertical adjustment of said frame pieces with reference to said plates. This adjustment permits the storm front to be readily adjusted in height to suit vehicles of different proportions.

The storm front is secured at the bottom by means of the clamping rod, *g*, which extends from one side to the other of the frame and through the respective plates *f f*, at a point preferably just inside the vehicle dash and where it may, if desired, rest on the top of the vehicle body. The clamping rod, *g*, is preferably in the form of an ordinary long bolt with a head at one end and a nut at the other so that by tightening up the nut on the screw-threaded portion of the rod or bolt the clamping plates will be clamped firmly to the vehicle body and thus hold the lower portion of the storm front firmly secured to the body at the bottom while the hinged arms perform a corresponding office at the top. The front will also preferably be provided with a suitable hood, *h*, at the top to fit over the ordinary vehicle top to prevent leakage at that point. The frame pieces, *c*, are also preferably provided with spring rollers, j^2, at each side having the ordinary curtains *j*, of waterproof material thereon and adapted to be drawn backwardly and attached to one of the bows at the vehicle top by a suitable hook, j^1, in a well known manner; these side curtains being adapted to be rolled onto the rollers by the usual spring action when the same are released in a well known manner, and each being provided with a window, j^3.

By having the recess, c^2, in the cross-bar, c^1, a place for the lines is provided and the ends of the recess form guides to prevent the lines from coming against the sides of the window. It is obvious that this recess might extend less than the entire distance across the window but by this arrangement the corner portion of the window forms the upper part of the opening through which the lines are extended, when the window is closed and when the window is opened the lines are perfectly free, there being no additional opening through which it is necessary to put the lines as is frequently the case.

Having thus described my invention, I claim:

1. In a storm front for vehicles, a suitably covered main frame having an opening in the upper portion thereof, a flexible window adapted to close said opening, a supporting roller in said frame at or near the top of said opening, an auxiliary frame supported by said main frame and extending under the vehicle top, and a spring actuated roller journaled at the rear end of said auxiliary frame, and means for attaching said window to said spring roller, substantially as specified.

2. In combination, the frame part formed of the side portions and a cross-bar, a notched recess in said cross-bar, an opening in the front of a width substantially equal to the length of said recess, a flexible window to close said opening, a supporting roller, and a spring actuated retaining roller, means for connecting said window to said retaining roller, extended arms substantially at right-angles to the said front for supporting said retaining roller in a substantially horizontal plane with said supporting roller, and means for connecting said window to the cross-bar when closed, as and for the purpose specified.

3. In a storm front, the frame, adjustable clamping plates adjustably connected to the bottom of said frame, means for clamping said plates to the vehicle body, side curtains mounted on spring actuated rollers at the sides of said frame, an opening in the front of said frame, a flexible curtain adapted to close said opening, a roller in the top of said frame for guiding and supporting said curtain, and a spring-actuated roller supported by said frame in a position to the rear of and substantially in a horizontal plane with said supporting roller, said curtain being attached to said spring-actuated roller, substantially as specified.

4. In a storm front for vehicles, a main front frame, an opening therein, a flexible curtain for said opening, a support or guide at the upper end of said frame for said curtain, an auxiliary rearwardly-extending frame located at the upper end of said main frame and supported thereby, and a spring-

actuated roller on said auxiliary frame located to the rear of said guide or support, said curtain being attached to said roller, substantially as specified.

5. In a storm front for vehicles, a main front frame formed in the nature of a bow, the lower end of which is clamped to the vehicle body, means for vertically adjusting said bow frame, an opening formed therein, a curtain for said opening, a guide or support at the upper end of said bow frame for said curtain, an auxiliary rearwardly-extending frame or support at the upper end of said bow frame and supported thereby, and a spring-actuated roller supported in the rear end of said auxiliary frame having said curtain attached thereto, substantially as specified.

In testimony whereof, I have hereunto set my hand this 21st day of August, 1907.

DANIEL ARGERBRIGHT.

Witnesses:

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W. M. KYLE