

WOODEN CARS IN A RAILROAD WRECK.

As a general rule, the SCIENTIFIC AMERICAN publishes photographs of railroad wrecks only when there is some definite lesson taught by the disaster. The accompanying photographs of a wreck which occurred on the first of March near Colton, Cal., on the Santa Fé Railroad, tragically illustrate both the ever-present



The Massive Vestibule Day Coach Crushed the Baggage and Smoking Cars into Fragments, but Itself Remained Practically Intact.

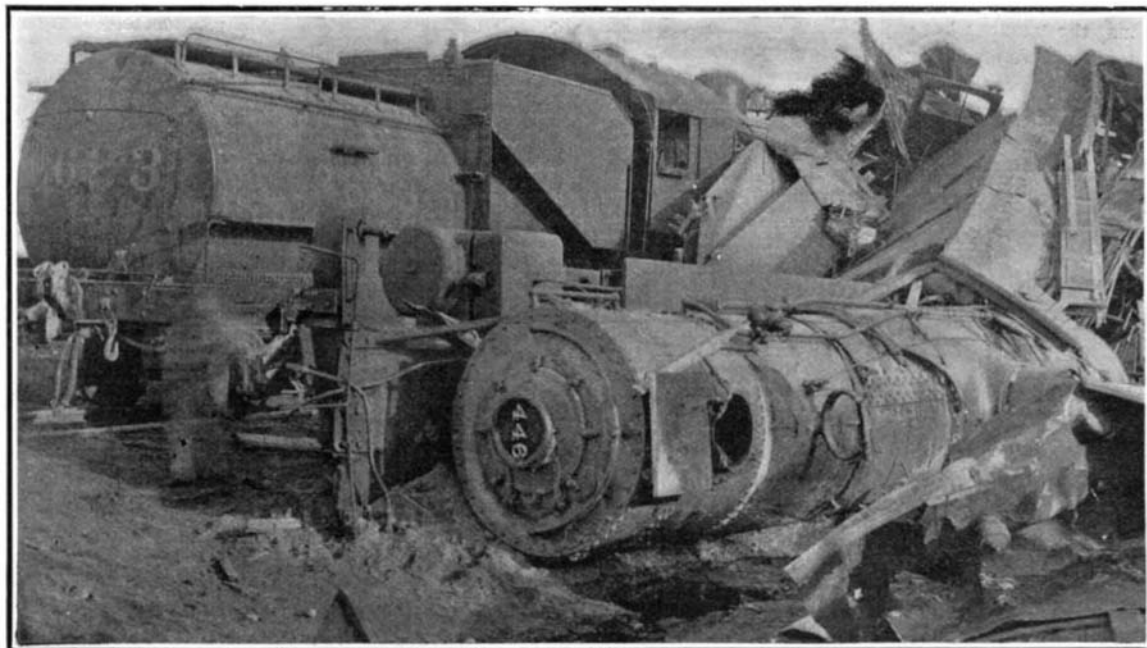
peril of the open switch and the frailty of the ordinary wooden passenger car, when it is placed between a heavy locomotive and a heavy Pullman car, and the train rushes at high speed into a head-on collision. In the present case, a passenger train, which was made up of a baggage car, a smoker, a vestibule day coach, and a Pullman observation car, was running at a speed of about fifty miles an hour as it approached a siding onto which a freight train had just backed, in order to give the passenger train a clear track. The train crew of the freight, by one of those fatal lapses of memory which are such a frequent cause of railroad disaster, omitted to close the switch, and the engineer of the passenger train failed to notice that it was open, until he was almost upon it. The centrifugal force as the engine attempted to swing around the sharp turnout was sufficient to overturn it bodily upon its side, and it ground its way over the roadbed for 150 feet before it came to rest, the tender breaking away at the point where it left the tracks. The train swept by the overturned locomotive and collided, practically at full speed, with the heavy engine of the freight train. The momentum of the vestibule day coach and the observation car drove the smoker into the baggage car and, as will be seen from our photographs, literally ground these two into fragments, the wreckage being more complete than anything we remember to have witnessed in a wreck of this character. Extraordinary to relate, only one person was killed outright, although two others were probably fatally injured, and a large number received minor injuries.

This wreck calls attention once more to the ever-present danger which exists in facing switches, which, while they may be eliminated on two-track roads, cannot be on single-track roads, on which the traffic runs in opposite directions on the same rails. Facing switches can be got rid of only by double-tracking, and the frequent occurrence of accidents of this kind proves that on the transcontinental roads, on which fast heavy expresses are run, double-tracking has become and, indeed, has long been, an urgent necessity. It is certain, however, that greater precautions could be taken to safeguard such switches. The provision of the present small dwarf signal, only a few feet high, at the switch points is a miserable and utterly inadequate safeguard.

Not only should the switch signals be mounted on a lofty signal post, but a lofty, distant signal should be provided, and the two so connected that when the switch is open, both signals will show a red semaphore by day and a red light by night. If a clear distant signal were provided, as it unquestionably should be, we believe that accidents due to express trains, or

indeed any kind of train, running into open sidings would become exceedingly rare.

The other lesson of the wreck is that the wooden day coach is literally a death trap in collisions, and cannot be too quickly superseded by the car of all-steel construction. To be convinced of this, it is only necessary to contrast the splintered wreckage of the frail smoker and baggage car with the practically intact under-frame and body of the vestibule day coach, whose



To the Right Is the Engine of Express; to the Left the Tender of the Freight.

more massive construction seems to have suffered practically no injury, not even the glass of the windows being broken. That both the vestibule day coach and the observation car were subjected to terrific shock was shown by the fact that in both of them the momentum of the seats was sufficient to tear them from the floor and pile them in a heap at the front end of the car. Here, by the way, is a menace to passengers which could very easily be remedied, and at little cost to the

railroad companies. Ordinarily, the seats are merely screwed down to the flooring with wood screws, and undoubtedly the breaking away of the seats and the crowding of seats and passengers in a confused mass at the front end of the car is the cause of many severe fractures and contusions. Cast-iron legs and frames should be abolished, and replaced by light steel framing with the legs bolted, not screwed, to the floor.

TABLET WRITINGS FROM THE RUINS OF NIPPUR.

BY H. D. JONES.

The expedition sent out by the University of Pennsylvania has uncovered and freed from the dust of ages one of the most interesting archives ever rescued from the debris of a buried city. Fourteen centuries before the birth of Christ, under the foreign rule of the Cassite kings of Babylon, Nippur became one of the most highly civilized and enterprising cities of ancient times. During this period of its prosperity, and before the hand of destiny consigned it to decay, Nippur must have been a highly desirable place of residence. Among the fine buildings were a temple and a temple school, from the executive department of which the archives referred to have been obtained. The "library" consists of about twenty-five thousand books and documents in the form of the clay tablets of the time, and the deciphering of these discloses many conditions not very different from those obtaining in Philadelphia to-day.

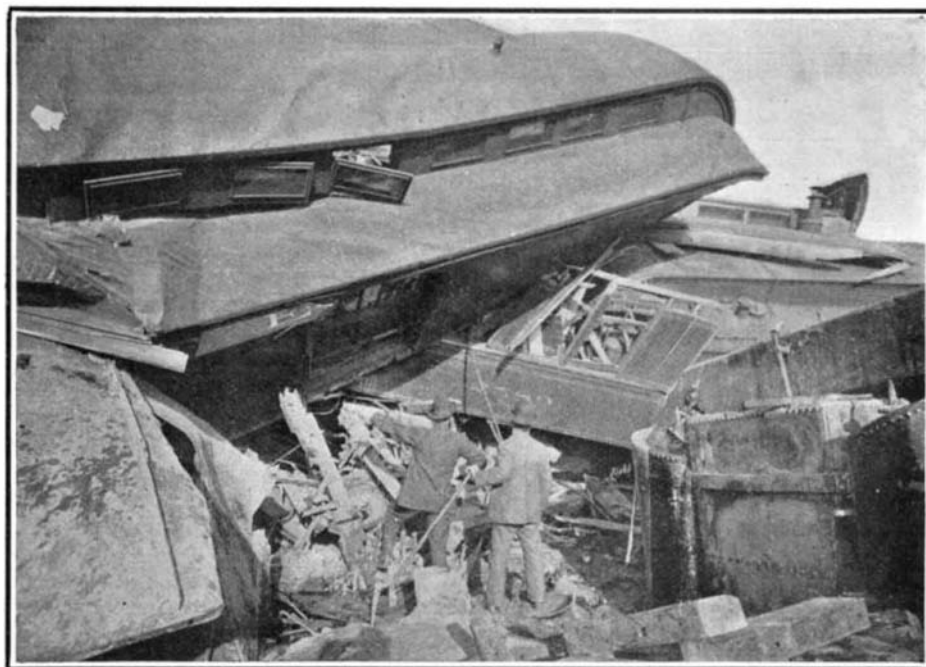
After years of study Prof. Clay, of the University of Pennsylvania, who has been described as "probably the foremost living copyist of cuneiform tablets," has succeeded in translating many of the important tablets in the collection. The clay tablets were found, it may be mentioned, in one of the ancient palaces un-

earthed by the workers, and were in perfect condition for the most part, because they had evidently been "filed away," if the expression can be applied to such ancient objects, the clay tablets being placed on edge, "reclining against each other like a shelf of leaning books in an ill-kept library of to-day."

Astute Arabs, rightly guessing that there were some monetary pickings in the relics that the members of the expedition sought in the ruins of Nippur, took a



Wreckage of Baggage and Smoker After They Were Crumpled into Fragments Between Vestibule Coach and Freight Engine.



Roof and One Side of Baggage, and Fragments of Smoker Immediately After Collision. These Adjoining Views Taken on Opposite Sides of Wreck.