used to fill stone drains (trenches filled with stones). As far as the quantity of the latter class is concerned. I have nothing of importance to say, but inasmuch as the specification says that when any material taken from a cutting is used and paid for in a higher class of work its value in the cutting is to be deducted; as I believe that all the stones used in these stone drains were un loubtedly taken out of the cuttings and paid for as rip-rap in the drains; and as there is not in the books of the engineers an instance of the value of the stones in the cuttings being deducted; I believe a very large deduction should be made on this account from the estimates of the engineers; but I did not feel that I could positively affirm that the stones, or what part of them had been taken out of the cutting<sup>2</sup>, and therefore I did not make the deduction.

"In the other kind of rip rap - namely, that for the protection of embankments from water-I believe I deducted all that the engineers had returned, as the work was practically worthless, and as there was not in any case more than the slightest attempt at building up the stones, which were merely dumped over the sides of embankments in the same way as in numerous cases boulders and solid rock from cuttings were dumped over as waste. In one short piece about 100 feet long, the stones which were taken from an adjoining rock cutting seemed to have been laid with some care, but in reality they are part of the embankment within the regular dimensions; and they are now covered with ballast put over them so as to make the top of the embankment of the proper width, and the ballast, which is sand, runs out into the water, from which rip-rap was supposed to protect the embankment. In another place not far from that just mentioned, a piece of so-called rip-rap is returned by the engineer in charge of that section as having been built twice because it had been washed down and rebuilt, but when 1 saw it it was merely a loosely-built plumb wall, built about under the ends of the sleepers, barely sufficient to retain the inner filling of the embankment and support the road. After my inspection of it and before my leaving the work it was covered over with sand ballast and stumps which, as in the last mentioned case, ran out unprotected into the waters of Hay Lake.

"In very many cases, petty perhaps in detail but of considerable importance in the aggregate, and clearly indicating the system pursued on the contract, the contractors were paid by a suppositious quantity of rock or earthwork for work done of a totally different naturesuch, for instance, as that already given where a certain number of cubic yards of rock were allowed by the engineers for hauling out the boulders from cuttings, the removal of which toulders having been already allowed for in their measurement in excavation; the "fighting of fires " paid for by a number of yards of earthwork, the fires having been caused by sparks from the contractors' engines and men, the contractors by their contract being solely respon sible for such damage; the paying by a certain quantity of rock excavation for the building up, with stones from a neighboring irock cutting, of the burned ends of a wooden culvert, burned, undoubtedly, through the agency of the contractors' workmen ; the paying by a certain quantity of rock excavation for the removal of large blocks of rock from a ditch into which they had been thrown by the blasting in a neighboring rock cutting, which blocks, however, it was plain to be seen were never removed, but a small trench, in fact, was cut to let the water of the ditch pass them-even if the blocks had been removed the contractor should have removed them at his own cost.

" My instructions were to measure the work done, so as to test the accuracy of the engineers' returns; but in doing this I could not avoid taking notice of great extravagance in the