

## MORAL SOUNDNESS OF THE LONDON POPULATION.

The London nation is remarkably distinguished for their strong moral sense, and their acute, quick intelligence. In these, no people in the most educated, virtuous, or simple counties, or districts, at home or abroad, can be compared to the Londoners. It stands to reason that this should be their character. They are a people living in the midst of temptation and opportunity, and therefore necessarily in the perpetual exercise, daily and hourly, of self-restraint and moral principle; living in the midst of the keenest competition in every trade and branch of industry, and therefore naturally in the perpetual exercise of ingenuity and mental power in every work and calling. The needy, starving men in this population exert every day, in walking through the streets of London, more practical virtue, more self-restraint, and active, virtuous principle, in withstanding temptation to dishonest or immoral means of relieving his pressing want, and he struggles against and overcomes more of the vicious propensities of our nature, than the poor, or rich, or middle-class men in a country population, or small town population has occasion to exercise in the course of a whole life-time. Man must live among men, and not in a state of isolation, to live in the highest moral condition of man. The London population may be far enough from this highest moral condition, but they are individually and practically educated by the circumstances in which they live, into high moral habits of honesty and self-restraint. Look at the exposure of property in London, and at the small amount of depredation in proportion to the vast amount of articles exposed to depredation in every street, lane, or shop; and consider the total inadequacy of any police force, however numerous—and in all London the police force does not exceed six thousand persons—or of any vigilance on the part of the owners themselves, however strict, to guard this property, if it were not guarded by the general, habitual, thorough honesty of the population itself. Look at the temptations to inebriety, and the small proportion of the people totally abandoned to habitual drunkenness.

Virtue is not the child of the desert or of the school-room, but of the dense assemblages of mankind in which its social influences are called into action and into practical exertion every hour. The urchin on the pavement, turning over head and heels for a chance half-penny, and resisting, in all his hunger, the temptation of snatching the apple or the cake from the old woman's stall or the pastry-cook's window, is morally no uneducated being. His sense of right, his self-restraint, his moral education, are as truly and highly cultivated as in the son of the bishop who is declaiming at Exeter Hall about this poor boy's ignorance and vice, and whose son never knew, in his position, what it is to resist pressing temptation, secret opportunity, and the urgent call of hunger. Practical moral education, a religious regard for what belongs to others, and doing as you would be done by, the neighbourly sympathy with, and help of real distress, and the generous glow at what is manly, bold, and right in common life, and the indignation at what is wrong or base, are in more full development among the labouring class in London than among the same class elsewhere, either at home or abroad. They put more of the fair-play in their doings. The exception to this character—the vice, immorality, blackguardism, brutality of a comparatively small number,—and many of these not born and bred in the lowest ranks, but in much higher positions, from which they have sunk besmeared with vice, immorality, and dishonesty which caused their fall—cannot be justly taken as a measure of the moral condition of the lower or labouring classes in London. The genuine cockneys are a good-natured, hearty set of men; their mobs are full of sport and rough play; and the ferocious spirit of mischief, wickedness, and bloodshed rarely predominates. Considering their great temptations and opportunities, and the inadequacy of any social arrangements, or military or police force that the Government posesses to oppose them, if a majority were inclined to active deeds of mischief, the London population may claim the highest place among the town populations of Europe, for a spirit of self-restraint on vicious propensities, and for a practical, moral education in the right and reasonable.—[*Ex.*]

## FIGHTING WITH LIGHT.

Professor Henry Morton, in a recent report to the Philadelphia Franklin Institute, gives the following description of the use of the calcium light during the siege of Fort Wayne, on James Island, opposite Charleston:

The front of Fort Wayne, toward which the advances of the United States forces were made, was about seven hundred yards in length, while the approaching saps were confined to a narrow strip of solid land about fifty yards across, the rest of the fort being covered by a swamp on one side and the ocean on the other. For this reason, when the head of the sap had been pushed to within two hundred and fifty yards of the fort, further advance was rendered impossible because the zig-zags would be enfiladed from one side or another by the guns at the extremities of the fort.

It was under these conditions, no advance having been made for several days, and the loss in the trenches being very heavy, that the calcium lights were first tried. Two of these, with jets one-eighteenth of an inch in diameter, burning about fourteen cubic feet of gas per hour, were set up at the extreme left of the second parallel, about seven hundred and fifty yards distant from the fort. These jets were supplied from large reservoirs, fifteen inches by eight feet, each capable of holding two hundred and fifty cubic feet. Both the gases were made on the island in a laboratory established for the purpose, where a detail of twenty soldiers and twelve negroes were constantly employed in the manufacture and compression of the gases for use in various ways connected with the military operations at this point, such as the prevention of blockade running at night, of sending supplies and troops to Fort Sumter, &c.

The two lights above mentioned were so arranged with parabolic mirrors as to throw sectors of light over one half of the fort, and the other over the remainder, the field of light being sharply cut by the diaphragm, so as not to reach below the edge of the parapet. The effect of this was to make every motion and each figure on the rebel works perfectly clear to those in the trenches, while the space below, from the ditch of the fort to the saps and parallels, was hid in impenetrable darkness. The Union riflemen and sharpshooters, in fact, were able to leave the protection of their works with impunity, while on the contrary, all the gunners in the fort were exposed to a deadly fire. The consequence was that within twenty minutes after the starting of the lights, the fort, from which a constant fusillade had been kept up ever since the darkness had set in, was absolutely silenced, and remained so during the night. Advantage was of course taken of this condition to push forward the sap, and by the end of the second night such progress had been made that the eastern angle of the fort was entered, and the work, becoming no longer tenable, was abandoned by its garrison. Of course every available gun was brought to bear upon the lights from the neighboring batteries, but these dazzling points seem to have been very hard objects to aim at, for though some of the reservoirs were hit by fragments of shell, and still bear the dents so inflicted, the apparatus was never seriously damaged.

## CHANCES OF LIFE.

An old document contains some interesting information unknown to many, and rarely encountered in the papers. Among other things, it contains a table exhibiting an average age attained by persons employed in the various popular professions of the day. In this particular, as in most others, the farmers have the advantage over most of the rest of mankind, as their average is sixty-five. Next upon the docket come the judges and justices of the peace, the dignity of whose lives is lengthened out to sixty-four. Following them immediately in the catalogue of longevity, is the bank officer, who sums up his account at the age of sixty-three. Public officers cling to their existence with as much pertinacity as they retain their offices—they never resign their offices, but life forsakes them at fifty-six. Coopers, although they seem to stave through life, hang on until they are fifty-eight. The good works of the clergyman follow them at fifty-five. Shipwrights, hatters, lawyers, and ropemakers (some very appropriately) go together at fifty-four. The "Village Blacksmith," like most of his contemporaries, dies at fifty-one. Butchers follow their bloody career for precisely half a century. Carpenters are brought to the scaffold at forty-nine.

Masons realize the cry of "Mort!" at the age of forty-seven. Traders cease their speculation at forty-six. Jewelers are disgusted with the tinsel of life at forty-four. Bakers, manufacturers, and various mechanics die at forty-three. The painters yield to their colic at forty-two. The brittle thread of the tailor's life is broken at forty-one. Editors, like all other beings who come under the special admiration of the gods, die comparatively young—they accomplish their errand of mercy at forty. The musician redeems his last note and plays his dying fall at thirty-nine. Printers become dead matter at thirty-eight. The machinist is usually blown up at thirty-six. The teacher usually dismisses his scholars at the age of thirty-four; and the clerk is even shorter lived, for he must needs prepare his balance-sheet at thirty-three. No account is given of the average longevity of wealthy uncles. The inference is fair, therefore, that they are immortal.—[*Albion.*]

## TRAINING COLTS.

T. S. Ingersoll, Berea, Ohio, a practical man, now more than eighty years of age, but who has broken a good many colts, writes as follows: "Colts are taught in the first place while I am their friend I must be their master and they must obey. This lesson is sometimes hard for them to learn, especially as I used to break colts in former years, when a young man. Then if the colt did not come right up to the 'chalk' the first time it was abused by the whip. I was most unmerciful in my dealings, exercising no reason or good judgment, which are the necessary attributes of character to be called into requisition by the trainer of colts. These two talents, together with patience, I have made use of in my later years in training colts till I think we have them in pretty good use, when required. Many friends often say you are too old to break colts. Why, a man nearly eighty years of age to think of breaking such wilds; it seems quite absurd, you'll get killed by them by-and-by. My reply has been, I am better qualified to break colts, as you term it, than when I was young. It is half the work now that it was forty years ago. I don't break any colts now; I train them; I don't like the term of breaking colts; I use them—treating them something as I would a young child, never punishing them for ignorance. I seldom use a whip in my early training. The first exercise with a colt, after he has carried harness till he is not afraid of it, is to put lines to the bits and over the buttocks and running them through the breeching, so as to keep them up, I go behind and attempt to drive him. This sometimes makes awkward work; but patience and reason and good judgment must now be exercised, for the colt will now cut up all manners of pranks, sometimes rearing or kicking up. Do not hold the reins very tight; humor him until he finds he cannot get away nor rid himself of his harness, and as he gets a little tired he will begin to yield. I get my colts accustomed to the bits by driving them around with the harness on, always letting the traces dangle about their legs as much as possible to get them used to having anything hit their heels without being frightened at it. I should have said before that while I am driving them I talk to them a great deal. They will soon learn my language. If they are inclined to back, I gently pull on the lines say, 'Back, back, Charley,' if that is his name. When they choose to go forward, I say go on. When I want them to turn round, I gently pull the lines on the side I wish them to turn, and say, 'come round, Charley!' always speaking his name. When I think it safe to put him between a pair of thills, with two wheels, I first let him see it and smell it, leading him around it, lifting up the thills and letting them fall till he sees that it will not hurt him. Then I pull him between the thills and let him stand a while before I drive him. By driving awhile in this vehicle until I think it safe, I put him before a lumber-wagon, and he will soon be manageable at ordinary work.—[*Ex.*]

THE FAMINE IN INDIA.—The Bombay Overland Mail brings advices to Sept. 8. The famine in Orissa was fearful. The Board of Revenue has ceased to publish the number of reported deaths. The Calcutta correspondent of the *Times* says a cry has gone up for Sir John Lawrence to supersede Sir C. Bendon, or at least to send the Sanitary Commissioner to Orissa. So near to Calcutta has the famine approached that a missionary has received a large grant for the Southern villages. He says it will be impossible to relieve a fiftieth part of the suffering around Calcutta for the next two months.

TELEGRAPH FAC SIMILES.—Mr. Field has brought out to this country a number of very interesting specimens of the system of telegraphing now in operation between Paris and Lyons, and Paris and Bordeaux, by which exact copies of the message are produced at either extremity of the lines, solely by mechanical means. The message is written on prepared paper covered with a lead-colored surface, which is a non-conductor of the electric fluid. The writing, or drawing, in the ink furnished for the purpose, changes the points touched by it to the opposite electrical character. The pendulum is swinging at each end of the circuit in unison. Its upper end is divided into points, say, like a fine tooth comb. The message being passed over these at one end, sends a current to correspond with the writing or lines, and produces an exact copy of the original upon the prepared paper held to the vibrating pendulum in the distant city. Thus a fac simile of writing and signature is furnished without any skill of the operator. A drawing of the likeness of a thief or absconding clerk is reproduced with minute faithfulness. Patterns of machinery, patterns for bonnets, hieroglyphics, messages in Chinese, or in an unknown tongue, are copied with as little trouble as the simplest letters of a familiar alphabet. Some notices of this have been given in foreign journals, but no mere verbal description can convey a full idea of the wonderful process. The Hibernian who insisted, some years ago, that the telegraph operator should forward his photograph over the wires to his sweetheart was only a little ahead of his age, since this can now be done without the slightest trouble, provided the likeness be taken on the proper material.

IMMENSE PUBLIC WORKS IN FRANCE.—In a letter to the *London Morning Star*, the Paris correspondent of that journal writes:—"Draining on a gigantic scale is being carried on in France. No less than three hundred and fifty thousand square acres are undergoing this salutary process. Government has devoted seven millions to carry out the works. The staff officers of the civil engineer department have furthermore surveyed a superficies of five hundred thousand square acres, the reclaiming of which will not cost less than thirty-four millions. The most important public works now in hand, however, are the embankments, of which the immediate object is to prevent various rivers from overflowing their beds, and thus causing the frightful inundations which have, within the last few years, caused so much damage to the country. Works of this nature have been set on foot in sixty-four departments. Ten millions have been set apart for defraying the necessary expenses. Nineteen hundred river-courses will thus be dammed up, the total length of the embankments required measuring eight thousand English miles. It is much to the credit of the country population that two-thirds of the expense of these works will be defrayed by the interested parties. Government has only been called on to subscribe in districts where the population is of the poorest description.

FARMERS' LEAGUE.—An association under this title has been organized at Jackson, Amador county. The object of the organization is to procure such amendments to the existing laws of the United States, in regard to the public lands, as shall be necessary to adapt them to the circumstances and wants of the people in the mining districts of California. It is expected that the public lands will be sold within a short time, and, it is contended, according to the present law, not one man in ten will have the first right to purchase his own improvements.—[*Cal. Express.*]

BEARS AMONG THE APPLE-TREES.—Fourteen bears have been killed recently in Albany, N.H. The Portsmouth Journal says they have been quite bold. Three of them committed the offence of visiting a farmer's orchard. When discovered, one of them had ascended a tree and was deliberately shaking off the fruit, while the other two were gathering it up. One bear was killed in Conway Centre, near the Town House.

GOOD CEMENT.—Gutta percha, dissolved in chloroform so as to make fluid of the consistency of honey, produces a good cement. When spread, it will dry in a few moments, but it can be softened by heating. Small patches of leather can be cemented on boots in such a manner as to almost defy detection, and some shoemakers employ it with great success for this purpose. It is waterproof, resisting all the elements but heat.