

THE WEST VIRGINIA FLOOD.

The flood which overwhelmed the great Pocahontas coal field in West Virginia on June 22 and 23 resulted in great loss of life and property, especially in the Elkhorn Valley. The number of persons who were known to have perished is thirty-five, but undoubtedly many more were swept away in the flood, and their bodies may never be found. Owing to the peculiar conditions of a mining community the list of the missing is believed to be untrustworthy. At Keystone the water began rising at nine o'clock Sunday morning, and in two hours at least two-thirds of the village had been swept away. Little damage was done to the mines proper, as the drift mouths were high up on the mountainside. In the Elkhorn Valley it is estimated that the loss to the railroad and coal interests will exceed \$2,500,000. About twenty bridges were swept from their foundations, and in some instances the great girders were carried more than 100 feet. Large trees were torn up by the roots and carried long distances, while wooden buildings were swept away or dashed into pieces against the bluffs. Even the coke ovens, which were built of solid masonry, were

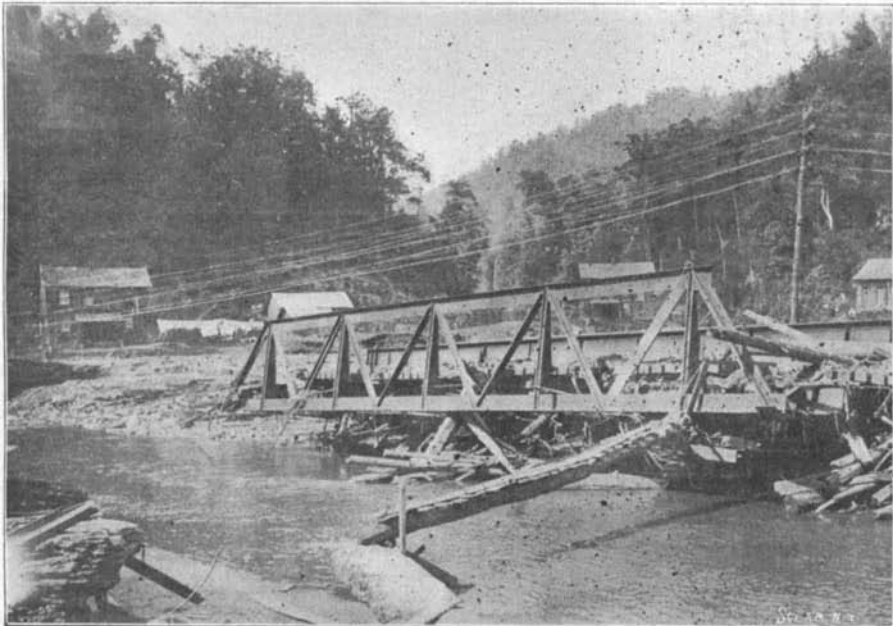
which was torn away and carried a considerable distance, notwithstanding its great weight. One of our illustrations shows how the wooden houses of the mining town were converted into tinder wood. Occasionally, if a house were very well built, it was carried intact quite a distance. Freight cars in large numbers were overturned, and in many cases entirely destroyed, even the metal work and trucks being torn away from the body.

While the flood was one of large proportions, it was not the most disastrous of its kind. The Johnstown flood, which occurred on May 31, 1889, entailed a loss of 2,000 lives and a destruction of over \$9,000,000 in property. The conditions were also different, as the catastrophe was caused by the breaking of a dam after several days of heavy rain. The valley was also a narrow one, the lake being some 275 feet above the level of Johnstown, and the result was that the water flowed through the valley at an enormous rate of speed, scouring the whole width as it went. The flood traveled 18 miles in 7 minutes. Nearly \$3,000,000 was raised for the relief of the sufferers. The Galveston disaster last September, which caused a loss of over

rust, and to prevent this they are often painted black by the master mechanics. The chief working surfaces of American locomotives are highly finished, as, for example, the guide bar faces, piston rods and valve stems, all the bearings and their brasses, and every part that carries a load. Finish is a very elastic term, and may mean much or nothing, according to how it is used. It is possible to polish surfaces very highly at comparatively slight expense by mechanical methods, but when it comes to handwork, old-fashioned ways of draw-filing surfaces, taking out all the scratches that can be seen by close examination and using emery cloth subsequently, finish may be very costly, indeed, and we suspect that this is what English critics have in mind when they assert that American locomotives are not highly finished. They are not intended to be from this aspect of the subject.

The Current Supplement.

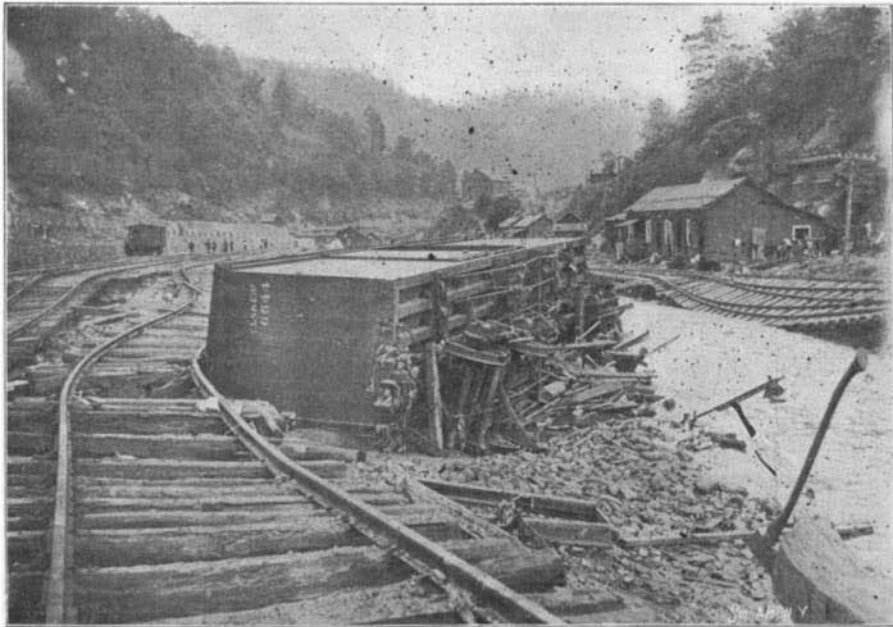
The current SUPPLEMENT No. 1333 has a number of remarkably interesting articles. "Logging in the Redwood Forests of California" is accompanied by seven engravings. "The Report of the Secretary of Agricul-



Truss of a Bridge Torn Away at Kyle, W. Va.



Freight Train Destroyed by the Flood.



Damage to the Railroad at Elkhorn, W. Va.



Buildings Transported and Destroyed by the Flood.

THE WORK OF THE WEST VIRGINIA FLOOD.

destroyed. The damage to railroad trains was especially great, and three of our illustrations show the work of the flood. The grading of most of the railroads was entirely washed away. At Keystone the railway embankment gave way, or otherwise very little of the village would have been left. Over thirty miles of the tracks of the Norfolk and Western Railroad were destroyed, and the telegraph wires were swept away, adding much to the horror of the situation, as no communication could be established with the outside world. A passenger train was caught by the flood at Vivian, W. Va., and the lives of the passengers were saved by the use of ropes and they were dragged over the coke ovens to a point of safety. The peculiar conformation of the Elkhorn Valley is responsible for a large part of the damage. At times the valley is not over 1,000 feet wide at any one place, and occasionally for miles there is hardly enough level land for a roadbed, the mountains rising abruptly from the side, leaving barely space enough for the roadbed. The Norfolk and Western Railroad runs through this territory for 100 miles. One of our engravings shows a truss of the bridge at Kyle, W. Va.,

5,000 lives and enormous property damage, was an inundation rather than a flood. There appears to be no way of controlling streams in such narrow valleys, and it is doubtful if even costly dams would be very efficacious.

Cost of English and American Locomotives.

In the discussion of the relative cost of English and American locomotives much stress is laid upon the alleged fact that the former are better finished than the latter, but exactly where they are better finished is not stated, whether in the working surfaces or on exterior parts not under friction. American locomotives, in our experience and observation, are as well finished as there is any occasion for; that is to say, all the main connections have a good "wiping finish;" by which is meant surfaces that can be wiped clean, so as not to cause dust to adhere to them. But the eccentric rods (blades in England), reach rods, tumbling shaft, rocker arms, etc., are not finished, in the sense of being brightly polished, for the very good reason that our railways do not want them to be. If once polished they must be kept so, or else they will

ture" describes all of the important work done by the various Bureaus of the Department during the year 1900. "The Development of the Chick" is by Prof. Thomas H. Montgomery, Jr. "The Treasure Found at Boscoreale near Pompeii" is accompanied by two engravings. "Cocoa and Chocolate" is a very full article accompanied by a number of highly attractive engravings. "The Fire Hazard of the More Important Chemical Products" is by Ernest H. Cook. "Congress of Aeronautics" is by the Paris correspondent of the SCIENTIFIC AMERICAN.

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