

light. This play of light and darkness follow with perfect regularity, like night and day, but the duration of each is very different. There is, if one may so phrase it, about 263 times as much night as there is day for each picture seen. The beholder is, however, not conscious of the least break in the continuity of his sight. So rapid is the alternation that his eye is able to hold the impression made by one picture until the next is seen, and this property has been called "the persistence of vision." It is by reason of this extraordinary faculty that our organs of vision are actually able to bridge over, in each case, the period of these infinitesimal yet comparatively long kinetoscopic nights, and retain, with unbroken luminous impression, the sensations of its brief and fleeting days.

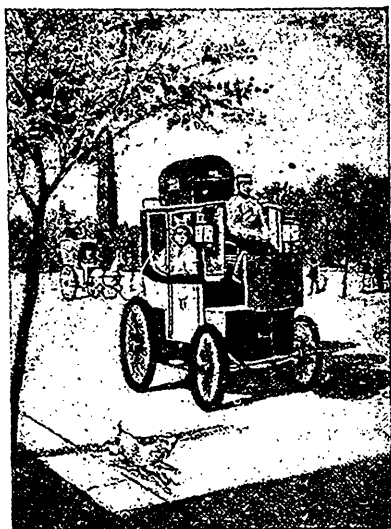
The eye sees actually a picture, with figure inert and motionless, which is instantly shut out of sight in complete

and absolute darkness while the moving mechanism shifts the scene. Again is disclosed another view with quiescent form, posed like a marble statue, without movement and without life, and again as quickly the image is blotted out in darkness, while eye and brain are busy. The swiftly moving panorama of lights and shades, rapid flashes and deep gloom, following each other with all the precision and exact regularity of which delicate machinery is capable; the scenes, so stiffly statuesque, and the frequent interruptions of sight flow on together smoothly and beautifully, obeying simply the laws of mechanics, of optics and of physics, so perfectly that one imagines he sees the graceful continuous motion of the figure, the sinuous movement, the rapid flash of moving arm and foot, and the endless flow of fluttering drapery, as a living, breathing being glides before us.—*Massey's Magazine.*

Science Notes.

THE AUTOMOBILE FIELD.

From an instructive article on this subject in the *Canadian Electrical News*, we quote as follows: The automobile is with us, and without doubt to stay, and we are assured upon all hands of the benefits to be derived therefrom, not only on the score of cheaper transportation, but in the matter of cleaner streets, better roads, etc. For city work the great desiderata are rapid, frequent, flexible and cheap service, and the present electric systems have these advantages over the older horse-car systems, for which reason the latter have been displaced. In the automobile we have something at hand which will give at least as frequent and rapid service, and will certainly be more flexible in meeting demands than the present electric lines for city service. Assuming that automobile bus-lines were initiated and run in competition with the electric cars, what would be their advantages from the point of view of operating costs? The largest item in the cost of electric transportation is generally that of motormen and conductors. This would probably not be decreased, nor would car inspection or repairs, by the use of the automobile. The next largest item is the fixed charges for interest, depreciation, taxes, etc. These depend upon the investment, and



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very slight consideration will readily convince the most sceptical of the smaller capital cost of the automobile. The electric line has a station costing about \$100 per h.p., a permanent way valued at from \$10,000 to \$50,000 per mile, depending upon the nature of the structure