ELECTRICAL.

Fast Telegraph Operating-Hard Work of English Telegraphers - A Novel Proposi-tion to get Rid of the Insect Pest-A Wider Sphere for the Phonograph.

The question "What is good Morse?" which has lately been so frequently procunded, is answered by an expert. "Morse," is says, "is the term applied to the quality which has lately occur so inclining prounded, is answered by an expert. "Morso," he says, "is the term applied to the quality of the work done by an operator in transmitting a message. Of course, overy operator sends 'Morse,' either good, bad, or indifferent. When the dots, dashes, and spaces used in the Morse alphabet are of the proper size, perfectly discernible, and easily read we say an operator sends good 'Morse.' If the message is received on a sounder, the ear is depended "pon to judge sounder, the car is depended upon to judge the quality of the Morse, but if the message is received on the tape of a ticker the quality may be observed by the appearance of the printed slip."

An analysis of the phenomenal work done an analysis of the phenomenal work done by Pollock, the winner of the recently fast sending telegraph tournament, shows that the 270 words transmitted in five minutes call for 1,223 letters and eleven punctuations, or say 1,234 letters in all. To make these 2,834 impulses into each second, and letters 2,834 impulses into each second, and as each impulse calls for a down and up motion of the key, the hand and fingers of the operator had to make nearly nineteen movements per second for 300 consecutive seconds. P. B. Delany, a telegrapher of world-wide reputation, in commenting on this tournament, says: "To my mind the great speed and general excellence of the work of the young women was the most remarkable feature of the contest. It was a revelation to one who has not been very close to the sounder for some years. I close to the sounder for some years. I considered 32 or 33 words per minute the winning speed in their class, but how the glory of old times faded when 43 and a fraction were poured out with ease and grace without untying a bonnet string! I think the quality of the young women's work average lingher thauthat of the men. In the mere matter of speed, the women's work averaged 393 words per minute, against the the mere matter 431 of the men.

There is great dissatisfaction among the employees in the telegraph service in England, and this discontent has culminated in and, and this discontent has culminated in the formation of a Postal Telegraph Clerk's Association. The chief grievances complain-ed of are msufficiency of pay, overwork, and stagnation of promotion. Anothergrievance is the deduction of pay during sickness, which certainly seems somewhat hard when the unlealthy conditions under which much of the telegraph work of England is done is taken into consideration. As an instance of the vast amount of work that has to be dealt with, it may be noted that on the night that Mr. Gladstone introduced his Home Rule Bill no fewer than a million and a half words Bill no fewer than a milion and a nail words were flashed from the Central Telegraph Office in London. Owing to the lack of encouragement, so dissatisfied are many telegraph operators with their present position and future prospects that of late large numbers have left the service and gone out to the solonier. to the colonies.

A method of bleaching by electricity has been introduced into Russia, where chloride of magnesium, which has hitherto been largely used in the industry, is rare and expensive. The apparatus requires little care or attention, the operator having merely to empty and refill from time to time, thatank containing the salt solution in which cleetrolytic apparatus is placed.

Two of the principal objections which have

been a ged a joint and objections which have been a ged a joint the phonograph and other talk og instruments with which the public have become tolerably familiary for the inetallic quality of the voice of produced, and the necessity of using hearing tables arising from the poor volume of the reproduction. Leat Bettini claims that he has micro graphuphone, these difficulties have necessary Lout. Bettini claims that he has micro gray phophone these difficulties have now been overcome by the employment of he will dependent daphragma that and of the bin disphragm of the usual histriance. It is said that the oppoduction of the himse voice is singularly clear and free from any harshness or metallic sound. By the major the harshness or metallic sound. By the major a non-metallic trumpet the tones are zell further softened. In reproducing mulic the tones of different pitch come out with singular distinctness, and, what is a crucial test, the timbre of the voice is admirably pre served. The characteristics of the record are relative loudness and absolute distinct-

ness. Even a whisper is whispered back from the diaphragm very clearly.

Not long ugo a philanthropic naturalist proposed the establishment of a dragon fly where the insect could be propagated for the surpose of eating up the mesquitoes. The purpose of eating up the mosquitoes. The dragon fly theory, however, has not justified the sanguine hopes with which it was put forward, and a correspondent comes to the front with another proposition. "It seems to me," he says, "that the best way to rid cities of misquitoes is to use the electric light." He states that when the arc lamms were first that when the arc lamms light." He states that when the arc lamps were first introduced in New Orleans the insect population of the neighboring swamps flocked to the city. The region beyond the radius of the lamps was clear of the nocradius of the lamps was clear of the noc-turnal tormentors, while the sidewalks and roads around each light were strewn every morning with dead and dying. He propos-es to reverse this operation and, by hanging enormous clusters of electric lights beyond the outskirts of the city, lure thereto the whole of the neighboring insect population. To the ingenuity of this gentleman is al-lied a commendable, if somewhat san-mine commercial justing for he adds: commercial instinct, for he adds: guine, commercial instinct, for he adds:
"Arrangements might be made for collect
ing these after they had committed suicide,
as they all do, by flying at the lamps, and
it is probable that they could be sold as
fertilizers for a sum large enough to pay the
cost of maintaining the lights."

The pleasing newshas been announced that not only is the use of the electric station indicator rapidly spreading, but is likely to come into general adoption over the railway lines of this country before long. The belated and weary commuter can now rouse himself from his extempore nap on the home-ward journey, and, by a glance upward, uispel all fears of having passed his station, and the traveller on an unfamiliar line can possess his soul in patience in the blissful consciousness that the vocal distortion which the railway conductor seems to regard as he rightful prerogative has lost its terrors. The mechanism of the machine is actuated by the touching of a button. The indi-ors in all the cars display the name of The indicators that all the trains of the change in station name is taking place, calls the attention of every passenger to the exact location of the train.

In some tests to ascertain the degree to which air is vitiated by different illuminants, which have been published, the very important sanitary advantages possessed by the electric light are strikingly exhibited. the electric light are strikingly exhibited. Taking the four illuminants, common gas, paraffine, tallow candle, and incandescent electric light, the relative heat produced was 278.6, 361.9, 305.4, and 13.8. The proportion of air consumed was 17.25,34,05, 60 00, and none, the quantity vitated being gas 348,25, paraffine 484,05, tallow candle 933,00, and electric light none.

"The Cheapest Light" has been announced "The Cheapest Light" has been announced by the National Academy of Sciences as the subject of a paper to be acad before the purveyors of gas and electric light are instantly filled with apprehension of what this new rival might be that was to cut the ground from under their fact. The sort this new rival migne to that was game account for ground from under their fact. The new pense, however, was the third or the professor's paper, the was a supported to revolutionize the communicial states of the illuminant of the future, was a discretation on the light of the hrefly as viewed through a specenscope.

triscope.

The electric pool register has now been reduced to a practical basis. This instrument is for registering the arisber of tickets adopted the main and book. It consists of the disk of the horses in the race and the mainless of the horses in the race and the mainless of tickets and of the same and the mainless of tickets and the mainless of tickets of tickets and the mainless of tickets and the same manually of tickets and handle sex number of ticket sellers, and partie items are all recorded on a central dial. By means of this device seller in the grand stand can commicate any transaction to the dials in the betting booth at any moment.

In the face of the improvements which ms hoter can be caused our distinctly as well as the wants of a guest. An electric wide door opener may be so arranged as to-ical come the incoming friend with a plantal greeting, while the same phonograph to be trusted to discharge upon the way. book agent or the too precir

flow of language suited to the occasion. On the entrance of a tramp the push button could let loose the dog and urge him to the attack. In offices a similar device would be of supreme value—merely a mechanical bouncer to operate just ten seconds after the phonograph had informed the pestilent intruder that it was time to go.

intruder that it was time to go.

Storage batteries are coming into vogue for use in conjunction with incandescent lighting plants. Soveral central stations, after two years' experience of the combination, speak of it in terms of unqualified praise. An expert says: "I have learned leafs are the combination of the co praise. An expert says: "I have learned to look upon the storage battery as an able lieutenant to the incandescent dynamo, and to put in a good word for it wherever I go. I find that although a good many people do not care to introduce the storage system all at once, they quickly see the advantage of having the current on tap at all hours and yet only run their steam plant in the evening. The use of secondary batteries for lighting purposes were aventable, dealers. ing purposes may eventually develop at an extent we have now no conception of."

Items of Interest.

Man is the universal animal. It is esti nated that there are 1,500,000,000 of him on the globe. The sheep rank next with 500, 000,000; there are 300,000,000 cattle; 100, 000,000 hogs and 60,000,000 horses continue the list.

A French statistician makes out that there is room for 115,000,000 people more in Europe, 1,336,000,000 more in Africa, 1,402,000,000 more in Asia, 515,000,000 more in Oceanica and 2,000,000,000 more in North and South America

M. Durand-Greville, husband of the celebrated novelist, after making a careful study of the works of Rembrandt, expresses his conviction that the "golden and warm tone which covers the principal works of the master is due to the successive layers of varnish mixed with saffron and liquorice

Some years ago European dress began to come into vogue in Japan for women as well as for men, but a reaction has set in. The Japanese women are not sotisfied with the ordinary dress styles of civilization, but they are unwilling to return to their old dress, and hence they have been making a study of "rational dress advocated by the various feminine aress reformers."

The visit of the shah's first favorite wife The visit of the shah's first favorite wife to Europe will cost at least \$100,000 Her journey from Teheran to Vienna occupied four weeks and expenses were \$34,000. The fees of the two surgeons who attended her in Vienna and operated on her left eye mointed to \$3,000 and \$5,000 has been paid for \$500 in the left eye in the little of the villa at Franzenskal, where the little is to go for a month before where the litans is to go for a month before relations to Persia. The sultana, who is just 12, but who looks like a very aged wo may has impressed influence over the shah, who is developing the peration which she recently audit with the astrologers who advised the peration would assuredly have porney to Vic

Giving Shape to Feet.

Every one, but especially children, should woar properly-fitting shoes, no matter how common their material. They should be neith for too large nor too small, and should have low flat heels that must be promptly "right ed" as soon as they begin to wear to ones. !e.

If the toes of the foot show a tendency to overlap they should be rubbed with the hands to or twice each day; and if this names of or twice each day; and it this care-be given when the mirring commenter it will, as a rule, prove sufficient to correct any irregularities of this nature. If a nail is wayward in its growth, from them; light is wayward in its growth, frinist only light ly at the ailing corner, but fully at the opposite corner. If both corners grow too deeply into the flesh, chip them carefully and lightly, and then acrape the configuration from the tap to negligible. This is an additionally an and flexible. This is the correct refractory many the correct refractory many the correct refractory many than the corner of the corne

Athletes all the Gum ; healthful ar

LAUGHLETS.

The saddest words of tongue or pen are these sad words : "Say, lend me ten

Ladies attend baseball games in large umbers. They are on the lookout for a

good catch.

Ho.—"You never call me Birdie any more." She—"Still I think you are as much of a jay as ever."

"There is very little poetry in a lawyer's life, I can tell you." "Maybe. But lawyers are always writing versus."

"James, I am cleaning house, so be a good fellow and beat the carpet as usual."
No, I think I'll shake it this year."

Edith—"It's the little things that tell in this life." Alico—"Well, you'd think so if you had two small brothers, as I have."

A mother may have taper fingers, but her little wy, when corrected, does not consider her hand the lighter on that account.

Bilious—"I sleep in leathers, but I believe its unlealthy." Tuffint — What's that! Look at the Spring chicken; see how tough he is."

If the suggestion doesn't come too late in the season, why not make an effort to construct the spring cheken so as to secure more chicken and less spring.

"Why, George," she exclaimed, tremu-lously, as she felt his arm steal about her slender waist, "what are you doing?" "Try-ing to operate a belt line, dear."

McCormick—"I want two peached eggs n toast." Waiter—"Yes, sir." "And be are and have them fresh laid." "Yes, sir; on tonat." I'll have them laid on the toast, sir."

Popinjay—"They say that Mrs. Bigsby makes things hot for her husband." Dumpsey(who has breakfasted with Bigsby) "That certainly doesn't apply to his coffee"

Marriage in moderation is a good thing, but too much fit—well, too much of it is certainly apt to make a man sneaking, miscertainly apt to make a man sneaking, miscertainly apt to make a man sneaking and often hald round-shouldered and often His visage is cerulean-hued.

Because at home so much he's harried . Short sighted man, he wasn't shrew'd, That is to say until he married "My income is small," said a rather dil-

atory lover, "and perhaps it is cruel of me to take you from your father's roof. "But I don't live on the roof," was the prompt

response to met the social lims while in London?" He—"Can't say that I did, but I mot one in Africa once. And he wanted to invite me inside as soon as he saw me."

She-"There's that Englishmen coming; he seems upset about something. Heffrom the ranch)—"Very likely: I just told him a funny story and sard I would come again to marrow to hear him lanch over it." to-morrow to hear him laugh ov. r it

Fashion's Paradox. now not why, by folly whirled

Time Canal

You should be prone your charms to hare; The richer you grow in this world, The less you seem to have to weatr.

The less you seem to have to wear.

De Smith—"Is Ponsonby a begamist."

Travis—"A bigamist! Well, If guess not!

What made you think o?" Jibe Smith—
"Oh, I don't know. I thought I heard his wife telling somelody that Dr. Swin lem's Weed Tonic had made another dismanshaher."

She—"Am I the first wome loved." He—"I think you know the cover truly low if the control of the control o