

AFRICAN DIAMOND MINING.

Regarding any reported discovery of a new diamond mine, one of the first questions asked is, "Is it a pipe?" Because, if so, there is every reason to be assured of its permanency.

These "pipes" are roughly circular or elliptical in section, and several hundred feet, sometimes 1,000 feet across.

The ground forming the top of the "pipe" is, for about the first 30 yards in depth, usually of a light yellow color, due to the decomposition of the "kimberlite," or diamondiferous rock, and is called "yellow ground."

"Blue ground," in which the Kimberly and De Beers mines have been working for years past, is the hard, unoxidized and unhydrated diamond-bearing rock of the general tone of color indicated by its name. It requires drilling and blasting, like any other hard rock, but the impression that diamonds are thereby crushed and broken is erroneous. The fracture is more often due to passage through the fine rolls in the washing operations rather than to blasting. Upon exposure to air this rock changes to a gray color, and disintegrates and crumbles, especially after moistening with water.

To this fortunate characteristic is due the existence of the extensive "floors" at Kimberly, containing millions of tons of blue ground in all degrees of weathering.

The floors are divided up into spaces, 400 yards by 200 yards, and on these the blue ground is deposited for a depth of about 10 inches.

The first operation the Kimberlite undergoes is that of harrowing, the harrows being drawn back and forth between two traction engines, stationed several hundred yards apart, thus avoiding the packing that would take place if the blue ground were traveled over by a steam harrow. After a proper interval the next process is that of winnowing, or collecting the lumps of hard "blue" that will not disintegrate into heaps. Portable tracks are laid down, and the lumps are sent to the crusher house.

A second harrowing then takes place, and if no rain has set in, the depositing ground is wet by hose, a complete system of water pipe being laid over the "floors" for this purpose.

After another interval, to allow of further weathering taking place, the material is loaded into cars on movable tracks run to the main haulage, and sent to the washing machines, any remaining pieces of hard "blue" being stacked separately and sent to the crushing and concentrating mill. The floor is then ready for a fresh deposit from the mines.

The floors are fenced about with barbed wire fencing, and are continually under guard, the night-watch being aided by a system of arc lights.

On July 1st, 1897, there were lying upon the depositing floors of the Kimberley, De Beers, and the newly started Wesselton mine an amount of 2,576,694 loads of diamond rock, equal to 2,061,355 tons. At a moderate estimate, this tonnage contains over \$15,000 worth of diamonds.—Cassier's Magazine.

HOW TO EXAMINE AN ASSESSMENT COMPANY.

The examination of a mutual company must cover a broader field than that of a stock company. Losses, if any, in a stock company fall upon the stockholders, and the main point in an examination of such company is not as to its methods so much as to its solvency, but in an examination of a mutual company, it is as necessary to examine its charter, constitution, by-laws, minutes of proceedings, applications and contracts, as it is to examine its methods of bookkeeping and arrive at its exact income, disbursements, assets and liabilities. It is not a question of its present solvency, but also a question as to whether

its methods of doing business are of such a character as to reasonably promise its future solvency. The register of death losses should be compared with the losses paid, whether paid promptly, and the vouchers therefor. Resisted losses should be investigated and the reasons obtained for refusal to pay. The amount of insurance written, the amount marked off, and the amount in force should be obtained. Investments should be carefully inquired into, titles scrutinized, and actual cash value obtained, commissions to agents, salaries of officers, and other expenses of procuring business should be closely examined, and whether economy is practiced or otherwise, the policy and propriety of advances to agents, whether any officer or director receives any compensation whatever, other than salary, whether the reserve or emergency fund is sufficient to comply with the law; vouchers should be produced for all expenditures, and the sufficiency of the bonds of those handling the funds inquired into.—B. K. Durfee, at the Milwaukee Convention of Superintendents.

—Woman's right to get off a street car backward has been vindicated. The New York Court of Appeal has upheld a verdict giving a female plaintiff damages for an accident, which the company defendant held and fairly proved was due to her trying to alight with her face to the rear of a car when said car was still in motion.

AMERICAN PETROLEUM ABROAD.

The production of crude petroleum in this country was 60,568,081 barrels in the year 1897, or 5,193,081 barrels more than the Russian production; and as nearly 75 per cent. of this product was refined into illuminating oil, while only 25 per cent. of the Russian oil could be so converted, the American production of illuminating oil is still far in excess of that of the Russian illuminant. It is necessary to bear these facts in mind in order to avoid being led astray by confusing statements. On the one hand, the Consular reports show that Russian and Dutch oil is supplanting American oil in many countries, or is, at least, competing energetically for the trade. On the other hand, the statistics show that exports of petroleum from this country to Europe and the far East are continually increasing.

RIGHT OF THE INSURED TO FREEDOM OF TRAVEL.

The United States Supreme Court gave its decision at Washington on Monday, 31st October, in the case of the Knights Templars and Masons' Life Indemnity Company, against E. Converse, involving to some extent that clause in many insurance policies relative to the freedom of travel by the party insured. Payment on an insurance policy was resisted on the ground that death had resulted while the insured was traveling outside the limits allowed by the policy. The Court of Appeals of the seventh circuit decided in favor of the beneficiary, under the policy, and the company applied to the Supreme Court for a writ of certiorari. The decision to-day denies the application of the writ.

HOW NOT TO TREAT AN AGENT.

Depreciate the importance of the local agent by stripping him of those privileges and prerogatives whose deprivation reduces him to a simple machine for gathering premiums; wound his sensibilities by writing a risk in his territory for some persuasive broker, and accentuate the offence by inditing a spread-eagle letter conveying a cheque for 5 per cent. commission; impair his efficiency and blunt the edge of his enthusiasm by creating additional competition for him in the ap-

pointment of other agents in his town; arouse his resentment by constantly reminding him, more in deed, perhaps, than in words, of the inherent turpitude of human nature, and the necessity of maintaining some bell-punch system to prevent the human nature part of himself from yielding to temptation; destroy his sympathetic interest in the company's fortunes by showing an indifference approaching almost, if not quite, to contempt for his opinions and his judgment, and you will have succeeded in doing for your company what the arboriculturist would do for his tree if he destroyed its roots.

The greed for volume of income, coupled with the collateral ambitious craving to out-strip and distance the "other fellow" in the race, has led to a lowering of the standard, and reputation, character, and ability wield an influence in the selection of local agents entirely secondary and subsidiary to the faculty for "getting" business—a faculty which, like charity, is made to cover a multitude of sins.

The reckless and indiscriminate appointment as local agents of persons of little responsibility and no experience, simply because they promised to develop into good "getters" of business, has brought a regrettable, but unavoidable change in the relationship which should exist between agent and company.—Chas. A. Janvier.

BE CAREFUL OF ELECTRICAL MACHINERY

The following advice regarding one's behavior in the presence of electric machinery or conductors will be useful in many respects to amateurs as well as to electricians. It is from The Engineer and Iron Trades Advertiser, Glasgow, Scotland:

"Never touch an electric wire that has fallen down across your way while standing on the ground, as your body will become a conductor for the electric fluid to the earth unless you have rubber boots on. Linemen are sometimes seen pulling wires about, but they have insulating boots on their feet or rubber gloves on their hands. Some people, supposing these coverings to be only used for the protection against wet weather, have foolishly grasped wires, and received severe shocks in consequence. Electric wires should be handled one at a time. If it is necessary to take hold of two wires at the same time, do not do it. In handling or drawing any wire lying over any of the ordinary street wires, especially such as convey currents for electric lighting, use a dry hand-line for the purpose, or grasp the wire with insulated pincers. An ordinary wire clothes-line may become the conductor of a deadly current.

In a dynamo room touch not, taste not, handle not. The most inoffensive looking dishpan may strike you like a mailed hand. Nothing is safe to you here unless you know everything. Let workmen remember that when a company has strung wires on the crossbars of poles so closely that a man cannot move easily between them, it is better for him to come down and resign. What profiteth a man if he has a situation if his wife be a widow? Never close a circuit without giving notice to all concerned. A telegraph notice received in the back of the neck generally arrives too late to do any good. On no condition let two wires touch your body at the same time.

Don't think that any wire is not dangerous. There is a difference between a gun with a cap on it and one without that can be detected with the naked eye, but a loaded wire—who knoweth it? Trimmers employed to attend to lights in public crowded thoroughfares should be sure that the current is turned off before they touch the lamp, as the stepladders are often very high and the public object to being hit on the head by a gyrating galvanized lamp-trimmer."