air. In these lamps are two tips, like what I have already explained, made of carbon, so that they will not burn away. The tips are arranged at a certain distance from each other. They meet. They separate. That seems all. Instantly we have the fierce light and heat.

From the small baby dynamos we have gradually grown to huge gigantic things of hundreds of horse power. With these we are able, not to make electricity, but to carry it from the place where it is made to the place where it is to be used. How far we can carry it, no man can tell. But you all know that we cannot carry steam, it cools so quickly. Hence electricity must soon take the place of steam.

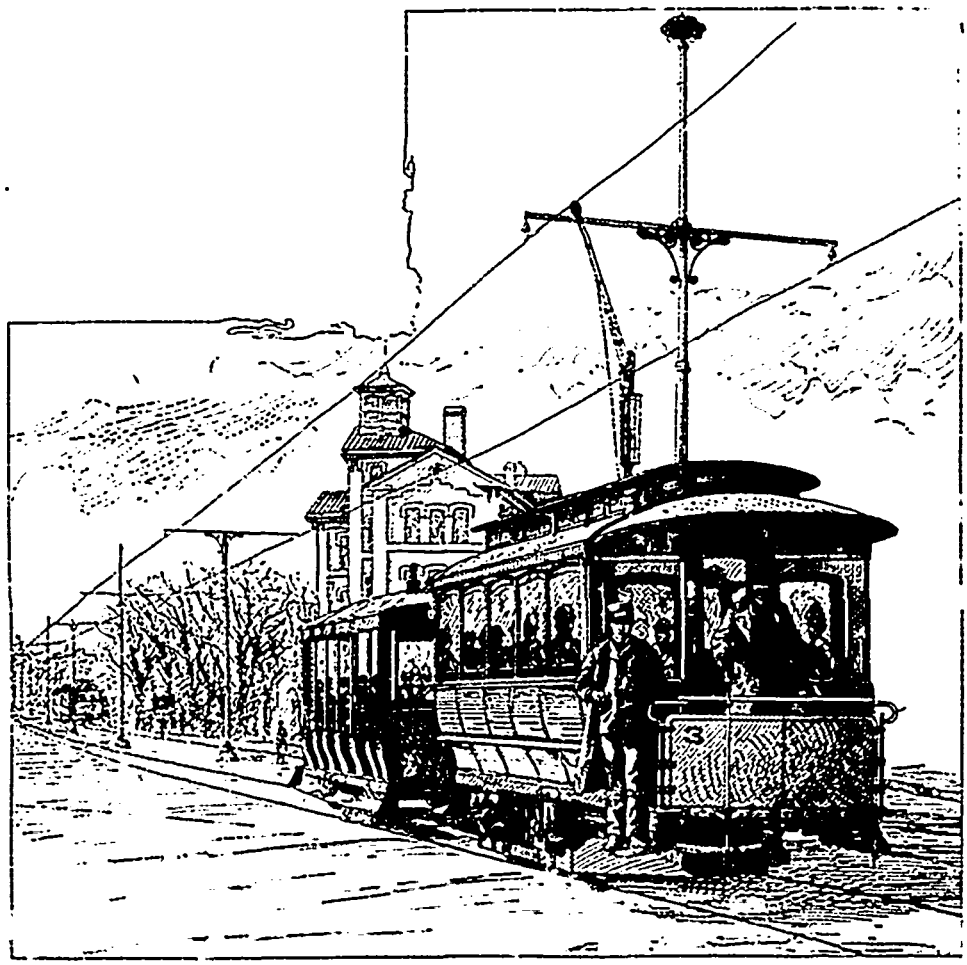
Of lamps all sorts have been invented, each in its turn raising the expectation of the inventor to heat as white as the light itself, and each in turn failing to realize what had been anticipated. Still the carbon consumes. Still the poles, or tips, separate. Still the light goes out. Still it has to be re-lighted.

Attempts to have the separation of the tips remedied by hand have been more or less successful, but the constant attention necessary is almost as great an objection as the sudden extinction of the light. At present the minds of scientific men are turned towards self-regulating lamps, and to have the regulation done by the current—by the same current that causes the difficulty. Doubtless we shall soon see another triumph of art in this direction.

From the factory where the current is sent out, to the lamps where it is ignited, the transmission is carried on in the surest and safest manner. Any boy who had, for example, water to convey from one place to another, would try to make his pipe of something that would neither soak up the water like a sponge nor let it leak through like a sieve. So in carrying the force for the electric light, a similar precaution has to be taken. Some kinds of wire would absorb the current, would dilute it, would rob it of some of its power. Others would gobble it all up, so that none would reach its destination. The wire, therefore, that is used for the purpose must be of a substance that will allow the current to pass on about its own business, uninjured, and unimpeded.

At present all these wires are sent through our streets, stretched in the air from pole to pole, but when we each assume the individual responsibility of expressing our convictions of what is right and wrong, instead of putting up with what may as well be remedied, all these wires shall run underground, where we shan't see them, and where there will be no chance of our being injured by them.

In these days the name of Edison is stamped on all that is done in the improvement of our electric appliances. He has gone with such bold and unmistakable strides in the perfection of these, that we have almost ceased to wonder at what he tells us. We have grown to accept it without a single question. Because of the difficulties that face us in incandescent lights, the almost entire attention of scientific men has been to avoid them. Edison, however, delights in difficulties and barriers, and is still working away with various materials for the tips. He has at present adopted a carbon filament which he produces from fine bamboo. The bamboo is cut into strips of a certain size and form. They are then car-



OUR NEXT IMPROVEMENT.