

friends have alabaster boxes laid away, full of perfumes of sympathy and affection, which they intend to break over me when I am silent in death, I would rather they would bring them out in my weary hours, and open them, that I may be refreshed and cheered by them while I need them. I would rather have a bare coffin, without a flower, and a funeral without a eulogy, than a life without the sweetness of love and sympathy."

HINTS TO EMPLOYEES.—There is only one spirit that achieves a great success. The man who seeks only how to make himself most useful, whose aim is to render himself indispensable to his employer, whose whole being is animated with the purpose to fill the largest possible place in the wall assigned to him, has, in the exhibition of that spirit, the guaranty of success. He commands the situation, and shall walk in the light of prosperity all his days. On the other hand, the man who accepts the unwholesome advice of the demagogue, and seeks only how little he may do, and how easy he may render his place and not lose his employment altogether, is unfit for service. As soon as there is a supernumerary on the list, he becomes disengaged as least valuable to his employer. The man who is afraid of doing too much is near of kin to him who seeks to do nothing, and was begot in the same family. They are neither of them, in the remotest degree, a relation of the man whose willingness to do everything possible to his touch places him at the head of the active list.

ELECTRIC CARBONS.—The manufacture of carbons for electric lights has become an important business. At a trial in Cleveland, for alleged infringement of patent, a witness testified that out of one hundred and fifty thousand carbons burned daily in the United States, one hundred thousand are manufactured in Cleveland, where there are twenty furnaces. The carbons are made chiefly of the residuum of oil after it has been refined, but the deposit about natural gas wells is also coming into use. The material is ground to powder, a little pitch is added, and the substance is then placed in moulds. These are packed in boxes and the

latter placed in a furnace, where they are subjected to the most intense heat. The capacity of an ordinary furnace is forty-five thousand carbons. Through the use of a movable furnace roof, the patent on which forms the subject of contention, two furnaces are constructed side by side, and while the carbons in one are being burned, the other is loaded with boxes and moulds. Under this system, two men load a furnace in one day, the carbons are thoroughly burned in five days, and the cooling process continues only twenty-four hours.

BELLITE.—This explosive is inexpensive, easily made, and not liable to spontaneous explosion, but it develops, when intentionally fired by a spark, a force thirty-five times as great as gunpowder, and fifteen per cent. greater than that of guncotton. To make bellite, benzine is treated with a mixture of sulphuric and nitric acids. The sulphuric acid should be of the fuming kind, which is nearly free from water; and the proportion of nitric acid should be somewhat larger than that of the other. By keeping the mixed acids in contact with the benzine for some time, at a temperature rather above that of boiling water, the benzine is converted into trinitrobenzine, which is washed, so as to clear away all traces of free nitric acid, and then it is mixed with nitrate of ammonia, which is the common substance used for producing nitrous oxide gas. The mixture, if the free acid is thoroughly washed away, is very stable. Unlike dynamite, which explodes so readily from concussion that in heavy charges only every tenth cartridge is fired directly, the others being all exploded with certainty by sympathy, a charge of bellite can not be ignited by a blow or by friction. A shell charged with it strikes its object without exploding, unless a fulminating fuse is attached to it, and a magazine filled with it may be struck by projectiles without danger. When applied to use, however, its force is enormous. A charge of less than half an ounce, placed in a mortar behind a shell weighing ninety pounds, projected the shell to a distance of nearly four hundred feet; and its efficacy in detaching rock in a quarry, proves greater than that of any nitroglycerine compound.