cuttings are numerous, not one of practical commercial value was reached until the tramway came into Messrs Hugonin and Henderson's property. The owners had long known of a fine outcrop of marble within their boundary but never hoped to develop it when there were miles of marble outcrop between Kairuru and the sea. But the failure of the Sandy Bay venture gave them their opportunity; they brought the Kairuru deposit once more under the Government's notice, and as it was already favourably known to the Government Architect, the Minister of Public Works agreed to help a languishing venture of tremendous potential value by building the tramline to Kairuru. The cost will eventually be repaid by the company now working the Kairuru deposits.

THE KAIRURU QUARRY.

The new tramline is hardly in full working order, but by dint of great care in trucking—and much exertion in replacing derailed loads!—it was possible to make the first shipment of marble to Wellington on February 19th last. The undertaking being thus in working order, the time seemed favourable for a visit, and thanks to the kindly hospitality of Messrs Hugonin and Henderson of the Kairuru station, one important difficulty associated with the trip was happily overcome. The daily motor-car service between Nelson and Takaka serves Kairuru, which is about six miles up the high hill leading out of Riwaka. The Kairuru homestead is scarcely a quarter of a mile from the main road, and the marble quarry only another quarter of a mile, as the crow flies. But this quarter mile gives one a speedy introduction to the character of the country. The hillside drops at a steep angle, sometimes more than 45 degrees, and the quarry though so close to Kairuru, might be three miles away in a practical sense, when the difficulties of the rugged hillside are taken into account. On the way down, we pass the marble outcropping with granite. An illustration of a prominent rock is reproduced on page 568. This is not a true marble, as it has become schistose in structure. It was photographed as a typical outcrop on the edge of the true marble.

GREAT MASSES OF MARBLE.

There is no real quarry face at the head of the tramway, but the great mass of splendid marble blocks awaiting trucking shows that at least the uncertainties of supply are over. In the pile of stone near the crane, illustrated on page 566 are blocks of sound marble, passed by the Government Inspector, totalling 12,000 cubic feet. These have been taken practically from the surface. The real quarry face to be opened up is behind this pile of stones, a few score yards up a narrow gully, where giant marble rocks, stand up like rugged castles, defying Time itself. They measure out at 200 tons of sound visible marble, and how far they go beneath the surface, quarrying operations must be awaited to prove.

A block measuring 30 feet in length, 30 feet in width and 7 feet in thickness was taken out of the face at the tramway head. It weighed 520 tons. So enormous a mass was, of course, impossible to move from the quarry. It was cut into fifteen stones averaging 5 feet by 5 feet by 2 feet 6 inches thick, without a fault. Rarely does a quarrying enterprise start with such remarkable ease. There is usually a great overlay of shattered rock and soil to remove, but in this case the great problem was not how to get sound stone, but how to transport it. And that difficulty has now been overcome.

SOME OF THE STONES.

At the stage of quarrying when rubbish has to be cleared, the quarrymen have put out fine square blocks suitable for the caps of the front columns of Parliament Building. Here are the sizes and approximate weights of some of the stones illustrated on page 566-7.

6 feet by 6 feet by 3 feet: weight over 9 tons.

6 feet by 5 feet by 2 feet: weight 5 tons.

6 feet by 3 feet by 2 feet: weight 3 tons.

This stone will be identified in the photographs as the one against which a quarryman's rule, four feet in length, has been placed.

5 feet by 5 feet by 3 feet: weight 6 tons.

8 feet by 4 feet by 4 feet: weight 10 tons.

15 feet by 2 feet 6 inches by 2 feet 6 inches: weight 7 tons.

At the proposed quarry face, sound stones 15 feet in thickness are showing over a large area. One rock has been measured up to a length of 25 feet, and another is 45 feet long. The stones lie in stratas, a joint occurring at about 5 feet intervals, so that all the quarrymen have to do is to drive a series of holes along the top of a rock, and split it vertically by means of steel wedges—the operation known as "plugs and feathers." Explosives will be rarely needed at the Kairuru quarry. The operation of plugging is at present done with long iron bars —jumpers—but a compressed air drilling plant, to be driven by steam, is awaiting erection. The Kairuru Marble Company has also under consideration various types of power crane, with a view to installing one capable of dealing with the heavy lifts required. Ten tons is the present limit of weight which can be transported over the tramline, but the quarry furnishes sound stones greatly exceeding this weight. When transit facilities improve, larger blocks of marble can be delivered, if they are required. The splendid surface rocks available have given the quarry a great start, more stone being ready for trucking than can be taken over the tramline for many months to come. The quarry foreman, Mr. Thomas Cooper, has had lengthy quarrying experience at Mount Somers and Timaru, and more recently as foreman at the greenstone quarry on the West Coast.

EXTENT OF VISIBLE DEPOSITS.

The present limit of visible stone goes 200 feet above the face of the new quarry, and it evidently runs into the hill a considerable distance.

The marble can be traced down the valley to a point 300 feet below the face, the intervening dis-