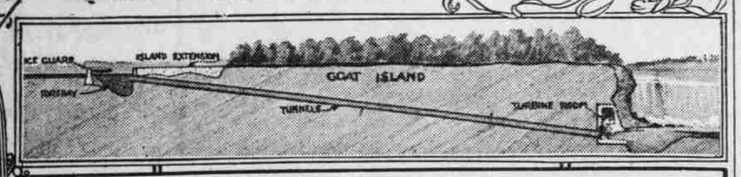
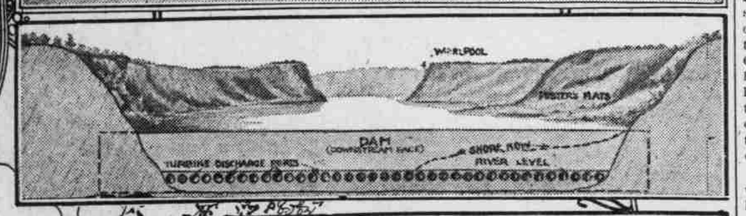
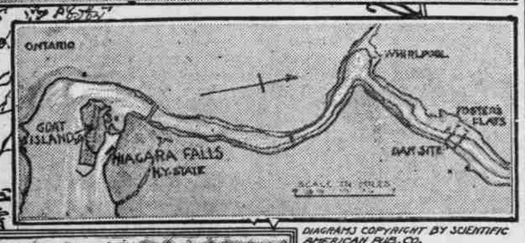
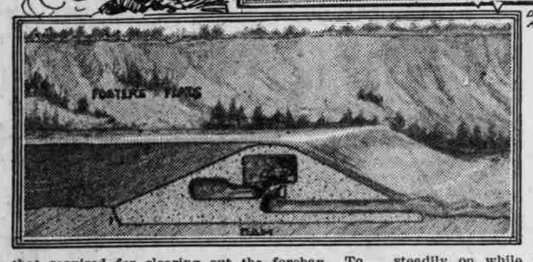
Making the Most of Niagara

By Robert G. Skerrett









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THAT the Niagara river is not yet furnishing sufficient electrical energy to meet existing requirements is evidenced by the Queenston-Chippawa development now being pushed to completion on the Canadian side of the international stream. As recently described in the Scientific American, the plan is to generate at the start 210,000 horsepower and, later on, 472,500 horsepower. Recognizing the prospective greater demands for electricty in the course of the next few years, the projects discussed in the current issue are of timely interest. In the order of their preference, they are first, a dam a few miles below the Falls which will make use of the full flow of the river, and, second, an installation at Goat Island which, of necessity, would have to absorb waters that might diminish the impressiveness of the present Falls.

So says the editor of the Scientific American in an editorial note on an article in the Scientific American with the title "Making the Most of Niagara." Robert G. Skerrett furnishes both the text and the diagrams herewith reproduced.

As everybody knows, Niagara Falls is a natural wonder of beauty and power over which the nature lovers and the commercial interests have been fighting for years. The article follows:

The Niagara river will inevitably be utilized more extensively than now for the development of hydro-electric energy. The rush of those descending waters must be put to greater practical service wherever feasible without seriously impairing the scenic beauty of the Falls. Upon both of the governments concerned the people are making insistent demands for bigger blocks of power, and the authorities are listening sympathetically because of the logical promise of vast savings through the corresponding non-use of coal. No fewer than ten projects for water rights on the Niagara river have been filed with the United States federal power commission, and among them are two that are sufficiently matured to warrant discussion.

Both of these contemplated hyro-electric propositions may well be considered as a single coordinated system, for they have been conceived and espoused by the same men, i. e., T. Kennard Thomson, C. E., of New York City, and Peter A. Porter, of Niagara Falls. The dual project embraces first, the boring of tunnels through the massive foundation of Goat Island so that water may be led through them to large turbo-generators located near the river level on the downstream end of the island, and, next, the rearing of a dam squarely athwart the river at a point 4 2-3 miles below the Falls, thus submerging the present Rapids. The Goat island tunnels would lie wholly on American territory, but the dam would stretch from shore to shore in the Gorge and be international in character. However, the citizens of this country would benefit by both of these engineering undertakings.

According to the existing treaty arrangement between the neighboring countries, it is not now permissible to divert for power purposes above Niagara Falls more than 56,000 cubic feet of water a second; and for certain reasons the American allotment of this is 20,000 cubic feet. It has been proposed that the combined total be raised to 80,000 cubic feet, and that each of the nations share equally. In other words, Canada would have 4,000 cubic feet more than is the case today while our volume of water would be doubled. If the suggestion be adopted, the problem will resolve itself into governmental selection of such of the proposed installations as would be apt least to mar the great natural spectacle, while giving the largest yields in energy and involving the fewest engineering difficulties of a debatable sort. The Goat island scheme meets these desiderata in many particulars, and makes instant appeal to us, inasmuch as it would be located on our side of the river.

Goat Island would not have endured for ages in the erosive sweep of the Niagara but for the fact that it is an integral part of the massive ledge there underlying the river, and this has a very important bearing upon power development at that point. From the crest to the base of the Horseshoe falls is a drop of about 165 feet, but the plan is to increase this head to substantially 200 feet by lengthening Goat island. From east to west, along its major axis, the island is today 2,800 feet long, but there is nothing to prevent extending it 600 feet by raising above the surface of the river the slightly submereged area at the upstream end.

By doing this it would then be practicable to drive the tunnels from water level to water level at a moderate angle and so insure a difference in drop of about 200 feet between the intake and the discharge ports of the conduits. At the same time, the bores in their entirety could be cut through solid rock. Each aqueduct, when finished with a concrete lining, would have an internal diameter of 20 feet, and the descending waters led by it would be capable of developing 100,000 horsepower through the medium of suitable turbo-generators. As now projected, only two tunnels would be excavated at the outset, furnishing 200,000 horsepower, but the physical conditions will ultimately permit a larger number.

As can be seen from one of the opening page illustrations, in sinking the tunnels it would be a relatively easy matter to rear cofferdams to hold the river at bay during construction work; and the only subaqueous excavating of rock would be that required for clearing out the forebay. To screen the tunnel intakes from logs, ice, etc., there would be built an L-shaped reinforced concrete wall, rising from the ledge of the river bed to a sufficient height above the surface to divert floating objects into the currents sweeping onward and over the two Falls. According to the engineering estimates, two tunnels can be cut and turbo-generators placed and made ready for service within an interval of two and a half years.

Today, in the vicinity of Niagara Falls it costs anywhere from $70 to $100 to generate by steam a horsepower year. If we strike an average, and call the outlay $80 per annum, it should be manifest that an economy of $120,000,000 in coal consumption may be effected while adding tremendously to the power available for industrial and other purposes. If it be assumed that a horsepower year in the run of steam plants calls for the burning of 8 tons of coal, then the substitution of hydroelectric energy will save each twelve months quite 12,000,000 tons of fuel which, otherwise, would have to be mined and transported from the nearest fields, those in Pennsylvania.

It is pertinent to emphasize here that in Buffalo, only about 25 miles distant from Niagara Falls, a big public service electric company develops two-thirds of its current at present by means of steam, and it is obliged to do this because it cannot obtain all of its energy from the comparatively near-by hydroelectric plants. Think of it, there within a stone's throw, so to speak, of the thunderous waters of the Falls, this concern has to rely upon coal to generate 80,000 out of the 100,000 horsepower needed by its customers. Thirty years ago, the population of Buffalo was 250,000 and is now 505,875, an increase of 198 per cent in three decades. The city of Niagara Falls, when incorporated in 1892, had a population of about 10,000, and in the interval it has grown 600 per cent owing principally to the influence of the availability of hundreds of thousands of horsepower in the form of electrical energy.

Indeed, electricity is playing its part throughout a wide zone lying around Niagara Falls—the primary source of power. Syracuse is drawing current from that point, 160 miles away, and the loss in transmission is less than 10 per cent at a voltage of 60,000. Using a potential of 110,000 volts, the Canadians are distributing current nearly 250 miles; and by raising this pressure to 220,000 volts, the radius of distribution could be lengthened to 500 miles. Under existing conditions, the five pioneer companies located at the Falls are developing 650,000 horsepower; and it is a matter of common knowledge what this has brought about in the realm of electrochemical industries. Visualize, then, what momentous evolutions in our productive capacity would be made possible if a million and a half more of motive current were at hand!

Four years ago, in the State of New York alone, the power requirements totaled something more than 3,000,000 horsepower, and the demand was then increasing under normal circumstances at the rate of 300,000 horsepower each twelve-month. Therefore, if the Goat island project were pushed to completion, and equipped to provide a maximum of 1,500,000 horsepower, there would be a market for every kilowatt-hour of its output within the span of a comparatively short while. It should be recognized, however, that this scheme would, of necessity, divert water from the Falls, and, according to the measure of this diversion, affect the volume and possibly the scenic grandeur of the cataracts. For this reason the proponents of this enterprise do not urge its adoption first, but advocate, instead, the construction of the dam farther down the river.

As an engineering undertaking, the dam proposed at Foster's Flats, a little less than five miles below the Falls, would be a much more ambitious enterprise, and would permit of the development of 2,000,000 horsepower of electrical energy. The plan is to take advantage of the drop of 102 feet in the river level between the foot of the Falls and the site chosen by rearing a massive structure from the base line to the crest of the spillway. This barrier would raise the water level within the impounding area high enough to submerge the existing rapids and modify, at the same time, the character of the Whirlpool by making it larger and more impressive. But the scenic features of the Falls, themselves, would not be altered in any way.

At first blush, the mere suggestion of building a barrier athwart the Niagara river, with its minimum flow of 220,000 cubic feet of water per second, seems little short of preposterous, knowing that the ceaseless flood must be allowed to pass steadily on while the proposed structure is in course of erection. But nature is ready to lend help which would make the execution of such a project far easier than one might imagine offhand. The walls of the gorge above Foster's Flats rise sheer several hundred feet from the tideway, but contiguous to the Flats the gorge is considerably wider and on the Canadian side, especially, the bank slopes at a comparatively easy gradient, terminating near the river in a fairly expansive low-lying area. At the same time, the river's path is considerably narrower at that stretch of its run. Owing to this state of affairs, the Flats present a strategic base of operations from which to start the rearing of a dam. That is to say, something like 50 per cent of the contemplated structure can be completed on dry land before any of the work trespasses upon the present course of the Niagara at that point. Let us be more specific.

As designed, the dam has a spread in cross section of about 650 feet at the base, and 30 feet or more of this lower portion will reach below the line of the riverbed and have its footing on the underlying solid rock. With a total height of 140 feet, the dam will be of an extremely massive character. The bottom section of the dam—at least that half of it that will rise from Foster's Flats—will be pierced by large temporary openings of culverts, and channels will be dug to them on the upstream side to serve as sluiceways for the entire volume of the Niagara when it becomes necessary to divert the river in order to bare the normal bed for building purposes along the line of the contemplated barrier. With this done, it will then be a relatively easy engineering task to dam the usual or natural water course to facilitate excavating the rock and erecting that portion of the dam that will terminate on the American shore. When the dam is finished, then the sluiceways will be sealed and the waters impounded until they accumulate and carry the surface level back from the crest of the dam to the very foot of the Falls.

As most everyone knows, great quantities of ice are carried over the Falls and down the river during the winter and the breakup of that rigorous season, and the impact and the pressure of these floes must be withstood by any rigid obstruction rising in their path. Therefore, it is essential that these stresses be minimized and that the currents be free to carry the ice onward with a minimum of opposition while the bulk of the water is held in check. To this end, the dam will be fashioned with long slopes on the up and the down-stream sides.

The dam will serve the double purpose of impounding the waters of the Niagara for a distance of nearly five miles and of housing the great turbo-generators that will transform the force of those waters into 2,000,000 horsepower of electrical energy. According to the estimates, this undertaking would involve a total outlay of approximately $100,000,000; and from start to finish would take something like three years. On the basis of coal consumption previously cited for the development of a horsepower year, i. e., 8 tons, this scheme would be tantamount to saving 16,000,000 tons of that fuel annually. At $10 a ton this would represent an economy of $160,000,000 every twelve-month. But quite apart from these considerations, there would be that inestimable gain in the matter of electrical energy that could be utilized for innumerable industrial purposes. Not only that, motive impulse at a moderate cost would be available for domestic services of many sorts.

We have led the world in the varied character and the magnitude of our electrochemical industries, and we can maintain our position in this respect only by continuing to provide great blocks of low-priced current to meet the increasing demands for the commodities now manufactured at or near Niagara Falls. Finally, let it be recalled that the two projects might prove exceedingly valuable sources of energy for that great superpower zone which is to embrace a far-flung section of the states of our northeastern seaboard. Isn't it worth our while to have at our disposal 3,500,000 horsepower without burning a single pound of coal? Can we be indifferent to undertakings that will enable us to increase vastly our productiveness while cutting the fuel bill by hundreds of millions of dollars yearly?

Duel Ended in Friendship

Happy Ending of Clay-Randolph Encounter Is Among the Most Noted in American Annals.

One of the most famous quarrels arising from hot language used in a debate in congress resulted in a celebrated duel fought between Henry Clay and Senator John Randolph of Virginia, near Georgetown, on April 8, 1826. Each duelist fired two shots. Clay's first bullet passed through the skirt of Randolph's coat, but he missed on the second shot. Randolph fired his second shot straight up in the air.

The quarrel grew out of a heated debate in the senate over an appointment of representatives to the congress of American republics at Panama. Randolph, in a speech called the administration of John Quincy Adams a "Puritanic-diplomatic-black-legged administration."

Clay, who was the secretary of state, regarded Randolph's speech as a personal insult, and challenged him to fight the duel, which happily turned out to be a bloodless one and, moreover, cemented the opponents in a cordial friendship.

Falcons are all rock dwellers by nature.

Raw Bones Become Glue.

Raw bones are now being made into glue by treatment with sulphur dioxide, the fat being removed with benzine and the mass being boiled in water under a pressure. The resulting substance is a very good glue.

How Artesian Wells Got Name.

Artesian wells take their name from Artesium, the Latin for Artois, a province in northern France where this system of boring for water was first practiced.

Great Men Fond of Sleep

Not Every One Who Has Done Brilliant Work Has Cared Little for Slumber.

It may be some comfort for light sleepers and those who require many hours of sleep to properly refresh themselves to know that they "are not the only ones." All great men didn't emulate the weasel in their sleeping habits.

Indeed, some of the most brilliant men, instead of calling three or four hours a night's sleep, were able to work only two or three hours out of twenty-four.

Darwin, for all his prodigious output of creative work, was able to be at his desk only two or three hours each day. Spencer worked only four hours out of the twenty-four.

And the famous philosopher, Descartes as well as the big-brained Doctor Johnson, used frequently to lie abed until two or three in the afternoon.

Perhaps the champion of all long-distance sleepers, however—excluding Hindoo fakirs, buried alive for months, and other trance subjects—was Moivre, the French mathematician. Moivre, during his old age, used to sleep 20 hours a day, leaving only four hours for science—and everything else.—Dr. Edwin F. Bowers in "Sleeping for Health."

Uncle Charlie's Whistle.

Anna and her mother often go to see her aunt and uncle. Her uncle plays a clarinet, of which she is much afraid. When she sees him reach for it she takes hold of her mother's hand and says, "Come home, mamma. Uncle Charlie is going to blow him's whistle."

IN GLOVE STYLES

White Glace Kids Are Ignored by the French Women.

Taste Turns Toward Suede in Pearl Gray and Light Beige in Variety of Tones.

An amusing fact, despite the prevalent belief that America looks to Paris for fashion hints, is the complete absence in the wardrobe of any well-dressed Frenchwoman of the ubiquitous white glace kid glove of America. Glace kid gloves are only worn in Paris when they are black and of gauntlet mousquetaire or 20-button cut, and these as well as evening gloves, of any cut or color, have been sacrificed to the prevailing vogue of enormous cabochon rings.

In place of white gloves, which always increase the apparent size of the hands and are so frequently incongruous with the remainder of the toilette, the Frenchwoman's taste instinctively turns toward the lovely suede gloves in pearl-gray and light beige, in a variety of tones, each one only removed from another in a varying degree.

Practically all the chic gloves developed in color are in suede and have very fine stitchings in self-tone, black suede being peculiar to mourning in France. The popular lengths are gauntlet and mousquetaire, the latter sometimes having such intriguing details as scalloped or pointed tops and narrow bands or motifs of cut steel bead embroidery. For an example, black glace kid gloves are embroidered with a fairly open triangle of cut steel beads, quite close to the scalloped edge. Another pair shows the steel bead embroidery in diamond shape on the back of the hand. Worn with these gloves was a small hat of white leather embroidered with the same pattern in jet beads.

The gauntlet glove lends itself more readily to variation in that it can be amazingly lined and edged. When you line a beige suede glove with black moire and edge the same with a very narrow but rich silver galloon you have a chic accessory to the simple black dress, which is the rage of the moment. The color of the lining is by no means limited to black, because you may find beige lined with rose, green and rust; pearl gray lined with peacock blue, and black glace lined with rust, or with gold and white brocade, or with gold cloth.

SWEATER BLOUSE, SHADE HAT

The summer costume of sweater blouse and shade hat is charming when developed in jade. The hat, of jade straw, is trimmed with large daisies.

THE WHITE HOMESPUN SUIT

White homespun makes an unusual tailleur. The effective orange and black trimming is woven into the material. It is a neat garment for sport wear.

FASHIONS IN BRIEF

Circular flounces have made their appearance.

Veiled effects are favored in evening gowns.

Cherry red bead necklaces are being freely bought.

Beaded gowns continue to be worn, the newer ones having small beads in fringe or festoon effect.

The summer sleeve will be either short, halfway to the elbow, or below the elbow, and bell shape.

The oblong from shoulder to shoulder neckline is still featured, while guimpes of organdie or lace are used to fill in the front of cloth dresses.

For women who like to wear their stockings rolled beneath the knee, is a three-quarter length hose with lace ruffled garters that give the effect of pantalettes.

Satin coats are being brought out with the upper half stitched in a scroll design in white. The newest models with the stitching in white or contrasted colors are rather fitted.

Quaint old-fashioned ruffles and puffs of one sort or another trim many springtime taffeta frocks. Indications are that this silk will lead the procession in the lineup of popular silk materials for frocks.

Furs are not lacking as a trimming for the new summer coats. Some of the most exaggerated collars that extend down the entire length of the garment are of white caracul. These are used with striking effect on red and black duvetyn or black crepe de chine.

Nut Pudding.

One cupful of molasses, one cupful of chopped suet, one cupful sweet milk, two and one-half cupfuls flour, one-half teaspoonful nutmeg, one teaspoonful soda, one-half teaspoonful salt, one pound of English walnuts, chopped, one-quarter pound figs, chopped. Steam two and one-half hours. Serve with any preferred sauce.

Crepe de Chine for Gloves

Fabric Now Serving as Lining—Tulle Used on Large and Small Hats.

The genius of crepe de chine, not content with dominating the fashion world as no one-color material ever has, is now invading the glove realm in the form of very simple linings for beautiful gloves of the softest leather, impeccable in cut. The three-tier ruffled gauntlet glove has just been introduced in glace kid, both black and white, and it remains to be seen whether the Frenchwoman will weaken in her aversion and be tempted to find some considerable use for the white glace kid glove. It is in such details as this that the silhouette of the Frenchwoman differs so markedly from that of the American woman.

With such a choice as this the glove box can easily be filled, but not so its neighbor, the veil box. One of the rare novelties is the Lewis veil of Venetian inspiration. Of black Chantilly lace or tulle adoration, it entirely covers the hat and falls fairly full to the shoulders. The face appears through a triangular opening. The veil fastens under the chin, and the hat worn with this is generally of the harlequin shape.

Another veil in vogue also is of tulle adoration—a very fine needle-run tulle—and is used on large and small hats. It is draped around the crown and falls just over the eyes, but at either side it leaves the crown and is allowed to fall in two points to the shoulder.

The continued vogue for trailing veils is surprising. There was such a craze for them last season that one might suppose that they had run their course for the time being, as this is usually the fate of all fashions that become too popular. The draped and trailing veil, however, is an exception.

Tricorn Never Disappears.

The little tricorn which never really disappears from the fashion world is quite a pet of the spring mode. It is shown with the lace eyeveil draped about it and it is shown with the spray of paradise standing up at the front. It is trimmed with a coquarde or a stiff little ostrich tip curling under the point at each side. It is a satisfactory little tailored hat at all times. And about that sprig of paradise—its sprouts out or drips off the hat at most unexpected places. Many times the dressy hat of all black has no other trimming.

The Organdie Hats.

Organdie hats are here. Some of them are light colors as they have been and there are those showing an innovation, appearing made of dark colors. One navy blue had the crown done in a wide, open lattice design couched in green worsted. There were flat flowers on the brim with leaves and stems. All were couched in colored worsteds sewed with silk floss. These flowers were in soft shades of brown, yellow, pink and blue, the centers composed of French knots and the round outside of couching in row after row.

Many Styles of Footwear

Gorgeous Brocaded Black Satin and Variety of Other Slippers to Please All Tastes.

Seldom since the Middle Ages when shoes had pointed toes so long that often they were looped up and fastened at the knee has footwear assumed so many and varied modes. It would seem that the designers had ransacked their brains to produce unusual and charming effects in shoes and slippers.

Georgeous brocaded evening slippers in vivid tangerine fashioned in sandal effect, with high thin French heels, and straps which fasten with tiny jeweled buckles; or metallic brocaded slippers with low heels just like those worn by children, and with straps of the brocade; or slippers of ruby or French blue velvet, for strong colors are for the nonce preferred to black, all may be seen displayed in the footwear section of the various stores and shops.

Black satin slippers with green satin heels and jade green buttons are in vogue while for sports wear red calf is splendid, fringed tongues which pass over the tops of such slippers and down the front being considered very smart. Other sport combinations consist of white buckskin with brown or red calf vamps and straps. Really the new spring shoes rival the new spring millinery in interest.

So, take it all in all, one can readily see that quite as much attention is being paid at present to the pedal extremities as there is to the head.

Summer Skirts.

In separate skirts for summer white flannel, serge anl jersey will be used. The straight-line plaited skirts will likely be the favorites.

Victorian Line.

The Victorian line is used in decolletage.

THE TRIALS OF A HOUSEWIFE

How They Have Been Endured and How Overcome by Lydia E. Pinkham's Vegetable Compound

Experience of a Providence Woman

Providence, R. I.—"I took Lydia E. Pinkham's Vegetable Compound for a female trouble and backache. It began just after my baby was born, and I did the best I could about getting my work done, but I had awful bearing-down pains so I could not stand on my feet. I read in the papers about Lydia E. Pinkham's Vegetable Compound and the good it was doing other women, and I have got dandy results from it and will always recommend it. You can use these facts as a testimonial if you wish."—Mrs. HERBERT L. CASSEN, 18 Meni Court, Providence, R. I.

Ohio woman for three years could hardly keep about and do her housework she was so ill. Made well by Lydia E. Pinkham's Vegetable Compound:

Fayette, O.—"For about three years I was very nervous and had backache, sideache, dragging-down pains, could not sleep at night, and had no appetite. At times I could hardly do my housework. I got medicine from the doctor but it did not help me. I saw Lydia E. Pinkham's Vegetable Compound advertised in a newspaper and took it with good results, and am now able to do my housework. I recommend your medicine to my friends and you may publish my testimonial."—Mrs. CHESTER A. BALL, R. 15, Fayette, Ohio.

An Illinois woman relates her experience:

Bloomington, Ill.—"I was never very strong and female trouble kept me so weak I had no interest in my housework. I had such a backache I could not cook a meal or sweep a room without raging with pain. Rubbing my back with alcohol sometimes eased the pain for a few hours, but did not stop it. I heard of Lydia E. Pinkham's Vegetable Compound, and six bottles of it have made me as strong and healthy as any woman; and I give my thanks to it for my health."—Mrs. J. A. McQUITTY, 610 W. Walnut St., Bloomington, Ill.

The conditions described by Mrs. Cassen, Mrs. Ball, and Mrs. McQuitty will appeal to many women who struggle on with their daily tasks in just such conditions—in fact, it is said that the tragedy in the lives of some women is almost beyond belief. Day in and day out they slave in their homes for their families—and beside the daily routine of housework, often make clothes for themselves and for their children, or work in their gardens, all the while suffering from those awful bearing-down pains, backache, headaches, nervousness, the blues, and troubles which sap the very foundation of life until there comes a time when nature gives out and an operation seems inevitable. If such women would only profit by the experience of these three women, and remember that Lydia E. Pinkham's Vegetable Compound is the natural restorative for such conditions it may save them years of suffering and unhappiness.

There is hardly a neighborhood in any town or hamlet in the United States wherein some woman does not reside who has been restored to health by this famous medicine. Therefore ask your neighbor, and you will find in a great many cases that at some time or other she, too, has been benefited by taking it, and will recommend it to you. For more than forty years this old-fashioned root and herb medicine has been restoring suffering women to health and strength.

• Lydia E. Pinkham's Private Text-Book upon "Ailments Peculiar to Women" will be sent to you free upon request. Write to The Lydia E. Pinkham Medicine Co., Lynn, Massachusetts. This book contains valuable information.

DON'T LET THAT COUGH CONTINUE!

Spohn's Distemper Compound

will knock it in very short time. At the first sign of a cough or cold in your horse, give a few doses of "SPOHN'S." It will act on the glands, eliminate the disease germ and prevent further destruction of body by disease. "SPOHN'S" has been the standard remedy for DISTEMPER, INFLUENZA, PINK EYE, CATARRHAL FEVER, COUGHS and COLDS for a quarter of a century. 50 cents and $1.15 per bottle at all drug stores.
SPOHN MEDICAL COMPANY, GOSHEN, IND.

The Cheap Kind.

The telephone bell tinkled and the big sister rushed over and grabbed the receiver.

"Goody, goody! Alice is going some place tonight!" shouted Mary, much younger.

But after warming the receiver against her ear for 45 minutes the elder sister sat down and resumed her reading.

"'Nother one of those telephone beaus!" exclaimed the pest—"talk, but never go any place."

Cuticura for Sore Hands.

Soak hands on retiring in the hot suds of Cuticura Soap, dry and rub in Cuticura Ointment. Remove surplus Ointment with tissue paper. This is only one of the things Cuticura will do if Soap, Ointment and Talcum are used for all toilet purposes.—Adv.

He's Right, at That.

A writer declares that while we talk a lot about having money we practice it only indifferently. He evidently thinks there is too much "con" in our economy.

A Resolution.

"See here," said Adam to Eve, "do you realize that the high cost of living is crimping me badly? You simply must be less extravagant in the matter of clothes."

"All right, dear," answered Eve, obligingly, "I'll help you to economize by turning over an old leaf."—American Legion Weekly.

For true blue, use Red Cross Ball Blue. Snowy-white clothes will be sure to result. Try it and you will always use it. All good grocers have it.

Class in Physiology.

Teacher—Where is the heart located.

Little Jimmy (silent).

Teacher (places hand on boy's chest)—Don't you feel the beating?

Little Jimmy—No; I usually feel it on the other side a little lower down.

Age of Discretion.

Youth has its compensations, but personally we are glad to have passed the age when we thrilled at the sight of a gent in a silk hat and fur collar.—Galveston News.

EVERYBODY'S DOING IT!

WHAT?

WHY, TAKING

BEECHAM'S PILLS

Western Canada Offers Health and Wealth

and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had on easy terms

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years has yielded from 20 to 45 bushels of wheat to the acre—oats, barley and flax also in great abundance, while raising horses, cattle, sheep and hogs is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

make a tremendous appeal to industrious settlers wishing to improve their circumstances.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

W. S. NETHERY, Room 82, Interurban Station Bldg., Columbus, Ohio; M. J. JOHNSTONE, 215 Traction-Terminal Building, Indianapolis, Indiana

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160 ACRE FARMS IN WESTERN CANADA FREE