## Scientific American.

## LANDSLIDE AT AMALFI.

A landslide occurred December 21 at Amalfi, on the Gulf of Salerno, Italy. Many houses and the Capuchin monastery were destroyed. The landslide dashed the whole building on the houses below, and all were in turn hurled into the sea, burying four smacks that were moored in the bay. At first it was thought that the loss of life was very severe. Fortunately it was found that only ten were killed and quite a number injured. The accident is attributed to the recent heavy rains. Troops and engineers from Naples and Salerno were hurried to the spot. Fortunately many of the visitors had gone up to Rome to witness the imposing ceremonies of the Christmas season at St. Peter's, or the fatalities would have been much larger. The residents were naturally greatly frightened, especially as another landslide threatened to overwhelm them.

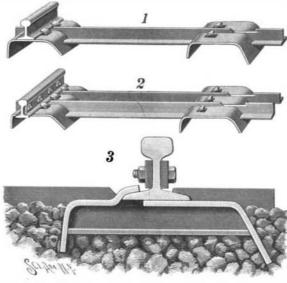
It really seems as though in that country nature chooses the most beautiful spots for the manifestation of her power. Witness Vesuvius, Etna, Ischia, and now Amalfi. Amalfi is one of the two or three most picturesque spots in Italy and is probably exceeded in beauty only by the Bay of Naples itself and Taormina. Our two engravings give an admirable idea of this wonderful place. Amalfi is not far from Sorrento and lies on the southeastern side of a high rocky point which extends out toward the island of Capri. It has a most interesting history, being mentioned for the first time in the sixth century, when it enjoyed the protection of the Emperor. It afterward became an independent State under the presidency of a Doge. The town was continually at variance with the neighboring princes, and defied all the sovereign States in the neighborhood until King Roger reduced the place in 1131. Amalfi assisted in a war with the Pisans, and it was during this struggle that the celebrated manuscript of the Pandects of Justinian fell into the hands of the Pisans. The sea began gradually to undermine the lower part of the town in the twelfth century, and a terrible inundation, in 1343, proved still more destructive, and after that period Amalfi steadily declined.

It was really the Athens of the middle ages, and it can boast of having given birth to Flavio Gioja, who is said to have invented the compass in 1302. In a hollow of a rock, 400 feet above the sea, stood the ancient Capuchin monastery which was destroyed. It contained fine cloisters, a charming veranda, and magnificent points of view. A large grotto which will be seen to the left was formerly used as a Calvary or series of devotional stations. The whole front of the great rock is covered with vineyards, and donkeys wind their way among the tortuous lanes, going up and down the frequent flight of steps with sure-footedness. A trip to this "dependence of the Albergo dei Cappuccini" on the Marina is not altogether enjoyable, owing to the dreadful pest of beggars, all the streets and lanes being infested with them, and the only hope

of future comfort is never, under any circumstances, to be tempted to give anything to a beggar in Amalfi, for if the tourist once does this, he is lost and can go nowhere without a horde of ill-kempt and persistent beggars. The open loggia covered by vines gives one of the most inviting views in the world and certainly makes one of the most picturesque photographs conceivable. An examination of the general view of Amalfi shows better than any description how a land-slide could have occurred.

## THE CHESTER METALLIC RAILWAY TIE.

The time is coming when our forests will no longer be able to fill the enormous demands of railway com-



THE CHESTER METALLIC RAILWAY TIE.

panies for ties. But even though there may be no signs of a decreased production, the metal tie is gradually supplanting the old wooden sleeper. Its greater cheapness and durability, and its smaller weight, more than any sentimental desire to preserve our forests, have been the chief cause of its adoption on many American railways.

Our attention has been drawn to a steel tie in which these elements of cheapness, strength, and lightness are even more prominent than we have been accustomed to find them in metallic sleepers. The tie in question is the product of the Philadelphia Railway Track Equipment Company, Stephen Girard Building, Philadelphia, Penn., and has been very successfully used on the Huntingdon and Broad Top Mountain Railroad, Pennsylvania.

The Chester tie, as it is termed, is a T-shaped bar six feet in length passing through correspondingly-shaped slots in bearing-plates upon which the rails rest, and having hook-shaped rail-seats. The bearing-plates, it will be observed, have each two depending legs, one on

each side of the rail and parallel therewith. Upon their upper flat surfaces the bearing-plates are provided with two lugs engaging and clamping the inner flange of the rail. The lugs, acting in conjunction with the hook-shaped rail-seats holding the outer flange, fasten the rails so firmly in position that spreading or lateral strain is resisted.

Perhaps the most noteworthy feature of the tie is its simplicity. There are but three parts, and these are locked together without the use of bolts, rivets, keys or wedges. As a result of this simplicity, a road can be laid with astonishing rapidity. The oppositely-disposed lugs and hooks impart strength to the tie and insure the maintenance of a constant gage. By reason of the slotted connection between the bearing-plates and the tie, the accidental separation of the parts is prevented. The small weight and compactness effects a considerable saving in the cost of transportation.

Fig. 1 is a main line tie, and Fig. 2 is a joint tie, in which two L-shaped bars are used on opposite sides of the joint, with a middle lug lapping the rail at the joint. Fish-plates, it will be observed, are discarded. Standard gage ties weigh from 69 to 119 pounds; joint ties (standard gage), about 160 pounds.

## Confectionery in Army Rations.

Candy has been added to the regular ration of the American soldier. One New York firm has shipped more than fifty tons of confectionery during the past year for the troops in the Philippines, Cuba and Porto Rico. The government buys candy of good quality, which would retail from 30 to 40 cents a pound. It consists of mixed chocolate creams, lemon drops, cocoanut maroons and acidulated fruit drops. These are put in sealed one pound cans of a special oval shape, designed to fit the pockets of a uniform coat. According to The Evening Post, the use of candy as an army ration originated in some experiments on the diet of the troops conducted by the German government. ten years ago. They showed that the addition of candy and chocolate to the regular ration greatly improved the health and endurance of the troops using it. Since that time the German government has issued cakes of chocolate and a limited amount of other confectionery. The Queen has just forwarded 500,000 pounds of chocolate in half-pound packages as a Christmas treat for the troops in the Transvaal. American jam manufacturers are considering a movement to add jam to the army ration. It has been found so wholesome for the British army that 1,450,000 pounds have been dispatched to South Africa as a four months' supply for 116,000 troops.

THE loss of life on the Great Lakes during the last season has been about a hundred. Fifty-six persons were lost by the foundering of ships and thirty-two were lost overboard. No passengers were lost on any of the regular lines.





AMALFI-GRAND HOTEL OF THE CAPPUCCINI, RECENTLY DESTROYED BY A LANDSLIDE.

VIEW FROM THE TERRACE OF THE HOTEL.