

to 2s. a day for compositors, while that of lithographers is about ten per cent. less.

Bakers and millers, although also omitted from the official return, form a large industrial class. The former alone number in all above 2,300, specially engaged in the trade, irrespective of the private bread-making by the fellahs, who, like the Bedoween, do most of their own milling and baking. Of this total, above 1,000 are registered in Cairo, 490 in Alexandria, and the remainder in the other provincial towns. The universal love of pastry, chiefly in the form of the cake called *fateereh*, further employs above 1,200 makers of this greasy luxury, of whom some 800 find work and customers in the capital, 200 in Alexandria, and the rest elsewhere. To provide flour for all these, 27 steam mills and 575 driven by horse-power are worked in Cairo, respectively 31 and 127, besides 37 windmills, at Alexandria, and a few of all three classes at Tanta, Zagazig, and Mansourah. For the supply of the army and navy the Government works a large steam mill at Cairo, and two great bakeries there and at Alexandria, which furnish all the bread and biscuit required by both services, as also for the extensive gratuitous distributions of both which are made to passing pilgrims, schools, and other charities. The wages in these two trades are lower than those of most other crafts, averaging for the common hands not more than 9d. a day.

In nearly the whole of these handicrafts the work done by the natives is, as a rule, inferior. The masons, shoemakers, and tinsmiths turn out perhaps the best; but even their work, as compared with that of foreigners, is clumsy and rough in finish. Occasional specimens of good embroidery may be met with, but, although pleasing to the European eye from its being applied to objects

with which embroidery is not generally associated in Europe, and from the pattern being Eastern, these also are much inferior in delicacy and precision to the best European work. So, too, with goldsmiths' work, which, though in some of its results very quaintly pretty, is as rude in finish as its narrow range of patterns is antique—for the originals of nearly every one of these last may be seen in the Boulak Museum, or among the wall pictures of Thebes. The re-construction of so much of Cairo and Alexandria in a European style of architecture, and the imitation, more or less rude, of a similar fashion in the new buildings in most of the other large towns has largely led, within the past dozen or fifteen years, to disuse of the old-fashioned *mushrabeeyah*, or projecting lattice window, and to a consequent very marked decline in the production of the beautiful turnery-work of which these were composed. So pretty indeed is this, that travelling collectors now pay more for old specimens of it than a whole window cost fifty years ago. The same remark also applies to the curious and intricate panel-work employed in interior decorations, which is similarly being superseded by tawdry French and German mouldings. In Cairo and Alexandria a large opening is consequently offered to the better skill of Europeans—especially in mechanical engineering, railway plate-laying, carpentry, smiths' work, and the best class of stonemasonry and bricklaying. The engineering required is chiefly done by Englishmen, at wages ranging from 8l. to 25l. a month, or by Frenchmen or Germans at from twenty to thirty per cent. less. But in this craft natives have, within the past few years, qualified to an extent which has sensibly reduced the number of Europeans employed, with the result that both on the railways and in fixed factories, a large proportion of the engine-drivers

are now Egyptians, receiving from 8*l.* to 10*l.* a month. In the other trades Maltese take the lead in respect alike of skill and wages, receiving as ordinary workmen, 5*s.*, or as foremen, from 6*s.* to 8*s.* a day; Frenchmen, Italians, and Greeks ranking next, at from 3*s.* to 5*s.* per diem.

Passing from regular handicrafts to industries in which the labour cannot in the same sense be called skilled, the oldest and most peculiar is that of artificial egg-hatching, which provides almost the whole poultry of the country. This curious process was already ancient when Herodotus made his note of it at Memphis, and as it was carried on then, so is it still in nearly every detail. The building in which it is performed, called *mahmal-ferakh*, is constructed of burnt or sun-dried bricks, and consists of two parallel rows of small chambers and ovens—the latter uppermost—each about eleven feet square by about five feet high, and divided by a narrow vaulted passage, through which the rearer enters to watch the progress of the operation. This last takes place only during two or three months of the year, in spring, and as soon as the *mahmal* is opened the eggs are brought in by the neighbouring peasants, and after being carefully examined—with the result of about one-fifth being rejected as not fecundated—are placed on mats or straw sprinkled with bran, on the floor of the lower chamber. The ovens above are warmed with fires of *gileh*, the flat cakes of mixed dung and chopped straw described elsewhere. These *mahmals* vary in size from twelve to twenty-four chambers, and in the larger ones receive about 150,000 eggs during the annual term of their being open. The hatching takes generally twenty-one days, during which the temperature is maintained at from 100° to 103° Fahr., fixed, it need hardly be said, by the practised sense of the rearer, without the aid of a thermometer. In the

result, about two-thirds of the eggs produce chickens, of which the owner of the *mahmal* retains one-half, as his fee in kind, and gives the remainder to the peasants. There are in all some 600 of these establishments throughout the country, hatching above 12,000,000 chickens a year.

Although not reckoned in the official list of trades given in a previous foot-note, the workers in the cotton factories form a large industrial element, ranking in respect of wages about midway between common labourers and artisans. Most of these establishments date from the beginning of the American war, which gave so sudden a spurt to the Egyptian cotton trade. There are in all eight steam pressing mills—six in Alexandria, with nine presses, and two in the interior—and about 150 ginning factories, for the whole of which last, however, there is not now constant work. These establishments* employ a large number of men, women, and children, at wages varying, for the common hands, from 5*d.* to 2*s.* a day.

As Egypt possesses few or no mineral resources, properly so-called, it has in consequence no industries that can be classed strictly under this head. The old emerald mines of Jebel-Zabára and Wady-Sakáyt, between the Nile at Edfou and the Red Sea, the lead mines of Jebel-Resás in the same region, the gold mines in the Bishari country, and the turquoise mines of Magharah in the peninsula of Sinai, have all been long ago abandoned, although there is reason to believe that with improved modern skill and appliances some of these might be profitably re-opened.† The granite and limestone quar-

* The largest of these cotton factories is that of Messrs. Whitworth Brothers, at Mansourah, which comprises 80 cotton-gins, several presses, garbles for cleaning seed, oil-mills, flax-scutching machines, and an extensive corn mill.

† See note t. p. 11

ries of Assouan and the Mokattem are still of course worked, as are also those of Oriental alabaster and porphyry at Wady-Omargoob and Jebel-ed-Dokhan in the eastern desert—the former of which supplied the material for the Citadel mosque at Cairo, while from the latter were taken, during the time of Trajan and Adrian, most of the splendid porphyry columns that still adorn Rome. Of coal, tin, silver, and the more modern metals, no traces have been discovered, and only the faintest of iron, copper, and lead, in, respectively, some rocks near Philæ, and Mounts Baram and Zabára. Apart, therefore, from the quarries mentioned, the mineral products of the country are narrowed to the natron found in the province of Behera and at one or two other places on the Upper Nile, and to the nitre and other salts collected in the various *salines* of Lower Egypt, or worked in the rock from along the western coast of the Red Sea. The first of these is chiefly gathered in the Wady-Natroon, about thirty-five miles west of Teranéh, on the Rosetta branch of the Nile. The valley takes its name, as mentioned in a previous chapter, from a series of rock-walled basins whose waters contain crystallisations of natron or subcarbonate, and of muriate of soda, or common salt. These basins or lakes—called *melláhot*—of which there are in all eight, besides two smaller ponds that dry up during the summer, are fed by infiltration from the Nile, whose waters take three months to percolate through the interjacent desert of rock and sand, the salts of which they carry with them, and deposit in these reservoirs. Thus, the annual rise in the water in the lakes begins only about the end of December, and continues to the middle of March, when the fall commences, after which, during the summer months, the subcarbonate and muriate are collected. All the lakes contain the latter, but only some

of them both salts, which in that case crystallise separately, the natron underneath in a layer of some 30 inches thick, and the common salt above in one of about 18 inches. The natron is of two kinds—the *khartayeh* and the *sultanieh*, which latter (the better of the two qualities) is further distinguished as black and white. This (the *sultanieh*) is taken from the bed of the lakes as the water retires, and the *khartayeh* from the neighbouring low grounds which have not been submerged, but to the surface of which the salt rises. This valuable product is prepared for market by being washed, dissolved in water, and then again crystallised by the action of artificial or solar heat. The muriate is more commonly exported in the rough as collected. The official returns of this industry do not distinguish between the two salts, but state the total quantity of both gathered in one season at 90,169 pesés, of which 71,297 were collected directly on account of the Government, and the remainder, in the neighbourhood of Barnoughi in the same province, by a contractor who farms the enterprise from the Treasury. The cost price of the former, delivered in Alexandria, averaged about 10 pias. 8 paras per pesé, and that of the latter, being nearer the port, 6 pias. 10 par. The population of the Wady-Natroon is about 300, of whom some 200 are employed in this industry, and the remainder belong to the four Coptic monasteries,* which form the chief attraction of visitors to this desolate region. Natron is also found on the brink of some ponds in the valley of El-Kab, above Esneh, and on the shore of the

* Egypt, which once swarmed with monasteries and nunneries, has now properly none of the latter, and only seven of the former—these four in the Wady-Natroon, those of St. Anthony and St. Paul in the eastern desert, and one at Jebel-Koskam, in Upper Egypt. There are, it is true, several other religious establishments, but the priests are seculars and the inmates of both sexes

Birket-el-Korn, in the Fayoum, but in neither place in sufficient bulk to be of much commercial value. As it is, about 30,000 pesés of natron are annually exported from Alexandria, chiefly to Austria and Italy. Large quantities of raw nitre are also extracted, chiefly on Government account, from the mounds that mark the sites of ancient cities in Middle and Upper Egypt. It is thus procured more or less abundantly from Ghizeh, Bedreshayn, Sakkara, Enaneh, Mensheeyah, Denderah, Karnak, Koum-Ombos, and from various places in the Fayoum. The *débris* of the old walls is thrown into shallow ponds, when the nitre dissolves, and is then drained off into still shallower basins, the water in which rapidly evaporates under the strong solar heat, leaving a layer of crystallised nitre at the bottom. The total quantity thus produced averages about 650,000 kilos a year, which, when refined at the Government saltpetre works at Old Cairo, yield about 560,000 kilos of pure nitrate of potash.

In addition to this large collection of natron and nitre, above 72,000 ardebs of sea-salt are annually produced from twelve pits at Damietta (the largest of the whole), Rosetta, Farkshour, Ballachi (on Lake Menzaleh), Brullos, Alexandria, Havara, Port Saïd, Ismaïlia, and Suez. The last official return reports nearly 700 persons and above 1,300 animals as finding employment at these twelve pits, at wages averaging for the former about 9*z.* a day. There are also two other large pits at Rawiah and Darrah, near Souakim, which further produce some 30,000,000 quintals a year. Of this quantity about 1,000,000 quintals are exported to Djeddah, Aden, and Bombay, and as much more is carried inland by caravans to Taka, northern Abyssinia, and other parts of the interior. The remaining surplus of the whole produce finds a market chiefly in the Levant and at Constantinople. Rock-salt exists in almost inexhaustible abundance along the coast of the

Red Sea below Suez, cropping up to the surface in seams of great thickness and purity; but as yet these have been merely tapped at wide intervals, and contribute little or nothing to the salt produce of the country. This industry, which is a Government monopoly, yields to the Treasury a net annual revenue of about 250,000*z.*

Petroleum of good quality has also been "struck" about a hundred miles south of Suez, but only a few sample barrels—drawn off last year by an American mining engineer in the service of the Government—have yet been raised. Machinery, however, for opening and working several wells has been procured, and will be *in situ* in a few months, when it is expected that not only the whole of the lubricating oil required for the railways, the Khedivieh steamers, and the Government and Daira factories will be thus provided at a low cost, but a considerable excess be available for export.

The sea and fresh-water fisheries, which are also farmed out, form an important industry, the former employing above 3,700 persons and 800 boats, and the latter in all over 6,000 hands. Of these last, nearly 4,000 find work on Lake Menzaleh, with some 400 boats, and the remainder on the other lakes, the Nile, and the large navigable canals. As the total quantity of the fish caught greatly exceeds the home consumption, the excess, salted and dried, forms a considerable article of export to Syria, Turkey, and Greece. The proceeds of this monopoly being lumped together in the Budget with those of boat-farming, bridge-tolls, and charges on waste lands, its separate value to the Treasury cannot be stated; but the farming of Lake Menzaleh alone is said to yield 60,000*z.* a year.

The Nile boatmen and those employed on the larger navigable canals form another numerous class of in all above 36,000, working some fifty river passenger steam-

ers and tugs, and above 9,000 sailing boats of various kinds, from the yacht-like *cangias* or *dahabeeyahs* to the ponderous cargo-carrying *maashes* or cock-boat *sandals*. They are nearly all fine muscular men, inured to severe labour in rowing, poling, or towing, and are withal perhaps the merriest of the Egyptian working classes. They mostly belong to the river-side villages, and in spite of the still not uncommon device of sacrificing an eye—where ophthalmia has not already done it—to avoid conscription, they mainly furnish the crews of the small navy and of the Khedivieh Company's steamers. In both they are now fairly well treated, and the service is much less dreaded and avoided than it was a few years ago.

If the level of native skilled labour in Egypt is thus generally low, it is at least quite up to the wants of the great mass of the population. A vast advance must be made in both the social and material civilisation of the country before a much higher class of work, or more of it, will be required for home consumption; while as regards manufactures for export, the chance of Egypt competing successfully with Europe is still less now than it was fifty years ago. Sugar-making is perhaps the sole exception, and the foundations of that industry have been laid at a cost which no mere private enterprise could afford. From an æsthetic point of view the loss of the art which built Karnak, or of the later and more delicate skill that reared the old Cairene mosques, may be lamented; but the economist and the politician will not greatly regret either, nor the general backwardness in humbler crafts, if agriculture—the oldest and still most important of Egyptian industries—be improved and encouraged as it is the common interest of both the people and the Government that it should

CHAPTER XV.

SLAVERY.

Popular Misconception on this Subject—Difference between Eastern and Western Slavery—Property in the Person almost the only Common Feature—Status of Slave better in Egypt than in Turkey—Universality of the Institution—Different Classes of Slaves—Circassians now Rare—Abyssinians and Soudanis—Egyptian Slaves protected by Religion and Public Sentiment—Additional Safeguards decreed by the Khedive—Their Abuse by the Consuls—Consequent Limitation of Consular Interference—Existing Facilities of Emancipation—The Slave Trade legally Abolished, but still surreptitiously carried on—How it is fed—Prices—The Institution now merely a Mild Domestic Servitude—Acknowledged Cruelties of Slave-hunting—The Khedive honestly bent on its Abolition—Colonel Gordon's Commission.

ON few topics connected with the East is Western opinion more at fault than on the subject of this chapter. Thanks mainly to the well-meant but totally misleading exaggerations of professional philanthropists, the popular notion of Turkish and Egyptian servitude has been formed from illustrations of the cruel and brutalising bondage established in our own colonies till within little more than forty years ago, which survived for thirty years later in the Southern United States, and which still exists in Cuba and Brazil.* But barring the owner's right of property in the slave, the two systems have hardly a feature in common; and even this the patriarchal manners and, on not a few points, the humaner legislation of the East have beset by limitations which distinguish it widely from the absolute title of the Cuban or American Le-

* The recent discussions in Parliament, and the appeals of the Anti-Slavery and Aborigines Protection Societies to Lord Derby, amply exemplify the prevailing misconception on this subject.