Huron Signal.

WEEKLY EDITION

W. F. FOX, Editor and Proprietor. "The Greatest Possible Good to the Greatest Possible Number."

$1.00 PER ANN. IN ADVANCE, $2.00 AT END OF YEAR.

GODERICH, ONTARIO, D. C., THURSDAY, JUNE 23, 1870.

VOL. XXIII.—NO 22

Business Directory.

Dr. P. A. McDougall

WILL BE AT HOME FOR CONSULTATION up to 11 o'clock, a. m. every day. Will visit tients at any hour afterwards, night or day w49

G. C. Shannon M. D.

PHYSICIAN, SURGEON, &c., &c., GODERICH, C. W. 13:40-1y

DR. McLEAN.

PHYSICIAN, SURGEON, CORONER, &c. Office and Residence third door east of Central School. 49

G. M. McMICKING, M. D.

LICENTIATE COLLEGE PHYSICIANS AND SURGEONS, C. E. Residence, the house formerly occupied by Mr. J. F. C. Haldan, Elgin Street.

DR. CASSADY,
(of McGill College)

PHYSICIAN, SURGEON, &c. Office, over his Drug store, Goderich, Ontario. sw102

J. F. Danter, M. D.

SURGEON, ACCOUCHEUR, Homœopathic Physician, and Medical Electrician. Examining Physician of the Atlantic Mutual Insurance Company of Albany, N. Y.

☞ Office and Residence Park st., St. David's Ward, Goderich. 1yw42*

Medical.

RICHARD MOORE, PHYSICIAN, SURGEON AND Accoucheur, Manchester, C. W. February 7th, 1867. w3yr

M. NICHOLSON,
SURGEON DENTIST.

Rooms over the Post Office, West Street, Goderich.
November 27th, 1869. w45-tf

Ira Lewis,

BARRISTER AND ATTORNEY-AT-LAW, AND Solicitor-in-Chancery, County Crown Attorney, Goderich, Canada West. Office in Court House. v14n40

M. C. Cameron,

BARRISTER, ATTORNEY, CONVEYANCER, &c., Kingston st., Goderich, Ont. w49

Cameron & Garrow.

BARRISTERS, SOLICITORS IN CHANCERY, &c. Office, Kingston street, Goderich.
M. C. CAMERON. w52 J. T. GARROW.

John H. Gordon,

ATTORNEY-AT-LAW, SOLICITOR IN CHANCERY Notary Public, Conveyancer, &c., &c., Goderich, Ont., office, on the south side of West Street, third door from Court-House Square. w49

Isaac F. Toms,

BARRISTER, ATTORNEY-AT-LAW, SOLICITOR in Chancery, &c., Goderich, Ontario. Office—Crabb's block, Kingston street sw77.

Doyle & Squier,

BARRISTERS AND ATTORNIES, SOLICITORS-in-Chancery, &c. Goderich, Ont.
H. L. DOYLE. sw5 W. R. SQUIER, B. A.

Hays & Elwood,

BARRISTER & ATTORNEYS-AT-LAW, SOLICITORS in Chancery & Insolvency, Conveyancers, &c. Money to Lend. OFFICE: Crabb's Block, over Mr. Archibald's Store. sw37

William R. Bain, B. A.

CHANCERY AND LAW OFFICE, CRABB'S NEW buildings, Kingston, Street Goderich.
N. B.—Conveyancing, Money lent on reasonable terms, Disputed and defective titles to real estate quieted. Goderich, Dec. 24 1866. sw34

P. F. WALKER, Attorney-at-Law, Conveyancer, Notary Public, &c.
Office of the Clerk of the Peace, Court House, Goderich Ontario sw94

T. B. Stokes,

AGENT FOR STRATFORD AGRICULTURAL works (Joseph Sharman, proprietor). Residence, Agricultural w11-1y

S. Malcomson,

BARRISTER ATTORNEY, SOLICITOR, &c., &c. Clinton, Ont. w35
MONEY TO LEND.

Strong & Squier.

REAL ESTATE AND INSURANCE AGENTS, NO. 6, Arcade Building, Buffalo, N. Y.
ANDREW C. STRONG, Attorney at Law. H. R. SQUIER.
Nov 13th 1869. w43

D. McDougall

LICENSED AUCTIONEER, BAYFIELD, County of Huron. Sales in village or country punctually attended to. w9-1yr8

L. B. Hamlin,

CIVIL ENGINEER AND SURVEYOR, LAND Agent and Conveyancer, Kincardine. 1

HAZLEHURST & COOKE
AUCTIONEERS,
COMMISSION AGENTS, & C., &C.
Crabb's Block, (VanEvery's old stand)
KINGSTON STREET, GODERICH
ONTARIO.

☞ Sales in town and country punctually attended to.
Goderich July 12th 1869. w24

FREDERICK ARMSTRONG,
LAND AGENT, VALUER, &c.
WEST ST., GODERICH.

MONEY TO LEND,
Agent for the Canada Landed Credit Co., and the Imperial Building, Savings and Investment Co.

Farms for Sale

Crown Land Patents taken out. Debts Collected.
Goderich, Oct. 1st, 1869. sw4-tf

Auction & Commission.
GODERICH & CLINTON
Established 1852.

SALES of Miscellaneous Property in Goderich every Saturday, and in Clinton every Wednesday.
Money advanced on Property for immediate sale and prompt returns made.
Farm Stock and other Sales punctually attended to throughout the County,

G. M. TRUEMAN'S Auction Mart,
w61 Market Square, Goderich

CHEESE, CHEESE.

Shephard & Strachan,
GROCERS, GODERICH.

HAVE been re-appointed sole agents at Goderich for the sale of the celebrated Exeter Factory Cheese.
Local dealers supplied at the Factory Prices.

SHEPHARD & STRACHAN.
Goderich, May 27, 1867. w194f

Money to Lend.

ON very reasonable terms Apply to
L. DOYLE.
Savage's new Block
Goderich, 9th Jan. 865.

Agents, Read This!

WE WILL PAY AGENTS A SALARY of $30 a week and expenses, or allow a large commission to sell our new wonderful inventions. Address,
w67 W. WAGNER & CO., Marshal, Mich

Business Directory.

EDWARD SHARMAN,
BRICKLAYER,
PLASTERER AND SLATER,

STILL continues to do any work in the above branches on reasonable terms. Whitewashing and Jobbing attended to promptly. Parties building through the country who desire to put on a **Substantial Covering** would do well to correspond with the subscriber, and have their Houses covered with **Slates**, as they will find them cheaper than any other covering in the end.
Goderich, 19th March, 1870. w8-3m

S. R. M'DOUGALL,

PRACTICAL VETERINARY SURGEON, Goderich. Veterinary Medicines always on hand.
Will be in Dungannon every Wednesday, and at Lucknow every Thursday and Friday.
*** Horses examined as to soundness. ***
sw56-2m

IMPORTANT NOTICE.

F. R. MANN,
House Sign & Carriage Painter.

DESIRES TO ACQUAINT THE PUBLIC THAT he has fitted up a shop on North street next to the Wesleyan Methodist Church, with varnish room attached where he is prepared to fill all orders promptly, and at reasonable prices. Thankful for the patronage of the last 7 years solicits a continuance of the same.

Now is the time to Paint your Cutters, Sleighs, and Carriages.

☞ Orders from country Carriage shops attended to with dispatch.
Sign Painting, Gilding, Graining, Glazing, Paper-hanging, &c., &c.
F. R. MANN.
Goderich, Nov. 8, 1869. w42

HURON HOTEL,
ZURICH, CO. HURON.

JOHN PRANG, - - Proprietor.

This house is fitted up with every convenience for the travelling public.
☞ Good Stabling and prompt attendance.
February 1st, 1870. w2-tf

MRS. DAYS' HOTEL
WROXETER.

ON the direct road from Seaforth to Walkerton. Every necessary accommodation for the travelling public.
HANNAH DAYS.
Wroxeter, Nov. 5, 1867. w4

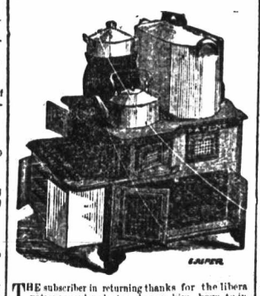
COLBORNE HOTEL,
GODERICH.

E. MARTIN, Proprietor.

Good Accommodations. Ample Stable Room.
☞ This is admitted to be a First class house kept in Good Style.
Dece 20th 1870. sw44-tf

Commercial Hotel, Mitchell C. W

JOHN HICKS, Proprietor. This is the largest and best Country Hotel in Western Canada, and charges as moderate as any House in Mitchell. Stage Proprietor. Goods stabling for 100 Horses. Horses and Carriages for Hire, on Shortest Notice. 14-7



THE subscriber in returning thanks for the liberal patronage so long bestowed upon him, begs to inform his numerous customers and the public generally, that in consequence of the late fire, he has removed his business to the store formerly occupied by Mr. Booth, West street, next Bank of Montreal, where everything in his line will be found and

All Kinds of Job Work will be Done
the same as usual,
G. N. DAVIS.
Goderich 29th March

SASH AND DOOR FACTORY.

THE undersigned having purchased the Planing Mill and Sash Factory owned, and occupied by Donald Cumming, are now prepared to carry on the business of manufacturing

Sash, Doors, Blinds, Mouldings, Flooring, Siding,
and all kinds of
CIRCLE WORK,
such as Circle and Gothic Sash and Frames

They think from their experience in Factory Work, that they can give satisfaction to all who may favor them with a call.
N. B.—A liberal discount to the trade.
20,000 feet of Dry inch and a quarter Flooring on hand.
JAS BUCHANAN,
DAVID LAWSON,
WM. ROBINSON.
Goderich, March 4th, 1867. sw55

ALLAN P. MACLEAN,

TAILOR & CLOTHIER,

HAS JUST RECEIVED A LARGE
ASSORTMENT OF CLOTHS

Consisting in part of West of England Broadcloths, Beavers, Whitneys, Bearskins, Fancy English, Scotch, and French Tweeds, Cashmeres, Doeskins, and a variety of Canadian Cloths; Plain, Satin, and Flowered Vestings, Shirts, Gloves, Caps, &c., &c.
He feels confident of giving satisfaction to all who may favor him with their orders.

TWEED SUITS (all wool) $12 and upwards.
☞ N. B.—Cutting done to Order. ☜
Goderich, Sept 25th, 1866 sw8

Business Directory.

NOW IS YOUR CHANCE

CRABB'S BLOCK, KINGSTON STREET,

Prices to Suit the Times!

Photographs reduced to $1.00 per Doz.,
OR 75cts. PER HALF DOZEN.

Large Photograph Reduced in Proportion.

Also will make the largest Photographs made in Goderich, very cheap. Porcelain pictures from one dollar upwards!
D. CAMPBELL'S
Photograph Gallery
Goderich, Oct. 19th, 1869. w27

THE
Oldest Establishment in Town.

MARTIN AMANN

BEGS TO INFORM HIS OLD CUSTOMERS that he is till able to sell for cash, at the owest rates,

ALL KINDS OF FURNITURE,

At his shop on Kingston Street, opposite the Huron Hotel, Goderich. Give him a call.
Goderich, Oct. 3, 1868. sw11w37.

PHOTOGRAPHS
$1.00 Per Dozen.

HALF DOZEN FROM BACK NEGATIVE 51 cents, postage free. One dozen from back negative 87 cents, postage free, to any address.

☞ Particular Attention paid to Copying old Ambrotypes.

For either large or small photographs. The subscriber in returning thanks for the liberal patronage heretofore extended to him, would just say that he has made such improvements in his gallery as will merit a continuance of the same.

☞ A Great Reduction on Large Photographs.
E. L. JOHNSON.
Goderich, Oct. 26, 1869. w44tf.

Sign of the big Broom.

BROOM FACTORY
AND
GROCERY STORE.

THE Subscribers have removed their Broom Factory to the premises in rear of the Store formerly occupied by Mr JAMES THOMSON (two doors South of the Huron Hotel), on Kingston street, and beg to intimate that having facilities for purchasing broom-corn in the cheapest market, and having secured the services of a first-class broom-maker, they are now turning out

AN EXTRA HEAVY BROOM and Whisk
OF THE
BEST QUALITY & WORKMANSHIP

which they are selling as cheap as any manufacturer in Hamilton or Toronto;

Both Wholesale & Retail.

They have also purchased the balance of Mr James Thomson's

Stock of Groceries!

and made large additions thereto, and intend to carry on (in his old stand) a first-class

Family Grocery Business on the CASH PRINCIPLE.

A complete assortment of
Teas, Coffees, Sugars, Fruit, Spices, Flour, Feed., Potatoes,
&c., &c., always on hand at the **Lowest** Prices and delivered in Town.

Only one call required to secure a continuance of Public Patronage.

COX & McDONALD,
Kingston Street.
N. B.—Farm Produce taken in Exchange for Goods
February 7th, 1870. w40-tf

FIRE & MARINE INSURANCE.

PHŒNIX FIRE ASSURANCE COMPANY of London, England, established in 1782, one of the oldest, largest and best offices in Canada.
HORACE HORTON, Agent

PROVINCIAL INSURANCE COMPANY of Canada, Head office, Toronto. Will take risks on Country and City property. Marine risks taken at as low rates as any other first class office
HORACE HORTON, Agent.

MONEY TO LOAN.

$20,000 on good farm security payable from from one to twelve years. No interest retained in advance.
HORACE HORTON, Agent.
Goderich, March 31, 1868

MONEY TO LEND.
EASY TERMS.
J. B. GORDON.
Goderich, Jan. 14th, 1868. w51

Money to Loan on Real Estate,

APPRAISER to the Trust and Loan Company of Upper Canada.
M. TRUEMAN,
w9 Market Square, Goderich

Stoves! Stoves!

EAVE TROUGHS & CONDUCTING PIPE,
CISTERN PUMPS, LEAD PIPES, &c., &c.

PLAIN AND FANCY
TIN WARE,

COAL OIL,
WHOLESALE AND RETAIL.

☞ Coal Oil Lamps, &c. &c. Old Iron, Copper, Brass, Wool Pickings, and Sheep Skins taken in exchange.
J. & J. STORY,
☞ Sign of the Large Coal Oil Barrel,
Goderich, March 1st, 1867 6-

MONEY TO LOAN
At Reduced Rates, on
Improved Farm & Town Property

For Periods extending from **Three to Ten Years**, to suit Borrower. Repayable in Monthly, Half Yearly or Yearly Instalments, by the

Imperial Building, Savings & Investment Co.
OFFICE—50 Church Street, Toronto.

PRESIDENT.
JOHN CRAWFORD, Esq., Q. C., M. P.
VICE-PRESIDENT.
JOHN GORDON, Esq.
DIRECTORS.
JOHN CRAWFORD, Esq., Q. C. M. P.
JOHN GORDON, Esq., Messrs Gordon & Mackay.
J. G. HARPER, Esq. Manager Merchants' Bank.
JOHN TURNER Esq., Messrs Seasons, Turner & Co.
JOHN FISKEN, Esq. Messrs J. Fisken & Co.
NOAH BARNHART, Esq. Merchant
JOHN MACNAB, Esq. Messrs Lyman & Macnab.
DALRYMPLE CRAWFORD, Esq., Messrs D Crawford & Co.
SOLICITOR.
G. D'ARCY BOULTON, Esq.
SECRETARY & TREASURER.
B. MORTON, Esq.
Bankers—Merchants' Bank of Canada.

☞ The full amount of the Loan is advanced without Deduction. Conveyancing charges reduced to the very Lowest Rates. Agent at Goderich.
w10tf FREDK ARMSTRONG, West Street.

WASHING MACHINE!

A PERFECT GEM.

Price only $2.00 each

THE SUBSCRIBERS OFFER FOR SALE "A little wonder the Washing Machine" patented and manufactured by Israel Kinney, of Woodstock. It is the cheapest machine ever invented; can be attached to any ordinary washtub; can be adjusted by springs to suit either light or heavy goods; washes as rapidly and efficiently as more cumbersome and costly machines; and does less injury to the clothes; and leaves them nearly as dry, if desired, as a regular Wringer. The low price of $2 brings it within the reach of any family. With it any housekeeper can do her own washing without either getting sore hands or an aching back.

Call and See the Machine
AT ROBINSON & YATES'
Market Grocery
Goderich, 28th Dec., 1869. w49

NEW CABINET
AND
UPHOLSTERING SHOP,
WEST STREET
OPPOSITE BANK OF MONTREAL,
GODERICH.

ERIC McKAY,

WOULD RESPECTFULLY ANnounce that he has opened a new shop in the above line, on West Street, opposite the Bank of Montreal, where he will keep constantly on hand or make to order

FURNITURE OF ALL KINDS.

Having on hand an assortment of Upholstering material, he will be prepared to fill promptly all orders in that line.
☞ A quantity of Gilt and Rosewood Mouldings on hand.

Picture Framing to Order.

☞ He trusts by strict attention to business to merit a share of public patronage.
Goderich, Nov. 17, 1869 w44-tf

REMOVAL.

ALEX. WALLACE,
WATCHMAKER
AND JEWELER,
WEST STREET,
GODERICH.

THE Subscriber having removed to the Store lately occupied by A. Naysmith, West Street, opposite the Post Office, wishes to thank his friends and the public for the liberal support with which they have favored him for the last 25 years, and begs to assure them that no effort will be spared to merit a continuance of their patronage, his anxious study will be to supply

Watches Clocks and Jewelery

which will give satisfaction to the purchaser, and as all work has been done by myself, customers may depend on having it well executed.
☞ A good assortment of Gold and Plated Jewelry, Watches, Clocks &c., always on hand.
ALEX WALLACE.
Goderich Oct. 28th 1868. w40

Feed! Feed!!
JUST RECEIVED
AT
Shephard & Strachan's,
20 TONS OF BRAN, SHORTS, & Midlings,
WHICH THEY WILL
Sell Cheap for Cash.
Goderich, June 7th 1869. w19-tf

Statistics of Goderich Gaol.

We are favored by Mr. Campaigne with the following very interesting statistics, giving the nature and number of the crimes committed, and the trades and nationalities of the criminals for the past 20 years:—

CRIMES.

Debtors	373
Drunkenness	516
Assaults	314
Thefts of all kinds	258
Murders and suspicion of	38
Arson do	32
Forgery	10
Perjury	14
Incest	2
Bigamy	1
Infanticide	5
Buggery	2
Bestiality	2
Rape	15
Burglary	1
Seduction	3
Treason	2
Manslaughter	8
Horse Stealing	23
Sheep Stealing	4
Threatening Language	56
Scuttling a Vessel	1
Contempt of Court	32
Disorderly Conduct	15
Riots	26
Leaving Employer	12
Refusing to do Statute Labor	10
House Breaking	4
Witness for the Crown	3
Fighting	7
Taking forcible possession	7
Insanity	136
Destitution	41
Vagrancy	26
Trespassing	28
Shooting a dog	1
Abduction	2
Injury to property	13
Breach of Promise	2
Destroying a Note of hand	1
Removing goods & chattels illegally	4
Cruelty to animals	3
Bound in articles of the Peace	13
Pulling down a House	1
Selling without License	13
Refusing to pay fine	15
Breaking out of Ship	6
Fraud	14
Counterfeiting	1
Passing bad money	1
Indecent exposure	7
Insubordination	1
Obstructing the highway	2
Detaining a boat	1
Maiming an ox	1
Enticing to enlist	1

NATIONALITIES.

Ireland	708	France	11
Canada	519	Wales	4
Scotland	393	East Indies	2
England	325	Poland	2
United States	78	Switzerland	2
Germany	40	Jamacia	7

TRADES OF CRIMINALS.

Farmers	725	Gunsmiths	2
Laborers	599	Wheelwrights	8
Carpenters	90	Watchmakers	5
Blacksmiths	47	Butchers	3
Shoemakers	65	Doctors	9
Merchants	45	Hunters	4
Sailors	76	Cabinetmakers	15
Tailors	30	Sawyers	7
Fishermen	28	Ministers	1
Painters	17	Turners	8
Innkeepers	27	Millwrights	3
Millers	8	School Teachers	3
Gentlemen	16	Plasterers	8
Clerks	32	Soapmakers	2
Bailiffs	2	Agents	3
Distillers	3	Machinist	2
Engineers	6	Baggage masters	2
Stone masons	19	Currier	1
Bricklayers	18	Toll-keepers	1
Weavers	8	Drovers	2
Bakers	12	Medical students	2
Wagonmakers	8	Auctioneers	2
Farriers	8	Dairyman	1
Ladies	29	Brickmakers	2
Dressmakers	32	Tanners	4
Tinsmiths	7	Nurserymen	4
Barbers	4	Lawyers' Clerks	3
Moulders	3	Soldiers	9
Printers	11	Marines	8
Pumpmakers	4	Gamblers	3
Coopers	11	Lecturers	2
Saddlers	10	Reporters	3
Contractors	4	Commercial trav.	1
Gardeners	2	Ropemaker	1
Pedlars	3		

Total prisoners of all classes from January 1st, 1850, to 31st Dec., 1869...2128.

GODERICH HARBOR.

From the report of John Page, Esq., Chief Engineer of Public Works, employed to select a proper site for a Harbor of Refuge on Lake Huron, we cull the following interesting paragraphs respecting Goderich Harbor:—

Lake Huron

The prevailing winds over a large portion of this continent being westerly, the Canadian shores of the lakes, but specially those of Lake Huron, are peculiarly open to their influence.

On this lake it has been observed that the heaviest storms are generally from the north-west. At such times the central portion of the east coast receives the full sweep of the sea from Mackinaw Straits, a distance of over 170 miles; and the lower part is equally open to gales from the direction of Saginaw, a distance across the lake of fully eight miles.

From Cape Hurd (7¼ miles south of the lighthouse on Cone Island, at the entrance of the Georgian Bay) to Chief's Point, a distance of forty-five miles, the general bearing of the shore is south-easterly. It is for the most part rocky, rugged in outline, and studded with numerous islands.

From Chief's Point to Point Clark the coast tends towards the southwest, and in this distance of forty-eight miles there is only one island of any considerable extent. From Point Clark to what is called Lakeview, the course of the shore is almost due south for fully 50 miles, when it again takes a south-westerly direction for forty-three miles the mouth of the St. Clair River. The total distance between the places mentioned being about 186 miles.

The greater part of this shore presents an irregular line of clay bluffs, which at Goderich are about 120 feet high, but towards the north their elevation diminishes, and at many places there are long gradual inclinations from the lake up to the adjoining table land.

These banks overlie the limestone, which is exposed at various places near the shore and also at or near the outlet of several streams.

The only rivers of any considerable extent which flow into the lake on its eastern side are the Saugeen and Maitland. The former of these drains an area of about 1,400 square miles, and the latter about 600 square miles of country.

Notwithstanding that these rivers are liable to heavy spring freshets, they do not bring down so large an amount of detritus as descends in streams of much less magnitude on the north shore of Lake Erie.

This should be especially borne in mind as it forms a distinguishing characteristic of the difficulties to be encountered in the construction of harbors on these lakes.

Being fully convinced that any place on the coast, between Chief's Point and Cape Hurd (no matter what natural advantages it might possess,) would be much too far to the north and east of the general track of vessels engaged in the trade to be of service as an asylum harbor; my investigations were principally directed to localities lying to the southward.

Having made these general remarks, it is now proposed to describe the different places which have been surveyed and examined.

The soundings or depth of water stated as existing at the various places mentioned, are in all cases (unless specially stated) those found in the fall of 1868, when the level of the lakes was unusually low.

* * * * *

"*Goderich Harbor* is situated at the mouth of the River Maitland, sixty-three miles north-east-by-north from the entrance to the St. Clair River, and twenty-three miles south-half-east from Point Clark Light-house, which is about thirty-six miles south-west-by-south from the Saugeen River.

The Maitland is a stream of considerable size, and drains a large extent of country, but the valley through which it passes is generally narrow until within about two miles of the Lake, where it quickly widens out to a width of from a quarter to half a mile.

Through this flat the river winds, at low water in numerous channels, amongst a series of islands into the harbor. Some of these islands are quite large, others of small area; but most of them show indications of having been formed by the detritus brought down from higher levels by the action of the stream.

They are liable to change their shape by cross-currents, produced by heavy freshets, which at times submerge the whole bottom of the wide portions of the valley, and many of the works constructed along its margin.

Along the inside line of the present beach of the lake there is a water surface a distance of fully 1,600 feet between the high, and at most places, steep banks which form the sides of the basin, and about half a mile further up stream the width is 1,000 feet. This area, containing 77¾ acres, may be subdivided as follows:—

Islands which stand from 3 to 6 feet over water surface, occupy a space of	20¼ acres
Space covered with water from 1 to 6 feet deep, probable average 2½ feet depth	53
Water space from 6 to 10 feet deep	3
Area of water from 10 to 15 feet deep	4¼
	77¾ acres

The space last mentioned as containing 4¼ acres lies south of the range of the south pier, and constitutes what may be called the extent of the inner harbor.

This, together with the whole area of the river's outlet, as well as the flats above described, are shut in on the southern and northern sides by high clay and gravel banks which on the lake shore are quite bluff, and stand about 100 feet over the water surface.

The entrance is formed by two lines of piers, placed 1 4 feet apart, which run out in a direction W. S. W. from the shore.

The north pier is of open cribwork, 1,216 feet long; has a row of sheet piles driven along its outer face, and extends out to a depth of from 13 to 14 feet, and 600 feet beyond the line of the present north beach, which appears to have formed fully 500 feet since the improvements were made.

The south pier consists of two longitudinal lines of piles, 20 feet apart, each range being driven close together, and secured by wall pieces, and at intervals by transversities. It is carried out to within 120 feet of the extreme end of the north pier.

In the channel between the piers, the depth of water varies from 12 to 16 feet, except for a distance of 300 feet along the inner end, and 50 feet out from the north pier, where there is a shoal with only from 4 to 9 feet water over it.

For nearly half a mile within the inner end of the south pier, the bank on that side is faced with docking, formed at some places of piles, but for the most part of cribwork.

In front of this docking, for a distance of 1,200 feet inwards from an angle in the south pier, is the inner basin before referred to, which has an irregular width, varying from 150 to 390 feet, and a depth of from 10 to 12½ feet.

In order to prevent the wharves, warehouses, &c., from being damaged during spring freshets, as well as for the protection of such vessels as might winter in the harbour, an ice-breaker, 1,100 feet long, and from 9 to 10 feet high over low water, has been constructed.

This commences at a point on the south shore, 2,300 feet inside of the basin, and extends outwards in a direction nearly parallel with the entrance piers. It appears to be strongly built and secured; nevertheless, a heavy freshet in the spring of 1868, carried away about 200 feet of it, and made a large breach through the gravel bank in its rear.

At this time the water was fully three feet over the wharves, and nearly 10 feet higher than the lake level. When the flood was at its highest piten, the descending ice formed a dam between the entrance piers, which resulted in a breech, nearly 400 feet wide, being made in the south pier, through which the water escaped and washed out the bottom at one place to a depth of 24 feet below the surface. The few vessels which were then in the harbor sustained some damage, but none of a very serious nature.

At this time, it is said, the water also forced its way through the beach behind the north pier.

The construction of a harbor at this place was first undertaken in 1835, by the Canada Company, who held the right under a lease from the Crown, but although a considerable expenditure was then made on the works, they were subsequently allowed to fall into decay.

In 1859, this Company transferred their claims on the harbor to the Buffalo and Lake Huron Railway Company, who in 1862 were granted a new lease from the Crown, one of the conditions of which is that they (the Company) should make and maintain a harbor sufficient to accommodate the largest class of vessels which navigate Lake Huron.

A large portion of the works above described as connected with the harbor were executed by this company. They also continued the line of their Railway along the face of the bank down to the waters of the harbor; erected a grain elevator and extensive freight sheds at a point deemed convenient for vessels to unload or receive cargoes.

They further engaged a line of propellers to run between Chicago and Goderich, and made the necessary arrangements for transporting southwards, by railway, the grain and other freight thus brought to the port. This railway now forms part of the Grand Trunk system, under which the harbor and works connected with it are controlled, subject, of course, to the conditions of the lease from the Crown granted in 1862.

The breach referred to as having been made through the ice-breaker during the spring freshet of 1868, was promptly and substantially repaired by the Company; but the deep water space in the basin still remains so narrow that large vessels experience much difficulty in entering or leaving, especially if there are others in port at the time.

Within the past few years, the line of propellers above referred to have been discontinued, and that portion of the American trade which for a time passed through Goderich for the east, now finds its way by Sarnia or other channels.

Whilst the facilities for transport afforded by the railway has created good markets in several flourishing villages in the interior, which has considerably reduced the trade of Goderich as a wheat-buying centre, still, the recent discovery of immense salt deposits in the town and vicinity will, doubtless, when fully developed, make this, in time, a place of considerable commercial importance.

It is believed proper to state that no expenditure has been made by the Government, either in the construction or maintenance of this harbor.

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"This harbor is the nearest to the line of trade, and is the only place, at present, where a vessel has the slightest opportunity of obtaining shelter on a long range, of what is frequently a lee shore. It is situated (as above mentioned) within bold high banks, has a small area of deep water, in which a few vessels can ride during the season of navigation with safety; it is the terminus of an important line of railway, and, in these respects, possesses advantages well worthy of the fullest consideration. The depth of water, lakewards of the pier, is from 13 to 14 feet, rapidly increasing outwards, and the holding ground, in form 4 to 5 fathoms in that direction, is said to be good.

During heavy westerly winds, both upward and downward bound vessels are frequently driven towards this harbor, and some of them are occasionally able to avail themselves of its shelter, although the attempt to make it at times is doubtless attended with considerable risk. It may further be stated that many intelligent persons engaged in lake navigation, give it as their opinion that Goderich harbor, notwithstanding its limited capacity, and unfavorable entrance, has been, and still is, of great benefit to the shipping interest.

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"The East Coast of the Lake, for 20 miles on either side of Goderich, is free from rocks, or outlying shoals, and the anchorage for the most part is good. Outwards, the water gradually increases in depth, which enables a vessel, even when the land cannot be seen, to determine with considerable accuracy her distance from the shore."

* * * * *

In order, however, to convert it into anything like a "harbor of refuge," which of itself would be at all sufficient to the wants of the trade, many extensive improvements would have to be made. The direction of the entrance would, doubtless, have to be changed, a much larger area of inside accommodation formed, and there is reason to believe that, for a considerable distance, a new channel would have to be made for the river. The line of the present piers run nearly W. S. W., which renders it barely possible for a vessel to enter the harbor in a north-westerly wind.

Although it is, in many respects, objectionable for a harbor to be open in the direction from whence the heaviest storms come, still, when the entrance is between two lines of piers, placed a moderate distance apart, unless their range is within a few points of the wind, there are times when no sailing vessel could safely venture near it.

Taking these and other important matters into consideration, it is believed that, in order to obtain the greatest average of the times at which there is a probability that this harbor could be safely approached, the line of the entrance to it should have a course west-by-north.

This would necessitate the abandonment of the existing works, and the removal for some distance of the inner part of them.

A new channel through the beach would, of course, have to be formed, and new lines of piers constructed. The latter should extend out to the depth of at least 17 feet water, which would require 1,400 feet of pier on each side. This, of itself would be a work of considerable magnitude that, under the most favorable circumstances, would cost not less than $95,000.

As previously mentioned, the area of the present basin is about four and a half acres, a space believed to be barely sufficient for purposes connected with an ordinary local trade.

It will, therefore, be evident that, in order to meet anything like the requirements of a "Harbor of Refuge," the basin accommodation must be largely augmented.

To obtain and secure this would doubtless be attended with a good deal of difficulty, some degree of uncertainty, and at a very considerable cost.

Every additional acre of basin would require on the average fully 18,000 cubic yards of dredging, and as the area should be increased at least 15½ acres (making the aggregate nearly 20 acres), the quantity of dredging to be done for this purpose would be about 280,000 cubic yards.

To protect this space so that vessels could winter in it, as well as to prevent the gravel which forms the bed of the river from being washed into it during freshets, a continuous line of cribs, or other close work, would have to be constructed the whole length of the harbor. This would have to be sufficiently strong, and of such a height as would form an artificial bank to the river at the highest freshets, which have been known to rise nearly 10 feet over the lake level.

* * * *

"At Goderich the high banks, which form nearly three sides of the harbor, give the best kind of inside protection, and there is reason to believe that if the improvements suggested were made, ample accommodation would be afforded.

* * *

It is not possible that a single entrance to this harbor could be made so as to be easily accessible in all winds, still it might have a direction that would be favorable for the greater part of the time.

* * *

Still, it is proper to state that nearly all the owners and masters of vessels which navigate the lake, represent that it would be of more advantage to them to have a safe harbor at this place than at any other point on the east coast.

These persons having a practical knowledge of the subject, and being deeply interested in the result (without being at all likely to be swayed by local influences), the arguments set forth in their memorials and communications have received full attention. Due consideration has also been given to the petitions sent in by, and documents received from other parties in reference to this and other localities.

On deliberately reviewing the whole matter the conclusion has been arrived at that there is not any one place so situated, or which possesses such natural advantages, as to warrant me in recommending its exclusive selection for the formation of a "harbor of refuge."

Goderich, although by far the most convenient for the commerce of the lake, would, as a whole, be the most difficult and expensive to construct and maintain, whilst the roadstead at Chantry Island lies almost too far out of the ordinary track of vessels to be generally serviceable, still there is no intervening point that could be judiciously chosen.

It is therefore considered, under all the circumstances, that the best course to adopt would be to make both places to some extent available to vessels requiring helter.

This might be done by carrying out, in the first instance, say one-third, or even, one-fourth of the projected works at Chantry Island, and afterwards extending them as occasion required, until the whole shall have been completed, and the place formed into a moderately well protected roadstead.

At Goderich the improvements might be limited to changing the direction of the entrance, and increasing the area of the basin, to say, double its present capacity.

There is reason to believe that by following this course greater benefits would be secured to the navigation than could be obtained from the selection of any one place, inasmuch as vessels in distress on the northern part of the lake might be able to get under the lee of Chantry Island, whilst those to the southward, when caught in severe gales, might be able to make Goderich."

There is no doubt the Government has at least adopted one portion of the Engineer's suggestion by making an appropriation for the construction of a Harbor of Refuge at Goderich. We are disappointed that all this summer should have been wasted in preliminaries and hope the authorities will push on the works at an early day. In eleven years $500,000 worth of property have been lost by shipwrecks on the eastern coast of Lake Huron—the greater part of which a proper harbor would no doubt have saved. Such an important national interest should not be delayed longer than is absolutely necessary.

Bayfield Harbor.

In the Government Engineer's report we find the following in reference to the Harbor at Bayfield:—

Bayfield Harbor lies 12½ miles south of Goderich, and is situated at the outlet of a stream called the Bayfield River.

In this vicinity the clay banks which form the shores of the lake are quite bold. Immediately north of the river they are nearly 100 feet high, and on its south side their height is from 60 to 70 feet.

For about 1,000 feet inland the stream flows through a flat in which it has cut for itself a deep bed, and appears to discharge a considerable volume of water during freshets.

The entrance piers are 200 feet apart at the narrowest place, 210 feet apart at the outer end of the southern one, and at the inner or landward end the distance between them is 330 feet.

The north pier has a direction nearly west-by-south from the shore line for a distance of 339 feet, thence it bears west-by-north 279 feet, the whole length being 618 feet; at its head was found a depth of ten feet of water.

The south pier is nearly straight, 620 feet long, built of cribwork; but the superstructure or part of it, towards the outer end, appears to have been carried up in detached pieces, and is now in a very dilapidated condition.

Within the extreme end of the north pier, for a distance of 400 feet, the soundings varied from 5 to 9½ feet. Inside of this a bar with from 3 to 4 feet water over it occupied the whole width between the piers, and for 100 feet longitudinally.

For 400 feet inside of the bar there was found a depth of from 4 to 8½ feet water, and from this point in the river for 800 feet up stream the depth is from 9 to 14 feet, but the width of water carrying this depth would not average over 10 feet.

The piers being comparat