

Science & Mechanics. Courrier des Dames.

THE FELL RAILROAD.

We give on page 45 a view of the Fell Narrow Gauge Railroad at Aldershot—of which a full description appeared in our last issue—together with illustrations from the *Engineer* of the rolling stock on the road.

Figs. 1, 2, 3 are side and end elevations and a plan of the form of wagon used on the Aldershot Camp Railway. The dimensions of the latter are as follows:—Length of wagon over all, 13 ft.; length of body, 8 ft.; width, 5 ft. 6 in.; depth, 2 ft.; diameter of wheels, 16 in. The side frames of the wagons are suspended from the axles by bolts passing through two volute springs fixed on each pedestal, the latter rising and falling with the action of the springs within two cast iron V shaped grooves. By this arrangement the bottom of the wagon is brought within 3 in. of the level of the rails, and the centre of gravity of the wagon when empty is about 8 in. above the carrying rails. Each wagon is provided with four horizontal wheels, which run upon guide rails fixed on each side of the structure, and 12 in. below the carrying rails. Mr. Fell claims that the stability thus obtained renders an 18 in. gauge of this form of railway equivalent to a 3 ft. 6 in. gauge of an ordinary railway. The body is made of 2½ in. planking, strengthened by corner plates of iron; 1 in. thick. The side frames or buffers are oak, 16 in. deep, 5 in. thick, which descend 7 in. below the level of the rails, and form a kind of inverted box over the top of the structure. The draw bar passes underneath the centre of the wagon, and the draw hook and chain are attached to it. The weight of the wagons is 30 cwt., and they carry a load of four tons each, or from 300 cubic feet to 400 cubic feet of bulky articles, or 500 cubic feet of light materials, such as hay.

Figs. 4 and 5 represent a passenger carriage, the general arrangements of which as regards carrying and guide wheels and under frame are similar to those of the wagons above described. The passengers sit facing one another, as in an omnibus, the roof of the carriage being raised in the centre to give sufficient head way for walking through it, the sides being kept low, in order that the centre of gravity may be raised as little as possible above the level of the rails. The width of the body is 5 ft. 6 in., height above floor 6 ft., and length 12 ft., containing places for twelve first-class or fourteen second-class or third-class passengers. It will be seen that in both carriages and wagons the wheels are placed at the extreme ends of the bodies, which are let down between them to near the level of the rails. The passenger carriages weigh from 1½ tons to 2 tons each, and may be constructed of the form described, or with the seats back to back, after the fashion of an Irish car.

The view of the Aldershot road is taken from the *Illustrated London News*.

The "Britannia" is the first of a new fleet of ferry-boats for crossing the English Channel. Whoever has crossed that tumultuous strip of sea has doubtless a most vivid remembrance of deathly sea-sickness. It is now proposed to arrange matters more comfortably, and to banish that distressing malady, for which, if it really comes to pass, all travellers will be devoutly grateful. The "Bessener saloon" is the proposed method by which this much-desired result is to be accomplished. This contrivance—which takes its name from the inventor—is, in brief, a centrally situated saloon, 70 feet long, 30 wide, and 20 high, with promenade deck above, so poised and managed that the slightest deviation from the horizontal position is prevented, and all the ordinary motions of a vessel are neutralized. Thus it is expected that all that motion which produces sea-sickness will be prevented. It would seem that there must be many and great mechanical difficulties attending the operation of such an arrangement. But it is to be tried; and if successful on the English Channel, why not upon the ocean in large steamers? Then, indeed, there will be some comfort in crossing the waters.

Somebody who has been "studying our weights" reports that, upon the average, boys, at birth, weigh a little more, and girls a little less, than six pounds and a-half. For the first twelve years the two sexes continue nearly equal in weight, but beyond that time males acquire a decided preponderance. Thus, young men of twenty average 143 lbs., each, while young women of twenty average 129 lbs. Men reach their heaviest bulk at about thirty-five, when their average is about 152 lbs.; but women slowly increase in weight until fifty, when their average is about 129 lbs. Taking men and women together, their weight, at full growth, averages about twenty times as heavy as they were on the first day of their existence. Men range from 105 to 220 lbs. (the *Tydeborne* Claimant weighs about 300 lbs.), and women from 55 to 207 lbs. The actual weight of human nature, taking the average of all ages and conditions—nobles, clergy, tinkers, tallors, maidens, boys, girls, and babies, all included—is very nearly 100 lbs. These figures are given in avoidance of weight; but the advocates of the superiority of woman might make a nice point by introducing the rule that women be weighed by Troy weight—like other jewels—and men by avoirdupois. The figures would then stand—young men of twenty, 143 lbs. each; young women of twenty, 199 lbs., and so on.

Gustave Doré is not coming to America yet, as was reported. His illustration of London have given less satisfaction to his admirers than anything yet from his pen.

SHOPPING IN PARIS.

The shop-keepers of Paris at the present day seem to take a pleasure in charging a foreigner double what they would ask of one of their own countrymen or women. An instance of this came under my notice not a month ago. Two ladies, one an American, the other a French woman, were walking down the Rue Saint Honoré, when the former saw in the window of a most respectable shop a straw hat which she thought she would like for one of her children. She went in and asked the price, and the shop-woman asked her sixteen francs, about thirteen-and-sixpence, for an article she could have bought at any West-end shop in London for about three-and-sixpence or four shillings. Americans are not much given to find anything too dear. In Paris, people say that most of them would rather pay a high than a low price for what they want—but so manifest an attempt at imposition was too much for her; she laid down the hat and joined her friend, who had waited outside. The latter asked why she had not bought the hat. When told the reason, she said she feared she did not know how to drive a bargain in France, and if she would say how much she would give for the article, she, the French lady, would try and get it for her at that price. The American lady said that the utmost she would pay for the hat was six francs—five shillings. The French lady entered the shop alone, asked the price, and was told that it was nine francs instead of sixteen, as had been demanded of her friend. She said that was too much, and offered six francs, whereupon the article was put in paper and made over to her. She then taxed the shop-woman with having attempted to impose upon a stranger, but the other was not in the least ashamed of herself. "Mon Dieu, madame, les étrangers sont toujours très-riche, et les affaires à Paris sont si mauvaises à présent," was all the satisfaction she could get out of this pleasant specimen of a Parisian tradeswoman. Accustomed as we are in England for tradesmen to ask what they intend to take—no more and no less—the idea of bargaining for everything we buy—from the silk dress to the handful of carrots required for the soup—is to English men and women most obnoxious; but in Paris it is absolutely necessary, unless we wish to throw away money by the pocketful. I saw a curious trial of the art of bargaining made last winter in Paris. Two French gentlemen, each accompanied by his wife, and having an umpire with each to see fair play, started round the Halles Centrales, or central markets, to lay in their provisions for the day. A list was made out, so that the two individuals were to purchase exactly the same articles and the same quantities of food—so much fish, so much vegetables, so much beef for soup, so much mutton for roasting, so much poultry, and the like. One of them was to bargain and get things as cheap as he could; the other was to give whatever the women at the different stalls asked him. They were not to go round together, but within half an hour of each other; and the bet was a breakfast for the whole party, at Bignon's, that the gentleman who did not bargain with the dealers would have to pay double what he who did bargain paid for his supplies—not one by one, but taken as a whole. They met about an hour later at the door of St. Eustache, and, when the umpires came to compare notes, it turned out that the non-bargaining purchaser had paid not only double, but more than three times what his adversary had done, and yet both had got the very same articles, and the same quantity and quality of each.—*Belgravia*.

UGLY FASHION.

Everybody agrees as to the advantages which might accrue from occasionally "seeing ourselves as others see us." But in the matter of fashions in dress, we all have that opportunity perpetually afforded to us. Nevertheless, we do not seem to derive the benefit from it which we might receive, and we go on doing what everybody else does, and dressing like everybody else, whether the style suits us or not. We see short fat women with flounced dresses and "bunched-up" tunics; we see tall women with long stripes; we see people with square faces, and their hair spread out so as to increase the breadth; we see others who have long thin visages, with every hair carefully brushed back and up, so as to make more distinct the already over-sufficient elongation. But these things, like the "applications" of sermons, are taken to be of importance with regard to everybody but ourselves. Our dress-maker or our indolent dresser says such a thing is "a worn" and forthwith we surrender ourselves without discretion. Tight-lacing and high heels are fashions which people follow quite regardless of how they cripple themselves and lay the foundations of permanent disease. "So-and-so does it, and why should not I?" is the effective argument in many cases.

Then by-and-by, when the fashion goes out, we laugh at it ourselves. We look at the fashion plates of twenty years ago and say "What guys we were!" or "our mothers were." We view and laugh at the bonnets in all their varieties—the "coal-scuttles" and the "spoons," and the bonnets that were always falling down in the back of one's neck; and those that were described as "a postage stamp and two pieces of red tape"—the enormous hoops and crinolines, which are always going in and out of fashion—the varieties of hairdressing, which all seem ridiculous, excepting the reigning absurdity.

There is one modification of dress which ladies are wearing at the present moment, the fashion of which must have been invented in imitation of Hottentot women, and which is

almost more unsightly than the enormous chignons, whose race seems to be almost finished, or the unwieldy hoops, which we hope have yet a long period to run before, in the accomplishment of the cycle of fashion, they return to us.

We allude to the *panier*. This addition to the dress, when covered with a much-ornamented skirt, produces occasionally a most ludicrous effect. Sometimes it seems to be endowed with a separate power of motion, which does not accord with that of the body of the wearer, and then the effect is, to say the least, remarkable. The other evening it was our fate to observe several ladies leaving a lecture theatre. Each lady had to mount a flight of steps leading up from the bottom to the top of the theatre, each lady wore a panier, each panier projected in a most ugly and obtrusive manner, and in each case a smile passed over the faces of the people present at the meeting. The ladies themselves were beautifully unconscious of the mirth which they excited; but it appeared to us an unseemly thing that women should thus expose themselves to just ridicule. Before people promulgate such fashions, could not a model be made, on which the new fashion could be tried in all its possible bearings?—*Queen*.

The cleverness of woman, as they set up as impostors, is almost as proverbial as their skill in doing and devising good. The *Globe* illustrates the craft by a story derived from the *Swiss Times*, from which we gather that a retired actress, about three years since, founded the *Dachauer Bank*, near Munich, promising all depositors interest at the fascinating rate of from 80 to 100 per cent., and more. So popular did the speculation become that crowds of eager clients converted all their property into money, and gave it freely into the hands of Mlle. Spitzeder, apparently without any security beyond her magnificent promises and her ostentatious manner of living. The interest was to be raised by lending the deposits at from 100 to 120 per cent.; and so much capital did she absorb that would-be borrowers were driven to her by the impossibility of obtaining loans elsewhere. Without extraneous support such a gigantic bubble must have burst in a day; but the lady knew how to play her cards. She presented a silver crucifix to one of the Munich churches; she made herself notorious for her piety; she was profuse in charities and gifts, and obtained the active support and encouragement of the Ultramontane clergy and their organs. The peasants and neighbouring proprietors, it is said, used to throng her bank on market days as if it were the door of a theatre, and when the crash came, with a deficit estimated at nearly 11,000,000 florins, or £1,000,000, it was natural that popular indignation should turn against her ecclesiastical patrons. Mlle. Spitzeder has probably done more immediate damage to Bavarian Ultramontanism than Dr. Dollinger himself.

The following remarks from the *Conservative* on the Woman's Suffrage question, will doubtless meet with the approval of all our lady readers:—"The question, which will be of primary interest to most Conservatives is, whether it is true that their leaders have individually, or in any official manner, recognised the force of the woman suffrage movement, and have agreed to the principle, at least to the extent of allowing single women who hold property to vote at political elections. We most emphatically deny that there has ever existed any foundation for such an opinion. One or two of the prominent members of the Conservative party have, as it is well known, voted in favour of Mr. Jacob Bright's motion, and some others have been disposed to regard the question as an open one, at least so far as politics are concerned. But nothing has occurred to warrant the belief that the Conservative party at large has changed its views on the subject of woman's suffrage; and those who have somewhat intemperately endeavoured to convey a contrary impression, represent only their own variations. We can vouch for it, that Mr. Hardy's opinions on the subject have undergone no change since he last recorded his vote against the proposal. The question of woman's suffrage is precisely where it was. There may be, of course, some who go to the root of the matter, and believe that the two sexes are not only intellectually and morally equal, but identical. With those it is useless to argue, even if the argument were pertinent to the present issue." We regret that we can only find room for the conclusion:—"Our objection to the proposal is based upon principles which are at the root of all Conservatism. It is impossible that there can be any open question here. The conservation of the home, the conservation of the English family sentiment, the conservation of the social system—these are objects of infinitely greater concern to true Conservatives than the increasing of their strength on the electoral register, or than the interests of property. Let property perish a thousand times, rather than one stone be taken from that fabric of domestic and social life which is the basis of all that we know as English feeling and English freedom."

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Jacobs' Rheumatic Liquid cures Lambs Back.

Art and Literature.

Christus, an oratorio by the Abbé Liszt, has just been published.

The Crown Princess of Germany is making a design for a monument, to be erected on the field of Weissenburg by the officers of the third army.

Melissander has painted three hundred and nineteen pictures from 1810 to 1872. Rosa Bonheur has finished, from 1818 to 1872, seventy-one paintings.

A grocer in Ipswich, England, is exhibiting in his window an original painting by Gainsborough, said to be worth \$5,000, and which only cost the present owner \$29.

A lofty story has been added to the old part of Burlington House, London. Shrouded by the buildings next Piccadilly, intended for the learned societies, the addition has been made so quietly that it will take many by surprise. It includes three galleries for the purpose of the Royal Academy, one of which is destined to receive the statues, casts, and other works of art left to the Academy by the late John Gibson.

Messrs. Dulau, of Paris, have formed a collection, in six volumes of engravures published in Paris in 1870 and 1871. The first series embraces the period from the Declaration of War to the close of August; the second, from Sedan to the fall of Metz; the third, from the surrender of Metz to the March Revolution; the fourth, the reign of the Commune; the fifth and sixth relate to Italian matters, and also comprise satires on Germans of a date posterior to the fall of the Commune. The whole comprises about 1,500 to 2,000 engravures. One copy has been purchased by Prince Bismarck, a second by the British Museum, a third is in the hands of the collectors.

Mr. Edwin Burritt has interested himself deeply in collecting materials for a memorial of the late Charles Dickens. The "monument," as he calls it, consists of copies of the tributes to the memory of the great novelist which appeared in the public journals and other periodicals of all nations; also extracts from sermons preached in all parts of the world in which reference was made to the deceased. The first Mr. Burritt styled "The Voice of the Press;" the second, "The Voice of the Pulpit;" and the whole, "The Voices of the Nations at the Death of Dickens." Publishers to whom Mr. Burritt applied refused, however, to undertake the bringing out of this memorial, so he remains sole owner and possessor of a household monument which, he says, he had hoped to see erected in many a family on both sides of the Atlantic.

Lady Georgiana Chatterton has addressed to the *London Spectator* a letter which seems to fix very clearly upon Lord Brougham the authorship of the novel of "Albert Ruel." She states that she was with Rogers, the poet, at one of his well-known little breakfast-parties, when "Albert Ruel" was brought to him from Lord Brougham. Rogers gave the book to Lady Chatterton, charging her to read it quickly, and not to say who had written it. "I did so," she continues, "and finished it by the time I went to a dinner-party on the following day. In the evening I met Mr. Rogers, and he told me that he had sent to my house for the book, as Lord Brougham had ordered it to be suppressed, the reason (as he had heard) being that many of the characters were from real life. I have never met with any one who read it before its suppression, except the late Dean Milman, nor since its suppression, till within the last few months."

The King of Italy's medal for presentation to Dr. Livingstone, the African traveller, has been consigned—with an official letter to the great African traveller—to Sir Harle Frere, in the hope that he may either present it in person, should Livingstone reach the coast in time, or forward it to him by some safe hand. The Commendatore Negri Cristoforo, President of the Italian Geographical Society, has been the prime mover in bringing about this gratifying recognition of Livingstone's labours in behalf of science and humanity; and the Italians generally appear to be delighted with the idea of being the first to tender him this national proof of the high estimation in which they hold him. The letter to Dr. Livingstone is written in the King's name, and signed by His Majesty's private secretary, the Commendatore Vaghenno. The medal is of massive gold, and bears on one side the bust of the King, with the legend, "Vittorio Emanuele II., Re d'Italia," and on the obverse, "A Davide Livingstone, Vittorio Emanuele II., 1872."

Soon after the Lord Chief Justice of England had taken his seat on the bench the other day, an American gentleman introduced himself to a group of members of the Junior bar by remarking that he was an American lawyer, he was, and had come in there just to see how things were managed in the English courts. Upon which one of the stuff gowmsmen, to whom he had addressed himself, quietly remarked, "Then you're just in time, for that's Cockburn on the bench, and they're just going to apply for a rule to set aside the Geneva award!"

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