

**The Manufacture of paper and paper pulp.**

Improved methods in machinery and the great change in the character of materials used has had an important bearing upon the printing art. In the earliest mills established in this country, the raw fiber after being prepared in the beating machine, was formed into a sheet in a mold or wire sieve which was dipped from the pulp vat by hand, the water drained off and the pulp left in a wet sheet in the mold. The sheets so made were turned out upon a felt press and then dried by exposing to the air in single sheets. Such mills were small and the output was limited. Strictly hand-made paper to-day is a rarity, although it exists. By the aid of the Foundry machine the transformation of the fluid to stock or finished paper is made an automatic operation. The pulp is screened from the vat over an apron to a moving endless wire cloth made of closely woven fine brass wire, and supported by a series of small metal rolls set close together, yet without touching each other. In this way an even surface of the wire cloth is maintained and by preserving an unvarying flow of the pulp and a constant forward motion of the wire cloth, the thickness of the layer of pulp deposited was kept uniform. By lateral motion of the supporting rolls the fibers are caused to interlace in various directions and give greater transverse strength to the texture. As the pulp is carried along on the wire cloth, much of the water drains through leaving the fiber on the meshes. This first drying is usually hastened by various devices and the moist web is carried between rolls which are covered with woolen felt and then taken from the wire cloth endless woolen felts which pass it between rolls, and then to dryers. These are large metal cylinders heated by steam. The paper has now acquired considerable strength. The water has been evaporated and the heated cylinders complete the drying process. The paper is then given a smooth surface by the calendar rolls, which are smooth-faced, heavy metal rollers. Finally the finished paper is reeled off in rolls and cut into sheets the desired size. A large paper mill will make 250 tons of finished paper a day. The most modern machinery turns out a continuous web of finished paper at the rate of 500 feet a minute. The raw material of wood pulp is spruce, poplar, and in smaller quantities various other woods are employed. Wood pulp has to a great extent superseded the use of rags, and entirely so in the manufacture of news paper. The blocks of wood are pressed hydraulically against the edge of a rapidly revolving grindstone, and by attrition reduced to a mushy consistency.

There is also a chemical process of making wood pulp which is largely used. The merchantable shape of the fiber differs somewhat. Ground wood pulp is ordinarily sold in folded sheets only partially dry, and is therefore under common conditions, only suitable for use near the locality of its manufacture. Its weight being so increased by the water as to preclude the profitable transportation of such a low-priced product. There are 763 paper-making plants in the United States and the total capital is \$167,507,713, giving employment to 64,186 persons. The total cost of the materials used was \$70,530,236, in 1900. The total value of the products was \$127,326,162, and the total power required for running the plants was 764,847 horse power.—From the Scientific American's Special Number on "Modern Aid to Printing."

**Sniffeling and Sneezing Colds.**

Can be stopped in a few minutes and permanently cured in one hour by inhaling fragrant healing Catarrh-ozone. No remedy compares with Catarrh-ozone for colds in the head and nasal catarrh. It soothes and heals the inflamed mucous membranes, prevents sneezing and coughing, clears away the "stuffed up" feeling in the forehead. If you have not used Catarrh-ozone get it to-day and try it on your next cold. You'll be surprised at the efficiency of this delightful inhaler treatment which pleases everyone because it cures so quickly. Complete outfit \$1.00; trial size 25c.

**The Verdict of Public Opinion.**

Is with the best article every time. That's why Putman's Corn Extractor has been in the lead for the last half century. It cures corns painlessly in twenty-four hours and never fails. Use only Putman's for corns and warts.



**Vapo-Cresolene**  
Established 1879.  
**Whooping Cough, Croup, Bronchitis, Coughs, Grip, Asthma, Diphtheria.**

Cresolene is a boon to Asthmatics.

CRESOLENE is a long established and standard remedy for the diseases indicated. It cures because the air rendered strongly antiseptic is carried over the diseased surfaces of the bronchial tubes with every breath, giving prolonged and constant treatment. Those of a consumptive tendency, or sufferers from chronic bronchitis, find immediate relief from coughs or inflamed conditions of the throat. Descriptive booklet free.

CRESOLENE ANTISEPTIC TABLETS dissolved in the mouth, are effective and safe for coughs and irritation of the throat. 10c a box. ALL DRUGGISTS.

LEWIS, MILES & CO., 1651 Notre Dame St., Montreal, Canadian Agents

**IS YOUR BACK LAME?**

You are Doubtless Suffering from Diseased Kidneys—Surest Cure is **Ferrozone.**

Unless you want to be stricken with incurable Bright's Disease, don't let your kidneys go without attention. Ferrozone is special remedy for this trouble, and never fails to give prompt relief and bring about a perfect cure.

Mr. Gordon J. MacFarlane, of Bradford was cured by Ferrozone, after being treated unsuccessfully by three for kidney complaint. "My kidneys were in a very bad shape," he writes, "and I had dreadful pains in my back and sides, and was never free from a dull, heavy feeling, that made life miserable. I spent a lot of money on local doctors, but was not benefited to any extent. Then I tried Ferrozone. One box helped me so much that I got six more, and before they were used I was quite well. I never used anything giving such prompt and lasting relief as Ferrozone. It beats all other kidney cures."

People suffering from kidney disorders quickly lose strength, and often die young. Therefore it is important to get Ferrozone at once, and be released from every symptom of this baneful disease. Price 50c. a box, or six boxes for \$2.50, at all druggists, or by mail from The Ferrone Company, Kingston, Ont.

**CO-OPERATION IN FRUIT GROWING**

The principle of co-operation among fruit growers, which has been strongly advocated during the last two years by W. A. MacKinnon of the Fruit Division, Ottawa, received enthusiastic endorsement at the recent annual meeting of the Ontario Fruit Growers' Association at Leamington. The address of the president, the report of the secretary and all the most interesting and instructive papers dealt with the question of co-operation.

A typical example of the practical working out of the co-operative plan was described by Mr. W. H. Owen, Catawba Island, Ohio, who is one of the recognized leaders in the movement across the line. He is manager of a co-operative fruit growers' union which does business in a very large way. The Catawba association confines its attention mostly to peaches, though pears and grapes are also handled. The membership is thirty-four, controlling about one thousand acres, on which there are about one hundred and fifty thousand peach trees. The growers all live within seven and a half miles of the large central packing depot, where the grading is done under the manager's supervision. The growers do their own picking, and bring in from three to five thousand bushels of peaches daily. The fruit begins to arrive at central depot by two o'clock p. m. and packing operations frequently continue all night. Each grower is duly credited with the amount of fruit of each grade which he contributes to the total amount, and he is paid in accordance, as soon as sales are made. Under the business-like system adopted it is possible to make most of the sales direct from the warehouse. Free use of the telegraph, telephone and mail service is made in collecting and disseminating information as to the quantity of each variety and grade available. In this way the fruit is disposed of practically as soon as produced. There is no refrigerator service at the packing house, but refrigerator cars are supplied by the railways, and the fruit is put into them as soon as possible. The cost of carrying on the business is about seventeen to nineteen cents per bushel of peaches, including cost of packages and transportation, as well as administrative expenses of the association.

Among the advantages of the plan which have become apparent during the twelve years that the association has been in existence are (1) It ensures better prices for the fruit. (2) It leaves the grower free to devote his undivided attention to the improvement of production. (3) It enables buyers to purchase at a central point large quantities of a uniform grade. Thus they can select precisely the sort of fruit to suit various markets. (4) It gives the members a much stronger position in dealing with commission men, merchants and



**Muskoka Free Hospital for Consumptives**

Not a single patient has ever been refused admittance because of his or her poverty.

FROM THE VERGE  
—From Bishop of Selkirk, Caribou Crossing, Yukon: "The trifling remittance (\$10.00) herewith enclosed, is intended to express our sympathy for the sufferers in other parts rather than imply a special need for your institution here."

CONFEDERATION LIFE ASSOCIATION  
—J. K. Macdonald, Esq., Managing Director Confederation Life Association, in sending cheque for \$500.00 from his Company, says: "I am pleased to be able to be the medium of helping on so good a work."

**Funds Urgently Needed**

The financial reports for the year just ending show that to keep the doors of the Free Hospital for Consumptives open, maintaining the number of patients for which accommodation has been provided, not less than \$25,000 is required for the year now entered upon.

Since the Free Hospital was opened (18 months ago) 224 patients have been received. The help the institution has been to these people—all from the wage-earning and poorer ranks of life—cannot be estimated in human language.

—Edward D. Haddon, Soling, Ont., on leaving the Free Hospital, writes: "I cannot speak too highly of the institution from which I have received so much benefit. I can but tender my best thanks for the kindness shown."

—Minnie Linklater, Hamilton, writes: "I have spent over nine months at the Free Hospital for Consumptives. I believe I have been greatly helped, and shall never hesitate to use my influence to further that good cause."

There is no endowment, excepting the provision made by three life insurance companies for six beds for the current year. Only by the continued contributions of the Canadian public can the work be maintained.

Patients are accepted from every part of the Dominion, and there have been in residence during the past year patients from Prince Edward Island on the east to the Northwest Territories on the west.

Contributions may be sent to SIR W. R. MEREDITH, KT., Vice-President National Sanitarium Association, or MR. W. J. GAGE, Chairman of the Executive Committee, Toronto, Can.

carrying companies than they could possibly have as individual shippers. (5) It provides for the proper distribution of fruit, so that one market may not be glutted at the same time that another if left bare of supplies.

This latter point was emphasized by Mr. W. H. Dawson, the Toronto Commission merchant, by a reference to the co-operative system of handling the Texas tomato crop. This is handled by one man stationed at St. Louis, and the system is so thorough that market demoralization is absolutely avoided. The grading is so perfect that a man can order a car of Texas tomatoes by grade and feel perfectly sure of getting just what he orders.

Something has already been done along these lines in Ontario, and we are still far behind California, Ohio, Michigan and other States. One of the most progressive co-operative associations in Canada has its headquarters at Walkerton, in the celebrated Huron apple district. Mr. A. E. Sherrington, the manager, reported that last year the association made its first trial in the co-operative work by forwarding to Manchester, Eng., two cars of Duchess apples, which arrived in good condition. In addition to these three cars of winter apples were packed and sold. This year the association has prospered beyond all expectations. There are now about fifty-five members, with an average of four acres of apples each. Fifteen cars of apples have this year been shipped on the co-operative plan. Not only have the prices been better, but more fruit has been sold than would have been possible under the old system. Even the early varieties of apples were put upon the market in good condition. Just as soon as the Duchess, for instance, were ripe, all co-operators were notified to begin picking at the same time. In this way a car would be started with the fruit within two days of the time the apples were taken from the trees. If he can, said Mr. Sherrington, by this system increase the general returns

received from our fruit crop, the producer of poor fruit will almost certainly be led to improve the quality of his output. If he will not do this he will have to get out of the association.

In the course of the discussion, Mr. McKinnon said that, in his opinion, no system of co-operation would be complete which did not start at the beginning, and introduce uniform methods in the selection of varieties, in planting and topgrafting, in orchard management, including spraying, and even in the buying of supplies.

Yours very truly,  
W. A. CLEMONS,  
Publication Clerk.

**The Man Who Works Hard.**

Perseverance and will-power he must have, but whether he has strength and vigor is another consideration. Hard working men usually have irritable nerves and should fortify their systems with a course of Ferrozone, a tonic that rebuilds and revitalizes beyond all telling. Its just wonderful strength that Ferrozone imparts to broken down men. It forms new blood, supplies the system with abundant nourishment, and where formerly there was tiredness and lassitude Ferrozone establishes a reserve of energy and vim. Try Ferrozone,—price 50c. per box.

**TO CONSUMPTIVES.**

The undersigned having been restored to health by simple means, after suffering for several years with a severe lung affection, and that dread disease Consumption, is anxious to make known to his fellow sufferers the means of cure. To those who desire it, he will cheerfully send, free of charge, a copy of the prescription used, which they will find a sure cure for Consumption, Asthma, Catarrh, Bronchitis and all throat and lung troubles. He hopes all sufferers will try his remedy, as it is invaluable. Those desiring the prescription, which will cost them nothing, and may prove a blessing, will please address, Rev. EDWARD A. WILSON Brooklyn New York

**For Sale.**

A BRICK HOUSE, 4 ROOMS AND Hall down stairs, stone cellar under all of the house. 3 acres of good land, 50 rods from house, 1 and one half miles from town. Apply to C. L. GRANT, or MRS. WM. WILLOUGHAN.

**Hogs for Sale.**

THE UNDERSIGNED HAS FOR Sale a large number of Ciderilla, Cambridge and Yorkshires, which he will ship to purchasers to any point. For further particulars apply to, OWEN HEFFERNAN, Nov. 25th—tf. Marden P. O.

**Sheep Estray.**

CAME TO THE PREMISES OF the undersigned, lot 29, con. 2, E. G. R., Glenelg, one white ewe. Owner may have same by proving property, paying expenses and taking her away. HUGH VAUGHAN, Edge Hill.

**Park Lot For Sale.**

PARK LOT NUMBER 13 NORTH of Saddle street in the Town of Durham, in the county of Grey, containing 4 acres more or less. For terms and particulars apply to J. P. TELFORD, Dec. 2.—tf. Vendor's Solicitor, Durham

**Farm for Sale.**

BEING LOT NO. 2, CON. 5, GLEN-Elg, containing 100 acres, about 70 cleared and 25 acres of good hardwood bush and five acres of good cedar. The farm is well watered by a never failing spring creek and a well, fairly well fenced, in good state of cultivation, fit for farm machinery. Convenient to church and school, five miles from Durham. Terms to suit the purchaser. For further particulars apply to A. H. BURNETT, Aug. 15th.—tf. Hopeville P. O.

**NOTICE TO CREDITORS IN THE SURROGATE COURT OF THE COUNTY OF GREY.**

In the matter of the Estate of Robert Jardine, late of the Township of Glenelg in the County of Grey, Farmer, deceased.

NOTICE is hereby given pursuant to "The Revised Statutes of Ontario" 1897, Chapter 129, Sec. 38, and amending Acts; that all persons having claims against the Estate of the said Robert Jardine, who died on or about the 23rd day of November, A. D. 1903, are requested to send by post prepaid, or to deliver to the undersigned Solicitor for the executors, on or before the

25th Day of December A. D. 1903, their names, addresses, and descriptions, and full statement of particulars of their claims, and the nature of the security (if any) held by them duly verified; and that after the said date last mentioned, the executors will proceed to distribute the assets of the deceased among the parties entitled thereto, having regard only to the claims of which they shall then have notice.

Dated the 1st day of December, A. D. 1903. J. P. TELFORD, Solicitor for the Executors, JOHN McARTHUR and THOMAS COOK.

**WANTED.**

**Forty or Fifty Good Men**

For the woods, to commence work about New Years. To good men, the highest wages current will be paid.

Dated 4th December, 1903.

For particulars apply to J. P. TELFORD, Durham.

**DURHAM FOUNDRY**

Dealers in and Manufacturers of Harvesting Machinery and farming implements of all kinds.

McCormick Binders, Mowers and Rakes.

Bissell Disc Harrows and Land Rollers.

Domestic Sewing Machines.

Steam and Gas Piping and Fittings.

Castings of all kinds made to order.

Saws gummed and fitted.

Repairing promptly attended to.

**C. SMITH & SONS**

78 QUEEN NEAR

**For Sale.**

VALUABLE PROPERTY SITUATED ON North side of Lampton Street, first place outside town of Durham, everything in first-class shape, good new brick house, good bank barn, 11 acres first-class land, large orchard set out last spring. A first class place for any body. Apply to

KEELER, the Jeweler, Durham. Oct. 13th, tf.

**Farms for Sale.**

THE UNDERSIGNED OFFERS for sale Lots 8 on Con. 21, Egremont, and 3 on Con. 4, S. D. R., Glenelg. Lot 8 consists of 100 acres, 90 acres cleared, well watered and fenced, 80 acres fit to run Machinery over, good large brick house and bank barn, small orchard, 1/2 mile from post office and 1 1/2 miles from school. Will be sold on easy terms. For further particulars apply to

JOHN WHITMORE, Durham P. O. Aug. 8th.—6mc.

**Farm for Sale.**

BEING EAST PARTS OF LOTS 4 and 5, Con. 2, W. G. R., Normandy. Also part of second division of Lot 3, Con. 1, Normandy, containing in all about 110 acres, 30 acres cleared, 20 acres of mixed bush land, log house, good frame barn, well fenced, well watered with springs and running brooks, in good state of cultivation, fit for all kinds of agricultural machinery, convenient to church, school and mills. Easy terms. A good chance for quick purchaser. For further particulars apply to F. R. WHELAN, Durham P. O., or the Proprietor W. R. ROMBOUGH, 254 Borden Street, Toronto, Ont. August 8th, 1903. —tf.

**For Service.**

YOUNG CLEAR GRIT STALLION "Prince Bobs." Anyone wishing to use a horse of this kind would do well to this colt. Matthew Scott is always in attendance, one door east of Crown hotel. H. WATSON, Priceville. Feb'y 26.—tf.

**House & Lot for Sale.**

A HOUSE AND LOT ON QUEEN Street, the property of Mrs. J. L. Browne. The house contains 12 rooms, conveniently situated, and quite new. Will make an excellent boarding house. For particulars apply to J. L. BROWNE, July 10th, 1901. Photographer.

**Boar for Service.**

"CONCORD GENERAL"

REGISTERED PEDIGREE NO. 12377, will be kept for service during 1903-4, at Lot 26, Con. 4, N.D.R., Bentinck, Terms \$1.00.

REGISTERED PEDIGREE, Farrowed March 9th, 1903; bred by Thos. Teasdale, Concord, Ont. 2nd owner, Robert Britton, Allan Park, Ont. Sire Perfection (imp. in dam) 1881—(bred by P. J. Mills, Esq., Royal Notingham, Eng.)—dam Maid S.—1873—(bred by Thos. Teasdale) by Halle—509—(bred by S. Coxworth, Dauphin, Man.)—Maid—521—by Baron Leo 4th—344—(Oxford Lass—407—by Royal Oxford—57—Ruth (imp.)—406—by Wimmer (imp.)—2111—(3699), Daisy—1544—by Lord Castlewood—746—(Oxford Gem—1107—by Baron Von Bismark—82—Oxford Lass—407—by Royal Oxford—57—Ruth (imp.)—406—by Mountain Walk; Thirza, by Collegen.—Handsome 2nd, by Union Jack; Hyacinth, by Wallace, Handsome 1st, by Eschange.—Hope by Leamington Lad.—Gilt, by Wilshire Lad.

ROBERT BRITTON, Prop. Nov. 5th, 1903—2m. ALLAN PARK.

**Farm for Sale or to Rent on Shares.**

LOTS NO. 46 AND 47, CON. 3, S. D. R., Pentinck, containing 162 acres. Good buildings and well watered. For particulars apply on the premises.

ALEX. BEGGS, Durham P. O. Aug. 11th, 1903.—tf.

**For Sale.**

LOT 3, ELGIN STREET WEST on which there is a good solid Brick House 20x30, 7 room; Barn and 1/2 acre of land; good well and young orchard; good stone basement to barn.

Also lots 3 and 4, Kincardine Street west, containing 1 acre. No buildings. This property will be sold in block or separate to suit purchasers. Owner going west. For terms apply to WM. WILLIS, Durham. August 3rd.—tf.

**For Sale.**

A DESIRABLE PIECE OF PROPERTY consisting of twenty-five acres one-half mile east of Corporation of the Toon of Durham, described as South part of Lot 59, Con. 2, E. G. R., Glenelg. On the premises is a comfortable brick five roomed cottage, a good frame barn and stable, a small bearing orchard, an abundance of the best running water. All cleared, title good. Terms easy and price right. For further particulars apply to THOS. DAVIS, Lot 2, Con. 3, N. D. R., Glenelg, Sept. 28, 1903.—3mos.—c. DURHAM P. O.

**First-class Farm of 212 Acres for Sale or Rent.**

LOTS 2 OF 10, AND 3 OF 10, 1st Concession of Egremont, and Lot 23, second Concession of Egremont. These lots are in one block, although on different concessions; 180 acres cleared and in a good state of cultivation, balance good bush. Both farms are well watered with spring creeks, one creek runs close to the barn. Good-bearing orchard of two acres. Good brick house, 32x24; kitchen, 16x22, finished in first-class order. Barn, 62x23 ft. with stone basement capable of holding 53 head of cattle; also horse stable, pig pens, hen house and all the building necessary for well-equipped farm; large weigh scales at slaughter house on farm. This property well fenced, and a lane runs through center of farm, connecting both farms. From 1st to second concession, will be sold in separate parcels if thought advisable. Terms suit purchasers. Will be sold at a bargain as the owner is giving up farming. Property is 5 miles from Durham from Mount Forest and 3 miles from Stein, on the Garrafrax road. Church convenient. Apply on

July 28th.—1903. pd.