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LOCOMOTIVE BOILER EXPLOSION, WALLINGFORD, CONN.

We illustrate on this page a remarkable explosion of a locomotive boiler. It occurred at 6:30 A.M., December 19, 1890, at Wallingford, Conn. The engine was an old one, having been built 29 years ago. It was engaged in hauling freight trains, and was the property of the New York, New Haven and Hartford Railroad, doing most of its work on the Hartford branch of that road.

At the time of the accident it was pulling out a train of freight cars from the station, with the throttle full open and reversing lever dropped down, but was only moving slowly, as it was just starting. The engine had barely passed the station when the explosion occurred. Its violence is shown by the fact that it was heard at a distance of several miles from the scene. It is asserted that the noise was perceived six miles away in each direction.

The outer shell was torn away in an irregular band or zone, after the accident pieces being found thrown in different directions. The tubes were bent and displaced, but few were drawn out of the tube sheets. The connecting rods, main rods, and side rods were bent, the front driving axle was broken, and the cab was demolished. No signs of low water were reported.

The rails under the engine were spread seven-eighths inch; the fence near the track for about fifty feet was blown down. Glass in all the houses near the scene was demolished, and bricks were thrown from a chimney 300 feet away. After the explosion the engine ran 150 feet and stopped.

At about the same distance was a house, shown in

the smaller illustration. The sand box of the engine was blown high in the air, and descending struck the roof, as shown. The cover, which accompanied it up to this point, fell off, and was found outside of the building. The box went through the roof, falling on one side of a partition, on the other side of which two children were in bed. A bushel of the sand which it had contained entered the house with it.

The engineer was blown off to the left of the engine to a distance of some forty feet. Thus he must have crossed the rear of the engine, as his post is on the right side. As the engine was stopping the fireman fell out, dropping near the engine and on the engineer's side. Thus each man left the footboard on the distant side, the two occupants of the cab crossing each other in their flight. Neither was fatally injured.

The engine was No. 69, built by Danforth & Cooke. It was a soft coal burner with 16 by 22 inch cylinders. The boiler plate was $\frac{1}{2}$ inch thick, and showed no sign of corrosion. The cause of the accident is unknown.

The Famous Death Valley in Colorado to be Explored.

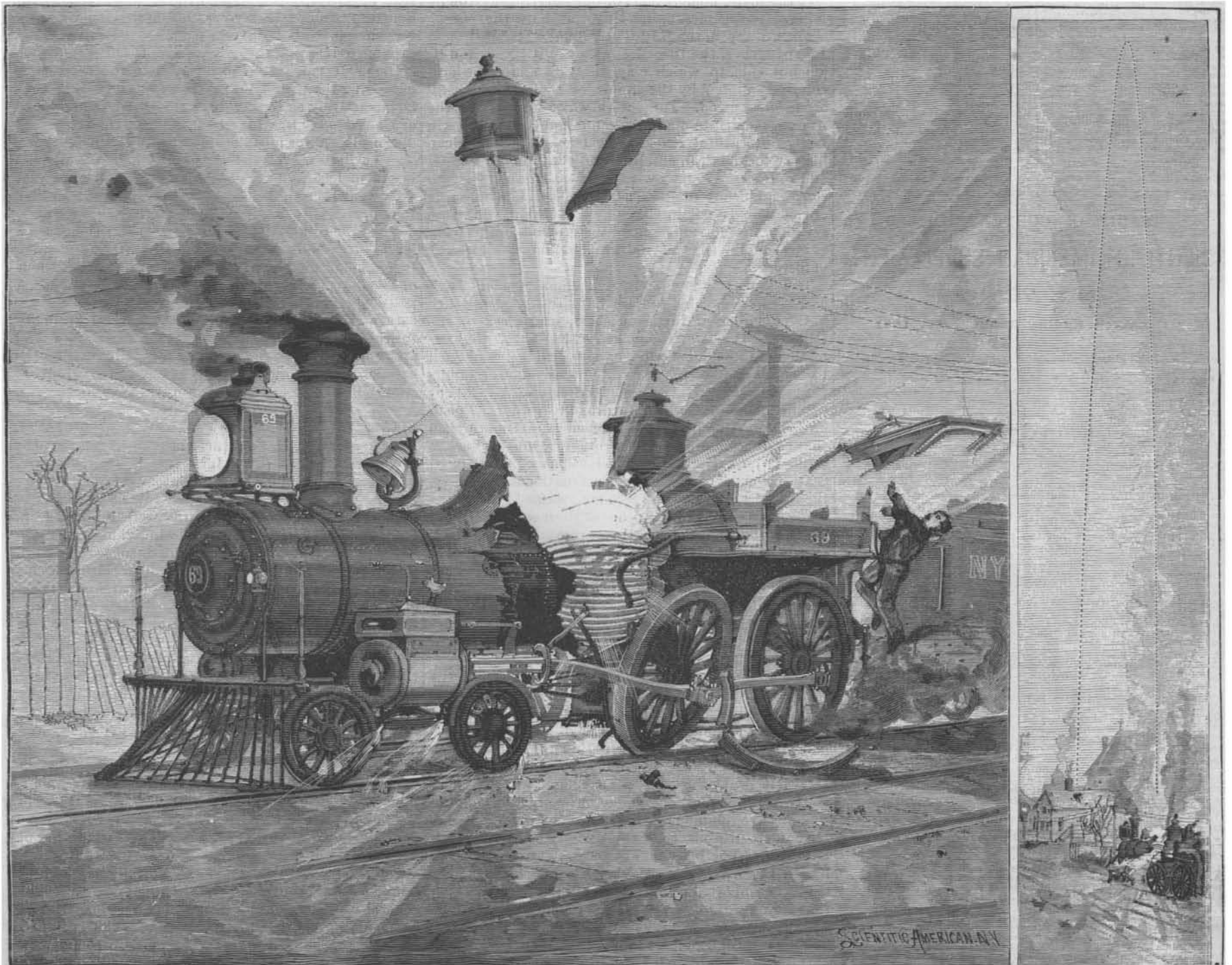
From *The Telegram* we learn that Secretary of Agriculture Rusk has been some time engaged in organizing an expedition to explore the famous Death Valley in Colorado. This region is a veritable *terra incognita*. The heat there is so intense that dead animals do not decompose. Water in the valley is unknown, and the expedition will carry water and food for mules and men. It is a question whether the animals will be able to survive the expedition. Two of the chief bot-

anists of the department are at present working their way into the valley from Southern Nevada, while another expedition is on the march from Southern California. The two expeditions are expected to meet, if nothing goes wrong with them, at a point previously decided upon in the valley. Professor Merriam will leave in a few days to take charge of the expedition.

There is reason to believe that there are rich gold and silver mines in the region named. A story is told of an adventurous miner who some years ago penetrated into the valley and found the skeleton of a miner. A wooden pail was lying near it, and in it a chunk of gold of great value. On his return to California he showed his find to a group of miners. Their cupidity was so excited that, other means failing, they tortured him to make him confess where he had found the gold, believing that he had discovered a gold mine, the location of which he would not reveal.

The scientific men with the expedition will map the country and procure specimens of such animals and insects as exist there, if any do exist. Secretary Rusk regards the expedition as of great importance.

BRASS is, perhaps, the best known and most useful alloy. It is formed by fusing together copper and zinc. Different proportions of these metals produce brasses possessing very marked distinctive properties. The portions of the different ingredients are seldom precisely alike; these depend upon the requirements of various uses for which the alloys are intended. Peculiar qualities of the constituent metals also exercise considerable influence on the results.



EXPLOSION OF A LOCOMOTIVE ON THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD.