

SPARKS.

The Brockville Light & Power Co. are applying for the contract to light the new asylum building. If their application is successful they will require a new alternator of at least 2000 lights capacity.

The Government are said to be looking out for a suitable site on the banks of the canal at Cornwall for an electric power station. When they have located one tenders will be required for the work.

The Reliance Electric Mfg. Co., referring to the paragraph in the recent issue of THE NEWS, which stated that an electric plant was required at Tilbury Centre, Ont., write that this statement is incorrect, as they put in a plant at that place in December last.

It is probably not widely known, says the N. Y. Electrical Review, that only seven out of the 17 transatlantic cables are now in use, the others having given out for various causes. Estimating the cost of each cable at \$3,000,000, here is an irreclaimable investment of \$30,000,000 safely buried beneath the ocean to a depth of from a few fathoms to over five miles.

There is one crudity about electrical work, says Power, which is perhaps more a problem for the electrician than for the engineer, and yet it is of interest from the power standpoint. A six hundred horse-power engine, for instance, is connected up to a six hundred horse-power generator. In case of an overload the engine could run up to eight or nine hundred horse-power, but when the electric load increases unduly the fuses blow or the circuit breakers drop, and that unit is dead until matters can be readjusted. It is as though a boiler were fitted with a fusible plug that would melt and put the fire out when the pressure got above the allowable limit. Cannot there be an electrical safety valve which will prevent a dynamo from furnishing over-much current without stopping it altogether?

POSSIBILITIES OF SPEED BY STEAM.

In his recent inaugural address, the president of the French society of civil engineers, M. du Bosquet, pointed out that express trains daily attain seventy-five miles an hour on down grades, providing that such speeds are not dangerous. But the engines are not sufficiently powerful to maintain such speeds on a level. A drawbar pull which would give seventy-five miles an hour on a down grade of one in 200 would give only fifty-seven and a half miles on a level, and thirty-one and a fourth miles on up grade of one in 200. A slight increase in the average speed greatly increases the power required. If 322 horse-power will draw a train at fifty miles an hour up an incline of one in 200, for a speed of 125 miles 2,060 horse-power would be necessary. High speeds, moreover, increase the weight of the engines per horse-power, and there is a limit beyond which the engines could not move themselves. At their maximum power, the modern French locomotives weigh about 158 pounds per indicated horse power; but a similar engine of 150 tons generating 2,000 horse-power, would be required to draw a train of 100 tons up a slope of one in 200. The highest possible speed for such an engine and train up the slope would be eighty-seven and a half miles an hour, and for this the engine would weigh 670 tons and would generate 8,932 indicated horse-power.

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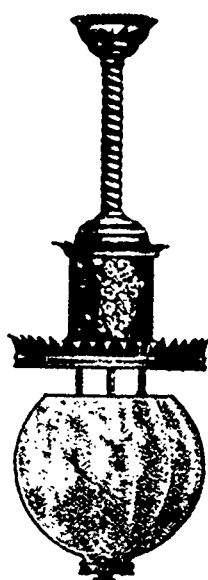
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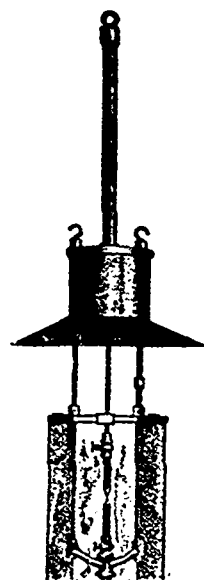
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