

(No Model.)

4 Sheets—Sheet 1.

F. P. STONE.

STORM PROTECTOR FOR VEHICLES.

No. 305,486.

Patented Sept. 23, 1884.

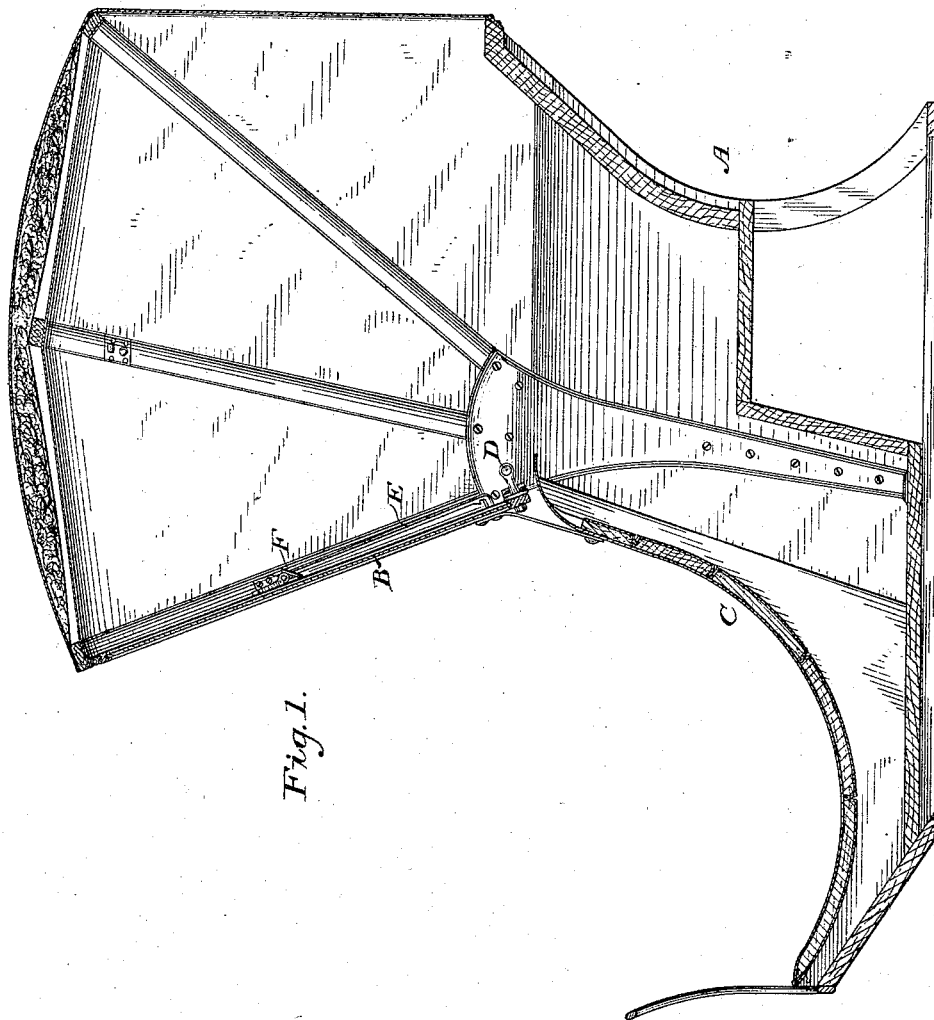


Fig. 1.

WITNESSES

*Wm A. Skink*

*H. W. Elmore*

INVENTOR

*Frank P. Stone*

By his Attorneys

*Caldwin, Hopkins, & Peyton*

(No Model.)

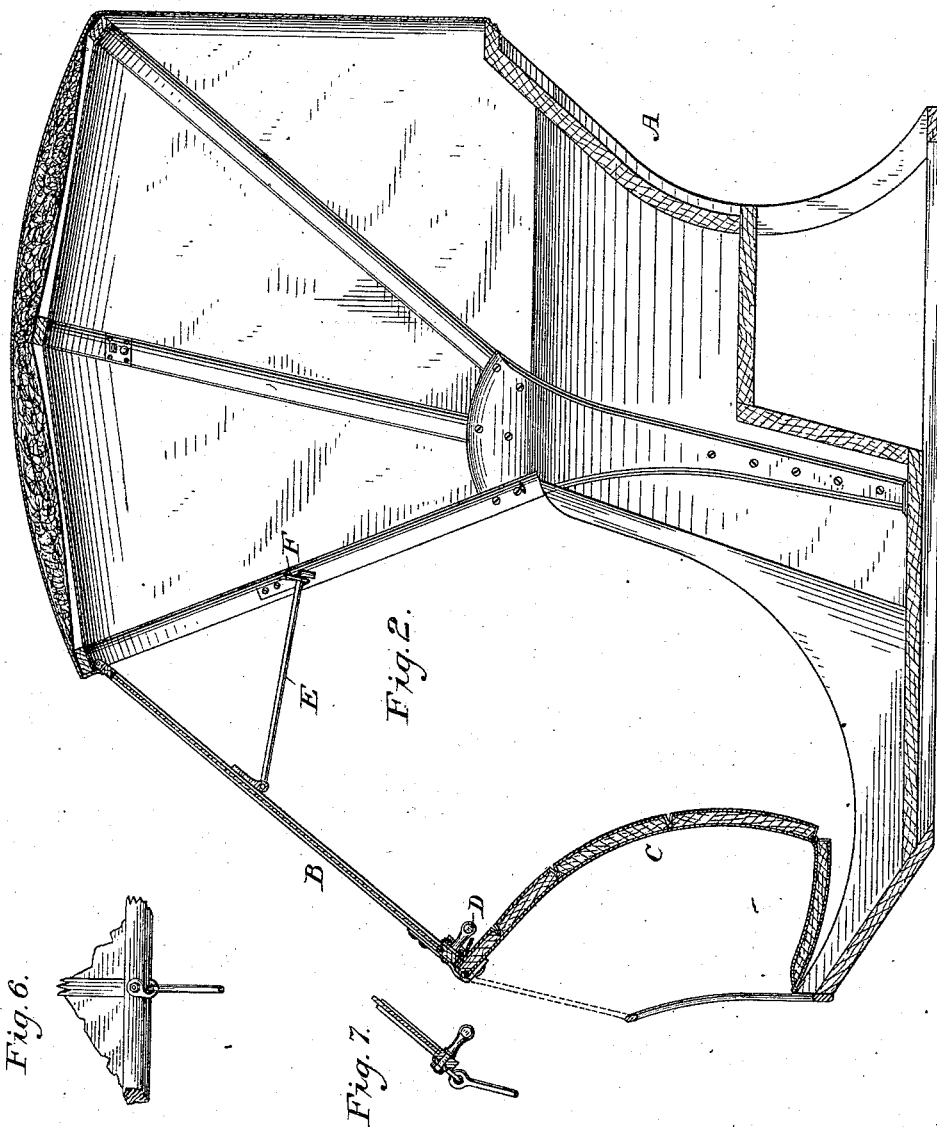
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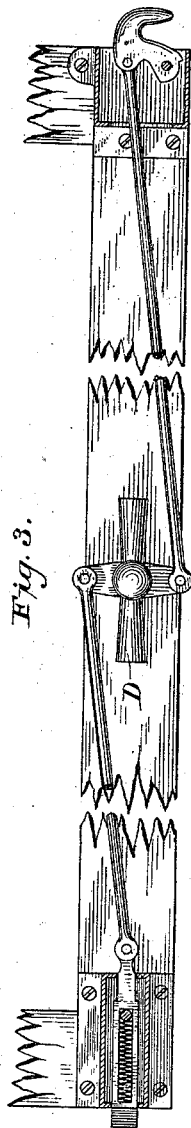


Fig. 3.

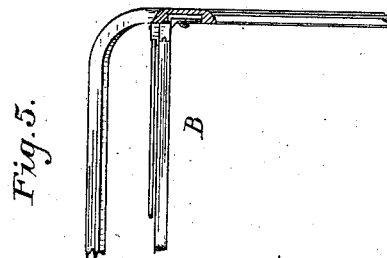


Fig. 5.

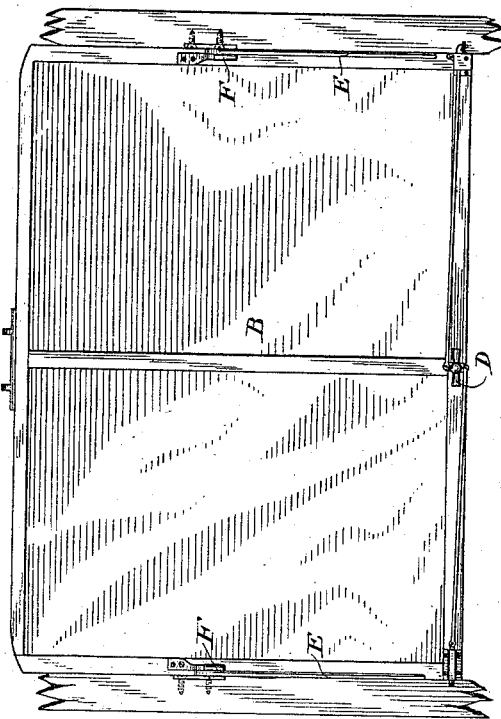


Fig. 4.

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(No Model.)

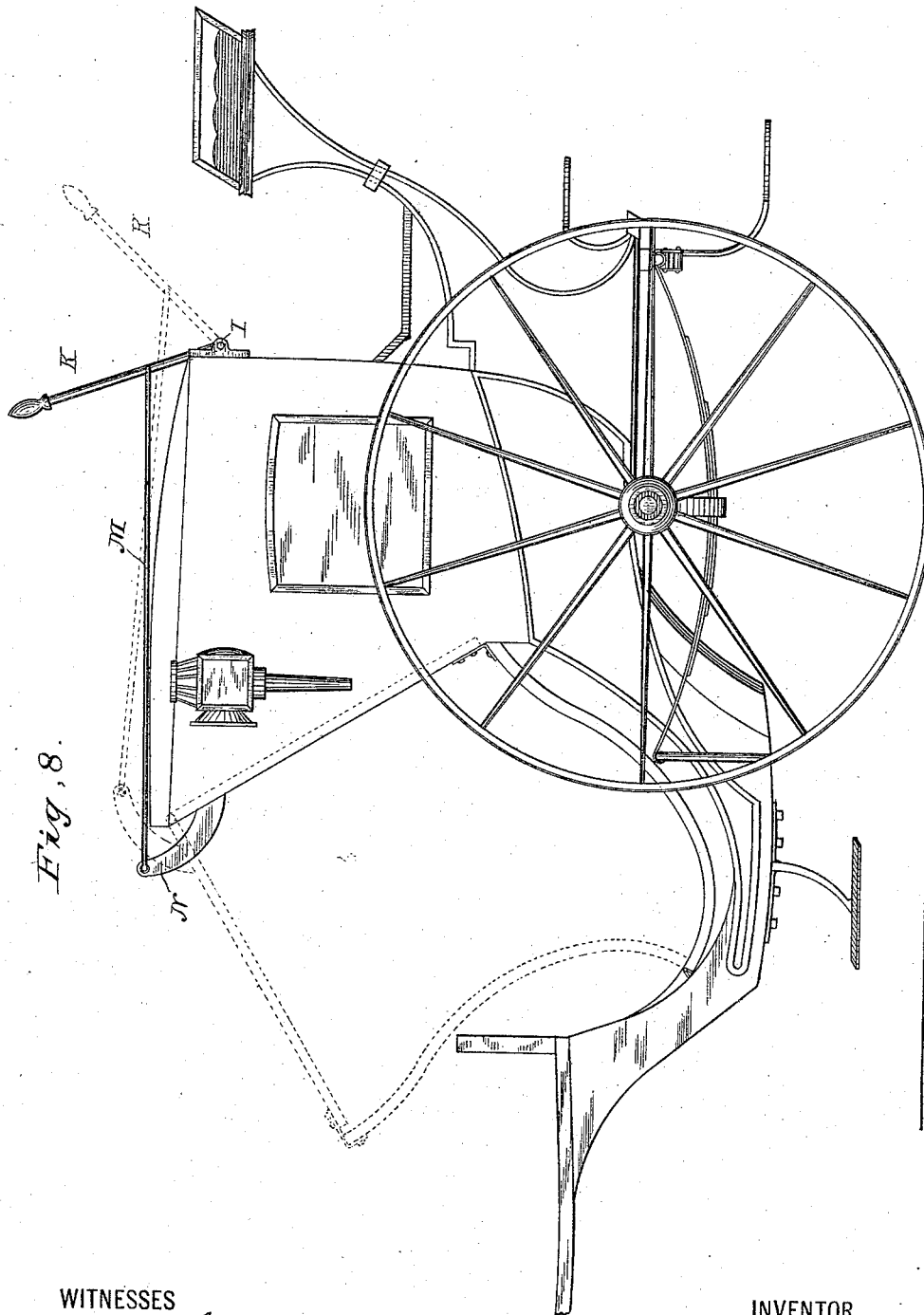
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No. 305,486.

Patented Sept. 23, 1884.



WITNESSES

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# UNITED STATES PATENT OFFICE.

FRANK P. STONE, OF CHICAGO, ILLINOIS.

## STORM-PROTECTOR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 305,486, dated September 23, 1884.

Application filed February 23, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK P. STONE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful  
5 Improvements in Storm-Protectors for Covered Carriages or Vehicles, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to provide a  
10 simple and convenient adjustable storm-protector which shall be connected operatively with the boot or lap-protector, which latter I make movable and flexible out of suitable material, so as to be raised and lowered in con-  
15 nection with the hinged window or storm-protector.

In the accompanying drawings, Figure 1 is a central section of a carriage body and top, showing my invention in the closed position.  
20 Fig. 2 is a similar section showing my improvement in the open position. Figs. 3 to 7, inclusive, are views of different parts detached for better illustration, which will all be understood from the following detail description;  
25 and Fig. 8 shows a hansom-cab with my improvements applied in connection with a lever, so that they can be operated by the driver.

A indicates an ordinary covered carriage; B, a swinging storm-protector hinged to the  
30 front bow of the carriage-top, and also hinged or otherwise flexibly connected to the boot C, which latter may be made of leather, cloth, rubber, or of narrow slats secured to oil-cloth, leather, or the like, and is fastened suitably  
35 to the front end of the box, as illustrated.

I provide suitable locking mechanism—such as illustrated, or any other that may be adapted to the purpose—for closing up the boot and storm-protector. (See Fig. 3 of the drawings.)  
40 This locking mechanism, as illustrated in Fig. 3, consists, simply, in catches or bolts controllable by a handle, D, which serves at the same time to swing outward and inward the storm-protector.

45 I also provide suitable means for holding or bracing the storm-protector and boot out in the position shown in Fig. 2.

E in Figs. 1 and 4 indicates a hook pivoted to the storm-protector and adapted to engage  
50 with a catch, F, fastened to the front bow of the carriage-top, as illustrated; but any other

suitable means for staying the storm-protector in its outward position may be employed.

Instead of having braces or stays to hold the storm-protector and boot in the outward  
55 position, they may in some cases be held in that position by being connected with the dash-board, as illustrated in Fig. 2.

When the storm-protector and boot are closed, as shown in Fig. 1, the carriage is en-  
60 tirely protected from the weather, and when it is open, as shown in Fig. 2, the boot is so elevated as to permit a person to readily get out and in the carriage.

As shown in Figs. 1 and 2, my improve-  
65 ments are applied to an ordinary top-buggy; but they may be well applied to a hansom-cab, as shown in Fig. 8, and to many other species of road-vehicles. In Fig. 8, K indi-  
70 cates a lever, pivoted at L, and pivotally connected by a rod, M, to a curved arm, N, secured to the storm-protector B. In this figure the full lines and the dotted lines indicate the operation by the driver using the lever K.

My storm-protector and boot may be dis-  
75 connected from each other by unhinging, and, if desired, the former folded up under the top of the carriage, as has been done heretofore, and at the same time the boot may be rolled  
80 up or bent forward over the dash-board; but ordinarily it will not be necessary to disconnect the storm-protector and the boot.

I am aware that a storm-protector hinged to a carriage-top is old, and that it is old to  
85 connect a flexible boot to a storm-protector; but, so far as I am aware, it is new with me to connect a flexible boot to a storm-protector that is hinged to the carriage, so that the boot and protector may move in and out together.

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

1. The combination of the carriage-top, a storm-protector hinged thereto, and a flexible  
95 boot or lap-protector, the two latter being hinged or otherwise flexibly connected, so as to move in and out together, substantially as and for the purpose described.

2. The combination of the carriage-top, the storm-protector hinged thereto, the boot flexi-  
100 bly connected to the storm-protector, the bolts for locking the protector when closed, and the

braces for holding it open, substantially as described.

3. The combination of the carriage-top, the hinged storm-protector, the curved arm secured thereto, the pivoted lever at the rear of the carriage, operated by the driver, and the rod that connects the lever with the curved arm, substantially as and for the purpose specified.

In testimony whereof I have hereunto subscribed my name this 6th day of February, A. D. 1884.

FRANK P. STONE.

Witnesses:

S. RUSH HARRIS,  
R. L. CHAPIN.