HARNESSING THE OCEAN.

HOW THE POWER OF THE WAVES CAN BE MADE TO DRIVE MACHINERY.

Air Now the Motive Power.

A project is nearing completion to utilize a portion of the vast power now running over Niagara Falls unemployed by man. But Niagara is a mere plaything to the ocean, its strength but as the strength of an infant to that of a god. A mere average hurricane will develop enough force in the ocean to drive all the locomotives, engines and other mechanical appliances that man has ever invented for an untold period of years, and a clever mechanician has a project to utilize it.

The name of this daring projector is or was Felix Starkenberg. Born near Stockholm, Swed n, in 1841, he died only last February, just when his daring project seemed to be on the eve of its own triumphant vindication. A machinist by trade, he came over to the United States in 1857, and for a number of years devoted his attention to the study of seawaves, especially in those natural V-shaped indentures in our rocky coast, where the inward rush of the waters propels them to a height of more than a hundred feet.

His first idea was to construct an apparatus that should receive the impact of the waves, and, closing upon them ere their downward descent, force them into an elevated reservoir or tank, where the immense body of water so collected could be stored for use in operating a water wheel or other motor. With this end in view he constructed a machine, which was duly patented. But further investigation showed him a much simpler and more practical method of attaining the same ends. He found that the impact of the waves was sufficient to compress air into a very similar apparatus, and that he air so compressed could be utilized as the motive power of machinery of all sorts.

A glance at the illustration will greatly aid in a comprehension of the manner in which the invention works.

As seen more evoccially in the outline drawing, the apparatus consists, first, of a receiving chamber (A), which has a broad, open end for the admission of water; second, of an air chamber or reservoir (B), secured on and to the receiving ch



THE MACHINE.

The operation of the apparatus is a follows:

Air enters at the broad open end of the receiving chamber, and is forced by the action of the waves which enter its open end and pass through the check-valve E end and pass through the check-valve E into the air chamber or reservoir, passing out through the pipe. The check-valve prevents the air from returning into the receiving chamber. Air, which is always present in the receiving chamber, prevents water from entering the secondary chamber. ary chamber.

SUCCESSFUL EXPERIMENTS. Nothing, in fact, can be simpler, and actus! experiments made on the Atlantic coast prove that the machine is as simple and effective in practice as it appears to be in theory. Of course the invention is still in its infancy, but it is impossible to say what future is before it if it fulfils the brilliant promise of that infancy. Its importance may be readily appreciated when it is remembered that there is practically no limit to the power obtainable on any sea coast where these wave motors are established. Never on its calmest days is the ocean so still that sufficient power may not be obtained for

sufficient power may not be obtained for driving machinery of any description.

Nor is the economy of the invention the least of the features that commend it to the commendation in the second of the it to the commercial intelligence. A plant can be erected at about one-third the expense of any other known method of obtaining power, and can be maintained at the most trifling cost.

I've read it over two or three times with dictionary at elbow, and think I with dictionary at eloow, and think I understand, in a general way, what he's driving at, but the quaint melody of it—that the wonderful word pictures which he draws—need no study. They dig their claws into the memory and stick. What aptitude in the reference to the offshore wind:

And then the mariners who plead with the Lord not to gather up the sea; they plucked their harps unhandily with thumbs rough and hard, and—

Loud sang the souls of the jolly, jolly mariners Crying: "Under Heaven there is neither lead nor lee.

Must we sing for evermore
On the windless, glassy floor?
Take back your golden fiddles and we'll beat for open

But the sailors' plea, seconded by the soul of Judas begging for his one cool day in the year, prevailed, and— Sun, wind and cloud shall fail not from the face of

Stinging, ringing spendthrift, nor the fulmar flying free. And the ships shall go abroad
To the glory of the Lord
Who heard the sily sailormen and gave them back
their sea.

Perhaps the poem hasn't any meaning and perhaps it doesn't need any, and perhaps its rather daring, but any of its critics would give a month's time to have written himself that line about the "bullmout hed breakers."

19 and 21 Richmond West. 26

Or to M

Bullding.

Bullding.

Love has no end: I love mamma, She loves my father I have found. My father loves me; so love goes Just round and round, and round and round.

the trings a letter addressed to "Dr. Olive W. Holmes," and addressed inside as "Dear Madam," to the famous "Autorat of the Breakfast Table," and yet this is what actually occurred in the mail of the Boston poet only a fortnight since.

Lady Burton tells of her leve for and married life with sir Bichard Burton in The Toronto Sunday World that will be published this evening.

A Colored Jack the Ripper. MEMPHIS, Tenn., Sept. 1.—Etta Ivy, a respectable colored girl, was outraged and murdered Wednesday by Andrew Wilkerson, a notorious negro desperado and exconvict. After killing the girl Wilkerson mutilated the body in a manner similar to the atrocities practised by Jack the Ripper. Wilkerson fled, but he is being pursued by more than 1000 negroes, who declare they will bust the brute to the stake. CIGAR? 300



Constipation, Sick Headache, Dyspepsia, Nervousness, AND DISTURBS THE SYSTEM GENERALLY. For all such ailments, and to impart a natural, healthy tone to the Stomach, Liver, and Bowels, take

AYER'S PILLS **Every Dose Effective**

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New shapes and styles of Fall Boots, easy, comfortable, durable; our own make of durable; our own make of New shapes and styles of Men's Shoes will always be Literary fame is a curious thing when found in great variety and extremely lew prices at

79 KING EAST. 26 The J. D. King Co., Ltd

Have You Tried the

NOTICE TO CREDITORS OF Richard Snelling, Deceased.

RE JOHN KERR AND SARAH Kerr, Deceased. Notice to creditors and others. Insuant to the statute in that behalf, notice by given that creditors and all others having sugginst the estates of the late John Kerpuntant, and Sarah Kerr, spinster, in the ime of the City of Toronto, in the County of the late of the City of Toronto, in the County of the late of the City of Toronto, in the County of the late of the City of Toronto, in the County of the late of the late

IN THE SURROGATE COURT OF the County of York. Notice to Creditors in the matter of the estate of William John Macdonell, late of the City of Toronto, in the County of York, Esquire, De-

Notice is hereby given, pursuant to the Revised Statutes of Ontario, Chapter 110, that all persons having claims upon or against the estate sof William John Macdonell, late of the City of Toronto, in the County of York, Esquire, deceased, who died on or about the fourth day of March, A.D. 1893, are required, on or before the fifteenth day of July, A.D. 1893, to send by post, prepaid, or deliver to Alfred E. Plummer, Manager of the Trusts Corporation of Ontario, Toronto, administrators with the will and codicils annexed of the said William John Macdonell, deceased, their Christian and surnames, addresses and descriptions and full particulars of their claims and statement of their accounts, and the nature of the securities, if any, held by them; and that after the said fifteenth day of July, A.D. 1893, said administrators will distribute the assets of the said administrators will distribute the assets of the said deceased among the parties entitled thereto, having regard only to those claims of which they shall then have notice, and the said administrators will not be liable for the said assets or any part thereof to any person of whose claim notice shall not have been received by them at the time of such distribution.

The TRUSTS CORPORATION OF ONTARIO, Administrators with the will and codicils annexed of William John Macdonell, deceased, the Moss, Barwick & Franks, their solicitors.

Dated at Toronto this 8th day of June, A.D. 1893.

Dated at Toronto this 8th day of June, A.D. 1893. Notice is hereby given, pursuant to the Revised

In order to wind up an estate there will be of-fered for sale, by Public Auction, with the ap-probation of the Official Guardian and subject to a reserve bid, by Oliver, Coate & Co., at "The Mart," No. 57 King-street East, Toronto. on Saturday, the second day of September, 1993, at the hour of twelve o'clock, noon, the following parcels:

Made in Round, Oval and Flat, All Sizes and Qualities.

Chas. Boeckh & Sons
Brush Manufacturers,
TORONTO. ONTARIO.

To be or not that has been agitating our minds, whether to have another inducement sale or not. We have decided in your favor and for the next week will sell

GAS,
ELECTRIC

AND
COMBINATION

At prices never touched before. Your time to buy is now. Come in and see

Mart, "No. 57 king-street East, Toronto, on Saturday, the second day of September, 1993, at the hour of twelve o'clock, ncon, the following parcels:

Parcel 1.—The premises known as stores Numbers 478 and 489, on the premises of Queen-street west. Toronto, near Denison-avenue, being part of Lot 5, Plan 65, fled in the Registry Office for the Western Division of the City of Toronto, having a frontage according to said plan of 100 feet, more or less, by a depth of 100 feet, on the premises are 2 two and one-half story brick stores and dwelling houses, which are well situated for retail purposes. This parcel will be offered first en bloc and then each store separately.

Parcel 2.—Vacant Lot Number 67. Plan 588, on the east side of St. Helen's avenue. Toronto, having a frontage according to Plan 038, on the south side of Vineavenue, Toronto Junction, having a total frontage according to said Plan of 171 feet by a depth of 170 feet, more or less.

Parcel 4.—Lot Number 67. Plan 58, on the east side of St. Helen's avenue Toronto, having a total frontage according to Said Plan of 171 feet by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or less, by a depth of 170 feet, more or les

H. LEAR & CO.,

19 and 21 Richmond West.

20

EN'S FOOTWEAT

The Learn is and see and application to FOY & KELLY.

No. 80 Church-street, Toronto, Vendors' Solicitors, Or to Messrs' MacLaren, Macdonald, Merritt & Shepley, No. 28 Toronto-street, Toronto.

Building, Toronto.

RUPTURE Lowest Market Prices Messrs. AUTHORS & COX, Manufacturers of Trusses, Artificial Limbs and Sur-gical Appliances, 121 Church-street, Toronto:

Church-street, Toronto:

DEAR SIRS, I am only too glad to inform you that the truss you, put on me two years ago was the means of curing me of a RUPTURE that I was troubled with for a long time, so that I was enabled to do almost any kind of work. I would not part with it for ten times its cost if I could not part with it for ten times its cost if I could not part another. If any person wishes more particulars send them to me. I will be only too glad to give them proof. Anything I can do to recommend your truss I am willing to do. Hop ing you may be spared to continue your noble work, I remain

MRS. JAMES FOWLER,

6

Church-street, Toronto:

DEAR SIRS, I am only too glad to means of the remains your trusp.

PRIVATE MEDICAL DISPENSARY complaints also.

DR. ANDREWS' FEMALE PILLS.—

They are nothing new, having been dispensed by the Doctor for more than 45 years. No experiment. Price one dollar, by mall on receipt of price and six cent stamp. Circulars free. Lettera answered ap is enclosed free of charge. Communication

Real Estate Exchange DICKSON & (INCORPORATED)

Commercial Sale Rooms

The first Auction Sale of Property will be held on the 14th September, for which entries are now solicited. A fee of \$5 charged for offering if no sale is effected. A certificate of all properties sold or offered for sale given under the Corporate Seed of the Total Carlot Seed of the Total Carlo

ate Seal of the Exchange.

The Rooms may be rented at any time for the Exhibition and Sale of Paintings, Sculpture and Works of Art and any Auctioneer preferred may be employed. Advances made on consignments sent for immediate sale. J. ENOCH THOMPSON,

Real Estate Exchange J. ENOCH THOMPSON, Pres't. 40 KING-STREET EAST Thursday, September 14, 1893

ELGIN SCHOFF, Solicitor for Exceutor, Dated at Toronto this 26th day of August, 1893.

C.M. HENDERSON & CO

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FOR SUMMER Cooking, Baking, Etc.

THE RIGHT KIND OF STOVE It is acknowledged by all who have used them that the

JEWEL' STOVES AND RANGES excel all others, and if you make but the slightest inspection of our samples you will agree with all the

KEITH & FITZSIMONS

NOTE-For the balance of the season we will sell these celebrated Stoves at a discount of 10 per cent.

111 King-street west.

COAL AND WOOD FOR PRESENT DELIVERY. P. Burns & Co.

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THE CANADIAN HOMESTEAD Loan and Savings Association. OFFICE: NO. 72 KING-STREET EAST, TO-RONTO. Money to Loan on First Mortgages. Principal may be paid monthly, quarterly or annually and interest charged upon balance only. Savings received and interest allowed.

JOHN HILLOCK A. J. PATTISON, President. 246 Manager.

Canadian Mutual Loan and In HEAD OFFICE - 51 Yonge-st., Teronto Money to loan in sums of \$100 to \$5000 on first mortgage security. 246

OPENING FALL SALE

THREE PRIVATE RESIDENCES, number of entries ALSO A QUANTITY OF

Tuesday, Sept. 5, at II a.m.

TERMS CASH. Dickson & Townsend, Auctioneers DICKSON &

AUCTION SALE . Of Fine Collection of DEER HEADS, HORNS Sept. 12, but

STUFFED BIRDS, ETC. all Beautifully Mounted, at Our 22 KING-STREET WEST. On Thursday, Sept. 7th will be given. This is one of the Best Collections ever offered for public competition in this city, and has been very much admired. Now on view.

Sale Positive. Terms Cash.
DICKSON & TOWNSEND,
Auctioneers. DICKSON & TELEPHONE TOWNSEND

MORTGAGE SALE.

Inder and by virtue of the power of sale con aed in several mortgages, which will be pro-ced at the time of sale, there will be offered sale by public auction by DICKSON & WNSEND at their rooms, 22 King-street west, ronto, on Saturday, September 9th, 1893, at o'clock noon, the following valuable freehold properties: he trouble would nave been saved.

Our stock is so large and so varied we are sure of satisfying the most exacting the most exacting the satisfying the satisfying

sarcressiti; thence easterly along said south limit of feet 9 inches to the west limit of Givens-street. Percent of the control of degrees 26 minutes west find the second of the control of the control of the place of beginning.

On said premises is erected a row of brick-fronted Tougheast dwelling houses known as mumbers 13, 14, 15 and 18 (blevens-street as wildened, distant 20 feet 3 inches to the west limit of Givens-street seems, and the control of the control of

BULL & WERRETT,
Vendor's Solicitors,
57 Adelaide street east.
Dated at Toronto this 17th day of August, A.D.
Aug. 19, Sept. 2, 9.

MYCFARLANE & G

AUCTION SALE OF VALUABLE So

Under and by virtue of the power of sale con

OFFICES TO RENT

MANUFACTURING PREMISES

WM. S. THOMPSON,

Owing to the great

is receiving for his next great sale, land the fact that a number ing to use their

HORSES AND

CARRIAGES TELEPHONE TOWNSEND until after the Exhibition, it will not be held on date advertised

At a Future Date

DICKSON &

TELEPHONE TOWNSEND PUBLIC NOTICE Is hereby given that the Steam Yacht "Rosamond," now lying on the Polson's premises, Es-planade-street, will be sold by Public Auction at our Rooms, No. 22 King-street west, on Tuesday, 12th Day of Septem-

At 12 o'clock noon, UNLESS the charges for storage due on the 1st January last are sooner paid. For the Vendors. DICKSON & TOWNSEND.

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DICKSON & TELEPHONE TOWNSEND Electric Motors from 1-8 to 10 H.P.

MORTGAGE SALE OF VALU-able Freehold Property in the City of Toronto.

AUCTION SALE OF PROPERTY on Sully-street, in the City of Toronto.

Sor less, and more particularly described in said mortgage.

This parcel consists of a good well-finished 2½ story solid brick house, known as No. 302 on the west side of Crawford-attrect. The building is 16x30 feet, with an extension 13x16 feet; contains 8 rooms and bathroom, with hot and cold water, etc., also good cellar with furnace. PARCEL II—Lot No. 45 on the east side of Wardell-street, according to registered plan 372. This parcel has a frontage on the east side of Wardell-street, according to registered plan 372. This parcel has a frontage on the east side of Wardell-street of the partition wall betwee two houses; thence easterly along a line draw, through the centre of said partition wall and the prolongation thereof one hundred and two fees six inches to a point and No. 93 contains 8 rooms; both houses are nicely papered. There is a good 2-story frame stable in rear of 93.

For further particulars and conditions of sale apply to the auctioneer, or to

New Crop of Roses Just in Refrigerators & Cooling Rooms Close to Post Office, 55x80 feet. Three stories, folid brick, good yard, to rent at low rent for a term of years.

New Crop of Roses Just I FRESH FLOWERS OF ALL KINDS
Funeral Emblems a Specialty. Orders promp FRESH FLOWERS OF ALL KINDS
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Lots of summer left yet. It will pay you to get the best. They are always the cheatest. Get the Arctic. Everybody says they are the best made. Get one and see for yourself. JAMES PAPE 9% Adelaide-street East. Youge 246 N.B. Flowers Embalmed

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of which due notice REDUCED FARES ON ALL RAIL WAYS AND STEAMBOATS. OPEN DAY AND NIGHT. ADMISSION 25c. For Price Lists and all information apply to

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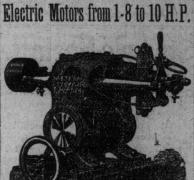
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Taronto, 24th August, 1893.

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WITHROW & HILLOCK

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All sizes in stock at our city warerooms.

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We have just received the last shipment of Glass for this summer and our stock is now complete in all sizes and qualities. Get our prices.

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