EFFECT OF THE EARTHQUAKE ON THE SOUTH CAROLINA RAILWAY.

Never before in this country has there been, and it it is to be hoped never again will there be, opportunity to present such a picture of the effect of "the bottom dropping out of everything" as that which we present in this issue in our engraving (an exact reproduction of a photograph) of what was left of what had before been a tangent on the South Carolina Railway, near the point where a bad accident and worse scare occurred on the night of the earthquake of August 31, and where (we presume) the dislocation was exceptionally severe. It hardly seems possible that the sharp curve in the foreground can be wholly due to a permanent dislocation of the surface, but we are informed that it was, as also the quick drop in grade in the "middle distance." The photograph gives obscure evidence of still further dislocations in the background, which has been rather softened than obscured in the engraving.

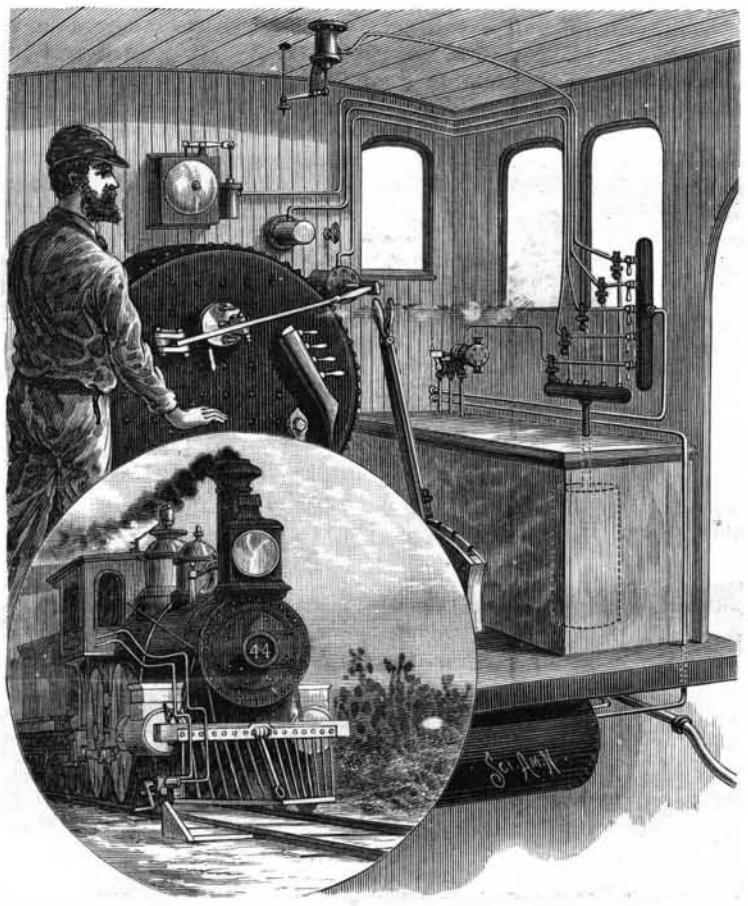
The Charleston & Savannah road is said to have suffered on the whole even more severely than the South Carolina or the Northeastern as respects dislocation, although all the serious wrecks occurred on the other lines. Accounts of three of those wrecks, including the one near the point illustrated, were given in our issue of September 10, as also a description of the accompanying "quakes." In connection with this engraving, the nature of the catastrophe, and the fact that the description is probably not exaggerated, can be better appreciated, and we therefore reproduce the substance of it:

"Near Ten Mile Hill a fatal accident occurred on Tuesday night. The down Columbia train (South Carolina Railroad) jumped the track under the unseen influence of the shock that dismantled the road. It is said that the earth suddenly gave way, and that the engine first plunged down the temporary declivity. It was then raised on the top of the succeeding terrestrial undulation, and, having reached the top of the wave, a sudden swerving of the force to the right and left hurled the ill-fated train down the embankment.

"How it was done was plainly indicated. In many places along the track of the South Carolina and the Northeastern railroads; and for spaces of several hundred yards in width, the dreadful energy of the earthquake was expended in two particular ways. First, there were intervals of a hundred yards and more in which the track had the appearance of having been alternately raised and depressed, like a line of waves frozen in their last position. The second indication was where the force had oscillated from east to west, bending the rails in reverse curves, most of them taking the shape of a single, and others a double letter S placed longitudinally. These latter accidents occurred almost invariably at trestles and culverts. There were no less than five of them between the Seven Mile Junction and Jedburg. In other places the track had the appearance of being kinked for miles, but always in these cases in the direction of the rails.

"The train at the time of the earthquake was running along at the usual speed, and when about a mile south of Jedburg it encountered a terrible experience. It was freighted with hundreds of pleasure seekers returning from the mountains. They were all gay and happy, laughing and talking, when all of a sudden, in the language of one of them, the train appeared to have left the track, and was going up, up, up into the air. This was the rising wave. Suddenly it descended, and as it rapidly fell it was flung first violently over at the east, the side of the car apparently leaning over at less than an angle of 45 degrees. Then there was a reflex action, and the train righted and was hurled, with a roar as of a charge of artillery, over to the west, and finally subsided on the track and took a plunge downward—evidently the descending wave. The engineer put down the brakes tight, but so great was the original and added momentum that the train kept right ahead. It is said on trustworthy authority that the train actually galloped along the track, the front and rear trucks of the coaches rising and falling alternately. The utmost confusion prevailed, women and children shrieked with dismay, and the bravest hearts quailed in momentary expectation of a more terrible catastrophe. The train was then taken back in the direction of Jedburg; and on the way back the work of the earthquake was terribly plain. The train had actually passed over one of those serpentine curves already described."

Two other accidents of the same general nature were likewise described in the same issue. The only pleasant feature in these occurrences, to a railroad man, is that at least it can be said of them, with literal and indisputable truth, that "no one was to blame."—*Railroad Gazette.*



CHASE'S AUTOMATIC ATTACHMENT FOR LOCOMOTIVES.

AUTOMATIC ATTACHMENT FOR LOCOMOTIVES.

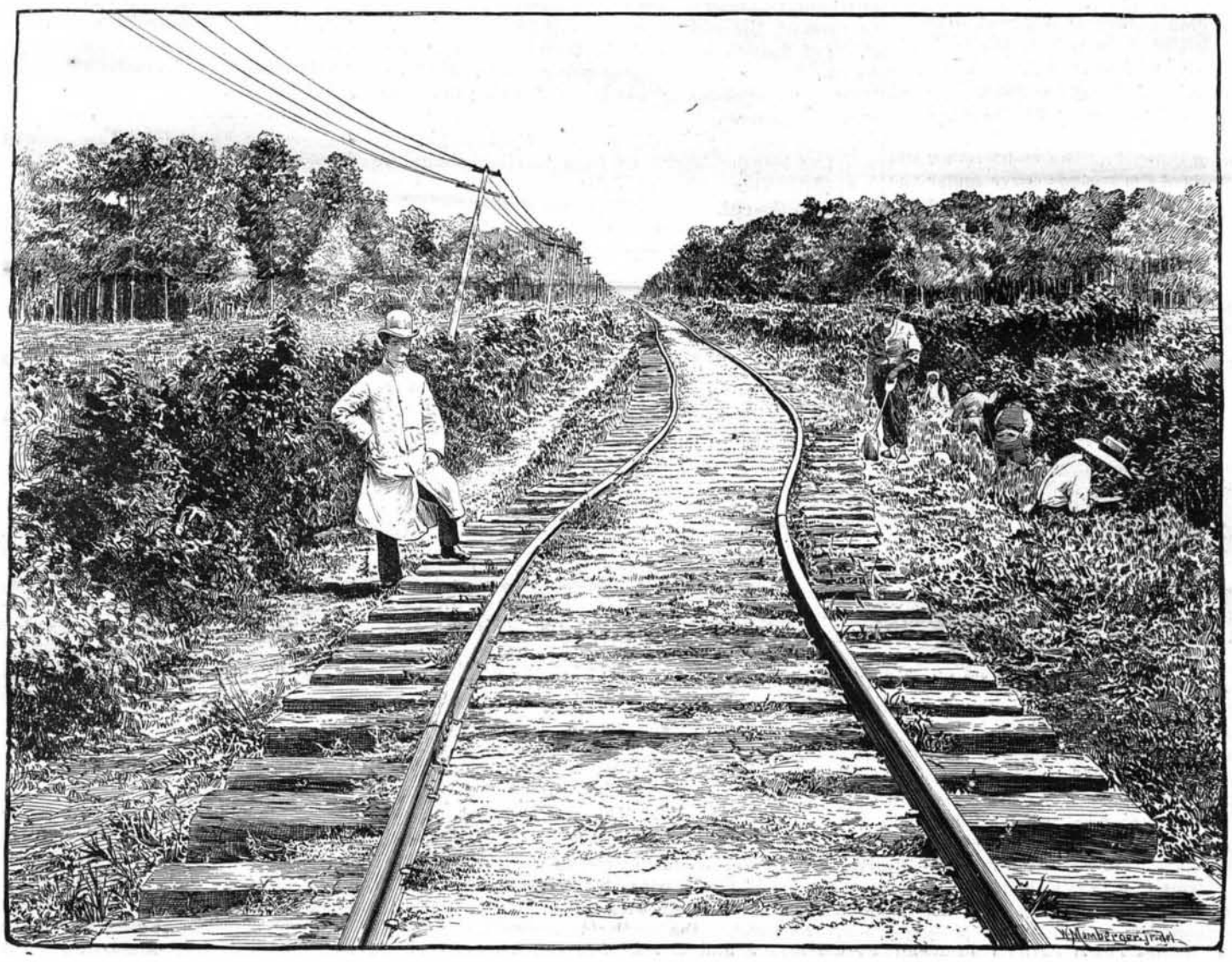
The purpose of this attachment is to prevent accidents and collisions by a more effective safeguard than has heretofore been devised. It not only gives warning of the impending danger to the engineer, but itself absolutely stops the train. If, for any reason, the engineer should fail to notice a signal, it puts it in the power of every trainman, or watchman at any point along the track to stop the train in time to prevent accident, even if the engineer had for any reason left his engine.

Attached to one side of the cow-catcher of the locomotive is a three-way cock, the lever for operating which projects at one side, so that an obstruction placed alongside of the track will operate the cock as the locomotive moves past. The movement of this cock admits air, obtained from the usual compressed air reservoir supplying the brakes, to five small cylinders. The shifting of the piston of one of these cylinders admits air to a pipe for applying the brakes, the second piston operates the throttle valve, the third opens the sand valve for sanding the track, the fourth rings a gong bell placed within the cab, and the fifth opens the valve of the steam engine. The mechanism for accomplishing these operations is so simple as to obviate all danger of getting out of order and to render certain the working of the entire system. It will be understood that these devices may be so arranged as to all operate at the same time or singly, as may be desired.

The inventor of this attachment for locomotives, Mr. Norman F. Chase, of Montrose, N. Y., presents the following advantages and reasons why it should be extensively adopted: First, the absolute certainty of preventing accidents and loss of life; second, preventing destruction of property; and third, economy in first cost and in use, as all lights can be dispensed with if desired.

The Trials of an Inventor.

M. Juibert, a mechanical engineer of Paris, recently made an invention which is said to increase materially the speed of railway travel. The journals discussed the matter at length and predicted for M. Juibert a great future. However, the other day, as the inventor sat in his workshop, a stranger suddenly rushed toward him and began belaboring him with a cane, exclaiming excitedly: "This will teach you not to make such murderous inventions that will enable my mother-in-law to reach my house in six hours instead of in twelve." M. Juibert caused the arrest of his assailant, who is said to be a well known merchant by the name of Bolivet.



THE SOUTH CAROLINA RAILWAY.—VIEW NEAR TEN MILE HILL AFTER THE EARTHQUAKE OF AUG. 31, 1886.