A correspondent desires to know if a Corliss engine can cut off later than one half of the stroke. Possibly a little later; but on all engines of this class the tripping device which releases the cut-off valve must do so, if at all, before the piston reaches the middle of its stroke. After the valve is released, however, it takes a little time for it to close. We do not know how much the time of cut off may be affected in this way, but when the engine is moving at a tolerably quick speed the delay from this cause would probably be appreciable least. We hope some of our readers will enlighten us on the matter.

The custom of running underground electric wires cannot be too greatly encouraged. Already accidents, more or less severe, according to the conditions, are reported in New York, where electric lighting wires have come in contact with wires leading to the fire-alarm boxes. Last week, while a fireman was releasing a key from an alarm box, he received a shock which nearly knocked him down. So much electricity passed into him that his right arm was rendered useless for several minutes. The pavement was dry at the time. Had it been damp, the shock would have been greater, because his body would have been a better conductor between the alarm box and the ground. The possibility of being killed suddenly while sending out an alarm or releasing a key is not a pleasing thing for firemen to contemplate. Several Boston companies have made a commencement in laying underground wires and have done so with very satisfactory results. Let the good work go on. — Com. Bulletin.

C. E. Illsley, in the American Architect, states that the white incrustation which so often disfigures brick walls, especially of new buildings, consists chiefly of sulphate of magnesia (epsom salts), a substance which is very soluble in water and which tends to effloresce on drying. M. William Trautwine of Philadelphia, who has experimented on these incrustations, believes the sulphate to be produced in the bricks, and to a less degree also in the lime used for mortar, during the process of burning, by the action of the sulphurous acid, generated in the combustion of bituminous coal containing iron pyrites, on the magnesia in the clay and in the limestone. The coating is washed off by the rain, and unless the bricks are especially charged with magnesia it will, in time, cease to appear. Bricks burned with wood or coke fuel are, so far as known, free from this defect. It is recommended, therefore, that only wood or coke be used in burning bricks intended for fronts. The lime also should be burned with wood, or else obtained from pure limestone, containing no magnesia. English Portland cement is said to be free from this substance.

In the system of electric illumination of trains, recently adopted on the Eastern Railway of France, there is a Gramme machine, driven by the locomotive and accumulators. M. Tommasi has introduced an "automatic interrupter," the action of which is to break all communication between the Gramme machine and the accumulators, when the speed of the train descends below the normal. Further, if the lamps are lit at such a time, or when stoppage occurs, the automatic apparatus substitutes the accumulators for the machine, or reciprocally; the moment of change is not perceptible. When the train is running without the lamps being lit, the Gramme machine charges the accumulators exclusively; when the train is lit, the machine feeds both the lamps and the accumulators. It is only when the illuminated train slackens speed by stops, that the accumulators supply the current required by the lamps, and this is restored when the train has resumed its normal speed. Thus the accumulators are not so cumbersome as if they had sufficient capacity to feed the lamps during the whole journey. There is a Swan lamp in each compartment. The train is lit by the guard on entering a tunnel. The cost for an ordinary train of thirty-six lamps is about twelve francs a day, whereas the lighting with oil cost thirty-six francs, and was very imperfect. — English Mechanic and World of Science.