coloured individual to be seen. They all present the uniform type of brown short hair and black manes and tails. So far as the testimony of the naturalist just mentioned goes, the presumption is indicated that brown, with black manes and tails, was the colour of original wild horses—the very colour stated by Pallas as belonging to wild horses of the Tartarian steppes.

The American descendants of tame pigs run wild illustrate, in their own personal characteristics, the mutation of type which an animal species may experience. Not only have the wilding porkers lost their slow slouching gait, and become veritable wild beasts of the forest—*that* might have been expected—but their colour is invariably black, and their ears, instead of being pendulous, as is the case of tame pigs, prick up and stand well forward. Whilst grunter was a denizen of the farm-yard, with no enemy to fear save the butcher (whom he never learned to fear), and having no care for his dinner, a state of blunt hearing was of no particular disadvantage to him. Far otherwise is it with a wild forest pig, having to shift for himself the best way he can, and to whom the ability to hear quickly, and to remain wide awake, is a matter of the utmost consequence. To such a pig, prick-up ears are a sort of necessity, and accordingly God has supplied them.

America presents sheep and bullocks for the naturalist's investigation, under the somewhat rare and very interesting condition of neither quite wild nor quite tame. In them the mutation of race in passing from civilized back to savage life is not wrought out, but is yet in a state of transition. Before more specially pointing out what has happened to both these races, I would just in passing direct the reader's attention to a series of animals of the sheep tribe, the skins of which are stuffed and preserved in the zoological department of the British Museum. Without particularizing the animals in question by the hard names which naturalists apply to them, it will be enough for my purpose if the reader observe that certain sheepy-looking animals are there to be seen—sheep-like in form, face, horns, and, in short, everything save the one characteristic of wool. Glancing now the mental eye far away from the stuffed skins of the British Museum, and contemplating all the solicitudes of which sheep are the objects, by reason of their fleece—considering how those warm coats of theirs have to be bathed, anointed, and otherwise cared for to prevent ill results—a question might arise of the following kind. How would a wild sheep manage with no kind shepherd at hand to see to the wool toilette? On this point the half wild sheep of America furnish an instructive lesson. Their lambs have wool like any civilized lambs, and the wool continues growing for a period: but mark now the curious result. If the shearer comes before a certain period, and shears the fleece, well and good: another fleece begins to grow, lengthening to maturity. If, however, the shearer so far neglects this operation that a certain time, a little too long, elapses, off falls the wool of its own accord, a crop of hair takes its place, and wool never grows on the hairy part again.

What can be more beautiful than this illustration of the way in which the Almighty modifies the characteristics of a race in favour of mankind? The young lamb with woolly fleece would seem to say mutely, and once for all, "Wild or tame? which is it to be? Take your choice, but choose at once."

Passing now from sheep to cows, just contemplate the enormous quantity of cows' milk consumed by human beings, and how freely cows supply it. But this facility of milk-yielding is a characteristic impressed on the species after many centuries of contact with humanity. The half-wild cows of America yield milk indeed, for their own progeny, but they have very little to spare besides. Neither the Spaniards at home, nor the descendants of Spaniards abroad, are much of a milk-loving people; but whenever a travelling milk-lover wanders amidst the half-wild cows of certain parts of America, he finds it no easy matter to get a little cows' milk. The animals have lost the function of continuous supply. To finish our account of tame animals run wild in America, I may remark that only the goat and the donkey have grown handsomer for the change which has come over their fortunes. As to the goat, his head has become smaller and his eye brighter; and, who would have thought it?—the wild donkey actually seeks out the wild horse to do battle with, fighting, I am bound to say, most treacherously—the very reverse of all that is noble and chivalresque—but, for the most part, successfully. In short, the wild donkey seems to be a fellow of more intelligence than the wild horse, but at the same time more treacherous, resentful, and unforgiving.

RIFLE SHOOTING IN EUROPE AND AMERICA.

THE importance now attached to rifle shooting in this country, as one of the principal elements of its future defence, may render interesting some information concerning it, as practised both in the Old World and the New.

Switzerland is one of the earliest countries in Europe in which the rifle has been popularly used, and the mountain republic has acquired a reputation on this point, worthy of the land of Tell. The bold burghers who sustained that intrepid assertor of his country's liberties, have been succeeded by men who wield the rifle with the same ability with which their forefathers bent the bow; and in these days, when the redoubted shaft has been superseded by the more deadly shot, equal attention is devoted towards maintaining the national renown. All the youth of the Helvetic Republic are early trained to arms. Even at school they are subjected to strict military drill; and we cannot refrain from here adding that, in so far as our observation has extended—and it has been tolerably extensive—the continental system of military drill, which expands the chest and renders the figure erect and manly, would prove a truly valuable supplement to our insular sports—cricket, foot-ball, etc., which have a tendency to round the shoulders and mar the gait. Physically, we are the first people in Europe—per-

haps in the world; but though these sports are calculated to render the limbs strong, they are less suited for insuring the equable development of the whole body, and moreover labour under the disadvantage of being wholly useless, apart from healthy amusement; whereas the other, to almost the last day of our existence, qualifies us to discharge the duties required for the defence of our country. We do not think it necessary to quote glorious old Homer's glowing lines on this head—though he has alluded to it in terms which, even in those days of mere utilitarianism, posterity, we trust, will never willingly let die—as the passage is doubtless familiar to all our classic readers, and the thought naturally occurs to every human breast. But, we may add, it is at present as necessary to keep the sentiment in view as it ever was in the days of ancient Greece.

The Tyrolese riflemen, we need not say, have long been celebrated. Some of the Germans, too, possess considerable ability in the use of the weapon; and at their great national *fête*, the Turnverein, in the New World, they keep up the exercise for several days once a year with great spirit.

The French may at present be considered the principal rifle shots on the continent; but the practice is confined chiefly to the army, though some divisions of this—especially the Tirailleurs (or riflemen) of Vincennes—have acquired extraordinary proficiency, not only with their weapons but also with their limbs. We remember seeing a regiment of these little fellows—they are generally small, broad-chested men—running in from Vincennes (a distance of four miles from Paris) at an *émeute*, or threatened insurrection, in 1849, all the way side by side with a regiment of dragoons at full trot, and arriving on the Boulevards in perfect trim.

But the Americans are undoubtedly the first rifle-shots in the world. There, every man is by statute trained to arms, as, even in cities, they have only the alternative of being firemen; and these, too, are so imbued with the national spirit, that they voluntarily arm themselves and have their target-shooting excursions also. Even long antecedent to the period when they are constrained to discharge their national duties by law, they resort to the practice of their own accord. The little fellows in Missouri and "fighting Kentucky," at nine or ten years of age, are sent out by their fathers with rifles to shoot the wild turkeys, which there so abound, and we have seen them soundly whipped on returning home, if they brought down the bird by any other than a shot through the head. Generally, after an incredibly short period of practice, they contrive to strike the head fairly off in a majority of the shots.

In America, we may mention, the militia, throughout the whole Union, are obliged by law to assemble four weeks throughout the year for the purpose of drill. Sometimes the period is subdivided into two or four parts, but in all it is imperative; and while they are thus in camp, or under drill, the utmost discipline prevails. The old nonsense about American militiamen—such as three out of every half-dozen turning to the right, while the other wheeled to the left, and the master threatening the man, or the creditor the debtor, about the payment of some bill, if he unduly disciplined—is now wholly obsolete, if indeed it were not always entirely fabulous. We have seen regiments of these men, especially the New York National Guards and "Boston Tigers," not inferior in discipline to any body of regular troops in Europe; and so completely were they under control, that the former, named also the Seventh Regiment, unhesitatingly, on receiving the word of command from the Recorder of New York, fired on their own countrymen, and, after bringing at least a dozen of them down, charged the others with the bayonet, during the miserable riot which occurred on the last visit of Mr. Macready to America.

The uniform, we may add, of this highly effective regiment is gray, but we are inclined to prefer that of the firemen of New York for service in the field, if the necessity should ever unhappily arise. It consists simply of a red flannel shirt, with dark-coloured trousers, tucked within the boots, like Lord Elcho's Knickerbockers, and is a remarkably handy dress for active service. It realizes, in fact, the celebrated life-guardsman, Shaw's *beau ideal* of battle trim—namely, dispensing with all bucklers and upper attire, and fighting only in shirt-sleeves. Red also, though somewhat of a conspicuous mark, is exceedingly useful for concealing the usual indications of any of those accidents which invariably befall troops in action, and are apt at first to produce a disagreeable effect upon unaccustomed men. The new felt hat, or sombrero, turned up on the right side, recently adopted by the United States army, might also be studied with advantage, it being very handy for sunny or sloppy weather.

Independently, however, of the regularly established national drills, so general is the martial spirit of America, that almost every city, every village, every newspaper-office and extensive private, commercial, or manufacturing establishment, has its own individual military company; and each of these goes forth frequently to drill, as well as contends, at least once a-year, for prizes at target-shooting. A sonorous band of music generally precedes these civic heroes on this occasion, and a huge negro brings up the rear with a large target, which is invariably brought home handsomely riddled. Truth compels us to add that the B'hoys on these occasions often return home with every indication of having been indulging in some fluid more potent than water; but they elect their own officers with a spirit of discernment which should induce the gallant nobleman, whose name we have already twice mentioned, to persist in his very excellent motion, that all volunteer corps should retain this privilege; and the journeyman or apprentice, if his superior alacrity or intelligence should have elevated him to this post, frequently issues the word of command to his foreman or "boss," in tones and with a promptitude which is implicitly obeyed, and is amusing enough.

Some of the private shooting exploits in America are almost incredible. The southern and western men in this respect generally excel. In Ohio, which is much infested by squirrels, what is termed "barking" takes place; that is, the riflemen set

out, and the animals, crouching so close upon the branches as to be almost invisible, the game is destroyed by hitting the bark of the tree beneath them, and thus causing them first to start high into the air and then fall upon the ground, killed by the shock, so that the skin is not injured by the ball. In California, bears in the valley below are frequently destroyed by the hunter high up on the mountain firing his piece aloft, whence it descends so unerringly and with such force (the momentum increasing with the height it attains) that the animal beneath is generally destroyed at a blow. In Acapulco, on the western coast of Mexico, a similar plan is resorted to for the purpose of destroying turtle at sea; but an arrow on these occasions is the weapon, and it generally proceeds from the hands of the fair sex, who, moreover, take the precaution of attaching a string to it, for the purpose of hauling their prize a-shore.

A one-armed hero of Massachusetts, Tim Smith, was undoubtedly one of the greatest wonders in the way of shooting we ever encountered in America. It is rarely that the northern men, more devoted to intellectual and money-making pursuits, thus excel; but Tim was positively a gem. Fortune, however, had not smiled upon him, as, in spite of the classic *dictum* we were taught at school, she frequently refuses to smile upon the brave; and we deeply commiserated poor Tim's lot in being constrained, when considerably past the meridian of life, to set forth to California, where every man goes about armed with a brace of revolvers, as well as bowie-knife, and requires also a brace of ready or stalwart arms to use them. Tim, it affords us satisfaction to add, confined himself to peaceful pursuits and eventually realized a fortune in San Francisco.

But the most renowned shot in America is Captain John Travis, of New Orleans. The feats of the Captain are positively marvellous. He will lay a rifle at his feet, pick it up in an instant, and bring down a pigeon or swallow on the wing. He will allow himself to be blindfolded, turn round, and, with revolver, ring the bell each time. The Captain has more than once beautifully removed an apple from our palm at twenty paces; and we grieve to say, when we think it might have spoilt or entirely precluded this article, had there been the slightest trepidation on our part, he gracefully removed one with his rifle, at the distance of fifty yards, when poised in air between our thumb and forefinger.* The Captain, moreover, good-naturedly offered, in like manner, and with like immunity, to remove a peach from the summit of our head at a hundred yards; but we respectfully begged to decline the handsome proffer, though we have no doubt he would have accomplished this feat with equal dexterity.

The Captain, we may add, has since established one of his shooting galleries in the Quaker city of Philadelphia, on Adams Street, between Main and Second; and it is probably the finest establishment of the kind, not only in the United States, but in the world. The rifle galleries are 70 feet in length, 10 in width, and 17 in height; the pistol galleries the same height and width, and 36 feet in length. There are also galleries and reception-rooms for ladies.

In conclusion, we beg to express a hope that the movement recently instituted in England will not be transitory. We wholly dissent from the opinions of those cynical military martinets and absurd parliamentary *saltimbanques*, who decry the volunteer force, and maintain the superiority of an army enlisted from the lowest and most illiterate portion of the people. The experience of all ages proves the reverse. The triumphs of ancient Greece and Rome were not gained by the *canaille*, but by the free citizens and agriculturists of higher rank, who carried the standard of their country to victory wherever it was unfurled. The people of England are in no degree degenerate. When we say England, we include Scotland; and the natives of either are yet the first people in the world, or, at all events, second to none whomsoever. The spirit which at present inflames their breasts is as glowing as any that ever illumined the hills of Rome or the plains of Greece. They are superior far to the plebs of Rome or the dregs of Athens; and we have no fear for Old Albion, so long as her flag shall be upheld by the hands of freemen.

It would be an error, we may add, in a matter intended to be wholly practical, to occupy too much time in undue attention to drill. Drill is indeed highly advantageous. It expands the body, and gives promptitude as well as precision to the mind. At a recent important public meeting in the metropolis, we were especially struck by the remarks of the venerable provost of Eton, Dr. Hawtrey, concerning its beneficial effects upon the boys of that renowned school; and we may add that, for the sake of promoting unity of action, we concur in his recommendation of a slight and inexpensive uniform too. We were also particularly impressed, as well as amused, by the information of the chairman, Lord Elcho (himself the crack colonel of the crack Scottish regiment,) that, so general has drill now become that, at a Quaker school in Yorkshire, the young ladies went through the whole of the military manœuvres, though they had substituted other terms for the phraseology of the soldier, all with the exception of the word *halt*, which there was no possibility for the ingenuity of even the Society of Friends to supplant. Wellington, too, declared that "Eton won Waterloo;" meaning that the manly habits there acquired by the flower of England's youth had engendered that vigour of body, promptitude of action, and lofty spirit, which on that ever-memorable day struck the great Napoleon down. But while fully approving of early drill, and acquiescing with all the important speakers at this meeting, that the system should be rendered

* On venturing to hint to the writer of the present communication, that some would consider this rifle experiment "foolhardy," he said that the risk was small—certainly so small as not to be taken into account by him under the circumstances; for had he declined the Captain's proposal, the American bystanders would have at once made some insulting remark about Britishers being cowards. In the Life of General Sir Charles Napier, there is an account of still more perilous experiments to which the generous and brave old soldier submitted at the request of an Indian swordsman.

national in our schools, we cannot but express a hope that undue time will not be lost in teaching it to adult rifle corps now organized. A few movements are indeed indispensable to teach them to act in unison; but the Americans at New Orleans, who, from behind their cotton-bags, brought the choicest troops of England down, were, for the most part, men ignorant even of the mysteries of "the goose step."

HOT ROLLS AND THEIR CONSEQUENCES.

It would destroy many a fine-set morning appetite if the breakfaster reflected on the iniquities which have been perpetrated in order to furnish his breakfast table. His sugar comes associated with memories of slavery, and perhaps the reality of it; and, as for hot rolls, they must have involved a slavery more intolerable in some respects than that which has oppressed the negro. The black slave at least has his night hours of rest; and, speaking of the Cuba slaves of to-day, Mr. Trollope testifies to the good treatment of them considered as mere animals.

The London baker is less happily situated. For him there is scarcely any night rest. Roam through London streets in the still hours, when every other artisan is refreshing himself with slumber, and you shall still perceive a dim fitful light glimmering through the bar-work of some dismal kneading-house. Look down, and you shall behold spectre-like objects almost naked, mixing the dough with many a thump and thwack, preparatory to its being made up in form to go into the oven. The housewife who kneads the materials of a cottage loaf cannot realize to herself the hard work which falls to the lot of the poor baker. I have spoken of their working by night, but the case is even worse. In London, as also in some of the larger provincial towns, the bakers' journeymen have to work day and night. On Sunday, for example, they begin work at 11 P.M. and continue it until four next morning. Then, instead of retiring to rest, a new day's work, so to speak, begins: they have to shoulder the heavy bread-basket, and supply their masters' customers. Up to Thursday, all days and nights are alike to these poor men, when matters, instead of mending, get worse, especially in the underselling shops, where, in a large number of cases, the men have to work continuously from 11 P.M. till late on the Saturday afternoon, making no less than forty hours' labour at a stretch: moreover, in most situations, the men have to attend on Sunday from about 10 A.M. till 2 P.M. to superintend the dinner bakings. Adding up the hours of these periods of labour, it will be found that a large proportion of bakers' journeymen are employed weekly for the most incredible period of 112 hours, an average of more than eighteen hours per day out of the twenty-four. The consequences of this barbarous servitude physically might readily be inferred, even were they not seen in the wan and withered aspect of bakers' workmen. Dr. Guy stated, in the course of a recent lecture, that he never found a baker's workman in what might be called robust health; that is to say, with healthy, florid complexion. Only 14 in the 100 had a tolerably healthy appearance; and out of 111 bakers, 48 had more or less severe diseases of the lungs and chest.

Of course, I need hardly say that religious observance of Sunday is quite impossible under these severe conditions. Those of the bakers' journeymen who go to church or chapel only go to sleep; they simply cannot help it.

Why should there be all this iniquity? Why cannot dough be kneaded and bread be baked in the day time? There seems no necessity why the baker's avocation should remain one of the most unhealthy. Reader, you individually have it, probably, in your own power to contribute to the redress of this great wrong. It is brought about chiefly by the love of hot rolls for breakfast. Now, hot rolls for breakfast can only come of dough kneaded and bread baked whilst you were in bed asleep. Nay, think about this yourself, and take care that your friends and neighbours think about it. What man, woman, or child, having a sentiment of human feeling in their composition, to say nothing of Christian charity, would knowingly and wilfully condemn a section of their fellow creatures to worse than negro bondage, for the sake of a hot roll? With this appeal I will be content. It would be an insult almost, to aim at carrying a point of benevolent justice by adverting to the unhealthiness of hot bread. Rest assured, however, that it is unhealthy; on this matter all medical men are agreed. Those who court dyspepsia, with heartburn, headache, skin eruptions, and a train of troubles, will find a most efficient health-disturber in the use of hot rolls.

I find, from a pamphlet written by Mr. Lilwall, that there are from ten to twelve thousand journeymen bakers in London alone, who are exposed to the bakehouse night-work and its destructive consequences. "Heads of families," Mr. Lilwall advises, "should make it a point of conscience to ascertain which of the master bakers in their respective districts have abolished night-work, and give them their patronage, that they may not be pecuniary sufferers by their kindness to their men. They will have no difficulty in obtaining this information from the journeyman who daily delivers their bread. In those cases—and they will be the large majority—where they find that the baker they respectively patronize adheres to the old system, they will be doing an act of real humanity by telling him they are resolved after a given period—say a month from that date—to get their bread from a baker who relieves his men as far as possible from oppressive night-work." It was remarked by the Earl of Shaftesbury, in presiding at a meeting at Exeter Hall, that "the heaviest amount of over-work would not be found at the west-end of London, but in the east, and in districts chiefly inhabited by working men." Let the working classes understand that, when indulging in the thriftless and unwholesome luxury of hot bread, they are imposing on their brethren that extra amount of toil, and let them consider whether they could not give up that selfish indulgence, bearing in mind the golden rule, "Whatsoever ye would that men should do to you, do ye even so to them."