Behind Circus Scenes



Lite Among the Performers - Some Good Stories Told of Circus Men and Women.

The perfection of organization in a great circus makes the life very monotonous. A man must do exactly the same thing at exactly the same moment every day of the 32 weeks during which the season last. Even a proprletor-Mr. Bailey, for example-scarcely varies in his movements from one week's end to another. Thus, to the circus people themselves, each day is so precisely reproducing another in their immediate work and surroundings, the constant movement in which they live ceases to exist. They lose all sense of distance and of locality; all places, all crowds, are alike to them; the towns and States they pass through leave as dim an impression on their minds as do their dreams. The outside world, in fact, becomes a dream to them, and outside people a kind of vague unreality, like water always flowing by a river, but never noticed. Wherever they go are bank of human heads, tiers of heads, thousands of heads, gaping, grinning, and these have for the circus folk so little individuality or kinship that they might as well belong to some other race. Sitting in the charlots, on elephants, astride horses, on camels, in the procession, under a scorching sun, breathing dust, all beneath comes to seem unreal and fantastic; and often in the midst of this glittering pageant there comes over the circus perfomer a sense of utter loneliness that is crush-

And even the performance itself has a bewildering effect upon those who are always taking part in it, but never see it. It is like the monotonous beating of a train which seems to the dozing traveler to be singing a song or speaking words. The great crowd in the tent are not people at all but only a colored background, of no more importance than the dingy walls of the tent itself. Everything comes as a matter of course. The crashing music, the grave-faced elephants with figp-ping ears, the long "Ah-h-h-oo" of applause of the crowd, the shrill whistle of the small boys, the dancing of the Arab girls, the cries of the howling dervish with is dreary "Low-y-loo hel -lah-how," the feats of the athletes and riders-all these are nothing to him, or rather, they are an un-noticed part of himself, like his hat or his

Circus people thus lose all power of wonder, all capacity for enthusiasm. As with the gambler, the very excitement of their lives and the constant change tend to paralyze interest. I should like to test a veteran circus man with some such programme a this: At 9 a.m. to see a man guillotined; at 10 a.m. to see a collision between two locomotives; at 11 a.m. to see a tenement house destroyed by fire; at moon to see a millionaire commit suicide; at 1 p.m. to see a crowded ferryboat go down; at 2 p.m. to see a powder mill explode: and at 3 p.m. to see a naval battle. I have no doubt that after a few weeks of even this as a routine he would find It a dull as his old life.

In point of fact, though, many of the circus people, perhaps most of them, have never sat through a performance from beginning to end. Mr. Newman, the elephant trainer, for instance, who has been with the circus for years, told me that he had never seen a performance: and Mr. Kohl, the head of the Barnum cook tent, said the same thing. The fact is, a circus man's time is so completely occupied with his own work, that he cannot attend to anything else. From sixteen to twenty hours a day he is on duty, whether a common laborer or head of a department. For weeks at a time he may have to content himself with flour or five hours' sleep out of 24. and work all the rest of the time. No wonder, then, that he never gets time, even if he had the desire, to witness a performance.

Most people have an idea that the circus is a free and easy place, and that those who travel with it are a Rohemian crowd, whose leisure hours are spent in more or less riotous pleasures. Never was a greater mistake In the first place, no one connected with the circus has much leisure; and then the discipline maintained is more rigid than that of any army. Drunkenness is very rare, and, if detected, is followed by immediate dismissal. And in other respects conduct is controlled rigorously. A week's experience with the circus convinced me that for sobriety, industry and general morality, there is no other community numbering so many people which can be compared with it. CIRCUS PERFORMERS OFF DUTY.

At the conclusion of the afternoon performance supper is served in the cook tent, and then the performers have an hour or so to themselves before the evening performance. This time they are apt to spend in the circus tent proper, empty now, in practicing ne feats or in improving old ones. they do from pure pride in their work, for the time is their own to spend as they please. Let us look in and see what is going on. Here is Alex. Seibert trying a new horse over the hurdles. Again and again he rides the horse at the five-bar gate, or rather, the canvas imitation of one-for it would not do to risk the horse's leg-and sometimes he gets over with a clean jump, and sometimes, stumbling, knocks the canvas from the hands of the ring-men. The owner apologizes for his horse's shortcomings, says he is nervous, has never jumped in a tent before, and so on.

Across the tent, over near the dress-ing-room entrance, Fred Herbert, the veteran acrobat, is teaching one of his two "brothers" to do a "twister" back somersault. The young fellow springs into the air with a will, turns gracefully, with a twisting movement at the same time, and, landing heavily on the bert shakes his head; the knees were bent too much and the fall was not artistic; he must try it again. The young athlete does try it again, not once, but twenty times, profiting by the criticisms of the master, and trying his best to get rid of the trouble with his knees. Some other day he will succeed, but not now, for Herbert tells him he has done enough and must not tire acrobats, sisters, who have been watching him from an elephant pedestal, give him a smile of encouragement, and a Cossack horseman, lounging near, claps his hands approvingly.

Meantime, in one of the rings, Conrad te exercising his over-lively pony Hu-Conrad rode as the "Austrian Emperor"; at the afternoon performance he was a miscellaneous clown, and now is a phlegmatic man in shirt-sleeves

Quite alone, in the large center ring, little Nelson, the 10-year-old acrobat, is practicing back somersaults, with all the gravity of a man who has large responsibilities on his shoulders. Nelon takes himself very seriously, and Insists on being treated with the respect due a star performer, which he Nothing hurts his feelings more than to be treated as a child, and he scorns the idea of playing with boys

**** would he miss the pleasure of riding in the procession every morning as the "Little King of Spain," and there is never a smile on his face as the carriage of state in which he sits passes through the crowds. He is a monarch, then, every inch of him, but not more so than when he steps out proudly before the great assemblage, under a crash of music, and is hauled to the very roof of the tent by his father, also an acrobat of note. Then it is a sight to see little Nelson fold his arms with joy in his art, and, hanging by his neck from the flying trapeze, 50 feet in the air, look down on the anxious thousands, his dark eyes seeming to say: "Now look at me and see if I am not an artist." Then, hanging by his knee-caps, head down, he suddenly lets himself slip and fall, catching the bar by the tips of his toes, and, swinging high on either side, seems to ask the crowd is any man could have done that trick more eleverly or bravely than he.

SOME CIRCUS STORIES. Meantime, others of the circus company are scattered about in groups hrough the deserted amphitheater, their voices sounding like whispers as they chat together, on account of the space and the emptiness. This leisure hour is the favorite time for story-telling among circus folk, and many are the strange tales one hears. Best of all in this pastime is George Starr, to whom the circus atmosphere is as the breath of life; he would be wretched without it; and his store of reminiscence and adventure is exhaustless. It is he who travels through Asia and Africa, gathering together tigers and lions for the menagerie, and members of strange tribes for the "Congress of Nations." On these trips he has to spend thousands of dollars, although the natives of these distant lands are often willing to come with him on ridiculously low terms. On one occasion, while in the interior of Africa, he found a Soudanese warrior, a perfect black Hercules, whom he was determined to get at any price. At first the warrior refused flatly; but when Starr told him he might demand whatever sum he pleased, he wavered. Finally, after long consultation with his friends, he told Starr, through an interpreter, that he would come, but added, "I must have my wife's expenses

paid while I am away." "All right," said Starr. "And I must have all my mother's ex-

penses paid." "All right." "And I must have money for my chil-

dren.' "I know it: name your own figure." At this the warrior, with a cunning gleam in his eyes, as if he were demanding a king's ransom, named a sum which in our money amounted to a little less than fifteen dollars. "And he nearly dropped dead," said Starr, "when I told him he could have

Then there comes a bit of pathos. One of the clowns, now dressed and behaving like an ordinary sober citizen, tells how, one night, years ago, old Miako, one of the funniest clowns of those days, had received word just be fore the performance began, that his son had died suddenly. Miako was then a gray-haired man of fifty, and his whole hope and pride in life were centered in his boy. For years all his savings had been put aside for the lad's education, the clown having always been resolved that his son should be something else than a circus performer. His desire had been gratified: the young man had gone through college taken his degree as a doctor. Now it was all over, and he was dead. When the news came, it was already time for Miako to enter the ring, and as he read the telegram he crumpled it up, and pushed it in the pocket of his flowing trousers, while a tear marked a furrow in the white paint that covered his face. But he said nothing. The music crashed out its call, and snatching up his painted cap, the broken-hearted father rolled into the ring, while the crowds split their sides with laughter. He went through the performance to the end, cracking his old jokes, tumbling about in the old ridiculous way, and then, when it was finished, and the crowd had gone, and an army of workmen were busy dismantling the tent, Miako sat there on the edge of the ring, in his clown's costume still, his head on his knees, his body twitching now and then with a convulsive shiver, his thoughts on the boy who was dead. And so the stories succeed each other the circus detective telling of adventures with pickpockets and three-cardmonte men; Rosie Meres, the bareback rider, telling how she first met in Paris the French clown who afterwards be-

this period of story-telling in the big and nearly empty tent. IN THE DRESSING-ROOM TENT. The dressing-room tent of a large circus lipe Barnum and Bailey's is a place full of interest for the outsider, all the more that he may not penetrate there except by special favor. This is al most the home of acrobats, clowns, and riders, the royalties of the ring, the only home they know, except a rushonly home they knew, except a rushing train from March to October. Passing through the performers' trance, that magic aperture on which the small boy's eyes are ever fondly piveted, one finds himself in a canvascovered space divided by a canvas partition into two equal parts, in one of which, standing in a switching, stamping circle, are a hundred horses. The other, devoted to the performers, is mattress, looks up for approval. Her- itself divided into two pants, the larger serving for about ninety men, the smaller for about fifty women. The entrance to the men's part is at one end of

the canvas wall, the entrance to the

women's at the other end, and the two

are so shut off from each other that

came her husband; John O'Brien telling

of the pluck and clean grit shown by

riders and acrobats, who often go

through their acts when suffering se-

verest pain and almost too weak to

when traveling with the Barnum circus

I enjoyed most this five o'clock leisure.

stand

Of all the experiences I had

only the indistinct buzz of preparations can come through the jealous partition. Passing into the men's dressing-room, a curious scene shows itself. The entire himself further. As he retires, two space is not larger than two good-sized parlors, and yet so perfect is the management that nearly 100 men are able at one time to dress and undress, to shave, to write letters, to play the violin, and amuse themselves in various ways, without interference or disorder. The center of operations for each one. ber, with the vicious baboon Abel in his chair, bureau, desk, treasure-house, the saddle. In the morning procession | and fortress, is his trunk, always square and heavily bound with metal fastenings, and always occupying identically the same place in the tent. Some of the trunks are ranged around the wall some lined along the center, and where you see them one day, there you will see thm every day, so precise is the property-man in the matter of arrangement. Ten photographs of the men's dressing-room taken on ten successive days would be so exactly alike in the smallest detail, showing the same clothes and hats hanging on the same ropes, the same tin basin, old pipe, or bit of looking-glass on the same swing-

ing shelf, the same trunks at precisely

distances between them, One of the strict rules of the circus is that all performers, unless excused by a special clause in the contract, shall ride in the daily street parade. Conrad, the fat clown, also trainer of Abdel, the dangerous baboon, now crowds himself into the uniform of the Emperor of Austria, and will presently be seen on horseback, riding with a grace and dignity worthy of Francis Joseph himself, Siebert, the best all-round acrobat in the ring, dons the black beard and serious manner of Gen. Grant, whom he will personate in the charlot of the Goddess of Liberty. Demott and Showles, the bare-back riders, array themselves to ride forth, the one as the Emperor of Germany, and the other as the President of France. Other men, and the women in the adjoining dressing-room as well, are all in the like

the hurry of transformation.

The parade is over by 10:30, and then there is hurry and bustle again to get back into ordinary dress and ready for dinner, served in the cook-tent at 11:30. After dinner, with scarcely an interval for digestion, preparations must be begun for the afternoon performance, which begins at 2 o'clock and lasts until 4:30. The best point of observation at this hour is in the larger division of the dressing-room tent, where the horses are, for here one is able to see both before and behind the scenes. While the great amphitheatre is filling from the menagerie tent, while the circus band is playing its overtures, and the clown with the bogus photographic apparatus is making sport of picious visitors, the space outside, between the dressing-room tent, the horse-tent, the cook-tent, and the circus tent proper, about an acre in all, is finish their day's work by drawing the crowded with horses, chariots, elephants, camels, and costumed riders, | trips, as they made two from the train carrying banners of all nations, wait- in the morning.

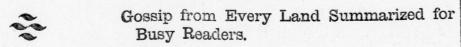
ing for the grand pageant which opens the performace. Now O'Brien gives the word: "Come, boys, get your horses out." The grooms lead the teams of

draught horses to the chariots, while out from the dressing-rooms come men and women and take their places. A handsome woman, who, a little later, all smiles and spangles, will drive four horses to one of the flying Roman char-iots, is now severely clad in black, with white wig, to ride in the grand carriage of state as Queen Victoria. While waiting she caresses one of her favorite horses, feeding him sugar and kissing him. Near her is the Goddess of Liberty, who does a song and dance act in the "concert," and is now in animated conversation with one of the clowns about a supper of fried chicken enjoyed the night before. Bedouins enveloped in white, Japanese warriors, and noblemen from Siam bustle about, looking for the camels, the elephants, or the blazing chariots which are to convey

It would seem impossible ever to organize an orderly procession out of such confusion. But the confusion is only seeming; in reality, every man and woman, horse and driver, knows exactly where he belongs and what to do; and as O'Brien waves his signal to the bandmaster to strike up the triumphal blast, the line moves out, elephants first, as easily as a coll of rope uncoils, and the grand pageant has passed

inside the big tent. As soon as the procession is finished, the quick-handed grooms take saddles and bridles off the draught horses and lead them to the horse-tent, where they will rest until brought out for the evening "pageant," after which they will circus wagons to the train, making two

Missing Links



ENGLISH curates are thinking of) forming themselves into a professional union, on the plan of the trades unions. MICROBES killed a Vienna bank clerk lately, who, in counting a pile of

bank notes, moistened his fingers with CHARLES W. CAMPBELL, a Philadelphian, has the longest mustache known to exist. It measures 22 inches

from tip to tip. DEAN ALLEN, aged 94, of St. David's Cathedral, England, is in vigorous health, superintends all the business of the cathedral and conducts the daily

THE English artist H. S. Tuke has his studio on the top of a crag, looking down on the sea on one side, on a pine forest on another, with a lake not far A LINEAL descendant of the famous

Scottish chieftain, Rob Roy MacGregor, lives in Washington. His house contains many relies of the great warrior SIR JAMES BELL, Bart., Lord Pro-

vost of Glasgow, Scotland, whose term expires in November, has agreed to the unanimous request of the town council to remain in office another year. LAURENCE HUTTON, the well-

known critic, is a collector of posters. For years he has been a collector of book plates, and his accumulation of the latter is said to be the largest in America. RABAH, now the head of the sultin-

ate of Bornu, Africa, was at one time a slave. He is a full-blooded negro, of gigantic stature, and is said to be possessed of immense treasures of gold, silver and ivory. WITH the death of James Bunn the

noble race of Shinnecock Indians ends. The old man died with his face to the sun, which, as he died, rose over the Shinnecock hills on Long Island, the ancient home of his once powerful race. SIGNOR DI PRISCO, an Italian country gentleman, recently dug up on his estate 27 ancient silver vases of Greek workmanship. He tried to sell them in Paris for \$100,000, but under the law

Italy, the Italian Minister of Education began proceedings against him. ALL the personal memorials of Carlyle contained in the Chelsea house, lately turned into a museum, consist, according to Truth, of a battered trunk, a walking stick, a wretched tin bath, a marble top washstand, and a

orbidding export of antiquities from

stovepipe hat under a glass case. DUCKS' eggs are shipped pretty ripe from Swatow, in China, to Bangkok and Singapore. They are put in shallow baskets in layers of two and three deep, wrapped up in soft paper, and the climate is so hot that they are all hatched before they reach their des-

MR. WILSON, the successful candidate for Mid-Norfolk, says a London correspondent, showed himself a master in electioneering. He formed for himself a bodyguard of pretty girls, the daughters of yeomen, and his nieces besides, and with this bodyguard, dressed in gay riding habits of white and blue, he cantered up and down the country.

W. K. Vanderbilt, jun., brought from Paris one of the labor-saving cycles which have recently been introduced in that city. It operates on the principle of the horseless carriages which are now so popular in France, and is propelled by a Damier motor. He has not made an appearance on his wheel, which is the only one of the kind in

Newport. At Mile End in London there is a serious outbreak of small-pox, but the vestry and guardians, being opposed to vaccination, refuse to exercise the power placed in their hands by law to make it compulsory. In the district there are from twelve to fourteen thousand unvaccinated children. The guardians assert that the small-pox has come from the neighboring districts, where the law is enforced.

In TANGANROG, in Russia, a company of Barishuiks, or small traders, finding that they could not reach their destination one night, decided to sleep in the open air. One of them, however. refused, and went to a cottage not far off. In the morning he found that his nine companions had been murdered in their sleep and 48,000 roubles which they had were stolen. The murderer was found soon after. He had joined the band disguised as a trader, had drugged them with morphine, and then

BISMARCK'S head was measured by Schaper, the sculptor, who made his statue at Cologne, and from the measurements the French scientific journals are trying to calculate the size of of the immaculate baron. Who could his brain. The head is enormous, be-

occiput and 170 millimeters between the temples; the average figures for German heads are 195 by 155 millimeters. The volume of the skull is 1,965 cubic centimetres, the average being 1,478, and the greatest recorded 1,860. From this the inference is that the brain weighs 1,897 grammes, 35 per cent above the average weight,

ENGLAND still begets ghost stories. The exceedingly sober Realm relates that not long ago, at a country seat in Cheshire, famous for its portrait gallery, a visitor was hastening down the main stairway. Suddenly he felt his progress arrested by two strong arms grasping him by the shoulders. On turning around he saw no one; but at that moment a large, heavy picture fell from the wall, directly in front of him, with force enough to demolish the very The ghostly substantial balusters. arms had caved his life.

MARY TATE, a United States girl, who recently died in Germany, made a dying request that was certainly unique. She loved music and was a Before the death finished his song she asked that she be buried in her grand piano. It was doubtless the strangest sepulchre of the century. During the funeral service a choral was played upon her favorite instrument, and then the strings were torn out, and in the tuneless box, as dead as the clay that was put in it, the body of the young planist was laid to rest.

FLORICULTURISTS are taking great interest in a new English rose which has been called the Crimson Rambler. It is so beautiful in color that Queen Victoria recently paid a special visit to the royal conservatory see it. The fact that it blooms through all seasons save winter will increase its popularity. Fashions in roses change. Once upon a time the Marechal Niel was in favor, but the great American Beauties and the Jacqueminots have made the delicate buff blooms take a back seat in Queen Flora's congress of blossoms

ACCORDING to St. Paul's, a French physician has fust discovered in rocking chairs a new and potent agency for good. The gentle and regular oscillations of these chairs have, it appears, "a wonderful effect in stimulating the gastro-intestinal peristalsis." If your digestion is sluggish and you suffer from "atony of the stomach," all you need is to rock yourself for about half an hour and all will be well. This new and simple cure for dyspensia will probably become much more popular than the numerous bad-tasting concections considered to possess potency in the cure of this common complaint.

ACCORDING to the Atlanta Constitution, a Western Alabama editor was writing up a local theatrical performance recently, and desired to give the participants a flattering notice; so he mentioned the names of several young ladies of the town, and wrote: all filled their parts to perfection." Then he went home. When the paper appeared it was found that the printer had put an "n" in the place of an "r" in the word "pants." Of course, it was an awkward dilemma for the poor edi-" but when the bloomer cruze shall have become a little more widely adopted such embarrassing mistakes probably be passed by unheeded.

ALL the English papers are talking about the cashmere shawl, the jeweled bracelet and other costly presents which Miss McNeill received from the Queen and royal family on the occasion of her marriage to the Duke of Argyll, nearly 50 years her senior. Not one of them, however, makes mention of the fact that the Queen, in accordance with traditional custom and usage, furnished the trousseau of the bride besides presenting her with a check for \$5,000. The Queen does this for each of her maids of honor or bedchamber women that may happen to wed with Victoria's consent during their term of and Princess Louise's mother-in-law is no exception to the

IN THE memoirs of Baron Stockmar is a note by his son, the editor of the work, in these words: "There were not wanting instances of shamelessness against which he had to defend himself. A rich Englishman, an author and member of Parliament, called upon him one day and promised to give him £10,000 if he would further his petition to the Queen for a peerage. Stockmar replied: 'I will now go into the next room in order to give you time. If upon my return I still find you here. I shall have you turned out by the servants.' Very creditable, of course, to Stockmar, considering his circumstances and position. The incident occured in the early forties, apparently, and there were not many rich Englishmen at that period who were both "authors and members of Parliament." But I am not aware that anybody has as yet identified the would-be corrupter he have been, and did he get his per-

Electric Wonders



New System of Lighting Railway Cars-Electric Cure for Deafness-Cooking by Electricity-No Work in the Future!

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they solved many of the problems ariscal cookery. A well-known writer on the chemistry of cookery has given it as his opinion that the perfect arrangement for an oven would be the radiation of its heat from all sides. This is now done in an electric oven which is having a large sale in London. The process is said to produce a cooked meat absolutely wholesome and extremely appetizing. There is no combustion whatever in the oven, and the food, being cooked in a pure atmosphere, cannot be tainted. The heat is turned on at any point merely by the movement of a switch. It is produced inside the oven, and it is so conserved that after the oven is once made hot what is required to carry on the process is little more than sufficient to make up for slight leakages. The electric oven can be put on the kitchen dresser when needed, and it throws practically nei-ther heat nor smell. Tabulated lists are provided, with which the weight and description of the joint being given, full instructions are derived as to the time and temperature of the required cooking. Roast mutton takes a temperature of 330 degrees Fahrenheit, beef 340 degrees and veal 350 degrees; and a heat of 370 degrees is needed to give puff paste its desirable tint and consistency. The comparative coolness of the outside of the oven is a singular feature; as the chef remarked at a recent dinner: "You could sit down on the oven while you roast inside."

The telegraphers have never to my knowledge, made but a single series of tests for the purpose of determining the actual amount of time which elapses while a signal is being flashed from America to Europe along the Atlantic cable.

The tests referred were made at the McGill University, Montreal, Canada, in June, 1891. In carrying out these experiments a duplex circuit was arranged both on land and sea along the entire line, which connects Montreal with Waterville, Ireland. When the line was "cleared"

chronograph was attached to the observatory wire at Montreal, and every-thing declared to be in readiness. The instrument clicked off the signal, while the experimenters watched the chronograph with breathless interest. It did not seem "like an age of sustense." however, for within one and lated cable leads from the other ter-one-eighth seconds the chronograph minal to a metallic strip behind the car, recorded the return of the signal, while it slowly dawned upon the interested

scientists present that the flash had

actually made the round trip from

Montreal to Ireland in a period of time but little greater than one-sixtieth of a minute. In that very short space of time, infinitesimal and almost unthinkable the better conducting part of the plant I might say, that electric message was | -the liquid in its cells-it traverse flashed a distance almost as great as the root to its very tips, and the whole one-third the circumference of the is electrocuted. It has been struck by world, or, to be exact, 8,022 miles. Other | lightning. As the car is pulled along

for the signal to make a round trip.

Mr. Edison predicted the other day that work would be altogether abolished in the next generation, and that our only labor would be to press a button and start the machinery going. Edison may be slightly wrong as to the generation, that is, it may take longer, a few more generations than he imagined, but that the drift is in the direction he indicates, and that actual labor will become a very small element in the industries, is self-evident. Steam did a great deal to free us from the curse of labor, but electricity is a far more potential instrument, and its uses seem almost limitless. We have made it do our lighting, our transportation and a thousand small jobs, but we have only just begun to use it.

Hitherto this mighty geni has been brought into play mainly in the field of manufactures, and a man is still compelled to labor hard to grow crops; but there is a disposition to use electricity more and more in agriculture, and it seems to be even better suited for the field than for the workshop. In Saxony they are now plowing by electricity with great success using an ordinary dynamo, and doing away with horses and men to a large extent. In the Department of Tarn, France, a water wheel is made to give sufficient force and to develop enough elec-

saves the farmer nearly all labor. In Moravia a single dynamo furnishes all the power needed to cultivate three adjacent farms. Plowing by electricity is much cheaper and better in all respects than plowing by steam. With a waterfall handy -and there is one handy to nearly every farm in the country, save in the telligence, there is no reason why all the hard work of the farm, from butter-making to the thrashing of grain, should not be economically done by a well-distributed electric plant. French experiments have further shown that the distribution of electricity through the soil by means of the ordinary current-bearing wires stimu-

tricity to cultivate the farm, so that

the little brook that runs through it

lates the growth of plants and increases the yield. It is not necessary to go into further particulars. We have mentioned the work done on the farm as a sample of the electrical development going on in a field of which we hear very littleagriculture. The farm as well as the city is to be benefited by this force, and the farmer as well as the city merchant will simply touch a button and have electricity do all his plowing for him. Edison is not a dreamer. No one can seriously doubt his prediction, but the only question is when we will enjoy that laborless world which he promises us .- New Orleans Times-

An improved form of the electric target has been brought out by an Austrian officer. The target consists of small meshes of wire, which are painted a bright color. No matter how long the range may be, as soon as the surface of the wire is struck by the projectile, a signal, which passes along a connecting cable, is registered on an indicator placed near the stand. The impact of the bullet on the figure or wire rings that represent the upper part of the man's body closes the circuit and rings a bell, the ringing being simultaneous with the signaling on the indicator. The apparatus is placed under ground, and acts automatically, requiring no care whatever for maintenance. It has been well received by Austrian experts, as it enables a man to be dispensed with in indicating the points, and so removes what has always been a more or less fruitful source of accident in military shooting drill. * * * *

Electricity promises to work a revolution in the oil industry. Heretofore the great drawback in developing an oil field was the necessity of hauling boilers to the well sites and furnishing

English electricians deserve much had been located. It is proposed to put credit for the practictal way in which an electric motor at each well and furnish power from a central electrical ing out of the developments in electri-cal cookery. A well-known writer on to take the place of the fuel and costly water line. Heretofore the cost of the well in this field has averaged about \$3,500, of which at least half was the laying of the water lines and hauling fuel. By this plan it is thought that wells may be put down for \$2,000 each. The value of the electric power will be even greater in pumping fields, where at present fuel must be hauled continuously, and wells of small production will not more than make up the cost of pumping. With the application of electricity twenty wells may be strung on one circuit and all be furnished with power from it. It is the intention to get a pant in operation at Sistersville by the first of October .- Philadelphia Record.

Recently there were pointed out some of the beneficial effects produced by electricity upon the growth of plants; but an overdose will kill a plant or a man. When lightning strikes a tree the latter is frequently killed, even if it be not blown into slivers, as sometimes happens. This result is believed to be due to the heating effects of the current, which raises the temperature of the sap far above the boiling point, and consequently to steam of high pressure, which explodes the tree or such part of it as conveys the current. If the current be not so strong as to produce steam, it may so much heat the sap as to expand and burst the plant tissues, which will be equally destructive to its life.

Advantage has been taken of this quality of an electric current to destroy the weeds that grow by railroad tracks. To keep such roads free from weeds in summer requires the constant work if many men with a hoe. Weeds have great vitality, and to kill them their roots must be dug out. If only cut off next to the ground they spring up afresh, and but little the worse for their temporary mutilation. A mild current of electricity acts as a stimu-lant to such plants, but a current strong enough to disintegrate the tissues will kill them. To accomplish this in a large way a car is provided with an engine, an alternating dynamo, and an induction coil suitable for raising the electric pressure to twenty or thirty thousand volts. One terminal of this induction coil is connected to the earth through the car tracks. A well insuwhich stretches across the track a short distance above the ground, and is provided with many fine wires pendant from it, like the teeth of a rake. Through these teeth the electric discharge takes place, and any weed that is touched receives a deadly current through it. As the current follows experiments made the same day show- the track every weed is at once killed ed a variation of from 1 to 11 seconds and with such an apparatus many miles of railway may be quickly and cheaply freed from weeds

A similar plan is feasible for ridding cultivated fields from such troublesome pests as thistles, daisies, chicory, or any other whose stems at any time reach above the grass around them. A two-wheeled vehicle like a horse-rake, carrying a suitable secondary battery, a mechanical current-alternator, and proper induction coil, could be driven across a field and kill every plant its teeth should touch. Acres of valuable land could be rid of its coarse weeds in a day, and with the assurance that no plant once fairly struck would ever be resurrected.

On the South Australian railways they have perfected a system of sup-plying current for lighting the cars by means of a dynamo run from the axle. This dynamo in the daytime stores up energy in accumulation cells, which is used in the night-time to light the train, so that the expense of an electrician is saved every second journey the train makes, there being only day and night trains on the line-from Adelaide to Broken Hill.

A recent Supreme Court decision with regard to electric railways in a Philadelphia suburban district has created a peculiar and unpleasant condition of things. A trolley line had been built, but the Supreme Court having decided that electric railways could not be constructed without the consent of all the property owners in a stretch of twelve miles, have objected and prevented the operation of the road. While the law in question applies to electric cars, it does not touch other forms of conveyance, so the managers have bought dummy steam cars for the operation of the road.



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