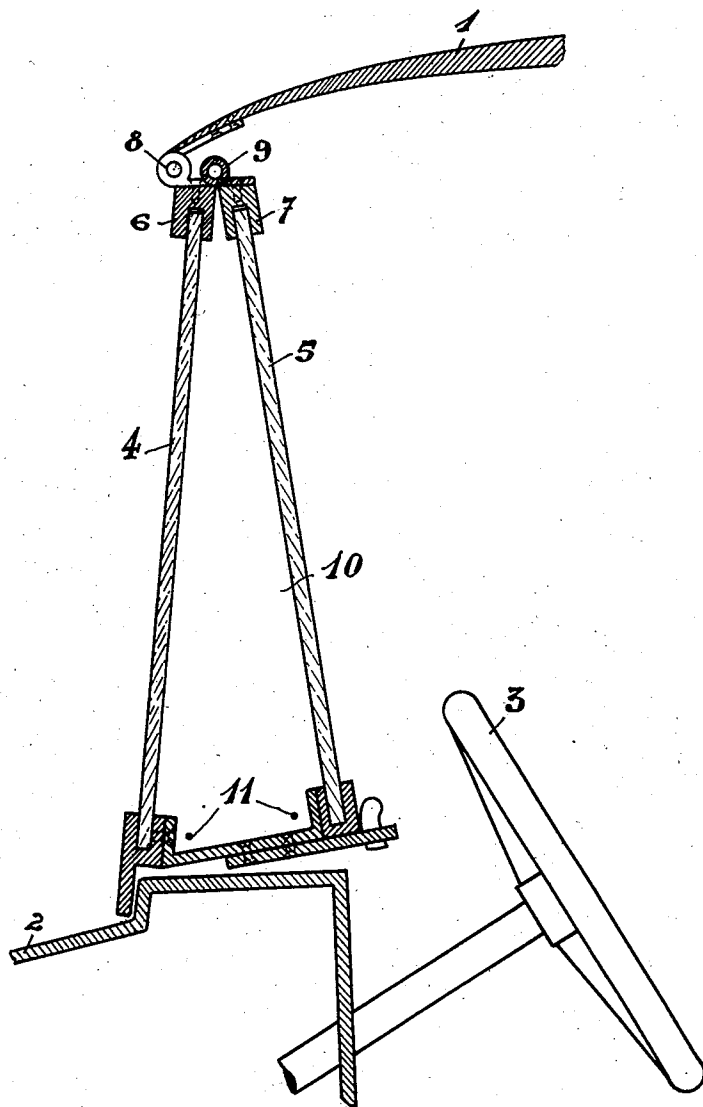


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C. F. CARLOTTI
WINDSCREEN

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WINDSCREEN

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3 Claims. (Cl. 20—40.5)

My invention relates to improvements in wind-screens comprising two or more walls or glass-plates forming chambers which are heated in order to avoid the formation of steam on the said walls or glass plates.

In all the wind screens now in use with two or more walls, these walls are arranged vertically and parallel the one to the other in the closed position of the wind screen. The consequence is that the air which is heated by the heating source which is commonly arranged in the lower portion of the chambers which are formed in this way, ascends between the said walls until reaching the upper portion of the chambers, and then falls down forming two layers or streams circulating along the cold walls. It is consequently only air which has already got cold that comes into contact with the said walls.

My invention is based on the observation of the heating conditions of parallel walls which have shown that the hot air is not immediately put into contact with the walls to be heated. The said walls being cold, the air coming into contact with them inside the chamber gets cold, increases in density and flows towards the bottom of the chamber.

Two series of streams consequently originate in the chamber:

- (1) a first stream of cold air along the walls—
- (2) a second stream of heated air ascending between the walls and the layers of cold air.

The consequence is a lowering in the heating output of the system.

My present invention has for its object to remedy this drawback, i. e. to reverse the direction of the said streams and to secure a device in which the air, which is heated by the heating source, is used in order to heat the walls or glass plates immediately after having left the heating source and during its ascending motion towards the upper portion of the chambers.

With this object in view, my invention essentially consists in the special arrangements and combinations of parts hereinafter fully described and pointed out in the appended claims.

The annexed drawing shows by way of example, in cross section, a wind screen constructed according to my invention.

On this drawing, 1 designates the carriage body of a motorcar, 2 the bonnet and 3 the steering wheel.

According to the invention, in the example shown, the wind screen is formed of two transparent walls 4 and 5 which are mounted in frames 6 and 7. The frame 6 which surrounds the main

wall 4 resting against the carriage body, is mounted by means of hinges 8 on the latter, while the other wall 5 is fixed through the medium of hinges 9 on the frame 7 of the wall 4.

The walls 4 and 5 are converging, i. e. are inclined in opposite direction to each other and set up between them a space or chamber 10 which is wider at its lower portion than at its upper portion. In the angles formed at the lower portion of the chamber 10 are arranged heating wires or conductors 11.

In view of this arrangement, the air which is heated by the wires or conductors 11 meets with the walls or windows 4 and 5 during its ascending movement, and comes into contact with their whole surface. When the air, after having cooled, arrives at the upper portion of the chamber 10, it falls down vertically between the windows without coming into contact with the latter and is again heated by the heating wires 11 and ascends afterwards again while heating the walls 4 and 5.

As it will be understood, in this device only the hot air is put into contact with the windows, the cold air falling down vertically at the bottom of the wind screen without coming into contact with the said windows. In this way, a permanent contact of hot air with the inner faces of both plates is secured, while at the same time the cold air is kept away from the said inner faces, thus preventing in an efficient manner the walls 4 and 5 from being covered with steam.

It must be observed that good results can also be obtained when use is made of only one inclined face, the other being arranged in a vertical plane.

What I claim is:

1. In a wind screen for motorcars and other vehicles in combination walls, the said walls being arranged according to inclined upwardly converging planes, and both inclined divergently downward relatively to a vertical plane therebetween, whereby a closed chamber having a larger width at the bottom than at the upper portion is formed between the said walls, and heating means arranged at the bottom of the said chamber, whereby the ascending hot air is put directly into contact with the said walls, the cold air falling down between the two ascending streams of hot air.

2. In a wind screen for motorcars and other vehicles, in combination two upwardly converging walls, each inclined toward the mid-plane of the structure whereby a closed chamber having a larger width at the bottom than at the upper portion is formed between the said walls, and electric heating wires arranged at the bottom of

the said chamber, one adjacent to the base of each wall, whereby the ascending hot air is put directly into contact with each of the said walls, the cold air falling down between the two ascending streams of hot air.

5 3. In a wind screen for motorcars and other vehicles, in combination walls, the said walls being arranged according to inclined upwardly converging planes whereby a chamber having a
10 larger width at the bottom than at the upper portion is formed between the said walls, and

heating means arranged at the bottom of the said chamber, whereby the ascending hot air is put directly into contact with the said walls, the cold air falling down between the two ascending streams of hot air, one of said walls being hinged to the body carriage, and the other wall being hinged to the first named wall, so that both walls may be swung bodily relatively to the body, and one wall may be swung relatively to the other.

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