

graphite partially burnt. But, after all, two analyses of Bessemer operations performed in Germany prove this augmentation of the carbon: according to Kessler, after 4 minutes the carbon passes in one operation from 3.58 to 3.79, and in another from 3.03 to 3.17.

To conclude, we say, 1st. *That the dephosphorization of pig iron by a purifying process in a furnace seems to us practically demonstrated.*

2d. *That with the Bessemer process the manufacture of steel from very phosphoric pig iron is a fact perfectly established and complete from a scientific point of view.*

There remain practical difficulties, that the authors of the process recognize themselves, and they seek to conquer them by continuing their experiments; but the moment does not seem to be very distant when all which still embarrasses the process will be completely resolved.

Nutritious Ferns.—The dwellers on the argillaceous mountains of Japan derive most of their food from a variety of ferns, which they call *warabi*. In spring they eat the young leaves; later in the season they feed on the starch which they extract from the roots. In extracting the starch, the roots are carefully washed in order to remove all dirt, then crushed by mallets, and the pulp stirred in reservoirs of water. The water is then drawn into other reservoirs to settle, depositing about 15 pounds of starch for every 100 pounds of roots. In order to secure the reproduction of the ferns, the natives often burn the herbage and brush-wood that spring up under the shade of the oaks and chestnuts. Vast tracts have been devastated by this deplorable practice.—*Les Mondes*. C.

Hunting by Electricity.—A new application of the Ruhmkorff coil has been made in the neighborhood of Marseilles. Instead of using bird-lime on trees which are frequented by birds of passage, a copper wire is wound around the trunk and a decoy attached to a neighboring staff. When a numerous flock has been attracted by the decoy, a shock is sent by the commutator, and they are more surely stunned than by a rifle. Experiments of a similar kind have also been made by M. Dalmas upon the vines at his country-seat, and powerful shocks are said to have destroyed the parasites together with their eggs. If this statement is confirmed, the ingenious inventor may reasonably expect the prize of 100,000 francs, which has been offered for the destruction of the phylloxera.—*Les Mondes*. C.