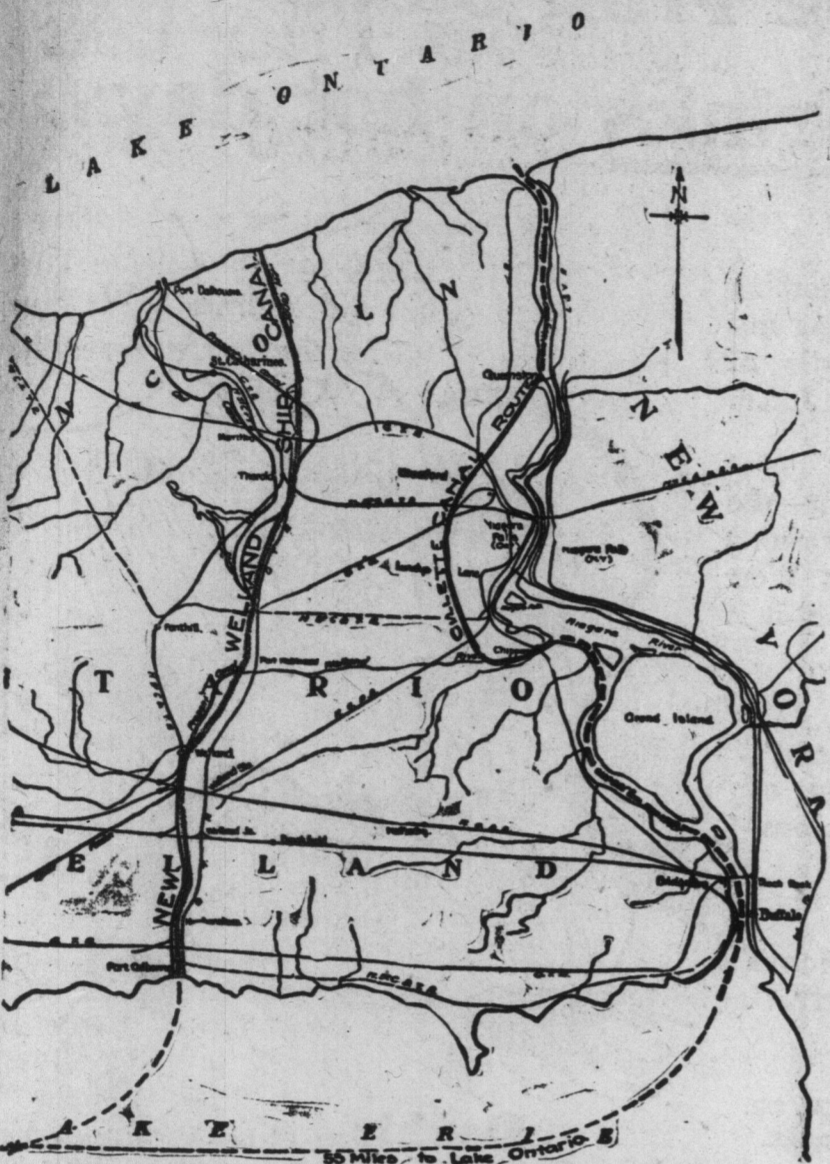


### MAJOR GILLETTE SHIP CANAL A PHANTASY, SAYS ENGINEER

Mr. W. P. Chapman Discusses Objections to Scheme to Utilize Niagara River and Excavate Waterway Around Cataract and Rapids.



MAP SHOWING ROUTE OF NIAGARA RIVER WATERWAY IN COMPARISON WITH PROPOSED NEW WELAND SHIP CANAL.

Walter P. Chapman, C.E., 58 Prince Arthur avenue, writes in the Sunday World, dealing with the proposal of Major Gillette, a U. S. engineer, to construct a ship canal from the Welland River, near Chippawa, to Queenston Heights, with a monolith lock to lower vessels to the Lake Ontario level at Queenston. He says:

Editor Sunday World: I have read with some interest a brief description appearing in your issue of the 6th inst., outlining an alternative route for the new Welland Ship Canal—via the Niagara River, Chippawa Creek and Canal to Queenston, on the lower level of the Niagara River, contributed by Major Gillette of U. S.

It might be well to deal with Major Gillette's proposition, as far as possible, in the order of his memoranda. His first statement is that the objection to high lift locks is the enormous cost of concrete or masonry to stand the great lateral hydraulic pressure.

This is somewhat exaggerated, as the high lock walls of the new Welland Ship Canal will be well supported by excavated material.

This is somewhat exaggerated, as the lock in the solid rock near Brock's Monument, all this expense is obviously incurred at the cost of this enormous excavation. What would be done with the material from such a rock excavation? It is quite clear that the material is not required.

A monolith lock (one lift) would require rock excavation, say, 1000 x 100 x 150 feet—total of 150 feet in height, as suggested by Major Gillette, say the least, imaginatively.

Further, engineers of experience in deep pit rock excavation are familiar with the danger of bulging movement of sides, likely to be encountered—even at half the depth, and of the great depth of the movement, owing to unstable character of rock, might be of such magnitude as to become insuperable.

The tunnel proposition is unique. Assuming it to be 100 feet wide in excavation, with water level at 150 feet—there would be at the height of 150 feet an unsupported crown or arch of concrete or masonry, say, 1000 x 100 x 150 feet—total of 150 feet in height, as suggested by Major Gillette, say the least, imaginatively.

percentage of rock, the yardage would be less and unit cost probably 200 per cent. higher. The question again presents itself—what to do with the material.

All this without the monolith lock, and or deep cutting at outlet, dredging of rivers, dams, and lands for right of way, and basins.

With regard to saving of time, which Major Gillette has figured out so carefully, describing how a saving of eight hours can be effected.

The length of approved route of the Welland Ship Canal is 25 miles—Lake Erie to Lake Ontario via the Welland Ship Canal to the mouth of the Niagara River at Niagara-on-the-Lake via the route selected by Major Gillette, the distance is approximately 55 miles. See map herewith.

Allow for deviation from the thru route on Lake Erie to Port Colborne, the distance would still be about 50 miles in favor of the Welland Canal route.

With the completion of the new ship canal via approved route, it is confidently expected that an ocean steamer will be able to pass from Lake Erie to Lake Ontario in eight hours, and that the capacity of the canal will be thirty vessels in 24 hours, or 15 each direction.

On the other hand, by the Gillette or Niagara route, using the monolith lock—large engineers estimate that the operation of this lock for clear passage of one large vessel would require at least two hours—or, say 12 in 24 hours—six each direction.

The time over this route would not likely be less than ten hours, considering the restricted channel in upper river. The time required to fully complete on the Gillette route can only be guessed at, and from indications of levels given above, it might be anywhere between five and ten hours.

Major Gillette's approximate estimate of \$20,000,000 is apparently arrived at on a much reliable data, but to be on the safe side, he rather reluctantly adds 50 per cent. The writer will go further than that and make it 20 plus 50 per cent, or \$30,000,000, and believes such an estimate to cover cost of the Niagara route as close to actual as any yet extant.

Major Gillette's anxiety that the people of Canada satisfy themselves that their money be spent to the best advantage may be relieved, and the people may rest assured that the approved route of the new Welland Ship Canal has been well studied and thought out by engineers of ability and experience.

Walter P. Chapman, C.E.

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### This Store Closes at 5 p.m. Daily and 1 p.m. Saturdays during June, July and August.



### Out - of - Town Folks Should Write For Our Big Photo Illustrated Catalogue No. 31.

## Now Comes the Best Chance of the Year to Buy Bedding



The Mid-Summer Bedding Sale, magical name. This is the event that makes thrifty homekeepers "sit up and take notice." No other announcement serves to throng the store like this one. None deserve it.

**Mattresses \$4.95, from \$6.75**  
Filled in layers of curled African fibre and seagrass, with white cotton top and bottom, covered in best quality art satin ticking, with guarantee label attached. Regularly \$6.75, for 4.95

**Mattresses \$7.95, from \$12.00**  
Our celebrated "Slumberland" pure all felt, non-stuffed, covered in best quality art satin ticking, all widths, with guarantee label attached. Regularly \$12.00, for 7.95

**Bed Spreads**  
At \$1.19—Honeycomb, blue, yellow, or pink. Reg. price \$1.75.  
At \$1.48—Dimitie. Reg. price \$2.50 each.  
At \$3.49—Satin finish, double size. Reg. price \$5.00.

**Some Examples of the Price Cutting in Bed Linen**  
Sheets at \$2.19 pair, double size. Regular price \$3.00.  
Sheets at \$1.19 pair, double size. Regular price \$2.00.  
Sheets at \$2.38 pair, double size. Regular price \$3.50.

Any of these bedding specials may be bought on our "Charge Account" plan without extra cost to you. Thus you can lay in your winter supply now, without strain on your pocketbook.

**Brass Beds \$13.50, from \$19.00**  
All sizes, bright and combination satin finishes, 2-inch posts, large flat vases, exceptionally high head end, and full drop extension foot; each fitted with six 3/4-inch fillers, and large rod ends, finished in best quality English lacquer, and absolutely guaranteed. Regularly \$19.00, for 13.50

**Brass Beds \$18.65, from \$30.00**  
All widths, bright or combination satin finishes, 2-inch continuous posts, with large head end and exceptionally high, and foot is full drop extension, each having six 3/4-in. fillers, with large rod ends; this is an exceptional value, lacquer is absolutely guaranteed. Regularly \$30.00, for 18.65

**Iron Beds \$2.19, from \$3.25**  
All widths, neat design, heavy posts and fillers, with brass caps, mounted on easy running castors, a strong, serviceable bed at a low price. Regularly \$3.25, for 2.19

**Iron Beds \$7.90, from \$12.00**  
A range of three attractive designs, with heavy continuous posts, ornamental centre and brass fillers, exceptionally high head ends, full drop extension foot, in best quality white enamel. Regularly ranging up to \$12.00, for 7.90

**Blankets \$2.95 Pair, from \$4.00**  
Good quality Union Blankets, soft, in full double sizes, 60 x 80, with pink or blue borders, full 7-lb. weight. Regularly \$4.00, for, per pair 2.95

**Blankets \$5.90, from \$8.75**  
Best English All-wool Blankets, in exceptionally large double sizes, with pink or blue borders, full 7-lb. weight, heavily napped, free from all imperfections. Regularly, per pair, \$8.75, for 5.90

**All-Feather Pillows \$1.29 Pair**  
Filled with absolutely pure all feathers, size 21 x 27, full weight, covered in best quality art satin ticking, guaranteed absolutely sanitary. Regularly, per pair, \$2.00, for 1.29

**All-Feather Pillows 3.90, from 5.75**  
Size 20 x 27, covered in striped German linen ticking, an exceptional value. Regularly \$5.75 per pair, for 3.90

## Dining Room Furniture

Three Instances of Remarkable Low Pricing Here for Monday.



**Buffets at \$33.50 Reg. worth up to \$44**  
Odd lot of sample Buffets, selected quarter-cut oak, fumed and golden finish. These all have cutlery and linen drawers, double cupboards, display shelves, heavy British plate mirrors, best quality brass locks and trappings.

**Extension Tables**  
Clearing odd designs Monday. These are made of quartered oak, six patterns, fumed and golden finish, 44-inch tops, six-foot extension, heavy pedestal bases, round and octagon shape, carved and plain feet. Regularly priced up to \$32.00. Monday for 22.90

Other Fine Economies in This Dept. Monday.

**China Cabinets Monday at \$19.65**  
Former Prices Ranged up to \$28  
A collection of odd designs in quarter-cut oak, frames, fumed and golden finish; some have bent glass ends and doors; all have 4 display shelves; neatly shaped carved claw feet; some have pediment tops, with fancy shaped plate glass mirrors.

**Electric Fixtures**  
25 only, assorted 8-light in brush brass or extra gilt finish, fitted with fancy or plain globes. Regular \$8.50. Special Monday 6.45

**Hall Fixtures**  
25 only, square in art glass, amber, green, or ruby and green, wired and fitted complete. Regular \$4.50. Special Monday for 3.45

**Domes \$8.45**  
25 only, assorted, in amber and green, brush brass finish, heavy fringed, fitted with chain for electric, stems for gas. Prices up to \$12.50, for 8.45



**We are Toronto Agents for 'White' Sewing Machines**  
--You Can Buy One from Us on Easy Terms

**Heavy All-Wool Carpet 83c Yard**  
800 yards, each yard wide, good reversible patterns, suitable for bedrooms and dining-rooms, greens, reds, tans, blues. Regular \$1.25 per yard. Special, sew, lay and line free... 83

**Scotch Linoleum 87c Yard**  
900 yards, heavy inlaid, 2 yards wide, in floral and tile patterns, for dining-rooms, kitchens, stores, etc. Regular \$1.15 per square yard. Special at, per square yard... 87

**Verandah Rugs Half Price**  
A clearance of Cottage or Verandah Mats, in fibre and grass, in different qualities, a large assortment of patterns, in a large range of sizes, running from 3 x 6 to 3 x 12, to clear at half-price.

**Axminster Rugs at July Sale Prices**  
A choice collection of Seamless Axminster Art Squares, in floral, medallion and Oriental patterns, all fashionable colors, greens, tans, browns, reds, etc., suitable for best rooms, in the following sizes:

9 ft. x 9 ft. Regular price \$40.00. Monday 20.50  
9 ft. x 10 ft. 6 in. Regular price \$45.00. Monday 31.50  
9 ft. x 12 ft. Regular price \$50.00. Monday 38.50  
10 ft. 6 in. x 10 ft. 6 in. Regular price \$60.00. Monday 37.50



## In the Sale of Draperies

This month's attractions, besides lowered prices, include making up and hanging free all drapery materials purchased from us now amounting to \$10 or more.

**Portieres \$14.95 Pair—Worth up to \$20.00**  
Made to your order from choice of a large selection of fine cotton velours, such as French linen velours, mercerized, in all the leading shades, dark or light browns, striped, moire effects, brocades, taffetas, linen to fit any size arch up to 8 feet wide by 7 feet high. Regular price up to \$20.00 per pair. Special Monday 14.95

**Drapery Materials \$1.10 Yard—From \$1.50**  
Including velours, velvets, Egyptian, hopsacks, taffetas, casements, tapestries, poplins, moire effects, figured armures, and a large variety of other materials, suitable for doors or window draperies. In the season's best selling shades all 50 inches wide. Regular price 1.19 up to \$1.50 per yard. Special Monday 1.10

**Sample Curtains Half-price**  
A clearance of all our samples, pairs and odd lines of Marie Antoinette, point Arab, etc. Sizes range from 40 inches wide by 2 1/2 by 3 1/2 yards long, slightly soiled, and from one to two pairs of a pattern. Regular price from \$2.50 to \$12.00 per pair, amounting to \$10.00 or over, measured, made and put up free of charge. Monday, half price, per pair... 1.25 to 6.00

## THE JULY CARPET SALE

Now is the time to figure your needs in Rugs, Carpets, Linoleums, etc. The earlier in the month the better, because many of the special lines are limited in quantity, and some of them we cannot buy again at the prices we are now offering them to you. These for Monday—

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10 ft. 6 in. x 10 ft. 6 in. Regular price \$60.00. Monday 37.50

Major Gillette will refer to a United States chart of the west channel of the Buffalo River, from Chippawa to Queenston, which shows the depth of water for long stretches as low as 14, 17 and 20 feet, and some rock formation at the outlet. The cost of dredging a restricted channel would run into millions.

**The Adams Furniture Company, Limited - - CITY HALL SQUARE**