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Fire-Side, Vol. 1 No. 11 (1820), by Various**

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*** START OF THE PROJECT GUTENBERG EBOOK THE RURAL MAGAZINE, AND LITERARY
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THE
RURAL MAGAZINE,
AND
LITERARY EVENING FIRE-SIDE.

VOL. I. PHILADELPHIA, *Eleventh Month*, 1820. No. 11.

FOR THE RURAL MAGAZINE.

THE DESULTORY REMARKER.

No. X.

When casting around for topics, to which the attention of my readers may be solicited, they sometimes start up in almost every quarter; and the principal difficulty arises in the task of selection. It is, however, altogether probable, that like the young lady, who after disregarding the pretensions of men of sense and merit, at length gives her hand to some empty-pated coxcomb, my final determination may not always furnish the most conclusive evidence of wisdom or correct taste. Notwithstanding this may be the case, it is possible that here and there, at distant intervals, something may be found from which improvement may be derived by those who are in pursuit of it.

On the present occasion, the attention of my little circle is respectfully invited to a few of the occurrences of the passing year. We are now approaching the confines of winter, that season which has been called with great propriety its old age. Previously to its commencement, and during the continuance of what in this country is called Indian Summer, the face of nature is expressive of pleasing melancholy; the sun divested of his ordinary radiance, courts our gaze—the prevailing stillness is only invaded by the falling leaf—and every phasis in which we behold her, is serene and tranquil. At such a period we are led into a train of sober and rational reflection; and for a moment, feel wisely disposed to appropriate to our advantage, the truths which it reveals. In contemplating the progress of decay, and witnessing the beauties with which we are surrounded, successfully fading before our eyes, we are forcibly reminded of the solemn fact, that human life, with all its sublunary enjoyments, is also rapidly hastening to the tomb. We in some degree become familiar with the image of dissolution; and the departure of those of our friends and acquaintances, who have during the past months joined "the immense majority of the dead," is by the power of association brought to our remembrance. Most of them entered on the present year full of life and hope, and had every prospect of outliving many who are now their survivors; but alas! how vague and uncertain are all human calculations. The past summer and autumn, have in many parts of our otherwise highly favoured country, been accompanied with FEVER in its various appalling forms; and numerous have been the victims to this minister of

death. Our own metropolis was for some time the seat of painful apprehension, and no one could doubt the presence of a most malignant visiter, whose footsteps were, however, mercifully arrested by an overruling hand. NEW-ORLEANS and SAVANNAH have experienced more weighty and tremendous affliction from this source; and the sufferings of their inhabitants claim our deep and sincere sympathy. Many of the laws of nature are still concealed from our observation; but it is our duty to collect authentic facts, to reason from what we know, so that in some instances we may ascend from effects to their causes. *It is certainly the part of wisdom, in relation to YELLOW FEVER, to guard with vigilance every supposed avenue of approach, whether domestic or foreign.* The season has been remarkable in many respects. The earth has been unusually fruitful of her productions: the crops of bread-stuffs, and vegetables of every description, have been almost unprecedented.—Apples were never known to be so abundant and cheap. It may not moreover be altogether unworthy of remark, that myriads of musquitoes have for many weeks past been our unwelcome guests. Whether there be any necessary connexion between these circumstances or not, and in what manner it exists, is the proper business of philosophy to inquire, and if possible determine.

Among the events which have recently passed in review before us of Pennsylvania, although we disclaim the character of politicians, the recent general election could not have been entirely a matter of indifference. But whether the election of a GOVERNOR, conducted as it is here with an inordinate excitement of all the angry passions, be promotive of the great moral interests of society, is at least questionable. Peaceable citizens very naturally keep aloof from such a conflict; and from this circumstance alone, the commonwealth sustains great loss. Whether the immense patronage and influence of that important office could not be so lessened, by a partial distribution among other public functionaries, without impairing its essential dignity and usefulness; and in this way the constant recurrence of such disreputable spectacles be obviated as that we have recently witnessed, is certainly a question of great moment to the tranquillity and character of the state.

Belonging as we do to the great family of man, we cannot glance across the Atlantic at the important transactions of that region, without feeling an interest of no ordinary kind. Reference is here particularly made to the bloodless revolutions of Spain, Naples, and Portugal. We are hostile to the spirit of revolution, as such, but the character of these is well fitted to excite our "special wonder." And it is anxiously to be desired, that the welfare of the people of those countries may have been substantially promoted by them; for it ought to be remembered, that governments are instituted for the good of the whole, and not exclusively for the benefit of priests and kings. As Christians and patriots, we may on this subject be permitted to entertain such wishes as these.

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With regard to Great Britain, few of us can advert to what is there transpiring at present, in relation to royalty, without blushing for the land of our fathers;—the land of NEWTON and LOCKE, of MILTON, of YOUNG, and of COWPER. The drama referred to, disgraceful as it is, is nevertheless fruitful of salutary lessons. Of these it may be observed, this is not the least striking and important, that however elevated station may be, it is still accessible to the consequences of guilt; and its occupant may be made to tremble at their approach. We may also derive from its incidents, an argument in favour of our own form of government, comparatively simple and unimposing as it is in its structure; but not less efficient with respect to the legitimate objects of government, without which, properly administered, the fabric of society would crumble into ruins, and lawless violence usurp the seat of order and justice. ☞

FOR THE RURAL MAGAZINE.

THE VILLAGE TEACHER.

One morning during the present autumn, I made an early excursion through the fields. The sky was unclouded, and the eastern horizon was in a glow with those saffron hues that usher in the day. The stream before me, unruffled by a breath of air, gave back the shape and colour of the landscape as distinctly as in a mirror. A few chirping insects, and now and then a warble, sometimes half heard from a distant grove, and sometimes bursting full upon the ear, were all that broke the silence.

Captivated and riveted by the scene, I sat down under a favourite beech-tree, to enjoy it at my leisure. In such situations, the mind naturally falls into that train of musing which is most habitual; and I was soon lost in meditations upon the inexhaustible beauty and magnificence of Nature, and those lessons of deep philosophy which are to be learned in its school. From one thought I passed to another, till insensibly I fell into the following reverie.

Methought that beside me was a hill, whose rocky sides seemed almost inaccessible. The ascent was somewhat easier near the top, which glowed as if it were on fire. Before the hill was a fertile and beautiful plain, which was terminated by a barren heath, and that, by the waters of a vast lake. A path, the beginning of which I could not discover, seemed to wind round the foot of the hill, till it came to where there was somewhat of an opening in rocks, and divided. One part took the direction of the plain, and was soon lost in innumerable avenues. The other ascended the hill, in nearly a straight direction to the summit.

Where the path divided, there were stationed two beings of a celestial appearance. One of

them, who guarded the ascent to the hill, was a youth of severe but manly beauty.

A female stood at the entrance to the plain. She was elegantly though loosely dressed; her head was crowned with a chaplet of flowers, and her whole contour was that of perfect beauty—yet there was a certain boldness and forwardness in her mien, that however it might captivate some, rather checked the advances of those whose self-command was not disarmed by her beauty.

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I perceived a crowd of persons advancing along the great road, towards these beings; and when they came to where it forked, they seemed urged forward by an irresistible impulse, yet doubtful which path to pursue. Many attempted to ascend the hill, allured no doubt by the splendour of its summit. Yet I observed that the greater part of these, after toiling a little way up the ascent, turned back, after many a wistful look at the valley which lay behind them. The greater part of the travellers, however, chose the direction of the valley. Some were allured by the sight of verdant banks and shady groves, and by the strains of exquisite melody ever and anon wafted to their ears.

Many were enticed by the Portress of the Plain, who assured them that there was a much easier and pleasanter way to the summit of the hill through her dominions. When they had once entered, it seemed like a region of enchantment. The main path, as I have mentioned, speedily lost itself in innumerable branches.—Many of these seemed to wind along the foot of the hill, so that the travellers easily persuaded themselves that they would soon find the road which the Genius had promised, and pitied the ascetic toil of those who were scaling the mountain.

The inducements to repose, and the pleasures by the wayside, were, however, innumerable. Here a flower of uncommon beauty solicited their admiration, while umbrageous retreats and cooling fountains, presented themselves at every turn. Beings of celestial beauty were loitering in the shade—willing to be caressed, and ever ready to beguile the way with music and song. At one time they would invite the pilgrims to taste the golden fruits, which hung from the branches; or to listen to the melody of some songster of the grove. At another they would join in the wanton dance, "to the warbling of the lascivious lute," and lull their senses into oblivion with music like that of Circe. Every sense was gratified; the sky was serene and brilliant, the landscape in its summer beauty, and the breeze was loaded with fragrance and melody.

By degrees the paths lost their former direction, and all tended towards the end of the plain. I could see that the sirens, who so fatally beguiled the way, kept aloof from this part of the valley, and lingered among the cool and shady retreats at the entrance. Yet the travellers seemed, as before, urged on by an irresistible impulse; although, as they advanced, the way became less pleasant, the groves and the flowers less frequent and luxuriant, and the melody of the birds less enchanting. The sun now shone with intolerable ardour, and the plain ended in a burning sandy desert, trackless and unwatered. The few sirens who still accompanied them, and who were before so irresistibly charming, lost by degrees their youth and beauty. A few withered hags were all that now remained. The lute and the myrtle wreath were exchanged for a whip of snakes and a dagger. With these they chased the band of miserable bloated wretches, urging them farther and farther from the last vestige of delight. I could see a number of winged boys, flying about, and armed with a bow and a quiver of arrows. They discharged their weapons at random, among the deluded travellers on the plain.—Their shafts most frequently fell blunted to the ground. But whomsoever they pierced, seemed roused as from a dream. The flowers, for them, lost their fragrantcy, the song of the grove its music, and the banks their verdure. The sun burnt with tenfold rage, and they gazed on themselves and their companions with horror. Many of them turned and fled, and though they were pursued by the taunts and hisses of those around them, seldom stopped until they had gained the foot of the mountain. But the greater number tore the darts wildly from their bosoms, and pressed on more desperately than before. The wound, for a time, would appear to be healed. But whenever they were struck with the lashes of their pursuers, it opened again—a rankling and incurable sore. At every step their torment increased. Frantic and blaspheming, they hurried on towards the end of the desert, where a grove of blasted cedars seemed to promise shade, and the sound of waters, refreshment. But scarcely had they gained the bank, when the billows rolled over them, and closed for ever. The howling of the winds, the dashing of the waves, and the shrieks of the dying, sent horror to my soul.—I turned with pain from the prospect to observe those who were ascending the mountain. They seemed at first to advance with difficulty, for the ascent of the hill was steep and rocky. There was but one path to its summit, and this kept nearly a direct course, and seldom bent itself to the inequalities of the way. The travellers often stumbled over the stones that obstructed the passage, or tore themselves with the briars that trailed along the way. Sometimes they would unexpectedly find themselves at the foot of a rock that hid the prospect before them, and seemed to bar up the passage.—But an attentive observer might discover along its side a steep and hazardous, yet accessible path. Here all their vigour and caution was requisite; and when they had gained the top, it was often only to discover new difficulties. Such were the obstacles, that many became disheartened, and sighed after and sought the voluptuous delights of the plain. The air on the mountain was cool and damp, and often overcast with clouds. Yet the thunder seldom rolled but at a distance, and the lightnings played innocuously away. The ground was stony and barren, and seemed like a rude and desolate rock. Yet clusters of wild thyme, and chamomile, and rosemary, grew among the crevices of the stones; and shed around their sweet, though wholesome and refreshing perfumes. I observed several beings of a mild and majestic appearance, who went about removing and lessening the obstructions of the way. They raised and strengthened those who had fallen, and encouraged the laggard and the slothful. They cheered their labours with the tale of mighty men of old, or bade them mark the beauties before them, and the dazzling brilliancy of the summit. Whether it was from the invigorating effects of the climate, or the zeal

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and confidence with which such discourse inspired them, the travellers seemed to gather fresh strength as they proceeded. Their countenances beamed with cheerfulness and hope, and they bounded over the obstacles in the path with alacrity and vigour. A transient gloom would sometimes cloud their features, and they would sometimes complain of the asperities of the way. But a glance at the radiance above, or a smile from the good Genii who accompanied them, would always restore their wonted cheerfulness.

As they approached the summit, the road became more smooth and pleasant; the rude unsightly rock was exchanged for groves and fields of verdure. The air was purer, and more transparent. The landscape around was Nature in her sweetest robe: arrayed not in the unripened beauties of spring, or the gorgeous magnificence of summer, it breathed the tempered lustre, the full maturity, the mild undazzling serenity of autumn. The thrush, the robin, and the turtle-dove, were heard from the recesses of the grove; and the sky-lark sent down his melody from on high. Violets, jessamines, and honey-suckles, were scattered along the green, and wasted their sweets abroad. The radiance from the summit diffused a genial warmth around, and the travellers seemed already to enjoy the fruition of their labours,—But as if conscious that greater felicity was in view, they still pressed forward till I could scarcely distinguish them through the splendour that enveloped the top of the mountain.—As I was attentively gazing on their progress, methought I could discover a magnificent temple amidst the blaze of glory. The dome, the walls, and the pillars, shone like diamond through the mountain crystal. In the midst of the hall I could faintly trace an altar smoking with incense. The porticos and the area of the temple were crowded with beings of celestial beauty. Their robes were purer than the driven snow, and their locks were interwoven with gold and amaranth. Some were watching the rolling incense from the altar, and some were hymning the praises of their heavenly guide, or chanting the deeds of heroes. Others welcomed the travellers as they arrived, and led them rejoicing to the midst of the temple.

My sight, dazzled and overpowered, could behold them no longer.—The shout of welcome, the song of triumph, and the holy anthem, mellowed and softened by the distance, died sweetly away on my ear. "Happy regions!" exclaimed I, "this is indeed the abode of felicity. A thousand deaths, ten thousand years of anxiety and pain, would cheaply buy an admission to your delights." The violence of my emotion broke my slumbers; and I awoke, like Mirza, to behold, not indeed the camels of the long valley of Bagdat, but the awakening life and activity of the country,—the sober herd marching forth to their frugal pasture, the rattling swain, and the busy sounds of labour from the opposite hamlet.

HUSBANDMEN, AND THE HONOUR PAID TO AGRICULTURE IN CHINA.

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From Navarette, Le Comte, Du Halde, &c.

The Husbandmen in China, as to rank, are preferred to Merchants and Mechanics. They are endowed with large privileges, their profession being considered as the most necessary one in a state. Navarette observes, that the Chinese say, that the Emperor ought to take them under his particular care, and to allow them as large privileges as may be; because all the empire subsists by their labour and industry. Nay, it could not subsist without the strongest inclination and application of the country-people that way! China being so vastly populous, that if every inch of arable land was sowed, as in fact it generally is, yet the produce would be scarce sufficient to support the multitudes of inhabitants; and the empire is too extensive to have its wants that way supplied from foreign parts, even if it kept up a correspondence with them. For these reasons it has always been one of the chiefest cares of the government to promote Agriculture, by honouring husbandmen and their profession. With this view a festival is instituted in honour of agriculture; and the Emperor himself, once a year, turns ploughman, in imitation, as it is said, of the early monarchs, whose history seems to be calculated for the same end.

The common opinion, according to the Missioners, is, that husbandry was first taught by *Shin-nong*, who is at this day revered as the inventor of so useful an art; which has still gained farther credit from what is related in the books of their ancient philosophers. The Emperor *Yau*, who began to reign four hundred and eighty years after the monarch, it seems, set aside his own children in favour of a young husbandman, whom he chose for his successor. This choice of an emperor out of the country, has inspired the Chinese with a great esteem for agriculture. *Yu*, who succeeded *Shun*, came to the throne after the same manner. It is said, he found out the way, by means of canals, to drain off the water into the sea, which at the beginning of the empire overflowed several low countries, and afterwards made use of them to render the soil fruitful. It is added that he wrote several books concerning the manner of cultivating land, and watering it, which induced *Shun* to appoint him his successor, and has contributed much to raise the credit of agriculture, as they see it has been thought worthy the care and application of a great Prince.

Several other emperors have expressed their zeal for this art. *Kang Vang*, third monarch of the *Chew* family, caused land-marks to be fixed, to prevent disputes among the husbandmen. *King-Ving*, the twenty-fourth of the same race, in whose reign *Confusius* was born, five hundred and thirty-one years before Christ, renewed the laws that had been made for promoting agriculture. In a word, the Emperor *Ven-ti*, who reigned three hundred and fifty-two years after, raised its esteem to a great pitch: for this Prince perceiving, that his country was ruined by the wars, to

engage his subjects to cultivate the land, set them an example himself, by ploughing the fields belonging to his palace: which obliged all the ministers and gentlemen of his court to do the same.

It is thought, that this was the original of a great festival that is solemnized every year in all the great cities of China, when the sun enters the fifteenth degree of aquarius; which the Chinese look upon as the beginning of the spring. On this day the Governor comes out of his palace, carried in his chair, preceded by banners, lighted torches, and divers instruments; he is attended with several litters, painted, and adorned with a variety of silk tapestry; exhibiting various figures, and the portraits of illustrious persons who had practised husbandry, with histories relating to the same subject! He is crowned with flowers; and marches in this equipage towards the eastern gate of the city, as it were to meet the spring.

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Among the figures, there is a cow of earthenware, so monstrously large that forty men can hardly carry it.—Behind the cow, whose horns are gilt, is a young child with one foot naked and the other shod: him they call the *genius of labour and diligence*; who strikes the earthen cow incessantly with a rod, as though it were to make it advance. All the husbandmen follow with their instruments; after whom proceed companies of Masquers and Comedians, acting plays. In this manner they march to the Governor's palace, where they strip the cow of her ornaments; and drawing out of her belly a prodigious number of small cows made of clay, and distribute them among the multitude, as well as the fragments of the cow, which they break into pieces.—Afterwards the Governor makes a short discourse, recommending the care of husbandry as one of the things most conducive to the good of a state.

The attention of the Emperors and Mandarins to the cultivation of the land is so great, that when deputies arrive at court from the Vice-Roys, the Chinese monarch never forgets to demand in what condition the fields appeared to them; and the falling of a seasonable shower furnishes a proper occasion for visiting a Mandarin, to compliment him thereupon.—Every year, in spring, which falls in February, the Emperor (according to the ancient custom) goes himself, in a solemn manner, to plough a few ridges of land, in order to animate the husbandmen by his own example; and the Mandarins of every city perform the ceremony, which is as follows—The tribunal of Mathematics having, pursuant to orders, fixed on the twenty-fourth of the second moon, as the proper day for the ceremony of tillage, that of the Rites gave notice to the present Emperor *Yong-Ching*, by a memorial which set forth the following particulars to be observed by him, preparatory to this festival.—1st. That he should appoint 12 illustrious persons to attend and plough after him, viz. three princes, and nine presidents of the sovereign courts; or the assistants of the latter, in case they were too old, or infirm.—2nd. That as this ceremony does not solely consist in the Emperor's ploughing the earth, in order to stir up emulation by his own example; but also includes a sacrifice, which he, as Chief Pontiff, offers to *Shang-ti*, to procure plenty from him in favour of the people; therefore by way of preparation, he ought to fast and observe continence the three preceding days; the Princes and Mandarins, who accompany his Majesty, ought to prepare themselves in the same manner.—3rd. That on the eve of the ceremony, his Majesty is to send several Lords of the first quality to the Hall of his ancestors, to prostrate themselves before their Tablet, and give them notice, as though they were yet living, that the next day he will offer the great sacrifice.

Besides these directions to the Emperor, the tribunal likewise prescribes the preparations to be made by the different tribunals; one is obliged to prepare the sacrifice; another to compose the formula; another to carry and set up the tents, under which his Majesty is to dine, in case he so orders it; a fourth is to assemble forty or fifty husbandmen, venerable for their age, who are to be present when the Emperor ploughs the ground, with forty of the younger sort to make ready the ploughs, yoke the oxen, and prepare the grain that is to be sown; consisting of five sorts, supposed to comprehend all the rest, as wheat, rice, beans, and two kinds of millet.

On the twenty-fourth day of the moon, the Emperor went with his whole court, in his habit of ceremony, to the place appointed, to offer to *Shang-ti* the spring sacrifice; by which he is implored to increase and preserve the fruits of the earth. The place is a little hillock made of earth, a few furlongs south from the city; on the side of this elevation, which ought to be fifty feet four inches high, is the spot which is to be ploughed by the Imperial hands.

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After the Emperor had offered sacrifices, he descended with the three Princes and nine Presidents, who were to plough with him. Several great Lords carried the valuable chests, which contained the grains that were to be sown. All the court attended with profound silence; then the Emperor took the plough and tilled the ground several times backwards and forwards; when he quitted it a prince of the blood held it and ploughed; as did all the rest in their turns. After having ploughed in several places, the Emperor sowed the different grain; and the day following, the Husbandmen by profession, (forty-four of them old and forty-two of them young) finished the remainder of the field that was left untilled. The ceremony concluded with the appointed reward, which the Emperor bestowed upon each of them; consisting of four pieces of dyed cotton to make cloths.

The Governor of *Pe-King* goes often to visit this field, which is cultivated with great care; and examines all the ridges thoroughly, to see if he can meet with any uncommon ears, such as they reckon good omens; on which occasion he gives notice, that he found a stalk, for instance, that bore thirteen ears. In the autumn the same governor gets in the grain in yellow sacks; which are stowed in a granary built for that purpose, called the *Imperial Magazine*. This grain is kept for the most solemn ceremonies; for when the Emperor sacrifices to *Tyen*, or *Shang-ti*, he offers it as the fruit of his own hands; and on certain days in the year, he presents it to his ancestors, as if they were still living.

Among several good regulations made by the same Emperor, he has shown an uncommon regard for the Husbandmen. To encourage them in their labour, he has ordered the governors of all the cities to send him notice every year, of the person of this profession, in their respective districts, who is most remarkable for his application to agriculture; for unblemished reputation; for preserving union in his own family, and peace with his neighbours; for his frugality and aversion to extravagance. Upon the report of the governor, the Emperor will advance this wise and diligent Husbandman to the degree of a Mandarin of the eighth order, and send him patents of an ordinary Mandarin; which distinction will entitle him to wear the habit of a Mandarin, to visit the governor of the city, to sit in his presence, and drink tea with him. He will be respected all the rest of his days.—After his death he will have funeral obsequies suitable to his degree; and his title of honour shall be written in the hall of his ancestors. What emulation must such a reward excite among the Husbandmen!

Accordingly we find that they are continually busied about their lands if they have any time to spare, they go immediately to the mountains to cut wood; to the garden to look to their herbs, or to cut canes, &c. so that they are never idle. The land in China never lies fallow. Generally the same ground produces three crops in a year; first rice; and before it is reaped they sow fitches; and when they are in, wheat, beans, or some other grain: thus it goes continually round. They very seldom employ their land for unprofitable uses, such as flower gardens, or fine walks; believing useful things more for the public good, and their own.

The attention of husbandmen is chiefly employed in the cultivation of rice. They manure their land extremely well; gathering for that purpose, with extraordinary care, all sorts of ordure, both of men and animals, or truck for it wood, herbs, or linseed oil. This kind of manure, which elsewhere would burn up the plants, is very proper for the lands of China; where they have an art of tempering it with water before they use it. They gather the dung in pails, which they commonly carry covered on their shoulders; and this contributes very much to the cleanness of their cities, whose filth is thus taken away every day.

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In the province of *Che-Kyang*, and other places, where they sow rice, they use balls of hog's, or even human hair; which, according to them, gives strength to the land, and makes that grain grow better. For this reason, Barbers save the hair which they cut off the heads, and sell for about a halfpenny a pound to such people, who carry it away in bags; and you may often see barks loaded with it. When the plant begins to ear, if the land be watered with spring water, they mix quicklime with it; saying that it kills worms and insects, destroys weeds, and gives a warmth to the ground, which contributes much to fertility. By this means the rice fields are so clean, that Navarette, sometimes, walked through them, looking for some small herb; and could never find any; so that he concludes, the rice which is surprisingly tall and fine, draws all the nourishment from the ground.

The husbandmen sow their grain at first without any order; but when it has shot about a foot, or a foot and a half high, they pluck it up by the roots; and making it into a sort of small sheaves, plant it by a line, and checkerwise; to the end, that ears, resting upon each other, may stand more firmly, and resist the winds.—But, before the rice is transplanted, they level the land, and make it very smooth, after the following manner. Having ploughed the ground three or four times successively, always to the ancles in water, they break the clods with the head of their mattocks; then, by the help of a wooden machine (on which a man stands upright, and guides the buffalo that draws it) they smooth the earth, that the water may be every where of an equal height; insomuch that the plains seem more like vast gardens than open fields.

The mountains in China are all cultivated; but one sees neither hedges nor ditches, nor scarce any tree; so fearful they are of loosing an inch of ground. It is very agreeable to behold, in some places, plains three or four leagues in length, surrounded with hills and mountains, cut from bottom to top, into terraces three or four feet high, and rising one above another, sometimes to the number of twenty or thirty. These mountains are not generally rocky, as those in Europe, the soil being light and porous, and so easy to be cut in several provinces, that one may dig three or four hundred feet without meeting with the rock. When the mountains are rocky, the Chinese loosen the stones, and make little walls of them to support the terraces; they then level the good soil and sow it with grain.

They are still more industrious.—Though in some provinces, there be barren and uncultivated mountains, yet the valleys and fields which separate them in a vast number of places, are very fruitful and well cultivated. The husbandman first levels all the unequal places that are capable of culture. He then divides that part of the land, which is on the same level, into plots; and that along the edges of the valleys, which is unequal, into stories, in form of an amphitheatre: and as the rice will not thrive without water, they make reservoirs, at proper distances, and different heights, to catch the rain and the water which descends from the mountains, in order to distribute it equally among their rice plots; either by letting it run down from the reservoir to the plots below, or causing it to ascend from the lower reservoir to the highest stories.

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For this purpose they make use of certain hydraulic engines, which are very simple, both as to their make and the manner of playing them. It is composed of a chain made of wood, resembling a chaplet or pair of beads, strung as it were with a great number of flat boards, six or seven inches square, and placed parallel at equal distances. This chain passes through a square tube or gutter: at the lower end whereof is a smooth cylinder or barrel, whose axis is fixed in the two sides: and to the upper end is fastened a sort of drum, set round with little boards to answer those of the chain, which passes round both it and the cylinder; so that when the drum is turned, the chain turns also; and, consequently, the lower end of the gutter or tube being put into the water, and the drum-end set to the height where the water is to be conveyed, the boards filling

exactly the cavity of the tube, must carry up a continual stream so long as the machine is in motion; which is performed in three ways:—1st. With the hand, by means of one or two handles applied to the ends of the axis of the drum.—2nd. With the feet, by means of certain large wooden pegs, about half a foot long, set round the axle-tree of the drum for that purpose.—These pegs have long heads, rounded on the outside, for applying the soles of the naked feet; so that one or more men, may with the greatest ease put the engine in motion, either standing or sitting; their hands being employed all the while, the one holding an umbrella, and the other a fan.—3rd. By the assistance of a buffalo, or some other animal made fast to a great wheel, about four yards in diameter, placed horizontally. Round its circumference are fixed a great number of pegs or teeth; which tallying exactly with those in the axle-tree of the drum, turn the machine with a great deal of ease.

When a canal is to be cleansed, which often happens,—it is divided, at convenient distances, by dikes; and every neighbouring village, being allotted its share, the peasants immediately appear with their chain-engines; whereby the water is conveyed from one to the other. This labour, though painful, is soon ended, by means of the multitudes of hands. In some parts, as the province of *Fo-Kyen*, the mountains, though not very high, are contiguous, and with scarce any valleys between; yet they are all cultivated by the art which the husbandmen have to convey the water from one to the other through pipes made of bamboo.

To this surprizing industry of the husbandmen, is owing that great plenty of grain and herbs, that reigns in China above all other regions. Notwithstanding which, the land hardly suffices to support its inhabitants; and one may venture to say, that to live comfortably they have need of a country as large again.

REMARKS ON SALT AS A MANURE.

The progress of agriculture has been, and no doubt will continue to be, proportionate to the advancement of the science of chymistry; and the absolute necessity of calling in the aid of this science to that of agriculture, will be perfectly evident, when we reflect, that whenever any substance is applied to the soil, it becomes very frequently changed into new matter by combination or decomposition.—When a handful of salt is thrown upon some soils, its nature is in a very short time changed, and it becomes a new substance, which may be useful or injurious to vegetation, according to the change which it has undergone. Hence originates the great diversity of opinion, relative to the use of salt as a manure, a subject which the science of chymistry would set at rest, after a few simple experiments, but which the practice of agriculture would never determine without the knowledge of the effect of the soil, on the salt. There are also other considerations which materially affect the value in which this article is held as a manure. The farmers in Cornwall, in England, use the salt in which fish has been cured, by which the salt has already been partially changed, by combining it with the ammonia of the fish, which is one of the most powerful fertilizers known to chymical science. The practice also of using sea sand, in the same shire, is attended with effects which are as much owing to the use of the sand as the salt.—The astonishing effect produced by the urine of cattle, in Flanders, is no evidence in favour of salt, [as the urine contains twelve or thirteen fertilizing saline substances, besides salt] but it is a very powerful one in favour of compound saline manures. Salt is used in one of the preparations for the Patent Plaster, or Fertilizing Compost, but it is in that case combined with quicklime, and its eventual product is the muriate of lime and soda, both of which, when combined with other substances, are powerful fertilizers.

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It appears to be a provision of nature, that the muriate of soda, or common salt, should be a neutral substance with respect to fertilizing the soil. For if it possessed any degree of fertilizing powers, its effect would be seen on our sea-coasts; and its utility, by this time, would have been decisively proved by experiment as well as accident. That salt is partially beneficial to some soils, is beyond a doubt; but whether the benefit is equivalent to the expense of using it, is a question which can only be determined by the nature of the soil.—Wherever lime is used as a manure, salt may be beneficially applied, or when combined with any fertilizing substance which has a tendency to decompose it, but in this case the fertilizing power is owing to the new product, and not to the muriate of soda.

[*Morn. Chron.*]

THE LOCUST TREE.

A writer in the Long Island Star, highly recommends the cultivation of the Locust Tree, as a profitable business. He says the price of this timber is about seventy-five cents per cubic foot—that 200 trees will grow on an acre of land—or 20,000 trees to a hundred acres, which may average 20 feet per tree, which would give the enormous sum of \$300,000. But suppose they amount to only \$100,000, as the nett profits from 100 acres, in what way can the landholder expect so great a profit in 30 years, with the same probability of success, as from this? He mentions, that the timber, the seeds of which were planted by one man in England, was sold for 60,000*l.* sterling.

The locust becomes valuable in 15 years after planting, and in 25 or 30 years of full growth. It is easily raised by planting 15 or 20 trees to the acre; and as soon as the roots have spread, running a plough through the ground, and when it cuts the roots, new shoots will spring up.

This tree also invites the grass to grow under it, and the shade does not materially injure it; and while grass in the field is burnt up by the scorching rays of the sun, the locust grove will yield a rich and luxuriant pasture.

From Baldwin's London Magazine.

MEMOIRS OF RICHARD L. EDGEWORTH, Esq.^[1]

The first volume contains such part of the memoirs of Mr Edgeworth as was written by himself, and is of a very different complexion from the second from the pen of his daughter. We see in every page of the former, evidence of that abundance of animal spirits, and healthy activity of body and mind, which often changed their channel of direction in the course of his life, without ever relaxing their innate spring, or losing any of their pristine force of impulse. It is indeed Mr. Edgeworth's boast, corroborated by his daughter's testimony, that he was unchanged by age, or events.—He seems to have had a ready and quick feeling for every thing that happened, just as the bulrush has a rapid sympathy with the breeze that passes over it, and raises its head exactly into its old position the instant it is gone by. Mr. Edgeworth began to marry at twenty, and continued the practice till late in life. In fact, matrimony and mechanics seem to have monopolized his fidelity: with dancing he was desperately enamoured at first, but his taste soon tired of it, though he is careful to assure us his legs never did. Gambling and dissipated companions possessed him for a time, but neither sullied his mind, nor permanently influenced his habits. Telegraphs and one-wheeled chaises, however, kept stronger hold of him: he was the first to send poetry across the channel by a chain of signals; and he contrived for himself a carriage in which his "*legs were warned to lift themselves up,*" to escape being broken by posts, and in which he sat "*pretty safe from wet,*" his feet being "secured by leathers which folded up like the sides of bellows."

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One of his exploits in this commodious vehicle, he records in a tone of exultation with which we entirely sympathize:—

"On my road to Birmingham, I passed through Long-Compton, in Warwickshire, on a Sunday. The people were returning from church, and numbers stopped to gaze at me. There is or was a shallow ford near the town, over which there was a very narrow bridge for horse and foot passengers, but not sufficiently wide for wagons or chaises. Towards this bridge I drove. The people, not perceiving the structure of my one-wheeled vehicle, called to me with great eagerness to warn me, that the bridge was too narrow for carriages. I had an excellent horse, which went so fast as to give but little time for examination. The louder they called, the faster I drove, and when I had passed the bridge, they shouted after me with surprise. I got on to Shipton upon Stour; but, before I had dined there, I found that my fame had overtaken me. My carriage was put into a coach-house, so that those who came from Long-Compton, not seeing it, did not recognize me; I therefore had an opportunity of hearing all the exaggerations and strange conjectures, which were made by those who related my passage over the narrow bridge. There were posts on the bridge, to prevent, as I suppose, more than one horseman from passing at once. Some of the spectators asserted, that my carriage had gone over these posts; others said that it had not *wheels*, which was indeed literally true; but they meant to say that it was without any wheel. Some were sure that no carriage ever went so fast; and all agreed, that at the end of the bridge, where the floods had laid the road for some way under water, my carriage swam on the surface of the water."

Mr. Edgeworth was also, about the commencement of his career in mechanics, lucky enough to contrive a wheel which "*should carry on a man as fast as he could possibly walk,*" that is to say, provided he "*plied his legs with energy.*" On the first experiment being made, it answered its purpose so well as to give the lad within scarcely time "*to jump from his rolling prison before it reached the chalk-pit;*" but the wheel went on with such velocity as to outstrip its pursuers, and rolling over the edge of the precipice it was dashed to pieces."

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To recompense himself for this misfortune, he invented "*a sailing carriage.*"

"The carriage was light, steady, and ran with amazing velocity. One day when I was preparing for a sail in it, with my friend and schoolfellow, Mr. William Foster, my wheel-boat escaped from its moorings, just as we were going to step on board. With the utmost difficulty I overtook it, and as I saw three or four stage coaches on the road, and feared that this sailing chariot might frighten their horses, I, at the hazard of my life, got into my carriage while it was under full sail, and then, at a favourable part of the road, I used the means I had of guiding it easily out of the way. But the sense of the mischief which must have ensued, if I had not succeeded in getting into the machine at the proper place, and stopping it at the right moment was so strong, as to deter me from trying any more experiments on this carriage in such a dangerous place. Such should never be attempted except on a large common, *at a distance from a high road.* It may not however be amiss to suggest, that upon a large extent of iron rail-way, in an open country, carriages properly constructed, might make profitable voyages from time to time with sails instead of horses; for though a constant or regular intercourse could not be thus carried on, yet

goods of a certain sort, that are saleable at any time, might be stored till wind and weather were favourable."

One more of Mr. Edgeworth's ingenious inventions is all we can allow to this subject:—he offered for a wager to produce a *wooden horse that should carry him safely over the highest wall in the country!*

"It struck me, that, if a machine were made with eight legs, four only of which should stand upon the ground at one time; if the remaining four were raised up into the body of the machine, and if this body were divided into two parts, sliding, or rather rolling on cylinders, one of the parts, and the legs belonging to it, might in two efforts be projected over the wall by a person in the machine; and the legs belonging to this part might be let down to the ground, and then the other half of the machine might have its legs drawn up, and be projected over the wall, and so on alternately. This idea by degrees developed itself in my mind, so as to make me perceive, that as one half of the machine was always a road for the other half, and that such a machine never rolled upon the ground, a carriage might be made, which should carry a road for itself. It is already certain, that a carriage moving on an iron rail-way may be drawn with a fourth part of the force requisite to draw it on a common road. After having made a number of models of my machine, that should carry and lay down its own road. *I took out a patent to secure to myself the principle;* but the term of my patent has been long since expired, without my having been able to unite to my satisfaction in this machine strength with sufficient lightness, and with regular motion, so as to obtain the advantages I proposed. As an *encouragement to perseverance*, I assure my readers, that I never lost sight of this scheme during *forty years*; that I have made considerably above *one hundred* working models upon this principle, in a great variety of forms; and that, *although I have not yet been able to accomplish my project, I am still satisfied that it is feasible.*"

Justice, however, will not permit us to go to other matters contained in these most entertaining biographical notices, without cautioning the reader not to take the standard of the utility and intelligence of Mr. Edgeworth's mechanical pursuits, from these specimens of his achievements in this line. He effected much of a more useful nature, and appears to have had very considerable talent in his way—but so in fact had *King Corny*.

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Mr. Edgeworth's first marriage was the only unsuitable one of the several it was his fortune to make; and not finding his wife cheerful at home, he says, led him to seek cheerful company abroad. In fact, before the death of his father, we find him quite involved in the vortex of dissipation and fashion. His picture of the *beau monde* of those times is not without its charm. "Among the ladies who visited the Mrs. Blakes, was a Miss Dalton, the famous "Fanny, blooming fair," whom Lord Chesterfield has celebrated. He was ingenious enough to detect the legerdemain tricks of the "celebrated Comus." Miss D. told him that her relation, the famous Sir Francis Blake Delaval, had also discovered these secrets, and believed himself to be the only man in England who possessed them. This brought about an acquaintance, or rather intimacy, between Mr. Edgeworth and Sir Francis, from the description of the incidents of which we derive much amusement. They arranged together the house in Downing street, where Sir Francis lived, for the representation of conjuring tricks.

"The ingenuity of some of the contrivances, that were employed in our deceptions, attracted the notice not only of those who sought mere amusement, but of men of letters and science, who came to our exhibitions. This circumstance was highly grateful to Sir Francis, and advantageous to me. I, by these means, became acquainted with many men of eminence, to whom I could not at any period of my life have otherwise obtained familiar access. Among the number were Dr. Knight, of the British Museum: Dr. Watson; Mr. Wilson; Mr. Espinasse, the electrician; Foote, the author and actor, a man, who, beside his well known humour, possessed a considerable fund of real feeling; Macklin, and all the famous actors of the day. They resorted to a constant table, which was open to men of genius and merit in every department of literature and science.—I cannot say that his guests were always "unelbowed by a player;" but I can truly assert, that none but those who were an honour to the stage, and who were admitted into the best company at other houses, were received at Sir Francis Delaval's.

They got up the tragedy of the Fair Penitent here, to allow the late Duke of York, who afterwards died suddenly at Rome, to play Lothario; and "he was as warm, as hasty, and as much in love, as the fair Calista could possibly wish." A pleasant supper-party, he says, they had at the King's Arms, Covent Garden, after the performance.

"Macklin called for a nightcap, and threw off his wig. This, it was whispered to me, was a signal of his intention to be entertaining. Plays, play-wrights, enunciation, action, every thing belonging to eloquence of every species, was discussed. Angelo, the graceful fencing-master, and Bensley, the actor, were of the party.—Angelo was consulted by Bensley, on what he ought to do with his hands while he was speaking. Angelo told him, that it was impossible to prescribe what he should always do with them; but that it was easy to tell him what should *not* be done—"he should not put them into his breeches' pockets"—a custom to which poor Bensley was much addicted. Pronunciation was discussed; the faults in our language in this particular were copiously enumerated. "For instance," said Macklin, "*Pare* me a *pair* of *pears*." You may take three words out of this sentence, of the same sound, but of different meanings, and I defy any man to pronounce them in such a manner as to discriminate the sounds, or to mark to any ear by his pronunciation the difference between the verb *to pare*, the noun of number, *a pair*, and the fruit, *pear*. The pompous Bensley undertook that Powel, who was remarkable for a good ear, should do this. Bensley, who mouthed prodigiously whilst he spoke, was put behind a curtain, that the motion of his lips might not assist Powel in judging what meaning he intended to express by each

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of the words as he pronounced them. One of the company was placed behind the curtain, and to him Bensley was previously to communicate, whether he proposed to pronounce the word denoting the action, the noun of number, or the fruit. Bensley failed so often, and so ridiculously, that he became quite angry, and charged Powell with wilful misapprehension. To defend himself, Powell proposed that Holland should try his skill; but Holland had no better success. During these trials, I concerted by signs with Sir Francis, a method of pointing out my meaning, and I offered to try my skill. The audience with difficulty restrained their contempt: but I took my place behind the curtain, and they were soon compelled to acknowledge, that I had a more distinct pronunciation, or that Sir Francis had more acute hearing, than the rest of the company. Out of twenty experiments, I never failed more than two or three times, and in these I failed on purpose, to prevent suspicion. I had made my confederate understand, that when I turned my right foot outward, as it appeared from beneath the curtain, I meant to say *pare*, to cut; when I turned inward, *pair*, a couple; and when it was straight forward, *pear*, the fruit. We kept our own counsel, and won unmerited applause. Amidst such trifling as this, much sound criticism was mixed, which improved my literary taste, and a number of entertaining anecdotes were related, which informed my inexperienced mind with knowledge of the world."

One of the many excellent anecdotes which Mr. Edgeworth introduces relative to the extraordinary man of the town with whom he was now passing his time, we shall give as a sample. Sir Francis had contrived to represent the borough of Andover, in several Parliaments, by practising a series of tricks on his constituents:—but at length, he sustained a reverse of fortune, and his electioneering success terminated.

His attorney's bill was yet to be discharged. It had been running on for many years; and though large sums had been paid on account, a prodigious balance still remained to be adjusted. The affair came before the King's Bench. Among a variety of exorbitant and monstrous charges, there appeared the following article.

"To being thrown out of the window at the George Inn, Andover—to my leg being thereby broken—to surgeon's bill, and loss of time and business—all in the service of Sir F. B. Delaval.—Five hundred pounds.

"When this curious *item* came to be explained, it appeared, that the attorney had, by way of promoting Sir Francis' interest in the borough, sent cards of invitation to the officers of a regiment in the town, in the name of the mayor and corporation, inviting them to dine and drink his Majesty's health on his birthday. He, at the same time, wrote a similar invitation to the mayor and corporation, in the name of the officers of the regiment. The two companies met, complimented each other, eat a good dinner, drank a hearty bottle of wine to his Majesty's health, and prepared to break up.—The commanding officer of the regiment, being the politest man in company, made a handsome speech to Mr. Mayor, thanking him for his hospitable invitation and entertainment. "No, Colonel," replied the mayor, "it is to you that thanks are due by me and by my brother aldermen for your generous treat to us." The colonel replied with as much warmth as good breeding would allow: the mayor retorted with downright anger, swearing that he would not be choused by the bravest colonel in his Majesty's service.—"Mr. Mayor," said the colonel, "there is no necessity for displaying any vulgar passion on this occasion. Permit me to show you, that I have here your obliging card of invitation."—"Nay, Mr. Colonel, here is no opportunity for bantering, there is your card."

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Upon examining the cards, it was observed, that notwithstanding an attempt to disguise it, both cards were written in the same hand by some person, who had designed to make fools of them all. Every eye of the corporation turned spontaneously upon the attorney, who, of course, attended all public meetings. His impudence suddenly gave way, he faltered and betrayed himself so fully by his confusion, that the colonel, in a fit of summary justice, threw him out of the window. For this Sir Francis Delaval was charged five hundred pounds.—Whether he paid the money of not, I forget."

THE PROMPTER.

It will do for the present.

This common saying does as much mischief in society, as *rum* or a *pestilence*. If I hear a man, whether a farmer, a mechanic, or any other person, often repeat that saying, and appear to act from the opinion, that *it will do for the present*, I rely on it he is a sloven, a drone, or something worse. I never knew such a man thrive.

A young man setting out in life, is in haste to be married. He wants a house to live in, but is not fully able to build one. Yet his pride requires a large showy house. At last, between poverty and pride, he determines to build a large house, but not to finish it till he is *more able*. He sets up a large two story house, with four rooms in a story—he covers it and paints it: this is a showy house—his pride exults to see passengers stare at his elegant house: but though *pride* governs the *outside*, *poverty* reigns *within*—he can finish but two rooms, half finish one or two more—and lay a loose floor above, to spread his corn upon: this elegant mansion house then is a granary—a corn house: the man and a litter of children below—and rats and mice above: but the man says, *it will do for the present*. True, but the man has but twenty or thirty acres of land, or an indifferent trade—his family grows faster than his income—he is not able to finish his house—the covering soon decays and admits water—the house falls to pieces—the man is forced *poor* into the

wilderness, or he and his children loiter about, dependant on the neighbours for subsistence by day labour.

I know one of these *do-for-the-present-farmers*, who never effectually repairs his fences; but when a breach is made, he fills it with a bush that a sheep may remove: if a rail is broke, and another is not at hand, he takes the next billet of wood, inserts one end into the post, and ties up the other with elm or hickory bark—he says, *this will do for the present*. His cattle learn to be unruly—to remedy the evil, fetters, shackles, clogs, yokes, and what he calls *pokes*, are invented—and his cattle and horses are doomed to hobble about their pasture with a hundred weight of wood or iron machines upon their feet and necks. The man himself, in two years, spends time enough in patching up his fences and making fetters, to make a good effectual fence round his whole farm, which would want very little repair in twenty years.

In family affairs, these *do-for-the-present folks* double their necessary labour. They labour hard to put things *out of order*, and then it requires nearly the same work to put them into order again. A man uses an axe, a hoe, a spade, and throws it down where he uses it; instead of putting it in its proper place, under cover. Exposed to the weather, tools do not last more than half so long, as when kept housed; but this is not all: a sloven leaves the tool where he last used it—or throws it down any where at random: in a few days he wants it again—he has forgot where he left it—he goes to look for it—he spends perhaps half an hour in search of it, or walks a distance to get it: this time is lost, for it breaks in upon some other business—the loss of this small portion of time appears trifling; but slovens and sluts incur such losses every day; and the loss of these little scraps of time determine a man's fortune. Let the Prompter make a little calculation: a farmer, whose family expends one hundred pounds a year, if he can clear ten pounds a year is a thriving man. In order to get his one hundred and ten pounds, suppose he labours ten hours a day: in this case, if he loses an *hour* every day, in repairing the carelessness of the day before (and every sloven and slut loses more time than this, every day, for want of care and order) he loses a *tenth* part of his time—a *tenth* part of his income—this is *eleven pounds*. Such a man cannot thrive—he must grow poorer, for want of *care*, of *order*, of *method*.

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So it is with a woman. A neat woman who does business thoroughly, keeps things *in order*, with about *half the labour* that a slut employs who keeps things for ever *out of order*. If a pail or kettle be used, it is directly made clean, fit for other uses, and put in its place. When it is wanted, it is ready. But a slut uses an article and leaves it *any where*, dirty, unfit for use another time: by and by it is wanted, and cannot be found—"Moll, where did you leave the kettle?" "I han't had the kettle, Nab had it last"—"Nab, did you have the kettle?" "Yes, but it is dirty." So the kettle is found, but it is a half hour's work to fit it for the purpose required; in the mean time, the necessary business must lie by. Yet this woman says, when she does any thing, *it will do for the present*.

I have only to add, that I went to church, on a late cold Sunday, when a neighbouring clergyman officiated. He had spoken to his *fifteenthy*, when the clock struck *one*. Every man was shivering with the cold, and shuffling his feet—the parson took the hint, and broke off with "*this will do for the present*."

STAPLES OF MISSOURI.

1. *Lead*.—MISSOURI is famed throughout Europe and America, for the extent and value of her lead mines. She would be able to furnish all the U. States, the West Indies, Mexico, and South America, with that article. In the meantime, the U. States are purchasing lead from England! About \$500,000 per annum is usually paid by Americans to Englishmen for lead; last year, however, it was about \$300,000. The difference of the policy pursued by the two nations, is the cause of this state of things. In England, foreign lead pays a duty of 26*l.* 13*s.* 4*d.* sterling on every quantity of 100*l.* worth imported; and the lead mines are private property. In America, foreign lead pays but little duty, and the mines are monopolized by the government.

2. *Iron*.—Missouri has a great interest in the production of domestic iron. She possesses immense beds of ore, exceedingly rich, and well situated to be worked, and conveniently transported to all parts of the valley of the Mississippi. The waters of the Merrimac, and of the Gasconade are the chief seats of this ore, although it is found in many other parts of the territory, and in such amazing quantities, that it may be considered to be for ever inexhaustible. Missouri could furnish not only herself and immediate neighbours, but the whole valley of the Mississippi with iron and its manufactures, yet she is purchasing these articles from England, Sweden and Russia!

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3. *Salt*.—The state of Missouri abounds with salt springs. In many places they are almost as common as fresh water springs. They are found in every section of the country, but especially in the Boon's-lick district, and on the waters of Salt River, a branch of the Mississippi. Missouri would be able to furnish an empire with salt, but heretofore she has purchased that article from the Illinois and Kenawha, from Liverpool, St. Ubes, and Turk's Island!—The government monopoly was one cause of this. Since the purchase of Louisiana the government had reserved the salt springs; but in the bill for admitting Missouri into the Union, 12 springs, to be chosen by the Legislature, with four sections of land around each, are to be given to the state; and the remainder will probably be sold out, and become private property. These springs will be a source of wealth to the people, and of revenue to the state. With a judicious system of management, the

whole expenses of the state government may possibly be defrayed from the rents and profits accruing from 12 selected springs.

4. *Hemp*.—The soil and the climate of Missouri, announce it to be the true country for the production of hemp. Experience establishes the fact. Many farmers have raised it, as well under the Spanish as under the American government. The quantity obtained from an acre is prodigious, and by experiments made at New Orleans, under the auspices of the Governor General, the Baron de Carondelet, it was proved to be equal (the account says superior) in strength and fineness of fibre, to the boasted hemp of Russia. Persons who have looked to the resources of Missouri have always considered hemp as one of its staples, and the encouragement of its growth one of the first objects of our farmers and statesmen.

SPEECH NATURAL TO MAN.

In your paper some time past I saw an account of "a wild woman found in the interior of Java." History furnishes many instances of these "unfortunate commoners of nature," who have been exposed by design or accident. Comparatively few, we fear, have been brought to the domestic hearth; fewer still have been completely civilized. A book of travels, now almost obsolete, states instances of this kind. A race of marauding Tartars, subjects of Russia, frequently attacked Polish villages, and carried off whole families: in conveying their captives home they had to pass the wild and intricate forest of Minsk, in Russian Lithuania, and there these unfortunate mothers lost, and were separated from, their children. In after days, when this stupendous region was traversed for other purposes than the nefarious one above mentioned, several human males were found, in almost as barbarous a state as the native burghers of the forest, to whose ferocious instinct many of these innocents had doubtless fallen a prey.

Peter, the Wild Boy, excited much interest in his day. George the 2d, of England, found him whilst hunting in the woods near Hamelin, in the electorate of Hanover. Peter, when found, ran on all fours, like the quadrupeds amongst whom he had been raised. We might ask, why did the brutes of prey in this as well as other instances, deviate from the voracious instinct planted in their nature? To accident we cannot refer it; and, after wearying our minds with conjecture, we can only end the difficulty by attributing it to that providential care which preserved Daniel in the lion's den. Peter never could be taught to articulate more than two words—his own name and George; but he learned, with facility and correctness, the notes of several tunes.

Lord Monboddo, of eccentric memory, mentions in his narrative respecting Peter, that two children had been found in the same wild state—one in the island of Diego Garcia, and one in the Pyrenees. He also states that two wild children were found in the Dismal Swamp of Virginia.^[2] This immense morass is yet, in its inmost recesses, the refuge of wild animals of prey, particularly bears, panthers, and wild cats. During a fire in these swamps, 10 or 12 years ago, numbers were hunted down, who had fled before the rapid flames. A resident in that neighbourhood informed me that he had seen 17 of these animals, some half-burned, hung upon a single tree. In respect to the children noticed by Lord Monboddo, I cannot, in any history of either Virginia or North Carolina, find the least hint of such a circumstance having occurred; nor does the writer specify the period when they were found. Is it not probable that these outcasts from society (admitting the noble author to be rightly informed) were the offspring of aboriginal females, compelled to seek shelter in these swamps from the invading colonist, or from some hostile tribe?—Amongst the innumerable tribes of Indians in Virginia and North Carolina, the *Tuskaroras* were perhaps most powerful, and most immediately in the vicinity of this large tract. These aborigines were not all dispersed or destroyed until 1803, some of them living peaceably on the reserved lands. The main body of this tribe of Indians had migrated to New York state, and joined the Senecas, (one of the Six Nations,) many years preceding. Is it not probable, I again ask, that the young savages of lord Monboddo did, in fact, inherit the name from their birth? I would ask, as a matter of curiosity, of yourselves, Messrs. Editors, or any of your correspondents, answers to the following questions: When were these children found? Of what age when discovered? By whom found? What became of them? Could they be taught the use of speech?

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Lord Monboddo maintains that speech is not natural to man, and that the want of it is no proof that the Ourang-Outang is not of the same species, as that animal only wants the *artificial* use of it. King John, of England,^[3] held the same hypothesis upwards of five centuries before. Tradition (for such records are beneath the dignity of history) asserts, that this monarch imprisoned two children (a male and female) in separate cells.^[4] When, at a certain age, they were brought before him, each of these little victims repeated a sarcasm on his folly in thus confining them. He considered his hypothesis as confirmed, but punished the keepers. The legend is here torn, and we do not learn (supposing it true) what became of the children, or what further progress they made in language. That man has the power, as well as the organs of speech, it appears an absurdity to deny; for, what country has ever been discovered where the natives had not the means of communicating verbally with each other? In the earliest records of the world we find no sanction for such an opinion; for the Antediluvians were certainly not defective in the power or use of speech to convey their ideas. If we deny this we virtually acknowledge our belief that the Mosaic account of the creation is "a cunningly devised fable." After the Flood we cannot doubt that Noah and his descendants still spoke the language of Adam. "All the nations spoke one language." Lord Kames contends that, after the building of Babel, "men again degenerated into a savage state," which he attributes to the confusion of tongues, and the dispersion of the tribes.

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We are nowhere told that they lost or forgot the use of speech, which Lord Monboddo considers incidental to the savage state.

Lord Kames appears to take it for granted that *all* the men then in existence were engaged in this stupendous and impious attempt to scale Heaven, and "make themselves a name."—This idea is not conveyed by the sacred historian; it therefore appears probable that the tribes which continued together still spoke the *original language*, and remained in one place, and as one people. I fear I have trespassed on your limits, but the subject arose from the preceding remarks. I conclude with reiterating my request respecting the children found in the Dismal Swamp.

[*Nat. Int.*]

ARTIFICIAL STONE FLOORS

and coverings for houses as made in some parts of Russia.

The floors and coverings of houses in some parts of South Russia are made in the following manner:—For a floor let the ground be made even, and some stones of any shape be put on, and with a heavy wooden rammer force or break the stones into the ground, continuing to beat the floor until it becomes quite even, and incapable of receiving any further impression. Then run lime, immediately after it has been slacked, through a fine sieve as expeditiously as possible, because exposure to the air weakens the lime. Mix two parts of coarse sand or washed gravel, for there must be no earth in it, with one part of lime powder, and wet them with bullock's blood; so little moist however, as merely to prevent the lime blowing away in powder—in short, the less moist the better: spread it on the floor, and without a moment's loss of time, let several men be ready with large beetles to beat the mixture, which will become more and more moist by the excessive beating requisite. Then put on it some of the dry sand and lime mixed, and beat it till like a stone. If required to be very fine, take for the next layer finely sifted lime, with about a tenth part of rye flour, and a little ox blood; beat it with a trowel. The next day again smooth it with a trowel, and so continue to do daily till it be entirely dry. When it is quite dry and hard, rub it over with fresh ox blood, taking off all which it will not imbibe. No wet will penetrate this composition, which, however, after some time is often painted with oil colours. The whole floor appears as a single stone, and nothing will affect it.—The drier it is used the better, provided that with much beating it becomes like a very stiff mortar, and evidently forms a compact body.

On flat tops of houses, the beetles or rammers' ends must be smaller, to prevent the rebounding of the boards and timber, which would crack the cement; but, when the thickness of a foot is laid on, it will beat more firmly. A thick coating of ox blood, flour and lime, being beat in large, strong wooden troughs, or mortar, till it can be spread with a trowel, may be used without beating it again on the floor or house-top: but it must be very stiff, and used most expeditiously. Even frost will not affect it. With this composition, artificial stone may be made, rammed very hard into strong wooden frames of the required shape, particularly to turn arches for buildings of rammed earth. It is well known that earth which is not too argillaceous, with only the moisture it has when fresh dug, on being rammed between frames of wood till the rammer will no longer impress it, makes eternal walls; but a mass as hard as stone may be made with a little lime added to sand, horse-dung, or ox blood. The more the lime is beaten, the moister it becomes, and it must contain so much moisture as to become by beating a solid mass, adhering in all its parts, and not remain crumbling, that will properly set as a mortar. If there be too little moisture at first, it will remain a powder; if there be too much it will become a soft mortar. Lime is of no use mixed with clay or vegetable earths, which, if well beaten, are stronger without it.

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FROM A LATE ENGLISH PAPER.

ATTACK BY BEES.

Some days ago the following singular narrative appeared in the Berlin Gazette: it was furnished to that paper by M. Eulert, a merchant of that city, who was himself the party principally concerned:—

"I was travelling," says M. Eulert, "on the 20th of July, at 7 o'clock in the morning, in my carriage, accompanied by my wife, on my way from Wirtemberg to Berlin, between Kropfstadt and the town of Schmogelsdorf, which is contiguous to the high road; I observed one of my horses rub himself with uneasiness against the other. I remarked to my wife that the animal no doubt was stung by a horse-fly. Whilst we were talking upon the subject, we were suddenly surrounded by a swarm of bees, so thick, that our carriage horses, coachman, my wife, and myself, were completely covered. The furious insects attached themselves immediately to the nose, mouth, eyes and ears of each horse; the two animals seemed to be deprived of every sense, and as if overcome with stupor, they lay down, and stretched themselves out an unresisting prey to the bees.

"As soon as we perceived this cloud of insects to lessen around us, my wife threw over her hat the hood of her night cloak, got out of the carriage, went back a little way on the road, and

instinctively fled into the ditch, where she lay down with her face to the earth. I exerted myself in the meantime in endeavouring to get over this disaster; I went also out of the carriage, and covering my face and neck with my handkerchief, I re-ascended the carriage, and with all my strength cried out for help.—Three peasants, a short distance off, had all the while calmly observed my situation; but neither by the offer of reward, nor by the most urgent entreaty, could I prevail upon them to render us any assistance; they turned their backs upon us, and pursued their way to the village. In this unhappy plight I walked on for half an hour, when I met the road-keeper, named Daniel Arndt, and a carrier, named David Henry, accompanied by some labourers, and driving a cart with three horses.—Still tormented by the bees, and pursued by them with inconceivable bitterness, I breathed at last, and was relieved by this rencontre, as these good people had lighted tobacco pipes, and the smoke dispersed my disagreeable guests.

"The carrier being informed of the danger, in order not to expose himself to it, would not stir one pace further; and as the bees began to surround us on all sides, he unharnessed his team, left his cart laden with goods on the road, and took a by-way in order to place his horses under shelter in the village. Soon after the other people accompanied me to where my horses were, and they brought with them an abundance of hay and straw. There we found my unfortunate coachman stretched in the ditch, his head and hands all covered with bees, so that the road-keeper was obliged to use a brush to get them off his face; his hair was matted with blood, and as the insects could not be extricated, they were crushed to death.—Whilst this operation was going on, we set fire to the straw, and succeeded in driving away the bees.

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"As soon as the carrier had placed his horses in safety, he came back to us having fortified himself in every way against the bees, and showed himself anxious to give all the assistance in his power to my horses.—But one of them was so severely injured, that he died the same day. The other was conducted to Schmogelsdorf; but though the veterinary surgeon exhausted all his skill, the animal perished in twenty-four hours after.

"My coachman had brought his misfortune on himself, because, in endeavouring to succour the horses, he had lost his hat. The bees fastened on his naked head, and deprived him of his senses, and for forty-eight hours he remained in a state of suffering that threatened to terminate in his death. We were supplied with horses, and had him conveyed to Treuenbrietzen, where he recovered. He had at first cried out so vehemently for assistance, that the bees got into his mouth and throat. I myself passed twenty-four hours in extreme pain at the same place, and was compelled to apply several poultices, to my head, neck, and ears, to appease the inflammation.

"My wife, who, as if by inspiration, threw herself down into the ditch, came out again perfectly safe—and in a few days after, the coachman and I were at length entirely recovered.

"I attribute this accident to two causes. In the first place, I now believe it was not a horse fly that stung the horse, as I at first supposed, but rather the queen bee, which must have been killed when the animal rubbed against his companion. I conjecture this to have been the case, from the natural history of these insects; it is very common to see a swarm of bees, when deprived of their leading queen, unite with other swarms, and fall with a species of madness, upon the first objects they encounter.

"In the next place, I attribute the circumstance to the fact, that, contrary to express prohibition of the magistrates, the Commune of Schmogelsdorf, besides its proper number of 900 hives, takes in an equal number from the neighbouring communes to tend during the time of swarming, because the flowers, fields and gardens which it contains, present a singularly rich pasture for such insects. Hence it happens, that in a small space nearly two thousand hives are crowded together, so that in the season of swarming it is dangerous to pass that way.

ZOOLOGY OF THE SPITZBERGEN WHALE.

Extracted from Scoresby's valuable work, "Arctic Voyages," &c. just published.

Erroneous opinions have been entertained respecting the Whale (the *Balæna Mysticetus*) having been of a much larger size in former times than now: from a comparison of the preceding accounts of all credible witnesses, the author says—

"Hence I conceive we may satisfactorily conclude, that whales of as large size are found now, as at any former period since the Spitzbergen fishery was discovered; and I may also remark, that where any respectable authority affords actual measurements exceeding 70 feet, it will always be found that the specimen referred to, was not one of the *Mysticetus* kind, but of the *B. Physalis*, or the *B. Musculus*, animals which considerably exceed in length any of the common whales that I have either heard of, or met with. When fully grown, therefore, the length of the whale may be stated as varying from 50 to 65, and rarely, if ever, reaching 70 feet; and its greatest circumference from 30 to 40 feet. It is thickest a little behind the fins, or in the middle, between the anterior and posterior extremes of the animal; from whence it gradually tapers in a conical form, towards the tail, and slightly towards the head. Its form is cylindrical from the neck, to within ten feet of the tail, beyond which it becomes somewhat quadrangular, the greatest ridge being upward, or on the back, and running backward nearly across the middle of the tail. The head has somewhat of a triangular shape. The under-part, the arched outline of which is given by the jaw-bones, is flat, and measures 16 to 20 feet in length, and 10 to 12 in breadth. The lips, extending 15 to 20 feet in length, and 5 or 6 in height, and forming the cavity of the mouth,

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are attached to the under-jaw, and rise from the jaw-bones, at an angle of about 80 degrees, having the appearance, when viewed in front, of the letter U. The upper jaw, including the 'crown-bone,' or skull, is bent down at the extremity, so as to shut the front and upper parts of the cavity of the mouth, and is overlapped by the lips in a squamous manner at the sides. When the mouth is open, it presents a cavity as large as a room, and capable of containing a merchant-ship's jolly-boat, full of men, being 6 or 8 feet wide, 10 or 12 feet high (in front), and 15 or 16 feet long. The fins, two in number, are placed between one-third and two-fifths of the length of the animal, from the snout, and about two feet behind the angle of the mouth. They are 7 to 9 feet in length, and 4 or 5 in breadth. The part by which they are attached to the body, is somewhat elliptical, and about 2 feet in diameter; the side which strikes the water is nearly flat. The articulation being perfectly spherical, the fins are capable of motion in any direction; but, from the tension of the flesh and skin below, they cannot be raised above the horizontal position. Hence the account given by some naturalists, that the whale supports its young by its fins, on its back, must be erroneous. The fins, after death, are always hard and stiff; but, in the living animal, it is presumed, from the nature of the internal structure, that they are capable of considerable flexion. The whale has no dorsal fin. The tail, comprising, in a single surface, 80 or 100 square feet, is a formidable instrument of motion and defence. Its length is only 5 or 6 feet; but its width is 18 to 24 or 26 feet. Its position is horizontal. In its form it is flat and semi-lunar; indented in the middle; the two lobes somewhat pointed, and turned a little backward. Its motions are rapid and universal; its strength immense. The eyes are situated in the sides of the head, about a foot obliquely above and behind the angle of the mouth. They are remarkably small in proportion to the bulk of the animal's body, being little larger than those of an ox. The whale has no external ear; not can any orifice for the admission of sound be discovered until the skin is removed.

On the most elevated part of the head, about 16 feet from the anterior extremity of the jaw, are situated the blow-holes, or spiracles; consisting of two longitudinal apertures 6 or eight inches in length. These are the proper nostrils of the whale. A moist vapour, mixed with mucus, is discharged from them, when the animal breathes; but no water accompanies it, unless an expiration of the breath be made under the surface.

The mouth, in place of teeth, contains two extensive rows of "fins," or whalebone, which are suspended from the sides of the crown-bone. These series of fins are generally curved longitudinally, although they are sometimes straight, and give an arched form to the roof of the mouth.—They are covered immediately by the lips attached to the lower jaw, and enclose the tongue between their lower extremities. Each series or "side of bone," as the whalefishers term it, consists of upwards of 300 laminæ; the longest are near the middle, from whence they gradually diminish away to nothing at each extremity. Fifteen feet is the greatest length of the whalebone; but 10 or 11 feet is the average size, and 13 feet is a magnitude seldom met with. The greatest breadth, which is at the gum, is 10 or 12 inches. The laminæ, composing the two series of bone, are ranged side by side, two thirds of an inch apart, (thickness of the blade included,) and resemble a frame of saws, in a saw-mill. The interior edges are covered with a fringe of hair, and the exterior edge of every blade, excepting a few at each extremity of the series, is curved and flattened down, so as to present a smooth surface to the lips. In some whales, a curious hollow on one side, and ridge on the other, occurs in many of the central blades of whalebone, at regular intervals of 6 or 7 inches.—May not this irregularity, like the rings in the horns of the ox, which they resemble, afford an intimation of the age of the whale? If so, twice the number of running feet in the longest laminæ of whalebone in the head of a whale not full grown, would represent its age in years. In the youngest whales, called *suckers*, the whalebone is only a few inches long; when the length reaches 6 feet or upwards, the whale is said to be *size*. The colour of the whalebone is brownish-black, or bluish-black. In some animals, it is striped longitudinally with white. When newly cleaned, the surface exhibits a fine play of colour. A large whale sometimes affords a ton and a half of whalebone. If the "sample blade," that is, the largest lamina in the series, weigh 7 pounds, the whole produce may be estimated at a ton; and so on in proportion. The whalebone is inserted into the crown-bone, in a sort of rabbet. All the blades in the same series are connected together by the gum, in which the thick ends are inserted. This substance, (the gum,) is white, fibrous, tender, and tasteless. It cuts like cheese. It has the appearance of the interior or kernel of the cocoa-nut.

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The tongue occupies a large proportion of the cavity of the mouth, and the arch formed by the whalebone. It is incapable of protrusion, being fixed from root to tip, to the fat extending between the jaw-bones.—A slight beard, consisting of a short scattered white hair, surmounts the anterior extremity of both jaws. The throat is remarkably strait.

Two paps in the female, afford the means of rearing its young. The milk of the whale resembles that of quadrupeds in its appearance. It is said to be rich and well-flavoured.

Immediately beneath the skin lies the *blubber* or fat, encompassing the whole body of the animal, together with the fins and tail. Its colour is yellowish-white, yellow, or red. In the very young animal it is always yellowish-white. In some old animals, it resembles in colour the substance of the salmon. It swims in water. Its thickness all round the body, is 8 or 10 to 20 inches, varying in different parts as well as in different individuals. The lips are composed almost entirely of blubber, and yield from one to two tons of pure oil each. The tongue is chiefly composed of a soft kind of fat, that affords less oil than any other blubber; in the centre of the tongue, and towards the root, this fat is intermixed with fibres of a muscular substance. The under jaw, excepting the two jaw-bones, consists almost wholly of fat; and the crown-bone possesses a considerable coating of it. The fins are principally blubber, tendons, and bones; and the tail possesses a thin stratum of blubber. The oil appears to be retained in the blubber in

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minute cells, connected together by a strong reticulated combination of tendinous fibres. The blubber, in its fresh state, is without any unpleasant smell; and it is not until after the termination of the voyage, when the cargo is unstowed, that a Greenland ship becomes disagreeable.

Four tons of blubber by measure, generally afford three tons of oil; but the blubber of a sucker contains a very small proportion. Whales have been caught that afforded nearly thirty tons of pure oil; and whales yielding twenty tons of oil, are by no means uncommon. The quantity of oil yielded by a whale, generally bears a certain proportion to the length of its longest blade of whalebone.

A stout whale of sixty feet in length, is of the enormous weight of seventy tons; the blubber weighs about thirty tons, the bones of the head, whalebone, fins and tail, eight or ten; carcass thirty or thirty-two.

The flesh of the young whale is of a red colour; and when cleared of fat, broiled, and seasoned with pepper and salt, does not eat unlike coarse beef; that of the old whale approaches to black, and is exceedingly coarse.—An immense bed of muscles surrounding the body, is appropriated chiefly to the movements of the tail.

The number of ribs, according to Sir Charles Giesecké, is thirteen on each side. The bones of the fins are analogous, both in proportion and number, to those of the fingers of the human hand. From this peculiarity of structure, the fins have been denominated by Dr. Flemming, "swimming paws." The posterior extremity of the whale, however, is a real tail; the termination of the spine or coccygis, running through the middle of it almost to the edge.

The whale seems dull of hearing. A noise in the air, such as that produced by a person shouting, is not noticed by it, though at the distance only of a ship's length; but a very slight splashing in the water, in calm weather, excites its attention, and alarms it. Its sense of seeing is acute. Whales are observed to discover one another, in clear water, when under the surface, at an amazing distance. When at the surface, however, they do not see far. They have no voice; but in breathing or *blowing*, they make a very loud noise. The vapour they discharge, is ejected to the height of some yards, and appears at a distance, like a puff of smoke. When the animals are wounded, it is often stained with blood; and, on the approach of death, jets of blood are sometimes discharged alone. They blow strongest, densest, and loudest, when, "running," when in a state of alarm, or when they first appear at the surface, after being a long time down. They respire or blow about four or five times a-minute.

The usual rate at which whales swim, even when they are on their passage from one situation to another, seldom exceeds four miles an hour; and though when urged by the sight of any enemy, or alarmed by the stroke of a harpoon, their extreme velocity may be at the rate of eight or nine miles an hour: yet we find this speed never continues longer than for a few minutes, before it relaxes almost to one-half. Hence, for the space of a few minutes, they are capable of darting through the water, with the velocity almost of the fastest ship under sail, and of ascending with such rapidity as to leap entirely out of the water. This feat they sometimes perform as an amusement apparently, to the high admiration of the distant spectator; but to the no small terror of the unexperienced fishers who, even under such circumstances, are often ordered, by the foolhardy harpooner, to "pull away" to the attack. Sometimes the whales throw themselves into a perpendicular posture, with their heads downward, and, rearing their tails on high in the air, beat the water with awful violence.—In both these cases, the sea is thrown into foam, and the air filled with vapours; the noise, in calm weather, is heard to a great distance; and the concentric waves produced by the concussions on the water, are communicated abroad to a considerable extent. Sometimes the whale shakes its tremendous tail in the air, which, cracking like a whip, resounds to the distance of two or three miles.

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When it retires from the surface, it first lifts its head, then plunging it under water, elevates its back like the segment of a sphere, deliberately rounds it away towards the extremity, throws its tail out of the water, and then disappears.

In their usual conduct, whales remain at the surface to breathe, about two minutes, seldom longer; during which time, they "blow" eight or nine times, and then descend for an interval usually of five or ten minutes; but sometimes, when feeding, fifteen or twenty. The depth to which they commonly descend, is not known, though from the "eddy" occasionally observed on the water, it is evidently, at times, only trifling. But, when struck, the quantity of line they sometimes take out of the boats, in a perpendicular descent, affords a good measure of the depth. By this rule, they have been known to descend to the depth of an English mile; and with such velocity, that instances have occurred, in which whales have been drawn up by the line attached, from a depth of 700 or 800 fathoms, and have been found to have broken their jaw-bones, and sometimes crown-bone, by the blow struck against the bottom. Some persons are of opinion, that whales can remain under a field of ice, or at the bottom of the sea, in shallow water, when undisturbed, for many hours at a time.—Whales are seldom found sleeping; yet, in calm weather, among ice, instances occasionally occur.

The food of the whale consists of various species of actiniæ, cliones, sepiæ, medusæ, cancri, and helices; or at least some of these genera are always to be seen whenever any tribe of whales is found stationary and feeding. In the dead animals, however, in the very few instances in which I have been enabled to open their stomachs, squillæ or shrimps were the only substances discovered. In the mouth of a whale just killed, I once found a quantity of the same kind of insect.

When the whale feeds, it swims with considerable velocity below the surface of the sea, with its jaws widely extended. A stream of water consequently enters its capacious mouth, and along with

it, large quantities of water insects; the water escapes again at the sides; but the food is entangled and sifted as it were, by the whalebone, which, from its compact arrangement, and the thick internal covering of hair, does not allow a particle the size of the smallest grain to escape.

SIR JOSEPH BANKS.

On Monday morning, June 19, 1820, at 8 o'clock, died, at his house, Spring Grove, near Hounslow, the venerable President of the Royal Society, the Right Hon. Sir Joseph Banks, G. C. B. &c. &c. &c. The loss to science by the demise of this excellent man and liberal patron will be long and severely felt. It will be recollected, that when it was determined to send Captain Cook on his first voyage round the globe, Sir Joseph Banks, then a young man, whose ardent mind glowed with a love of science and of ingenious enterprise, determined to accompany him. His liberal spirit and generous curiosity were regarded with admiration, and every convenience from the government was readily supplied to render the circumstances of the voyage as comfortable as possible. Far, however, from soliciting any accommodation that might occasion expense to government, Mr. Banks was ready to contribute largely out of his own private fortune towards the general purposes of the expedition. He engaged as his director in natural history during the voyage, and as the companion of his researches, Dr. Solander, of the British museum, a Swede by birth, and one of the most eminent pupils of Linnæus, whose scientific merits had been his chief recommendation to patronage in England. He also took with him two draughtsmen, one to delineate views and figures, the other to paint subjects of natural history. A secretary and four servants formed the rest of his suite. He took care to provide likewise the necessary instruments for his intended observations, with convenience for preserving such specimens as he might collect of natural or artificial objects, and with stores to be distributed in the remote isles he was going to visit, for the improvement of the condition of savage life. In the course of the voyage dangers were encountered of no ordinary magnitude. On the coast of Terra del Fuego in an excursion to view the natural productions of the country, Sir Joseph Banks and Dr. Solander had nearly perished in a storm of snow. After passing a night on land, amid the storm, they at last, and with much difficulty, made their way back to the beach, and were received on board the ship; but three of the persons who accompanied them were lost. Shortly after his return from this voyage, Sir Joseph, in company with his friend Dr. Solander, visited Iceland. A rich harvest of new knowledge and of specimens compensated for the toils and expense of this scientific adventure. They afterwards visited the Western Islands of Scotland: and among other things worthy of notice, they discovered the columna stratification of the rocks surrounding the caves of Staffa; a phenomenon till then unobserved by naturalists, but was no sooner made known in a description by Sir J. Banks, than it became famous among men of science throughout Europe. In 1777, when Sir John Pringle retired from the presidency of the Royal Society, Sir Joseph Banks was elected to fill the vacant chair; and never perhaps has it been filled with more honour to the individual, or more advantage to the interests of science. His time, his wealth, (which was a princely fortune,) his influence, his talents, an incomparable library of science and art; knowledge and judgment to advise; affability to conciliate and encourage; generosity to assist; all in short of which he possessed, and it was all something either of goodness or greatness, he made the patrimony of the studious and learned, not of his own country alone, but of the whole world.

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CURIOUS FACTS IN NATURAL HISTORY.

The examination of flowers by the microscope opens a new field of wonder to the inquiring naturalist; by which we are enabled to perceive that the minutest works of Nature are adorned with the most consummate elegance and beauty. As one proof, from innumerable others that might be selected, I beg to subjoin Sir John Hill's interesting account of what appeared on examining a carnation;—first published in the Inspector, No. 109. "The principal flower in this *bouquet*, was a *carnation*; the fragrance of this led me to enjoy it frequently and nearly: the sense of smelling was not the only one affected on these occasions; while that was satiated with the powerful sweet, the ear was constantly attacked by an extremely soft but agreeable murmuring sound. It was easy to know that some animal, within the covert, must be the musician, and that the little noise must come from some little body suited to produce it. I instantly distended the lower part of the flower, and, placing it in a full light, could discover troops of little insects frisking and capering with wild jollity among the narrow pedestals that supported its leaves, and the little threads that occupied its centre! I was not cruel enough to pull out any one of them for examination: but adapting a microscope to take in at one view, the whole base of the flower, I gave myself an opportunity of contemplating what they were about, and this for many days together without giving them the least disturbance.—Thus could I discover their economy, their passions and their enjoyments. The microscope, on this occasion, had given what nature seemed to have denied to the objects of contemplation. The base of the flower extended itself under its influence to a vast plain; the slender stems of the leaves became trunks of so many stately cedars; the threads in the middle seemed columns of massy structure, supporting at the top their several ornaments; and the narrow spaces between were enlarged into walls, paterres, and terraces. On the polished bottom of these, brighter than Parian marble, walked in pairs, alone, or

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in larger companies, the winged inhabitants: these from little dusky flies (for such only the naked eye would have shown them,) were raised to glorious glittering animals, stained with living purple, and with a glossy gold that would have made all the labours of the loom contemptible in the comparison. I could, at leisure as they walked together, admire their elegant limbs, their velvet shoulders, and their silken wings; their backs vieing with the empyrean in its blue; and their eyes, each formed of a thousand others, out-glittering the little planes on a brilliant; above description, and too great almost for admiration. Here were the perfumed groves, the more than myrtle shades, of the poet's fancy, realized; here the little animals spent their days in joyful dalliance; or in the triumph of their little hearts, skipped after one another from stem to stem among the painted trees; or winged their short flight to the close shadow of some broader leaf, to revel undisturbed in the heights of all felicity."

ABSENCE OF MIND.

Among a number of instances of the celebrated Dr. Moncey's absence of mind, is one which he frequently mentioned, and laughed at heartily, when in good humour, at the same time observing that his brother was as bad as himself. The doctor being once on a visit to his brother, in Norfolk, in the beginning of winter, and intending to set off for London the next day, his brother proposed to go and shoot wild ducks early in the morning, that he might carry two or three couple fresh killed to London with him. The servant was ordered to clean the long fowling piece, get plenty of powder and shot, and to goose-grease their boots. Every thing being in readiness according to their desire, about an hour before day-light the doctor and his brother set off for the place where the ducks resort, in order to be there by the break of day, when they generally take wing to go to feed. They had walked nearly three miles, and it having rained in the night, the clay mud wall was very dirty and greasy, when they heard the cry of the ducks. They were now obliged to get over the wall and the gate, across a sluice into the marsh where the ducks were. The rain had raised the water about a foot. It was then proposed that one should go over, and the other remain behind. Says the doctor, "George, do you go over, for I have forgotten my boots." "So have I doctor," says his brother; "but we wont lose our sport, as we have come so far." So both waded through, and got over the gate into the marsh, and advancing along the fleet, they at length perceived the ducks. "You are near enough, George," said the doctor.—"Aye," replied George, "I think we are not above a hundred yards off." "Why then fire," says the doctor.—"Do you fire," returned George. "Why I hav'nt got the gun; do you fire." "I fire! why I have not got the gun," said his brother, "I thought you had it. What a fine opportunity is lost. Here are not less than thirty ducks within shot, and neither of us have got the gun."

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LIFE-PRESERVER.

The following simple method of rescuing drowning persons from a watery grave, is contained in a long article on that subject, in a late Liverpool paper, and is deserving of attention. The writer says:

If any one estimate inventions in the inverse ratio of their simplicity, they will smile to hear that the life-preserver which I have so highly extolled, is no more than a *hat* and *pocket handkerchief*,^[5] so that every man has, at all times, about his person an apparatus which may be the means of saving the life of his fellow creature.

With these simple means any man who can swim may safely venture into the water, with the certainty of rescuing a drowning person. All the preparation, which need not occupy ten seconds, is this: Spread the handkerchief out on the ground, and place the hat upon it in the centre, with the crown upwards, in the ordinary position of wearing; then gather up the four corners of the handkerchief over the crown of the hat, giving it a few twists for the greater convenience of grasping with the hand. The hat must then be inverted, (the crown downwards.) In this position, it is confidently asserted, any person may safely enter the water, as the cavity of the hat contains, a much greater quantity of air than is requisite to sustain any man. I found that the hat with which I tried the experiment, would almost support me and another person clinging to me, neither of us making the least effort to float by any motion of the hands and feet. The mode I should adopt, however, in using the life-preserver, would be to give up the handkerchief to the person whose life was in danger, and immediately to disengage myself from him. He would soon discover that he was buoyed up, and would recover his presence of mind; but, whether he did or not, it would be of little consequence, as long as he retained his grasp of the handkerchief. Whilst he was thus supported, nothing could be more easy than to push him to the shore with one hand, swimming with the other.

JOHN O'GROAT'S HOUSE.

The place so denominated is still a land-mark, although the house has long fallen to decay; so

totally so that not a vestige remains; but the scite is an object of curiosity to travellers, for the singularity of the building, which tradition has preserved the form of, and the motive for its erection. In the reign of James the VIth of Scotland, (James the Ist of England,) two brothers, named Malcomb Gavin, and John O'Groat, arrived in Caithness from Holland, and it is said brought letters from the King. They purchased or possessed themselves of the lands of Warse and Duningsbay, lying near the Portland Hills. They increased in course of time to eight families: here they lived peaceably and comfortably for many years, and held an annual feast to commemorate the landing of their ancestors. Could it be supposed that any petty distinctions should have a tendency to interrupt the family harmony? but so it was. Each head of the families contended for the seniority and chieftainship of the clan. The ingenuity of one (a John O'Groat) settled the dispute for precedency, which arose upon the importance of sitting at the head of the table, and the right of entering first in at the door! John occupied a ferry, and his daily intercourse with strangers had enlarged his ideas: he expostulated with his clan on the folly of their pretensions, and represented, that quarrels amongst themselves would render them obnoxious to the people where they had settled. John's reasoning prevailed, and they agreed to be guided by him: in due time he fulfilled his plan to reconcile their discordant ideas. He built a very large room in an octagon form, with eight doors and eight windows in it; in this room he placed a massy oak table with eight sides. At the next anniversary meeting, he requested each head of the families to enter at the door most convenient to their dwelling at the same moment; he then took the unoccupied seat. The scite, as has been observed, is still celebrated, and will be so, whilst good intentions, and a plain useful understanding, are considered estimable qualities. Fully to appreciate this, we should recollect the deadly feuds which frequently arose in Scotland in former days, even on less grounds than precedency.

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HARTFORD FAIR.

From the Connecticut Mirror.

To the Executive Committee of the Hartford County Agricultural Society. The Committee appointed to examine Domestic Manufactures, and award premiums to those who in their opinion are entitled to them, respectfully report:

That notwithstanding the unpleasant weather, the articles they were called to inspect were greater in number, and in general much superior in quality to those exhibited last year.

There were some woollen cloths of a finer texture and finish, than that which obtained the premium, but a part of them were not of the requisite width, and others were dyed in the piece, while your committee felt it their duty to give the preference to cloth dyed in the wool. A piece inferior to the premium cloth sold for \$2.50 per yard.

It was with much satisfaction that our committee remarked the improvement in the manufacture of Carpeting; last year but one piece offered for their inspection was filled with wool, while this year most of those exhibited were of that description. They were also gratified to learn that the premium carpets were all spun and dyed in the family.

The committee are of opinion that scarcely any thing submitted to their examination denotes so rapid an improvement in taste and domestic industry, as the hearth rugs—those which were this year exhibited displayed an elegance both in their design and execution, which in articles of that kind is rarely met with.

Many of the flannels were of a quality much superior to those exhibited last year. A large part of them sold at from eighty cents to one dollar; and the premium flannel brought \$1.25 by the piece.

The premium blankets excited universal attention, and were equally admired for their beauty and for their more substantial qualities. We have never seen any superior to them imported from England; they measured nearly twelve quarters, and sold for \$14.25.

The quantity of hosiery was much greater than at our former exhibition—many pairs of stockings sold at from 80 cents to \$1.50.

Premiums were awarded to two very fine elegant finished grass bonnets, made by the Miss Woodhouses of Weathersfield, and which are rarely surpassed in beauty by the most costly Leghorns. One very little inferior was also exhibited, made by Miss Hanmer of the same place. They were made of the *Poa Pratensis* or spear grass, and those which received the premiums sold one for 27 dollars, the other 30 dollars. Another of a quality almost equal to those just mentioned was made by a young lady of Windsor, of the sweet-scented vernal grass, and one of split straw by Miss Capen of Hartford, was remarkable for its extraordinary delicacy of texture.

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The linen diapers were equal to any of English fabric, and the linen shirting which obtained the premium sold for 4s. 6d. per yard. The committee would suggest to such as may hereafter be candidates for the premium on linen goods, the necessity of bleaching them, since after that process, their comparative merits can be more fairly ascertained.

The butter and cheese were excellent—the former sold for 16 cents, and a large quantity of the latter for 10 cents per pound.

Many articles were also exhibited for which no premiums were offered, yet which attracted the

particular attention of the committee and the numerous spectators. Among these were some highly finished treble-gilt buttons, from the manufactory of Mr. Moses Cook. The carpeting ingeniously manufactured from bul-rushes and woollen yarn; white silk hose, white linen hose, white and coloured counterpanes; a vandyke remarkable for its softness and beauty, made from the silk that covers the seed of the milk-weed; an excellent imitation of the Scotch plaid; and some elegant paper-hangings from the manufactory of Mr. George Putnam. While the committee could not but regret that the state of our funds precluded the offering premiums for such meritorious articles, yet they were highly gratified to perceive that it is not the hope of gain alone which produces such a splendid collection of domestic manufactures, but that there exists among all classes of the community a patriotic wish to give interest to our exhibition.

Your committee cannot close their report, without congratulating you, gentlemen, and the public at large, on the brilliant prospects of our infant society.

The general superiority of the articles we this year inspected, to those offered at our former exhibition, together with that lively interest they excited in the candidates for premiums, and the thousands of spectators who assembled to witness the productions of their industry, clearly evince that domestic manufactures are rapidly gaining that importance in public estimation which they so richly deserve.

All which is respectfully submitted.

GEO. COWLES, *Chairman.*

ANECDOTE.

Catherine Shaw, daughter of John Shaw, of Bargarron, having acquired a remarkable degree of dexterity in spinning fine flax, conceived the idea of manufacturing it into thread. Her first attempts were necessarily on a small scale; she executed every part herself, and bleached her materials on a large slate, placed in a window. Succeeding, in her first essays, she engaged her family in the process, and Lady Blentyre carried a parcel of the thread to Bath, where she advantageously disposed of it to the lace manufacturers there. This was the first thread that crossed the Tweed. Subsequently a connection of the family went to Holland, and brought from thence the secret of the twisting and twining machines in use there, then carefully kept from public observation; also the art of numbering the threads, and packing them for distant sale. The young women of the neighbourhood engaged in it also, and it became an object of profit and interest to the place. What, it will be asked, became of the ingenious young woman who turned her talents to so great private advantage, and eventually to such public utility.^[6] Surely she lived honoured, and died beloved. No! she was one of the last victims to the imputed crime of witchcraft in the south of Scotland! Amongst many others, she was accused of having evil agency with spirits, and is described, in the records of those unhappy times, as "young, handsome, and well-informed." Can it be possible that the superior activity of her mind, and the industrious efforts of her hands, could have involved her in the disgraceful and frantic measures, which terminated in herself and five others being *burned for witches* in 1626? This unfortunate female was urged by her friends to put in a plea to delay her execution—she replied, with the dignity of a Roman matron. "No; my honour is already destroyed, and my life is not worth defending!"

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MISCELLANY.

Scissors.—A very valuable improvement has been made on Scissors. It is especially so to those employed for delicate operations in surgery. The objection to the common scissors is, that, in the act of cutting, they, to a very considerable extent, compress and bruise the parts. This is owing to the edges being set very strong, and to the particular angle at which they are set, and is sufficient to account for wounds made by scissors refusing to unite by what surgeons call the first intention. To remedy this defect, it was lately suggested to Mr. Stodart, by Dr. Wollastan, to give to scissors the same kind of cutting edge that a knife has. This has been done, and the success has fully justified the experiment. The operation of hair lip has been repeatedly performed with the knife-edged scissors, both on the infant and on the adult, with complete success. The operation is in this way performed with facility to the operator, and in less time than with the knife, and consequently a less degree of pain to the patient. This improvement need not be confined to the science of surgery. A variety of delicate fancy work is performed by scissors, all of which will be much better done by giving them knife-edges. There is a little art in setting the edges, readily acquired by practice; this must be done with a view to the kind of work for which the scissors are intended. This improvement may easily be applied to common scissors, by grinding down the outer sides of the blades.

[*Lon. pap.*]

Public Spirit.—It has been my practice for several weeks past, to walk upon one of our turnpike roads, and, for about two weeks, I noticed a very large stone, lying in what is called the "summer road," which I wished to remove, but my strength was not sufficient to do it. It remained there as permanent, to the great annoyance of all who passed that way in carriages. But one day as I was

passing it, I saw a stout negro fellow, whose cart was *beyond* it as to the course which he was going, tugging at it, and he finally succeeded in putting it out of the way, saying to himself loud enough to be heard by me, as he laid it down, "now you can't upset any body!" Pleased with the incident, I asked the man if he often travelled that road. "No, sir," said he. "Why, then, did you take so much trouble to remove that large stone?" "Because, sir," returned he, "it might have upset some one in the night!" I then left him, reflecting that if all our politicians had a full portion of the same public spirit, and all our self-righteous persons as much of a desire to do good to their fellow men as this poor negro exhibited—we should have a very different time of it!

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[*Niles's Reg.*

Winter Butter.—An idea prevails very extensively, that *good butter* cannot be made in the winter. This is a great mistake. Where the process is well understood, as fine butter is made in the depths of winter, as at any season of the year. By pursuing the following course, the matter will be accomplished:—

Let the cows be kept under cover in a warm stable, well fed with the best hay and provender, and milked regularly morning and evening.—Place the milk in pans, in as cold a place as may be found about the dairy house—the sooner it freezes the better. As soon as it is frozen thoroughly, take the cream from the top—the frost will force the cream to the surface—and churn it with no other warmth than the air of the kitchen at the distance of eight or ten feet from the fire-place. It requires more time to fetch the butter than in summer; but when brought it will be of the finest flavour and quality.

The Diamond.—Dr. Brewster has discovered a curious phenomenon, which appears to elucidate the nature of this substance. Sir Isaac Newton observed, from a comparison of the refractive powers of various bodies, that amber and the diamond had a refractive power three times greater, in respect of their densities, than several other substances, and he conjectured that the diamond was "probably an unctuous substance coagulated." Subsequent discoveries of the properties of sulphur and phosphorous have corroborated this opinion. Dr. Brewster has observed, both in flat diamonds and those of a perfect crystalline form (as well as in amber,) the existence of globules, or small portions of air, the expansive force of which has communicated a polarizing structure to the parts in immediate contact with it. This structure is displayed by four sectors of polarizing light encircling the globule of air, and can be produced artificially in glass and gelatinous masses. It must have been produced by the expansive force of the included air, when the substance was so soft as to be susceptible of comparison from so small a force. Hence we are led to the conclusion that the diamond originates, like amber, from the consolidation of perhaps vegetable matter, gradually acquiring a crystalline form, by the influence of time, and the slow action of corpuscular forces.

White Hills.—The White Hills in New Hampshire, are the highest in the United States, being between 7 and 8000 feet above the level of the ocean. The ascent is both difficult and dangerous, as the sides of the mountains consist of naked, rugged, and precipitous rocks over which the traveller is obliged to climb his slow and toilsome way. The last of July and the first of August is the only time at which they can be ascended at all, as they are the rest of the year covered with snow.

Sizing.—A French chemist has recently discovered, that from the starch of potatoes quite fresh, and washed but once, a fine *size*, by mixing with chalk, might be made. The stucco plasterers of this country have been benefited by the discovery, and they find that this kind of size is particularly useful for ceilings and for white-washing, being more durable in tenacity and whiteness, and not putrifying like animal size or exhaling any unwholesome odour.

Arabian Horses.—Three fine Arabian horses have arrived at Boston from Tripoli. They are owned by R. B. Jones, Esq. late American Consul at that place, and a Mr. Morgan.

Transplanting Wheat.—In the month of August, 1795, a gentleman of Herefordshire, in England, set a single grain of wheat. As soon as it had properly taken root, he dug it up, divided it into several parts, and transplanted them. In August 1796, it was reaped, when it produced 137 ears; the average of which was 80 grains in the ear; the total produce 10,960 grains of wheat, besides the straw, most of which was seven feet high.

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Fall of a Glacier.—On the 27th of December, at six o'clock in the morning, an enormous portion of the glacier of Weisshorn, in the valley of St. Nicholas, or Vispach, fell from its exalted situation into the valley, causing dreadful devastation amongst the cultivated grounds and habitations. At the moment when the ice and snow struck the masses lying beneath, the minister of the place, and many other persons, observed a strong light, which immediately disappeared, and gave place to utter darkness. This phenomenon, from the brightness of the light, and the number of persons who saw it, can scarcely be considered as illusory. It was probably an electrical or phosphorescent effect. The mass of ice and snow covered a space of 2400 feet in length, 1000 feet wide, and at a mean 150 feet in height, and the displacement of the air by it was such as to cause a hurricane, which destroyed houses, mills, and buildings, even to the distance of a quarter of a league from the place of the fall. Extreme fears are entertained for the remains of the village of Ronds, which stands opposite the glacier, for the upper part of the glacier, left unsupported by the part which has given way, threatens to fall and complete the distress which has been brought upon the inhabitants of the valley.

Evolution of Heat by freezing.—M. de la Becha has devised an ingenious way of shewing the heat evolved by water during congelation. He places a glass vessel, containing in its lower part water, and upon that olive oil, in a temperature below the freezing point of water. In this

temperature olive oil alone would freeze and thicken, but, being placed over water, it is retained in the fluid state, in consequence of the heat evolved by the water during its conversion into ice; and it is not until the whole of the water is perfectly frozen that the oil itself will freeze.—*Bibliothèque Universelle*, xiii. 76.

Printing in Otaheite.—M. Turgenieff, Counsellor of State, has made a report to the Bible Society of Petersburg, in which it is stated that the English missionaries, have established a press at Otaheite, at which 3000 bibles have been printed. They were all sold in the space of three days, for three gallons of cocoa-nut oil each. The books of Moses, translated into the Otaheitean language, have been printed at the same press; also a catechism for the use of the inhabitants. These have been distributed gratuitously.

Animal Magnetism.—The Royal Academy of Sciences at Berlin have proposed animal magnetism as a prize subject, essays on which are to be rewarded in August 1820. It is desired that the phenomena, known by the name of animal magnetism, be described so as to admit of a positive judgment respecting their nature: and it is observed that, though there are many difficulties attached to the subject, still it appears that the number of facts ascertained is such as to admit the hope that, in the present state of the physical sciences, some light may be thrown on animal magnetism, when the probability of these facts has been estimated, and when their analogy with the better understood phenomena of natural sleep, dreams, somnambulism not magnetic, and many nervous affections, has been established.

Milk.—Professor Schubler has published in the Dictionary of Medical Sciences, a paper entitled, "Researches on Milk and its constituent Principles." The results of his analysis differ greatly from those lately published by Berzelius; and hence, in the author's opinion, prove the great influence of food and climate on the lacteal secretion. 1000 parts of new milk contain 110 of fresh cheese, 50 of fresh *serai*, 24 of butter, 77 of coarse sugar of milk, and 739 water; or, in a dry state, 42.6 cheese, 7.87 *serai*, 24.0 butter, 77.0 sugar of milk, and 848.53 water. 1000 parts of skimmed milk contain 43.64 dry cheese, 8.06 dry *serai*, 78.94 sugar of milk, and 869.34 water. 1000 parts of cream contain 240 butter, 33 cheese, 6 *serai*, and 721 whey. Lastly, 721 parts of whey contain 60 coarse sugar of milk.—These observations were made at Howfyl, which is some distance from the mountains, and where the cows are kept constantly in the stable, so that the milk must be nearly the same as in other flat countries.

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Respiration and Circulation of the Blood.—Dr. Carson has lately made some important experiments on the elasticity of the lungs in different animals, and he has found by the application of a simple apparatus that in oxen, and animals of their size, it is more than equal in power to the weight of a column of water a foot and a half high. In calves, sheep, and large dogs, it is balanced by a column of water varying in height from one foot to a foot and a half; and in rabbits and cats by a column of water varying from six to ten inches. To this elasticity of the lungs alternating with the irritability of the diaphragm, Dr. C. ascribes respiration, or the faculty of breathing; the capacity of the chest being by their means successively enlarged and diminished, and thus air alternately expelled and inhaled. He thinks also with great probability that the movements of the heart and the circulation of the blood are powerfully influenced by the same resiliency.

Beccaria.—This philosopher of humanity having, in one of the editions of his admirable work on crimes and punishments, in that part which relates to fraudulent bankruptcy, qualified some sentiments which he had originally expressed, but which, on reflection, appeared to himself too severe, he adds in a note, "I am ashamed of what I formerly wrote on this subject. I have been accused of irreligion, without deserving it; I have been accused of disaffection to the government, and deserved it as little; I was guilty of a real attack upon the rights of humanity, and *I have been reproached by nobody*."

Generosity.—It is an error to imagine that men in the lowest rank of life are unsusceptible of heroic and generous sentiments. All who are susceptible of enthusiasm are capable of being actuated by them. It is the minions of fortune, those who have been pampered from their infancy, by the hands of luxury, and early accustomed to every kind of profusion, whose minds sink into torpor for want of exertion; it is such as those that are more likely to be unsusceptible of generous sentiments.

Academy of Natural Sciences.—The Academy of Natural Sciences in this city has received from the president, Mr. William Maclure, now in France, a donation of books, amounting in value to about \$4000, and have received advice of another valuable shipment from the same munificent hand.

Method of preserving Vessels.—An American ship now at Cowes, built with spruce and white oak, sixteen years ago, has all her original timbers and planks in the most perfect state of preservation and soundness, owing to her having been, while on the stocks, filled up between the timbers with salt; and whenever she has been opened for examination filled up again.

General Post-Office.—The number of post-offices in the United States is four thousand eight hundred and thirty, and the length of post-roads is 71,522 miles. The amount of postage for the year 1819, was \$1,204,680; the cost of transportation of the mail \$717,843; and the compensation to postmasters \$375,964.

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Bibliomania.—At no time during the highest age of Bibliomanianism did books of rarity bear higher prices than at the concluding sale of Mr. Bindley's library. The competition for old poetical tracts and ballads was unexampled.

No. 1125	Collection of Poetical Ballads from 1540 to 1670.	192	0	0
1126	Do. from 1670 to 1680,	133	15	0
1127	Do. from 1679 to 1685,	174	6	0
1128	Do. 5 vols.	231	0	0
1130	Do.	43	1	0

The three first collections of ballads, and of halfpenny and penny songs, were bought by the Marquis of Buckingham. The five volumes of the same kind by Mr. Heber.

[*Lon. pap.*]

Precious Stones.—A diamond said to be worth 20,000*l.* and one of the largest in the world, was among the spoils of the Peishwa, and is now in the East India Company's treasury, to be sold for the benefit of the captors. It was brought to England by the ship York. A block of amethyst, or rather a mass of amethysts, has been sent from Brazil to Calcutta. This extraordinary specimen is four feet in circumference, and weighs 98 pounds. It is in its rough state, and consists of more than 50 irregular columns, smooth, transparent, purple and white, shooting up like crystals from a common matrix.

Nautical Improvement.—We congratulate the public on the application of a simple mechanical apparatus to impel boats, instead of oars. It consists of the machinery of steam-vessels, but the moving power is the hand applied to a windlass. Boats were first used on this principle with success on Whit-Monday, between London and Greenwich. The labour is much less than that of oars, and the impulse of the boat through the water much increased in swiftness.

Philosophic Girl.—The Italian journals mention that a young lady, only 13 years of age, named Maria Catherina Gherardi, a native of Scrola, has maintained in public a series of philosophic theses, in Latin.

Ingenious Automaton.—A German journal asserts, that an artist at Cemberg, in Prussia, has constructed a watch which imitates the human voice, and answers questions in German and Polish; besides executing musical airs.

To destroy Caterpillars.—A gardener at Glasgow practices a mode of destroying caterpillars, which he discovered by accident. A piece of woollen rag had been blown by the wind into a currant bush, and when taken out was found covered with these leaf-devouring insects. He immediately placed pieces of woollen cloth in every bush in his garden, and found next day that the caterpillars had universally taken to them for shelter. In this way he destroys many thousands every morning.

Vegetation in cold Climates.—The following is a calendar of a Siberian Lapland year:

Snow melts	June 22d.
Snow gone	July 1st.
Fields quite green	do. 6th.
Plants at full growth	do. 17th.
Plants in flower	do. 25th.
Fruits ripe	Aug. 2d.
Plants shed their seed	do. 10th.
Snow	do. 18th.
From August 18th to June 22d. snow and ice.	

Thus it appears, that from their first emerging from the ground to the ripening of their seeds, the plants take but a month; and spring, summer, and autumn are crowded into the short space of 56 days.

THE FARMER'S CREED.

By Sir John Sinclair, President of the Board of Agriculture.

Let this be held the Farmer's creed.
 For stock, seek out the choicest breed,
 In peace and plenty let them feed.
 Your land sow with the best of seed,
 Let it nor dung, nor dressing need,
 Enclose and drain it with all speed,
 And you will soon be rich indeed.

There are other paths to the temple of fame, than those which lead through blood and slaughter. This truth cannot too frequently be inculcated on the minds of the rising generation.

Our own country keeps pace with the nations of the old world, in applauding deeds of arms; apparently forgetful of the fact, that there are other incentives to ambition, of a much more useful and honourable character. He who augments the stock of public happiness, by improving the condition of his fellow creatures, or enriches the nation by developing her resources, is entitled to her thanks, and will probably receive them: At all events he will reap with certainty the high reward of self-approbation. The following stanzas to the memory of the late Duke of Bridgewater, were written by one who enjoys the rare distinction of being at once a painter and a poet, of no ordinary pretensions. What ample scope is furnished to Pennsylvania, and what cogent inducements may be found in the example of some of her neighbours, for adopting zealously, without further delay, a great and efficient plan of INTERNAL IMPROVEMENT. Should she evince the public spirit of Bridgewater, a Brindley will no doubt be found, to aid her in the important object of uniting the waters of the Ohio and the Delaware. This would add one more to the catalogue of those pacific but glorious triumphs, which have rendered her name celebrated throughout the civilized world.

I.

ON THE DUKE OF BRIDGEWATER.

From Shee's "Rhymes on Art."

Shall EGERTON^[7] depart without a tear?
And press in silent state a plumeless bier?
No, though his tomb no martial glories grace,
No trophies won in wild Ambition's race;
Though no vain pen on History's pompous page
Paint the deep statesman to th' astonish'd age;
Lay open all the labyrinth of his breast—
What plans he form'd—what factions he suppress'd;
What flames of war broke forth as he desir'd—
Cool'd as he calm'd, or kindled as he fir'd;
Yet life's mild Arts their spotless ensigns wave,
And grateful swains strow garlands on his grave.
Though crown'd with all in rank, or wealth that charms,
And lulls th' enfeebled soul in Pleasure's arms,
Behold him, yet in man's meridian hour,
Fly the false glare of pomp, and pride, and pow'r;
Decline the Court's intrigues, the Senate's, strife,
To serve his country in secluded life;
To ope new arteries of public health,
Promote her pride and circulate her wealth;
Call forth a BRINDLEY'S genius, and command,
To pierce opposing mountains with his wand,
Through wondering vales, in liquid course to lead
Commercial keels, and navigate the mead;
Bid in bright tracks obedient currents glide,
And, like a river-god, direct the tide.

THE KITTEN.

By Joanna Baillie.

Wanton drole, whose harmless play
Beguiles the rustic's closing day,
When drawn the evening fire about,
Sit aged Crone and thoughtless Lout,
And child upon his three-foot stool,
Waiting till his supper cool;
And Maid whose cheek outblooms the rose,
As bright the blazing faggot glows,
Who, bending to the friendly light,
Plies her task with busy sleight;
Come, show thy tricks and sportive graces,
Thus circled round with merry faces.
Backward coil'd and couching low,
With glaring eyeballs watch thy foe,
The housewife's spindle whirling round,
Or thread, or straw, that on the ground

Its shadow throws, by urchin sly
Held out to lure thy roving eye;
Then, onward stealing fiercely spring
Upon the futile, faithless thing.
Now, wheeling round with bootless skill,
Thy bo-peep tail provokes thee still,
As oft beyond thy curving side
Its getty tip is seen to glide;
Till from thy centre starting far
Thou sidelong rear'st with rump in air,
Erected stiff, and gait awry,
Like Madam in her tantrums high:
Though ne'er a Madam of them all,
Whose silken kirtle sweeps the hall,
More varied trick and whim displays,
To catch the admiring stranger's gaze.

Doth power in measured verses dwell,
All thy vagaries wild to tell?
Ah no! the start, the jet, the bound,
The giddy scamper round and round,
With leap, and jerk, and high curvet,
And many a whirling somerset,
(Permitted by the modern Muse
Expression technical to use,)
These mock the deftest rhymester's skill,
But poor in art, though rich in will.

The featest tumbler, stage-bedight,
To thee is but a clumsy wight,
Who every limb and sinew strains
To do what costs thee little pains,
For which, I trow, the gaping crowd
Requites him oft with plaudits loud;
But, stopped the while thy wanton play,
Applauses, too, thy feats repay;
For then beneath some urchin's hand,
With modest pride thou tak'st thy stand,
While many a stroke of fondness glides
Along thy back and tabby sides.
Dilated swells thy glossy fur,
And loudly sings thy busy pur;
As timing well the equal sound,
Thy clutching feet bepat the ground,
And all their harmless claws disclose,
Like prickles of an early rose;
While softly from thy whiskered cheek
Thy half-closed eyes peer mild and meek.

But, not alone by cottage fire
Do rustics rude thy feats admire;
The learned sage, whose thoughts explore
The widest range of human lore,
Or, with unfettered fancy, fly
Through airy heights of poesy,
Pausing, smiles with altered air
To see thee climb his elbow chair,
Or, struggling on the mat below,
Hold warfare with his slipper'd toe.
The widow'd dame, or lonely maid,
Who in the still but cheerless shade
Of home unsocial, spends her age,
And rarely turns a lettered page;
Upon her hearth for thee lets fall
The rounded cork, or paper ball,
Nor chides thee on thy wicked watch
The ends of ravelled skein to catch,
Buts lets thee have thy wayward will,
Perplexing oft her sober skill.
Even he, whose mind of gloomy bent,
In lonely tower or prison pent,
Reviews the wit of former days,
And loaths the world and all its ways;
What time the lamps unsteady gleam
Doth rouse him from his moody dream,
Feels as thou gambol'st round his seat,
His heart with pride less fiercely beat,
And smiles, a link in thee to find

That joins him to his living kind.

Whence hast thou then, thou witless puss,

The magic power to charm us thus?

Is it, that in thy glaring eye,

And rapid movements, we descry,

While we at ease, secure from ill,

The chimney corner snugly fill,

A lion, darting on his prey,

A tiger, at his ruthless play?

Or, is it that in thee we trace,

With all thy varied wanton grace,

An emblem view'd with kindred eye,

Of tricksey, restless infancy?

Ah! many a lightly-sportive child,

Who hath, like thee our wits beguil'd,

To dull and sober manhood grown,

With strange recoil our hearts disown.

Even so, poor Kit! must thou endure,

When thou becom'st a cat demure,

Full many a cuff, and angry word,

Chid roughly from the tempting board,

And yet for that, thou hast, I ween,

So oft our favoured playmate been,

Soft be the change which thou shalt prove,

When time hath spoil'd thee of our love;

Still be thou deemed by housewife fat,

A comely, careful, mousing cat;

Whose dish is for the public good,

Replenish'd oft with sav'ry food.

Nor when thy span of life is past,

Be thou to pond or dunghill cast,

But gently borne on good man's spade,

Beneath the decent sod be laid,

And children show with glist'ning eyes,

The place where poor old Pussy lies.

AN AUTUMNAL TALE.

"O Father, dear Father! lament now with me,
 This morning I've been at our wood,
 And the fine flowing leaves of your favourite tree,
 Around on the grass are all strew'd;
 And sure 'tis a pity! for lovely and green,
 All summer they yielded a shade,
 Dear Father, to you, who against it would lean,
 While sister and I round it play'd.

Of late they began to change colour indeed,
 Like the corn when 'tis ripe in the field;
 And the dark glossy green became yellow and red,
 As if they ripe berries would yield.
 I thought this was pretty, and ne'er heard you say
 That the leaves would soon fall from the tree;
 And I never was happier than t'other fine day,
 When you looked there at sister and me."

"Why, my boy, I am grieved at the tale you have told,
 But the leaves every year drop around—
 They are green in their youth, and turn red when they're old,
 Then the wind blows them down to the ground.
 But take comfort, my boy—when the winter is fled,
 The leaves will appear on the tree,
 And again form a bower thy father to shade,
 And the gambols of sister and thee."

"Why, that's good—but, my father, I've sad news to tell;
 Old William, who liv'd at Hillside,
 And lately came hither so wan and so pale,
 Old William this morning hath died."
 "Old William hath died! Ah! indeed, I am sad;
 But age, when it ripens, must fall,
 Though green was his summer, his autumn must fade;
 Such, my boy, is the end of us all."

"Then he fell like the leaves of your favourite tree,
 But when the long winter is o'er,
 Old William again on the hills shall we see
 A feeding his flock as before?"
 "Ah, no! my sweet boy!—the dead wander no more
 In the bounds of this wind-wasted scene;
 But to regions immortal all good spirits soar,
 More lovely, more lasting, and green."

BANK NOTE EXCHANGE,

[440]

AT PHILADELPHIA—Oct. 28, 1820.

	Per cent Disc't.
VERMONT—generally,	3
MAINE,—generally,	4
NEW HAMPSHIRE—generally,	2
CONNECTICUT—generally,	2-3
NEW YORK,—City Bank,	par.
Country generally,	1-5
J. Barker's Ex. Bank—no sales	
BANK OF UPPER CANADA,	10
NEW JERSEY notes,	par.
PENNSYLVANIA—Farmer's Bank, of Lancaster; Easton; Montgomery County; Chester County, at Westchester,	par.
New Hope; Northampton,	1-1½
Lancaster Bank,	1½
Susquehanna Bridge Company,	2
York; Gettysburg; Chambersburg,	2
Northumb.; Union; Centre,	15
Farm, and Mech. Bank of Pittsburgh,	25
DELAWARE—generally,	par.

MARYLAND—Baltimore Banks,	½
City Bank,	3
Annapolis; Hagerstown,	2
VIRGINIA—generally,	2
N. W. Bank, at Wheeling,	8
COLUMBIA DISTRICT—generally,	1
NORTH CAROLINA—State Bank at Raleigh, and Branches,	3-3½
Cape Fear; Newbern,	3½
SOUTH CAROLINA—generally,	1½
GEORGIA—State Banks, generally,	2
Augusta Bridge Company,	75
TENNESSEE—Few sales at any price.	
KENTUCKY—Kentucky Bank, and Branches,	30
OHIO—Marietta; Steubenville	12½
Bank of Chillicothe,	5
Country generally,	20-50

PRICES CURRENT,

October 28, 1820.

	Per	D. C.	D. C.
Beef, Philad. Mess,	<i>bbl.</i>	12.00	to 13.00
Butter, Fresh	<i>lb.</i>	0.25 "	0.30
Cotton, (Louisiana)	"	0.18 "	0.21
Cotton Yarn, No. 10,	"	0.36	
Flax, Clean,	"	0.16 "	0.18
Firewood, Hickory,	<i>cord,</i>	6.00 "	7.25
Oak,	"	4.25 "	5.00
Flour—Wheat, P. S. F.	<i>bbl.</i>	4.25	
Rye,	"	2.50	
Corn Meal,	"	2.75	
Grain—Wheat,	<i>bush.</i>	0.75 "	0.80
Rye,	"	0.37 "	0.43
Corn, Pa.	"	0.40 "	0.45
Oats,	"	0.25 "	0.30
Hams—Jersey,	<i>lb.</i>	0.13 "	0.15
Leather—Sole,	"	0.24 "	0.30
Upper, undrs'd.	<i>side,</i>	2.75 "	3.00
Plaster of Paris,	<i>ton,</i>	4.75 "	5.00
Shingles, cedar, 3 feet	1000	20.00 "	23.00
Cypress,	"	4.00	
Molasses, S. H.	<i>gall.</i>	0.50 "	0.52
Nails, Cut, all sizes,	<i>lb.</i>	0.07 "	0.12
Pork, Jersey & Penn. Mess,	<i>bbl.</i>	15.00	
Wool—Merino, Clean,	<i>lb.</i>	0.75	
Do. in Grease,	"	0.40	
Common,	"	0.50	
Yarn, Hempen,	"	0.10 "	0.11

STATE OF THE THERMOMETER.

	9 o'cl.	12 o'cl.	3 o'cl.
Oct. 4,	—	—	68
5,	68	67	64
6,	68	69	64
7,	55	62	60
9,	62	63	66
10,	57	59	61
11,	56	58	56
12,	50	59	57
13,	52	64	63
14,	58	65	67

16,	53	59	56
17,	47	59	56
18,	48	54	52
19,	53	57	51
20,	51	61	59
21,	50	55	54
23,	47	54	54
24,	49	59	58
25,	48	54	52
26,	40	49	47
27,	40	52	49
28,	43	54	50

RAIN GAUGE AT PHILADELPHIA.

	In hun.		
Oct.	5 to 6,	Rain,	1.65
	"	do.	0.20
	9,	do.	1.30
	10 to 11,	do.	0.50
Novem.	2,	Shower,	0.14
	5,	do.	0.07

ERRATUM.—In last November, page 399, first column, for resembled, read *remembered*.

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FOOTNOTES:

- [1] Memoirs of the late R. L. Edgeworth, Esq. begun by himself, and finished by his Daughter, Maria Edgeworth. 2 vols. London, 1820.
- [2] This great swamp, containing nearly 150,000 acres, lies more in North Carolina than Virginia. It is a marshy region, covered with a thick growth of cypress or juniper, many of which trees are of a prodigious growth. These trees are occasionally intermingled with oak, poplar, and maple. The annual fall of leaves, and the decay of trees, raise the surface above the original soil some feet, this part being completely saturated with water. The improvements in agriculture have done much to drain this vast surface, and many parts are sufficiently dry for the shingle-cutters and stave-makers to pursue their avocations in spots of this dreary region.
- [3] The Prince John of Ivanhoe, whom Hume characterises as replete "with cowardice, inactivity, folly, levity, licentiousness, ingratitude, treachery, tyranny, and cruelty." What a tissue of crimes! And this was a King!
- [4] In Newark Castle, where John died in 1216.
- [5] A large silk handkerchief is the best for the occasion.
- [6] A Mr. Pollock, of Paisley, (where this unfortunate suffered death,) availed himself of the information of assistants in the business, and established a thread manufactory at that place, which is yet carried on to great extent.
- [7] The late Duke of Bridgewater.



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