

THE PHONOGRAPH.

The last three or four years have been most fruitful in the annals of extraordinary discoveries or inventions, and we are still apparently going higher up the form. First we had the telephone—still a thing of yesterday; next came the phonograph—still in its very earliest infancy; and now we are promised public exhibitions of the microphone. With this latter we can hear the most minute sounds, from the very smallest of insects, which are supposed to be mute, and can trace the peculiar and varying cries of each and all—their signal calls, their notes of passion and endearment, and in fact the whole social life of the insect world, even in minute forms which are scarcely visible to the naked eye, will be laid open to us. It is not our object, however, to speak of this invention now, but one still more wonderful—we mean the phonograph, or talking machine. The present phonograph is, however, a perfect talking machine. It certainly requires to be spoken to before it will answer, and will then only repeat the words which have been addressed to it, but this it does to the most minute inflection or variation of the voice; and with any sort of mimicry of song, or any imitation of the cries of man, bird, or beast; and, what is more, it records them all indelibly as it speaks.

A result so utterly marvellous is not very easy to describe, but the process by which it is accomplished is so simple that we hope we shall be able to make it plain to the general reader. The instrument, then, consists of a small hollow brass cylinder a little over five inches long and about four in diameter. This rests on a pivot at either end, and is turned by very ordinary clock work at a regular and slow rate. The cylinder, it must be mentioned, is grooved out with a fine spiral thread, so fine that it is not easily seen. Round this cylinder, and fastened on to it at the ends by a morsel of shellac, is a strip of tin foil which has to be renewed when the machine is being constantly spoken to every twelve or fifteen minutes. So far nothing can be simpler, and we think we can make the rest as plain. But what we have now to say is what is virtually the whole secret of the instrument, for all the rest of it, its clockwork and cylinder, are the commonest mechanical contrivances. But when all is ready and the cylinder slowly begins to turn there is put in front of it a mouthpiece about twice the size of an ordinary speaking-tube, which at its end is closed by an iron disc about two and a half inches in diameter, but so exquisitely thin that it only weighs a few grains. Through the centre of this passes a minute tongue, in shape like the tongue of a Jew's-harp, but so fine and small as to be scarcely visible. Very few of us are so old as not to well remember the days when we were boys, and when at school our only harmonic consolation, albeit a small one, was a Jew's-harp, which we all played, more or less, with equal difficulty. The modulations of sound which the movements of the tongue or the hollowness of the mouth caused on the tongue of the Jew's-harp, while its metal rested on the teeth, is precisely the starting principle of the phonograph. The metal disc represents the teeth, while the accents of the voice vibrate the little tongue. This tongue is placed just touching the revolving cylinder covered with the tinfoil, and as the person speaks through the tube it causes the tongue to tremble and make little dots or dashes, according to the intonation of the voice, or, in the case of a song, according to the time for which the singer dwells upon a note. All this time the machine remains mute and dumb, though every change of the voice has been recorded. To make it speak, you have but to shift one of its pivots aside, like putting in the stop of an organ, so as to start at the commencement again, when, exactly as the dots and dashes of the tinfoil meet the little tongue in passing, they cause it to vibrate in a precisely similar manner as it did when the sounds were given, and it returns them high or low, soft or harsh, exactly as they were delivered to the machine, though not quite so loudly. And this, it must be remembered, can be done, and has, we are told, actually been done, with the same tinfoil sheet more than a thousand times over. The opponents of the invention—for, like all new inventions, it has opponents—say that the foil plates will not last more than from twenty-five to thirty years; while its supporters, who are in the majority, uphold that the plates will be good for 250 or 300 years if only moderate care is used in their preservation. But on what does either party base its theory, considering that the invention is only about four years old, and is admitted now to be not even half developed or even well begun? One might as well predicate what would be the exact stature of an infant when it reaches twenty-one years, as to say what time will limit the development of this extraordinary instrument when experience has shown its powers. There is no valid reason why it should not be brought into connection with the telephone, which in its main principles as to the vibration of sound it much resembles. A person could send a message through the telephone to the phonograph, and in case of the intended receiver being absent, say for a week, a month—any reasonable time, in fact—he would find that on coming to the office, and giving the date and hour, it would be all clearly and verbally delivered to him as it was spoken. There is one clear use to which the phonograph could and should be immediately applied. Not many months pass during which we do not hear of the burning of some opera house or the other, in the conflagration of which all the scores of most valuable music are destroyed. These, if sung to

the phonograph, would be preserved ; for its records, if stored in a safe place, would always remain, and the machine would sing them to a note. It might also be used in copying other valuable manuscripts, which, though the original might be destroyed, would at least leave behind authentic copies, which are but too often neglected to be taken. Patti, too, might sing into the instrument her Shadow Dance, or "Batti, batti," and then what prices would not these instruments command ! We feel quite sure that some such progress in the invention as this will take place as time goes on. At present the cost of them is very small ; not more than £30 for the best, that is to say, the most ornamental, while others quite as good, but not so decorative, can be had for less than half that sum.

CURIOSITIES.—Judicious applause.
Unostentatious charity.
A German who dislikes beer and dogs.
A pedestrian who can't beat O'Leary.
An artist who is not jealous or cranky.
Perfect harmony in the love affairs of the fel-
line species.
A New York alderman who has not had
"one soft thing."
A true disciple of Izaak Walton who never de-
viated from the truth.
A mother willing to acknowledge the superi-
ority of a neighbor's child.
An Italian who can't play on something—an
instrument or our credulity.
A critic who did never carry, or was unwilling
to carry, a satchel from a stage entrance.

THE ENSUING ELECTIONS.

NOMINATIONS FOR THE HOUSE OF COMMONS.

The following nominations have already been made for the House of Commons; and as other nominations shall be made from time to time, we shall add them in order to give our readers an opportunity of learning the names of those candidates who have been nominated to contest the various constituencies at the approaching general elections:—

ONTARIO.

	<i>Opposition.</i>	<i>Ministériels.</i>
Addington.....	J McRory	Shibley
Algonia.....	Dawson	Baron
Bothwell.....	J J Hawkins	D Mills
Brant, N.....	J S Crawford	Gavin Fleming
Brant, S.....	A Watts	Patterson
Brockville.....	W. Fitzsimmons	Col Buell
Bruce, N.....	Lt.-Col. Sprout	J Gillies
Bruce, S.....	A Shaw	E Blake
Carlwell.....	Thos. White	Patullo
Carleton.....	Rochester	
Cornwall.....	Dr Bergin	Macdonald
Dundas.....	Ross	Laflamme
Durham, E.....	Col Williams	Lewis Ross
Durham, W.....	Col Cubbitt	Burk
Elgin, E.....	T Arkell	C McDougall
Elgin, W.....	M G Muoro	G E Casey
Essex.....	J C Patterson	W McGregor
Frontenac.....	G Kirkpatrick	
Glengarry.....	J McLennan	McNab
Greenville, S.....	Dumbrille	Wiser
Grey, E.....	D S Sproule	
Grey, N.....	S G Lane	Snider
Grey, S.....	Geo Jackson	Landerkin
Haldimand.....	Davin	D Thompson
Halton.....	McDougall	McGrawey
	{ Kilvert	Irving
Hamilton.....	{ Robertson	Wood
Hastings, E.....	Jno White	W Aylesworth
Hastings, N.....	M Bowell	E. D. O'Flynn
Hastings, W.....	L Wallbridge	Jas Brown
Huron, C.....	Platt	Horton
Huron, N.....	F Farrow	Dr Sloan
Huron, S.....	G Porter	Cameron
Kent.....	R Stephenson	H McMahon
Kingston.....	Sir J Macdonald	A Gunn
Lambton.....	J A Mackenzie	A Mackenzie
Lenark, N.....	Jos Jamieson	D Galbraith
Lenark, S.....	J Haggart	F Frost
Leeds and Gren-		
ville, N.....	Dr Ferguson	
Leeds, S.....	Dr Jones	Fredenburgh
Lennox.....	E Hooper	R J Cartwright
Lincoln.....	J C Rykert	James Norris
London.....	Carling	" alker
Middlesex, E.....	McMillan	Glass
Middlesex, N.....	Coughlin	{ Scotch rd
		{ McInnis
Middlesex, W.....	N Currie	G W Ross
Monek.....	McCallum	Edgar
Muskoka.....	O'Brien	Cockburn
Niagara.....	J B Plumb	Hughes
Norfolk, N.....	A Walsh	Charlto
Norfolk, S.....	Wallace	
Northumberland, E.....	Keeler	Bigger
Northumberland,		
W.....	Cockburn	Kerr
Ontario, N.....	W H Gibbs	Wheeler
Ontario, S.....	T N Gibbs	F W Glen
Ottawa City.....	Currier	Bangs
	Tasé	St Jean
Oxford, N.....	Norris	Oliver
Oxford, S.....	Gibson	Col Skinner
Peel.....	Win Elliott	W Smith
Perth, N.....	Heason	
Perth, S.....	Hornbrook	Trow
Peterborough, E.....	Burnham	Buck
Peterborough, W.....	Hilliard	Bertram
Prescott.....	{ Urquhart	
	{ Routhier	Hager
Prince Edward.....	Jas S McCuaig	Dr Platt
Renfrew, N.....	White	Jas Findlay
Renfrew, S.....	W Bannerman	McDougall
Russell.....	J O'Connor	Morgan
Simcoe, N.....	Little	Fletcher
Simcoe, S.....	McCarthy	Cook
Stormont.....	Fulton	Archibald
Toronto Centre.....	Hay	Macdonald
Toronto East.....	Samuel Platt	Galley
Toronto West.....	J B Robinson	Hadges
Victoria, N.....	Cameron	James McLennan
Victoria, S.....	A McQuade	John Connolly
Waterloo, N.....	Kranz	Bowman
Waterloo, S.....	Merner	Young
Welland.....	C Bunting	E Hersley
Wellington Centre.....	Dr Orton	J Robinson
Wellington North.....	Drew, Q C	Higginbottom
Wellington South.....	Goldie	D Guthrie
Wentworth North.....	Thos Stock	Bain
Wentworth South.....	Carpenter	Rymal
York East.....	Boulbee	Metcalf
York West.....	Wallace	Blain
York North.....	Dr Strange	Dymond

QUEBEC.

Argenteuil	J J C Abbott	Christie
Bagot	Mousseau	Dr Chagnon
Beauce	Bolduc	
Beauharnois	Cayley	Robillard
Bellechasse	Forgues	Larue
Berthier	Curthbert	Béliveau
Brome	S W Foster	E L Chaudler
Bonaventure	Dr Robitaille	
Chambly	Benoit	Willet
Champlain	Montplaisir	Fugère
Charlevoix	Amyot	Tremblay
Chateauguy	Laberge	Holton
Compton	Pope	Leonard
Chicoutimi & Sa-		
guenay	Cimon	Gagné
Dorchester	Kouleau	
Drummond & Ar-		
thabaska	Bourbeau	Rainville
Gaspé	Fortin	Tremblay
Hochelaga	Denjardins	L O David
Huntingdon		Scrivier
Iberville	Thibault	Béchar
Jacques Cartier	Girouard	Lafamme
Joliette	Baby	Godin
Kamouraska	Roy	Dumont
L'Assomption	Hurteau	Dr Forest
Laprairie	Pinsonneault	
Lévis	Blanchet	Fréchette
L'Islet	Fournier	Casgrain
Laval	Ouimet	De Salaberry
Lotbinière	Beaudet	Benier
Maskinongé	Honde	Desaulniers
Mégantic	Turgeon	
Missisquoi	Baker	Cloyes
Montcalm	Dugas	Deslongchamps
Montmorency	McKay	Langlois
Montmagny	Landry	Carbonneau
Montreal Centre	M P Ryan	Devlin
" East	Coursol	Archambault
" West	M H Gault	W Darling
Napierville		Coupal
Nicolet	Méthot	Turcotte
Ottawa, County	A Wright	Cameron
Pontiac	Poupeur	Murray
Portneuf	Valleé	De St George
Quebec West	McGreevy	Connolly
" Centre		Malouin
" East		Laurier
Quebec, County	Caron	Thibaudeau
Richelieu	Massue	Barthe
Richmond &		
Wolfe	Ives	Aylmer
Rimouski	Languevin	Dr Fiset
Rouville	Giguault	Cheval
St. Hyacinthe	Teliér	Mercier
St. Jean	C Loupret (Ind)	Bourassa
St. Maurice	Lacerte	Kernington
Shefford	Nichol	Huntington
Sherbrooke	Brooks	
Soulanges	Lanthier	Dr Masson
Stanstead	Colby	Johnson
Témiscouata	Grandbois	Pouliot
Terrebonne	Masson	
Three Rivers	McDougall	
"	Malhiot	
Two Mountains	Daoust	
Vaudreuil	Harwood	
"	Mongenais	Valois
Verchères	Ducharme	Geoffrion
Yamaska	Gill	

NOVA SCOTIA.

Annapolis.....	A Longley	Ray
Antigonish.....	McKinney	McIsaac
Colchester.....	McKay	Archibald
Cumberland.....	Dr Tupper	J R Duffus
Cape Breton.....	McDonald	McKay
Digby.....	J C Wade	Smith
Guysborough.....	A Ogden	Kirk
Halifax.....	{ Daly	Jones
	{ Ritchie	Power
Hants.....	Allison	Goudge
Inverness.....	Dr Cameron	B McDunnell
King's.....	Woodworth	Sorden
Lunenburg.....	Kaulbach	Church
Pictou.....	{ J McDonald	Carmichael
	{ Doull	Dawson
Queen's.....	Freeman	Forbes
Richmond.....	Benoit	Flynn
Shelbourne.....	Freeman	Hon Coffin
Victoria.....	Campbell	McDonald
Yarmouth.....	Flint	Killam

NEW BRUNSWICK.

Albert.....	J Wallace
Carleton..... Connell	Appleby
Charlotte..... Grimmer	Gilmour
Gloucester..... Burns	Anglin
Kent..... Renaud	McLeod
Kings..... J Domville	Sharpe
Northumberland..... Mitchell	Snowball
Queen's..... Wiggins	King
Restigouche.....	Haddow
St John City..... Tilley	DeVeber
St. John County..... { Palmer	Burpee
	King
Sunbury..... Armstrong	Weldon
Victoria..... Costigan	Burpee
Westmoreland..... Chapman	
York.....	Sir A Smith

MANITOBA.

Lisgar.....	Schultz	
Marquette.....	Ryan	
Provencher.....	Hon J Dubuc	Bannatyne
Selkirk.....	Morris	Smith

BRITISH COLUMBIA.

Cariboo.....	Thompson	
Westminster.....	McInnis	
Vancouver.....	Banster	
Victoria.....	De Cosmos	Roscoe
Yale.....	Dewdney	

PRINCE EDWARD ISLAND.

Prince.....	{ Howatt	Perry
	{ Haskett	Yeo
Queen.....	{ J C Pope	{ Sinclair
	{ McGill	{ Brecken
King.....	B de Ste Croix	{ Davis
		{ McIntyre

HUMOROUS.

LAME excuses seldom carry the crutches of plausibility.

A MAN who don't know anything will tell it the first chance he gets.

SOME of the papers say that "trade is looking up." Flat on its back, eh?

THE times are hard—everybody says so—but the wages of sin have not been cut down.

CORRESPONDENTS say that many of the summer resorts are short of men this season. Wouldst know the wherefore? The men are short themselves.

CHRISTOPHER COLUMBUS didn't discover America any sooner than all his sailors did, and it's mean to single one man out of a homesick crowd and call towns and streets after him.

It requires great moral strength and tenacity of purpose to enable a man to sleep till seven in the morning when an industrious fly has decided that he had better get up at half-past four.

THE gang of burglars who worked for seven straight hours to hammer a safe to pieces to secure fourteen cents, know something how a country minister feels next day after a donation.

It is a fact demonstrated beyond dispute that the person who is entirely alone when slipping down on the sidewalk is more hurt than if he were surrounded by scores of unfeeling people.

The New York *Express* says: "One thing the average man can't help noticing, and that is, while the yellow fever is striking right and left in the Southern cities, not one candidate for office has yet been struck."

AN Iowa editor thus acknowledges a present of grapes: "We have received a basket of grapes from our friend W., for which he will accept our compliments, some of which are nearly two inches in diameter."

A MAN in Minneapolis, who went to that city in 1856, a poor boy, friendless and penniless, went out recently to Lake Minnetonka and caught a bass weighing four pounds. Industry and perseverance always thrive.

A RESTAURANT patron was talking somewhat roughly to a waiter, when the proprietor stepping up, remarked: "Don't talk to him that way. He used to be Governor of Oregon, and such treatment naturally hurts his feelings."

"If," advertised a philosophical victim, "the person who took my overcoat was influenced by the weather, then all is serene; but if he did so from commercial considerations I am ready to enter into financial negotiations for its return."

"TRANSLATION" INDEED!—It is said of the furniture of a well-to-do literary adapter that it is supposed to have been "borrowed from the French."

AN album containing the photographs of the handsomest women in Europe figured at the International Anthropological Congress which was held at the Trocadéro recently.

MISS HELEN TAYLOR, daughter-in-law of John Stuart Mill, has been nominated for Parliament. This will test the present strength of the woman's movement in England.

FOR MALE READERS ONLY.—A woman who can take a mental inventory of another woman's street attire in half a minute will occupy an entire morning in telling her neighbour the details.

ONE of the strangest lessons taught by the late eclipse reaches us from Colorado. It is the possibility of ice crystals in the sun's atmosphere. Professor Hastings, a great authority in optical matters, arrives at the conclusion that these crystals exist.

IN consequence of his services being required at Cyprus by the London *Daily News*, the war correspondent, Mr. Archibald Forbes, has been compelled to cancel various lecturing engagements in the United States, which he had intended to fulfil during the autumn.

ART AT SEA.—At an auction art-sale the other day a marine view was about being knocked down to a handsome figure, when a bluff sailor, who had happened to wander in, exclaimed earnestly, "My stars, if there ain't a vessel drifting on to the rocks with a strong breeze blowing off shore!" The artist took his work home to re-arrange the wind.

THE two rooms occupied by Voltaire in his chateau at Ferney have been kept lovingly and reverently as he left them. His little sleeping apartment, with its trundle bed and its walls hung round with portraits—among them Milton and Newton—is exactly the same as when he died there a century ago. Unchipped, too, by Cook's tourists' knives is still the black sarcophagus in which his heart is interred.

WHAT WOULD THE DOCTOR SAY TO IT?—Law Court reform is somewhat needed in the Mofussil, if we are to credit a correspondent of the *Indian Daily News*, who, commenting on the administration of justice there, states he once had occasion to go to a court of justice as a witness. He found the magistrate cross-legged, smoking a "hubblebubble," picking his teeth a while, and hearing three cases simultaneously. And, as there was no Bible to be found on the premises, he had to be sworn on Johnson's Dictionary.

A CYPRIAN DISH FOR AN EPICURE.—Herr Franz Löher, a recent traveller in Cyprus, gives the native recipe for treating the beccafico, which abounds in that island. Plucked and cleaned, the tiny birds are ranged side by side in a jar, which is then filled up with Cyprus wine. When they have acquired the fine aromatic and “almondy” taste of the wine of the Commandery they are taken out of pickle and roasted. The result, according to Herr von Löher, is magnificent.

ANOTHER "COOL AS A CUCUMBER."—Cool as the late Charles Matthews appeared on the stage, he was rendered very nervous sometimes by loud conversation in the boxes when he was acting, and he was frequently obliged to address the offending parties or appeal to the public to protect him. In such emergencies he was sure to be applauded by the audience, who insisted on silence from the obtrusive characters. Once only was he worsted. An elderly gentleman had throughout the evening annoyed him with loud talking. During the last piece the old man rose in his box and was putting on his overcoat, still talking at the top of his voice, when Charles Matthews, unable to stand it any longer, addressed him—"I beg pardon, sir; the piece is not yet over." "Yes, I know; and that's the very reason I am going," replied the unabashed tormentor.