

Lastly, bad roads have played a greater part in many failures than is commonly supposed. I am aware of a mine in Ontario, the road giving access to which is so bad that three barrels of concentrates form a load for two powerful horses ; in fact more than once the third barrel has had to be thrown off in mid-journey to lighten the draught. In another case it took about five weeks to take in a 60 h. p. boiler about 40 miles. How can profit be realized when every ton of material brought in or taken out must be handled under such very unfavorable conditions.

In connection with the transport of ore and supplies, I do not think enough attention has been paid to light tramways, upon which a single horse can draw comparatively large loads with ease. Wire cable-ways, particularly over short stretches of difficult ground, also deserve more consideration, their cost of operation comparing favorably with that of light rail and tramways, while the first cost is many times less.

Above all and by way of summing up the whole matter :— “ When the plans are being laid the educated mining engineer who possesses the business perception required for the successful conduct of any other manufacturing enterprise, will adopt tried and true processes, even though, as innovations not having the seal of local usage, they may be looked upon with suspicion and resisted by “ men of the camp.” To such careful, observant management, however, the many mines of Europe owe their continued prosperity after three hundred years of working.

By actual and costly experience the “ practical man ” learns what the “ theoretical man ” has been taught, to profit by the experience of others. System will replace obsolete hand-to-mouth methods, and thus many an idle mine may, by one keenly alive to improvements in mining appliances, be converted into a prosperous property.

A compromise between, or a union of theory and practice, in such a manner as to inculcate the principles of technical knowledge, will enable the engineer to bring the rosy anticipations of enterprise to the level of the facts of experience.

Improved

Permit me which I consider industry. It is preparation for our western districts scattered over the

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