





**CAMP, MORRILL & CAMP.**



# M. C. R. R. TIME TABLE.

GOING WEST.	
Mail Train	9:25 A. M.
Local Passenger	7:35 A. M.
Grand Rapids Express	5:55 P. M.
Grand Rapids Express	8:05 P. M.
Evening Express	10:35 P. M.
GOING EAST.	
Night Express	5:50 A. M.
Local Passenger	8:05 A. M.
Grand Rapids Express	10:07 A. M.
Mail Train	4:40 P. M.

Time of Closing the Mail.  
Western... 7:15 A. M., 11:15 A. M., 9:00 P. M.  
Eastern... 9:50 A. M., 4:15 P. M., 9:00 P. M.  
Geo. J. Crowell, Postmaster.

**The Chelsea Herald,**  
IS PUBLISHED  
Every Thursday Morning, by  
A. Allison, Chelsea, Mich.

**BUSINESS DIRECTORY.**  
**OLIVE LODGE, NO. 1.**  
L. O. O. F. & A. M., will meet at Masonic Hall in regular communication on Tuesday evenings, on or preceding each full moon.  
Then, E. Wood, Sec'y.

**L. O. O. F.—THE REGULAR**  
weekly meeting of Vernon Lodge No. 35, L. O. O. F., will take place every Wednesday evening at 6:30 o'clock, at their lodge room, Middle St., East.  
G. E. Wright, Sec'y.

**WASHTENAW ENCAMPMENT, No. 17.**  
L. O. O. F.—Regular meetings first and third Wednesday of each month.  
J. A. Palmer, Sec'y.

**Dr. Robertson & Champlin,**  
**PHYSICIANS & SURGEONS,**  
Office on Main Street (Over Holmes' Dry Goods Store).  
CHELSEA, MICHIGAN.  
v 0-5 6m

**R. M. SPEER,**  
**DENTIST.**  
(Formerly with D. C. Hawhurst, M. D.; D. D. S., of Battle Creek.)  
Nitrous oxide gas for the painless extraction of teeth administered.  
Rooms over Holmes' Dry Goods Store, CHELSEA, MICH. [v-10-3]

**R. Kempf & Brother,**  
**BANKERS,**  
**AND PRODUCE DEALERS,**  
CHELSEA, MICH.

Interest Paid on Special Deposits.  
Foreign Passage Tickets, to and from the Old Country, Sold.  
Drafts Sold on all the Principal Towns of Europe.

**The Laws of the State of Michigan hold Private Bankers liable to the full extent of their Personal Estate, thereby securing Depositors against any possible contingency.**

**Monies Loaned on First-Class Security, at Reasonable Rates.**  
**Insurance on Farm and City Property Effectd.**  
Chelsea, March 25, 1880. v-9-28-ly

**G. E. WRIGHT D. D. S. F. H. SLILES.**  
**WRIGHT & STILES,**  
**DENTISTS.**  
Office with Dr. Palmer, over Glazier & Armstrong's Drug Store, CHELSEA, MICH. [v-11-3]

**INSURANCE COMPANIES**  
REPRESENTED BY  
**Turnbull & Depew.**

Assets.  
Home, of New York, \$5,100,327  
Hartford, 3,292,014  
San Francisco, 4,500,000  
American Mutual-Union, 1,296,091  
Zina, of Hartford, 7,078,224  
Fire Association, 4,165,716

Office: Over Post-office, Main street Chelsea, Mich.  
It is cheaper to insure in these stalwarts, than in one horse companies. v-11

**M. W. BUSH,**  
**DENTIST,**  
Office over W. R. Reed & Co's Store, CHELSEA, MICH. 31

**RESTAURANT.**

**CHESEBROUGH** wishes to thank the people of Chelsea and vicinity for the liberal patronage they have bestowed upon him during the past year, and hope for a continuation of the same. He is prepared at all times to furnish hot and cold meals for the "lower man." He also keeps on hand Cigars, Candies, Nuts, etc. Remember a good square meal for 25 cents. South Main street, Chelsea, Mich. v-11

**New Restaurant**

**S. D. HARRINGTON** would respectfully announce to the inhabitants of Chelsea and vicinity, that he has opened a first-class Restaurant, one door north of the Chelsea House, and is prepared to accommodate all with warm and cold meals, at all hours. A share of public patronage is solicited.  
Chelsea, Mich. v-11

**TONSorial Emporium.**

**F. SHAYER** would respectfully announce to the inhabitants of Chelsea and vicinity that he is now prepared to do all kind of work in his line, also to keep on hand sharp razors, nice clean towels, and everything first-class to suit his customers. He is up to the times, and can give you an easy shave and fashionable hair cut. A share of the public patronage is solicited. Shop under Reed & Co's Drug Store. Main street east, Chelsea, Mich.

# CHURCH DIRECTORY.

**CONGREGATIONAL CHURCH.**  
Rev. Thos. Holmes, D. D., Pastor. Services at 10:45 A. M. and 7 P. M. Prayer meeting Thursday evening at 7 o'clock. Sunday School at 12 m.

**M. E. CHURCH.**  
Rev. H. C. Northrup, Pastor. Services at 10:45 A. M. and 7 P. M. Prayer meeting Tuesday and Thursday evenings at 7 o'clock. Sunday School immediately after morning services.

**BAPTIST CHURCH.**  
Rev. E. A. Gay, Pastor. Services at 10:45 A. M. and 7 P. M. Young people's meeting Tuesday evening at 7 o'clock. Prayer meeting Thursday evening at 7 o'clock. Sunday School at 12 m.

**CATHOLIC CHURCH.**  
Rev. Father Dunn, Services every Sunday at 8 and 10:45 A. M. Vespers 7 o'clock P. M. Sunday School at 12 o'clock A. M.

**LUTHERAN CHURCH.**  
Rev. Mr. Metzger. Services every alternate Sunday at 2 o'clock P. M.

**OUR TELEPHONE.**

Mrs. Fannie Hanly, Detroit, is in town.

F. M. Hooker, has returned to Detroit.

Miss Ida Tuttle, Unadilla, was in town last week.

Alice Richards, Grass Lake, in town on Saturday.

Ted Lundhard, Jackson, was the guest of Archie Wilkinson last week.

Miss Dudley, of Holly, Mich., is the guest of Lizzie Maroney.

Geo. Kempf spent Sunday in Ann Arbor.

Squire Lehman occupies his new house on Summit street.

Roz. Gates spent Thursday last in Detroit.

Master Johnny Kempf, of Ann Arbor, was in town Monday.

J. L. Gilbert is entertaining friends from Balloua, N. Y.

Lulu Spaulding is visiting in Newcomb, this county.

Nice, tender steaks at Canfield's.

Business is rather quiet after the holidays and everything seems serene.

The Marshal says there were eight "drunks" arrested last week.

Four "drunks" were tried before Justice Lehman, all at one time on, Saturday last.

A little fellow on Congdon street, wishes Christmas came every week. Perhaps his parents don't.

Our school opened last Tuesday. The teachers and pupils feeling somewhat better after their holiday vacation.

Misses Mina Geddes, Maggie Gates, Philie Matt fell and Abbie Gates, were the Chelsea daisies at Ann Arbor last week.

Fine fed veal, at Canfield's.

The multiphon, the new invention for the deaf, is being tried by a few here. We have not yet heard with what results.

R. M. Speer, our enterprising dentist, took to himself a wife, this week. She was one of the fair daughters of Battle Creek.

We are having pretty snug winter weather. About two inches of snow fell wit in the past four days.

We see by the Ypsilanti Commercial that Misses Irene and Jessie Everett have been visiting acquaintances there last week. They returned Saturday, after calling at Ann Arbor.

The stars, satellites, and other constellations of Chelsea society, have concluded to form a society called the "Chelsea Dramatic Club." They met on Tuesday night. Will report meeting next week.

An ex-consul of Great Britain, says the Brooklyn Eagle, related that Mr. Charles Townsend, Sedalia, Mo., was cured of rheumatism of the worst kind by St. Jacobs Oil.—Indianapolis (Ind.) Sentinel.

J. H. Bartlett, of Flint, was one of the members of the crew of the ill-fated Jeanette, which was crushed in the ice, June 22, off the coast of Siberia. His name appears among the list of saved.

**More Double Track.**—It was announced in Jackson, on Saturday last, that the Michigan Central would continue their new double track from Chelsea to Ypsilanti, next summer.

Superb Sugar Cured Hams, at Canfield's.

A disgraceful whisky fight occurred in one of our saloons on Saturday last, in which two men were engaged in a deadly combat, one of them got badly bruised and otherwise disfigured. So much for whisky.

The Christmas and New Year's tree party, given by the Good Templars of this village, last Friday evening, at Tuttle's Hall, was largely attended. Many valuable presents were given away to the young and old. A pleasant evening was enjoyed by all who were present.

Won't some man who owns a block, make a Hall out of it? Chelsea should be ashamed of itself to be, as it is, without a Town Hall. If the Dramatic Club is a success, a hall will be necessary and will pay the enterprising man who furnishes one. Come Thomas, Hudler, and the rest of you who can do it, shall Chelsea have a Hall?

Died.—At his residence in Francisco, on Saturday morning, Dec 31, after a short illness, William Nutton, aged 42 years.

His funeral took place last Monday, under the auspices of the F. & A. M., of which he was a member. The Chelsea band took a part in the solemn ceremony—his remains were taken to its last resting place by a large concourse of friends and relatives. He leaves a wife and three children to mourn his loss. Peace to his ashes.

The Ottawa (Kan.) Republican thus quotes: Mr. Harvey B. F. Keller, recorder of deeds, says: I have long been convinced of the merits of St. Jacobs Oil, and use it in my family for rheumatism successfully.

An injunction was served on Friday of last week, stopping the building of the new mill in Jackson. This throws many men temporarily out of employment. The injunction was sued out by Alonzo Bennett, in behalf of the estate of the late Allen Bennett, to restrain the Purifier company from using their funds in building the new mill.

**HENRY C. WENTWORTH'S FUNERAL.**—The funeral of the late Henry C. Wentworth, general passenger and ticket agent of the Michigan Central railway, took place in Chelsea, on Saturday of last week. There was a very large attendance of prominent railroad men. The body was taken to Rose Hill cemetery. Some beautiful floral tributes presented by ticket men of Chicago. The most marked design was a representation of a tunnel being entered by a train, the last car of which was the only one visible.

**Fifteenth Wedding Anniversary.**

Of all the pleasant gatherings of the festive season, and Holiday greetings, which gladden the heart, and lift the soul up to its haven of joy, none surpassed the gay gathering at the hospitable residence of our townsmen, Hon. M. J. Noyes and lady; where friends met on the eve of Dec. 29th, to celebrate the fifteenth anniversary of their marriage. The gathering was one that will long be remembered by those present, and the pleasant and kindly greetings of host and hostess to their guests were duly appreciated by all. The salutes of wit, and repartee were given, and received, that brought peals of laughter from all; no stiff formalities, but all vied to make it a merry wedding party. The groom seemed no older, than when many of the guests first clasped his hand "Lung Syne"; and the eye of the bride which shone resplendent in her maidenhood, was not dimmed, but lighted up, and sparkled as it crystallized this fifteenth anniversary of married life. The occasion was bright and joyous to all; and although some showed the silver threads upon the brow, it seemed for a time, all forgot they were no longer young. It is good to forget we are growing old, and this gathering served the purpose well. The crystallization of happiness brings its silver rills of joy, and as they unite, its fruits are golden in the declining years of life. After quiet was restored, Rev. E. Gay brought forth, as by enchantment, a gold-headed cane, and a beautiful card basket, presenting them as mementoes to our host and hostess, showing them that they held warm places in the hearts of friends; the cane to lean upon, when the steps are feeble; the basket to hold treasures of warm friendship, like golden links, binding hearts more closely in bonds of unity. It was indeed an occasion which will ever leave a special fragrance among the gathered leaves of memory.

**A GOLD.**

**NOT A BEVERAGE.**

They are not a beverage but a medicine, with curative properties of the highest degree containing no pure whisky or poisonous drugs. They do not tear down an already debilitated system, but build it up. One bottle contains more hops, than is more real hop strength, than a barrel of ordinary beer. Every druggist in Rochester sells them, and the physicians prescribe them.—Evening Express on Hop Bitters

**Tuomey Bros.,**  
WHOLESALE AND RETAIL,  
**DRY GOODS HOUSE,**  
JACKSON

**The Leaders of Small Profits.**

Offer extraordinary inducements to purchasers this season. The extent of our business enables us to buy at much lower prices than others—to do our business at very much less expense—to sell at much smaller margins of profit. The rapid and steady growth of our business, is evidence that we do all our business.

Our Dress Goods and Silk stock is more than double the size of any former season—the goods were selected with the greatest of care. We are selling many goods over our counters at less than other merchants pay for them, and as a result, our Dress Goods and Silk Department is doing more than double the business of any former season.

We have in stock, Black and Colored Gros Grain Silks, Black and Col red Satin, Black and Colored Brocade Silks and Satins, Black Satin Mere lileux, Satin De Lyon, Moire Antique Silks and Satins, Brocade Surrah Silks and Satins, Black and Colored Velvets and Velvetines, Black and Colored Plushes, in all the new shades.

Black and Colored Cashmeres, Corduroies, Chindlals, Camel's Hair Cloths, Mornins, Armures, Wool Brocades, Alpocas, Molairs, and the Novelties in Plaid and Stripes to match all these.

Waterproofs, All Wool Sackings and Suitings, Beyer Cloths, Cloakings, Wool Flannels, Cassimeres.

Silk Fringes and Beaded Gimps, Ornaments, Knit Underwear and Hosiery.

Cloaks, Jackets, Ulsters, Shawls and Skirts, Woolen Blankets.

65 cents is the railroad fare to Jackson. You will save four times that much on Ten Dollars worth of Dry Goods bought of us; besides you will find such an assortment to select from, that you can please yourself fully.

One Price to all—Plain Figures—No Credit.

**TUOMEY BROS.,**  
—The Leaders of Small Profits,  
Jackson, Mich.

Stores also, at Eaton Rapids and Muskegon.

P. S.—Orders for samples will have our best attention. Describe closely the kind of goods wanted, the color, about how much you wish to pay; we will serve you better than if you were here in person.

**MARRIED.**—In Chelsea, January 2, 1882, by Rev. Thomas Holmes, D. D., Mr. Chas. W. Smith and Miss Mallada R. Showers, both of Grass Lake.

**K. O. T. M.—ATTENTION.**—The officers elect of the Maccabees, will be installed by Great Record Keeper Boynton, of Port Huron, Thursday evening, Jan. 6th. A full attendance is required—an interesting time expected. The Order is flourishing in this place, having 37 members and a number waiting to get a chance to join, and get the benefit of this cheap and reliable insurance, as well as to enjoy the three years of warfare.

The first through passenger train over the Detroit, Mackinac & Marquette division of the Michigan Central road, left Detroit last Sunday night at 11 o'clock, and reaches Bay City at 6:45 A. M., leaves there at 8:20 A. M., and reaches Cheboygan at 4:35 P. M., and Mackinac at 6:45 P. M. Returning it will leave Mackinac at 7:20 A. M., Cheboygan at 8:35 A. M., reach Bay City at 5:35 P. M., and arrive in Detroit at 9:55 P. M. The outgoing train has a sleeper attached between Detroit and Bay City. It is estimated that the distance from Detroit to Marquette by the Michigan Central and Chicago & Northwestern is 685 miles, while by the new Detroit, Mackinac & Marquette road it will be only about 400 miles.

**Unclaimed Letters.**

LIST of Letters remaining in the Post Office, at Chelsea, Jan. 1, 1882.

Ball, M. C.  
Lee, Fred E.  
Mulvany, James  
Smith, Henry  
Wellburn, Mr Thomas

Persons calling for any of the above letters, please say "advertised."

Geo. J. Crowell, P. M.

**The Sun's Heat.**

A few general facts about the sun may not be uninteresting. Its diameter is 850,100 miles, or more than 107 times the mean diameter of the earth. The volume or bulk of the sun, exceeds that of the earth 1,405,000 times. The mass of the sun, or the quantity of matter it contains as measured by weight, exceeds that of the earth 356,000 times. The following facts relative to the chemical constitution of the sun will answer inquiries made: The solar atmosphere comprises, in the state of vapor, a great number of substances which compose our planet. Of the metals which enter into the composition of our alkalies and earths, it has sodium, magnesia, iron, calcium, barium; it also contains iron, zinc, copper, nickel and chromium; it also has, probably, gold, cobalt, strontium and cadmium. It has, however, neither silver, mercury, tin, aluminium, lead, antimony, arsenic nor silicium, at least no considerable quantities have yet been found.

We quote an authority in regard to the question of heat: "Until very lately, when the theory of the conservation of energy became understood, the vaguest ideas on the probable origin of the sun's light and heat had been sustained. Prof. Sir W. Thomson has thrown much light on the subject, and we are now led to think that, as the particles which formed the sun have gradually come together under the influence of gravitation, the result has been the conservation of potential energy into motion, or kinetic energy, and of the latter into heat. This idea is, we believe, also entertained by Prof. Helmholtz, Rankine, Tait, and generally by those who have studied the subject, and are at the same time acquainted with the theory of the conservation of energy."—Chicago Inter Ocean.

**NEVER GO INTO A PLACE WHERE YOU WOULD NOT TAKE YOUR WIFE.**

—A young man in Carson got married and started for California with his young wife. As he boarded the train his father bade him good-by and gave him the paternal blessing.

"My son," said the aged sire, shaking with emotion, etc., "remember these words if you never see me again: Never go into a place where you wouldn't take your wife."

The couple settled in Mariposa County, and the old man went down to visit them. He proposed a bear hunt, and they were fortunate enough to track a grizzly to his lair among some boulders in the chaparral. As the two approached, the bear roused up and sent forth a growl of defiance that shook the trees.

"Go in there and kill him," said the old man, excitedly.

The son held back, further acquaintance with the bear seeming in some respects undesirable.

"Count me out," he said.

"Have I crossed the seas and settled in America to raise a coward?" shouted the father, brandishing his gun.

"I recollect your advice when I left Carson," was the reply. "How can I forget your sage precepts? Didn't you tell me never to go where I couldn't take my wife? Now, how would Sal look in there with the bear?"

The old man clasped his doubtful son to his bosom, and as the bear issued forth, exclaimed:

"Speaking of Sal, let us hasten home. Our prolonged absence might cause her needless alarm."

In about fifteen minutes they had reached the ranch, the old man a little ahead, and the distance was about four miles.

# Chelsea Market.

CHELSEA, Jan. 5, 1882.	
FLOUR, # cwt.	\$3 50
WHEAT, White, # bu.	1 25
CORN, # bu.	80 25
OATS, # bu.	40
COYER BEAN, # bu.	4 00
TIMOTHY SEED, # bu.	3 50
BRASS, # bu.	3 25
POTATOES, # bu.	75
APPLES, green, # b.	1 12
do dried, # b.	6
HONEY, # b.	18 20
BUTTER, # b.	18 25
POULTRY—Chickens, #	7
EGGS, # b.	6
TALLOW, # b.	12
SHOULDERS, # b.	20
EGGS, # doz.	20
BEEF, live # cwt.	3 00 2 50
SHEEP, live # cwt.	3 00 5 00
HOGS, live # cwt.	3 00 5 00
do dressed # cwt.	5 00 12 00
HAY, tame # ton.	10 00 6 00
do marsh, # ton.	5 00 6 00
SALE, # b.	1 20
Wool, # b.	35 35
GRANITE, # bu.	2 00

**Sheriff's Sale.**

NOTICE is hereby given, that by virtue of a writ of *Fieri Facias* issued out of the Circuit Court for the County of Washtenaw, in favor of Fredrick Bush, against the goods and chattels and real estate of Mortimer W. Bush, in said county, to me directed and delivered. I did on the twenty-eighth (28) day of November, A. D. 1881, levy upon and take all the right, title and interest, of the said Mortimer W. Bush, in and to the following described real estate—that is to say, all that certain piece or parcels of land situated in the village of Chelsea, County of Washtenaw, and State of Michigan, known and described as follows viz: Lot number fifteen (15) in block number seventeen (17) according to Elsiea Congdon's third addition to the plat of the village of Chelsea, County of Washtenaw, State of Michigan, all of which I shall expose for sale at public auction or vendue to the highest bidder at the north front door of the Court House in the city of Ann Arbor, in said county, on the third day of February, A. D. 1882, next at eleven o'clock in the forenoon of that day.

Dated this Thirtieth day of December, A. D. 1881.

EDWIN W. WALLACE,  
Sheriff.

SAWYER & KNOWLTON, Plaintiff's Attorneys.

**Probate Order.**

STATE OF MICHIGAN, )  
COUNTY OF WASHTENAW, ) ss.

At a session of the Probate Court for the County of Washtenaw, holden at the Probate Office in the city of Ann Arbor, on Friday, the thirtieth day of December, in the year one thousand eight hundred and eighty-one.

Present, William D. Harriman, Judge of Probate.

In the matter of the estate of Alfred B. Bird, James P. Bird, Agnes E. Bird, and Daniel B. Bird, minors.

On reading and filing the petition, duly verified, of William F. Bird, Guardian, praying that he may be licensed to sell certain real estate belonging to said minors.

Thereupon it is ordered, that Tuesday the thirty-first day of January, 1882, at 10 o'clock in the forenoon, be assigned for the hearing of said petition, and that the next of kin of said minors, and all other persons interested in said estate, are required to appear at a session of said Court, then to be holden at the Probate Office, in the city of Ann Arbor, in said county, and show cause if any there be, why the prayer of the petitioner should not be granted: And it is further Ordered, that said petitioner give notice to the persons interested in said estate, of the pendency of said petition, of this order to be published in the Chelsea Herald, a newspaper printed and circulated in said county, three successive weeks previous to said day of hearing.

WILLIAM D. HARRIMAN,  
Judge of Probate.

[A true copy.]  
WILLIAM G. DOTY,  
Probate Register.

**BEST** business now before the public. You can make money faster at work for us than at anything else. Capital not needed. We will start you, \$12 a day and upwards made at home by the industrious. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time only or give your whole time to the business. You can live at home and do the work. No other business will pay you nearly as well. No one can fail to make enormous pay by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & CO., Augusta, Maine.

**MANHOOD**

**How Lost, How Restored!**

Just published, a new edition of DR. CULVERWELL'S CELEBRATED ESSAY on the radical cure of SPERMATORRHOEA or Seminal Weakness, Involuntary seminal Losses, Impotency, Mental and Physical Debility, Impairments to Marriage, etc.; also CONSUMPTION, EPILEPSY and FETES, induced by self-indulgence or sexual extravagance, etc.

The celebrated author, in this admirable Essay, clearly demonstrates, from a thirty years' successful practice, that the alarming consequences of self-abuse may be radically cured; pointing out a mode of cure at once simple, certain and effectual, by means of which every sufferer, no matter what his condition may be, may cure himself cheaply, privately and radically.

This Lecture should be in the hands of every youth and every man in the land. Sent under seal, in a plain envelope, to any address, post-paid, on receipt of six cents or two postage stamps. Address THE CULVERWELL MEDICAL CO., 41 Ann St., New York.

Post Office Box, 450. 18

**C. BLISS & SON,**

Have an elegant Stock of  
WATCHES,  
JEWELRY, and  
SILVER WARE.

REPAIRING—Neatly done, and warranted.

No. 11 SOUTH MAIN STREET,  
ANN ARBOR. 16

**NEW DRAY.**

J. D. SCHNAITMAN, would respectfully announce to the inhabitants of Chelsea, that he has opened business with a first-class Dray, and is ready at all times to accommodate all in his line. Having established headquarters at Sum & Van's store, all orders left will be promptly attended to. A share of public patronage is solicited.  
Wm. Winans, Drayman.

FOR SALE, at a Bargain—A house, lot and barn, situated on Marsh street. Enquire at this office. v-12

# 15 GREAT DAYS!

# Greatest Days Ever Known in the DRY GOODS TRADE!

# MY STOCK

# MUST BE REDUCED,

# AT Least One-half!

# IMMENSE SACRIFICE.



# WHAT MAKES THE GRASSES GROW?

I looked my book for Nature's book  
 Was open to the page of the book  
 And, with a weary head, I took  
 My hat, and wandered toward the brook  
 In the meadow lay the grass,  
 And I found the grassy side,  
 I found a child at play.

From on the sward, its little toes  
 Wrought dimples in the sand,  
 And, as the sun shone on the rose,  
 I heard it murmur, "Mama knows,  
 But I don't understand."  
 While all unheeded a daisy blade  
 Of grass was in its hand.

"What wouldst thou know, my little one?"  
 said I, with bearing wise;  
 For I, who thought to weigh the sun,  
 And trace the course where planets run,  
 And grasp their mysteries,  
 Under a lady's questioning  
 Would surely make replies.

"What wouldst thou know?" again I said,  
 And, gently bowing my head,  
 I stroked its half-uplifted head.  
 With chubby hand it grasped the blade  
 And answered, "O, I know,  
 For 'tis the grass that grows on the face."  
 What makes the grass grow?

"Last fall," I said, "a grass-seed fell  
 On the sand and went to sleep.  
 All winter it lay in its cold cell  
 Till Spring came tapping upon its shell;  
 Then it stirred, and tried to peep,  
 With its little green eye, right up to the sky,  
 And then it gave a leap."

"For the sun was warm and the earth was fair;  
 It felt the breezes blow;  
 It turned its cheek to the soft, sweet air,  
 And a current of life, so rich and rare,  
 Came up from its roots below.  
 It grew and kept growing, and that, my child,  
 Is the reason the grasses grow."

"O, talks she like as if 'twere I!"  
 I thought, and I don't know  
 "But surely," I said, "but babies and they one knows  
 That grasses don't think, for they're one knows  
 My Mama has told me so."  
 "What makes the grass grow?"  
 "What is it that makes 'em grow?"

How could I answer in words so plain.  
 That a baby could understand?  
 Ah, how could I answer my heart? "Twere  
 vain  
 To talk of the union of sun and rain  
 In the rich and fruitful land;  
 For over them all was the mystery  
 Of will and a guiding hand."

What could I gather from learning more  
 Than was written in Nature's book?  
 I heard the billows of silence roar  
 On the rocks of truth from the mystic shore,  
 And, humbly bowing low,  
 I answered like the man and child:  
 "God makes the grasses grow."  
 —W. W. B. in St. Nicholas.

## WATER AND HEALTH.

One of the most important subjects for the consideration of the inhabitants of any thickly populated district is the sanitary condition of water. Particularly is this important to the inhabitants of large cities, where the death rate is increased by a number of diseases that have been, and others that perhaps may be, traced to the imperfect and the improper supply of water.

Good water, fresh air and sun-light are three of nature's great remedies, but they are not advertised by our druggists because there is no money to be made. And if they were brought more forcibly to our notice, the chances are that we would prefer some of the more costly cures done up in bottles and wrapped in papers printed with the recommendations and opinions of those who, perhaps, are unconsciously victims to the patent drug. We people of the nineteenth century would, like Naaman of old, rather do some great thing than to wash and be clean.

The character of spring water depends largely upon the nature of the soil through which it flows. Although spring waters may appear very clear and sparkling, yet they may contain large quantities of impurities held in solution. The fact that the water flows through earth and gravel is enough to account for its clearness—the soil, although giving it its impurities, filters from it any sedimentary matter.

The total quantity of dissolved impurity in spring waters varies from one or two grains to eighty or ninety grains in one U. S. gallon (231 cubic inches). Waters are said to be hard or soft. Lime salts make water hard. These lime salts decompose the soap and destroy its detergent properties.

With hard water much more soap is necessary, as some is used up in making the water soft. It is said that the people of Glasgow, in introducing the pure water of Loch Katrine in place of the hard well water, made a saving of \$180,000 per annum.

Some hard waters may be made soft by boiling, viz., such as have bicarbonate of calcium. This compound may be destroyed by boiling, liberating carbonic acid gas, and forming insoluble calcium carbonate, which will settle and may be removed by filtration.

This explains how certain incrustations are formed in tea-kettles. I have specimens of incrustations more than an inch thick that were precipitated in the above manner in the boilers of an ocean line of steamers.

While bicarbonate of calcium produces only temporary hardness and may be removed by boiling, water is made permanently hard when the calcium is there as the sulphate.

Organic matter is almost always present in water. There must be a distinction made between vegetable matter which is harmless, and the objectionable organic matter derived from decomposing animal and vegetable substances. These last rarely occur in spring waters.

One word in regard to living animals and plants in water. Although these animals when seen under the microscope are very formidable in appearance and frightful in motion, yet they are not objectionable. They only inhabit very pure water. The plants exercise a purifying influence on the water by liberating oxygen.

It sometimes happens, owing perhaps to some peculiarity of the season, that these little animals multiply to such an extent as to produce serious annoyance. Although our waters are perhaps free from objectionable animals, yet I may say that it is stated that one-sixth of the deaths in Iceland are caused by little animals being taken into the system. Young leeches, contained in drinking water, sometimes fix themselves on the pharynx. In Algiers 400 French soldiers were sick at one time from this cause.

These waters contain about the same dose of impurities that springs do. In addition to this they sometimes contain large quantities of putrefying animal matter on account of their too close proximity to cess-pools, privy vaults or sewers. These matters, which they hardly affect the taste or smell, carry with them deadly results to the persons using the water. Wells in the neighborhood of grave yards often contain water contaminated with animal matter from the recently filled graves. In 1808 a law was passed in France prohibiting the digging of a well within 100 metres of any cemetery.

Very good water is often supplied by artesian wells when they are bored down so as to reach their supply of water from below a stratum of soil impervious to surface drainage.

Lakes and ponds contain less, but the same kind of impurities as springs. While the water from springs all flows through soil from which it dissolves its impurities, much of the lake and pond water only flows over the surface of the ground.

Rivers or any rapid streams contain generally a large amount of suspended matter which makes the water thick and dark in color. Very little of this suspended matter dissolves, and it may be removed by filtering or allowing it to settle.

When these turbid streams empty into lakes or ponds the suspended matter settles, leaving the lake water clear, but in running streams there is no opportunity for the sediment to settle.

The water of the Mississippi contains forty grains of mud per gallon. It is estimated that this river carries 400,000,000 tons of sediment per annum into the Gulf of Mexico. This mud is rich in plant food, and produces fertile land.

The water of rivers is often made very impure by receiving the drainage of towns on its banks. These impurities often make the water unfit to drink. Rivers, however, will purify themselves by oxidizing in a short time.

The quality is often of more importance than the quantity of the impurity. Five or six grains of lime or magnesia will render water unfit for the cooking of some vegetables, while such impurity will be of great advantage when the water is used for making tea or coffee. Soft waters are generally better for cooking and for washing purposes, and hard water for tea or coffee. It is on account of this that certain wells have a reputation as tea wells. In years gone by there were two or three such wells in New York City and a boy was employed by the corporation to pump water for the benefit of the inhabitants.

The reason why hard water is better for making tea or coffee is because the lime salts prevent the water from dissolving the astringent matter contained in the tea or coffee, but it does not prevent the extraction of them.

Larger quantities of these above-mentioned impurities make water injurious to health. If it is known that water has a high degree of permanent hardness, the chances are that it is a bad water. It will probably contain the sulphate of lime, chloride of calcium, and perhaps salts of magnesium. Magnesium salts are especially objectionable to health, and water containing even a small amount of these salts should be rejected. Water containing these salts causes diarrhoea when drunk. They are also said to cause dyspepsia. It is supposed to be the presence of these salts in water that produces goitre (a swelling of the glands of the neck). Cretinism, which is a certain kind of idiotic insanity, is also referred to the same impurities in large quantities.

Among the inorganic impurities of water, lead and copper are often found, and especially is lead found. Water which acts freely upon lead is not suitable for the supply of a town, as any service pipes are made of lead. Almost any water will not upon lead left in contact with it long enough. For this reason we should always empty the house pipes of water which has stood in them overnight, before drawing any for cooking purposes. Lead is a cumulative poison, and a very small quantity taken into the system each day will finally produce lead-poisoning.

The products of the decomposition of animal matter in water are the most objectionable impurities. These are highly dangerous even when found in minute quantities. They are the more dangerous, instead of being disagreeable to the taste, are frequently of very fine flavor and much sought after. Many cases of disease have been traced to the use of water contaminated by drainage from sewers, cesspools, etc.

The old saying "There was health in the new" is easily explained. New villages are generally supplied with water from springs, and as the number of inhabitants increases wells are used for greater convenience. Wells often receive contamination from sewers and cesspools, while spring water is free from such contamination. The famous Broad Street pump in London in 1854 killed 600 persons in a single week by disseminating cholera. In 1866 many deaths occurred from the use of water from a famous pump in Brooklyn. All trouble was brought to an end when the Health Officers removed the pump handle.

There are substances dissolved in water sometimes, which are themselves harmless, yet they should cause the water to be looked upon with great suspicion. The first is sodium chloride or common salt. This substance may get into the water by infiltration from the sea, or from strata containing common salt. But another source of chlorides in a water is pollution by sewage.

Although the presence of chlorides in water does not show positively that the water is contaminated, yet when found in any quantity the water must be condemned until the source of the sodium chloride has been ascertained.

Nitrates and nitrites are sometimes found in water, and they may be there as the products of the decomposition of organic matter. Allowing that they are not injurious in themselves, yet it is a once make you suspect that the water containing them has at some time or other been contaminated with organic matters to a large extent.

Impurities from factories and chemical works must sometimes be looked for. But such impurities are not to be feared in this country while our factories are so scattered as now. The waste products of our most important industries are quite harmless when diluted with much water.

It frequently happens that whole communities are thrown into a state of excitement if the water supply happens to be a little off-color, as it frequently is after a heavy storm. They get an idea that the water is poisoned, and no amount of reassuring will prove the reverse. Such cases occurred in New York City once or twice during the late war with the South; and they amounted almost to a panic. In New York they supposed the Croton water, which supplies the city, to have been poisoned by Southerners. The absurdity lies in the fact I am about to state.

One-sixteenth grain of strychnine is necessary to poison a person. That each person might get that amount the water of Croton Lake would have to receive three and one-half tons of strychnine. There is not so much in the world, and it would take about three years to procure it.

If arsenic were used, they must have two grains for each person, and would require 114 tons—a canal boat load.

Before closing I wish to call your attention to the following figures, which show the amount of water used per head in some large cities:

Manchester	50 gallons
Liverpool	30 gallons
Edinburgh	30 gallons
Birmingham	30 gallons
London	30 gallons
New York	100 gallons
San Francisco	30 gallons

If the amount of water used has any

thing to do with the health of a nation, we are far behind Rome in the days of the Caesars. Imperial Rome then supplied her citizens three times as much water as is now used per capita by the citizens of our largest city. —Horbert C. Foote, in a Lecture before the Students of the Cleveland Homeopathic College.

## Firework Making.

A firework factory is not a very imposing establishment to look at. It cannot very well be so. It is necessary to have almost as many workshops as there are various processes in the manufacture, and the law requires that only a certain amount of explosive material shall be accumulated in each shop, that only a certain number of hands shall be employed in it, that the center of each shop shall be at least twenty-five yards from the center of any other shop, and that finished fireworks shall be stored in quantities strictly limited and clearly specified in magazines sunk in the ground at least fifty yards from any other magazine or workshop.

A large firework factory, therefore, has the appearance of a rather queer-looking little industrial village, the open spaces of which may perhaps be piled up with debris of one sort and another, while some of the roadways left as the fringe of a display of iron mortars, which, to one who should chance to come upon the place without any knowledge of its character, might very probably suggest the idea that the heaps of broken frames rocket-sticks, barrels, and so forth, were the outcome of a recent bombardment.

It is not altogether an inviting enclosure for a stranger to make his way into. There is a big notice of "Danger" in capital letters near the entrance, and all sorts of notices of pains and penalties and warnings to trespassers. There are some fifty workshops and magazines dotted over about twenty-one acres of grass land, and the rules and regulations posted up here and there about the place convey the idea—quite an erroneous one no doubt—that a general blow-up may be expected at any moment. Every workshop is floored with kamptulene and lined with paper. Not a scrap of iron is employed in their structure, all nails, etc., being of copper. The people employed in them are compelled to wear "over-all" boots made specially for the purpose without nails, and garments of woolen, all pockets, in which lucifers or other contraband articles might be brought into the place being strictly forbidden. To insure that this prohibition is adhered to, every person is searched before commencing work. It is necessary, as it sometimes is, at busy times, to carry on work after dark, each workshop must be lighted by a gas lamp shining through the window from the outside.

Perhaps the most delicate and interesting feature of modern firework-making is the charging of Roman candles—those colored balls which are puffed out softly into the air one after the other without any report, and which always are recognized as such a pretty feature of the Sydney displays. The public like to see these balls thrown out by exactly an equal force, so as to play within the same sphere. In order to secure this very careful adjustment is necessary.

The fiery balls of color are little lumps of composition filled into the case, and separated from each other by a layer of "dark-fire," a little charge of gunpowder being just underneath each. It is this little charge of powder which blows them into the air, and if all the charges were alike, every ball would be thrown out a little further than its predecessor, because the deeper down in the case an explosion takes place the more violent it is, the resistance being greater. To obviate this the charge of powder is made to increase as the tube is filled up. The workman who fills a Roman candle, therefore, has before him a series of little scoops of different sizes for measuring the powder, and these, in succession, the smallest being used for the first ball put in and the largest one for the ball at the mouth of the tube. The "dark-fire" is a composition which only smolders, and which therefore does not burn down to a second ball until the first has performed its graceful progress through the air. Of all fireworks the rocket is perhaps the most beautiful, and it certainly is the most curious in its structure. Some of the best of them are said to rise to a height of more than a third of a mile, and this amazing power of height is secured by running in very tightly into the rocket-case a composition which burns rapidly, and generates gas very rapidly when once lighted, but which has only a very small vent for its fury at the lower end of the case. The gas generated inside rushes out by such violence against the air outside that the rocket is driven upward by it, the tail of the comet consisting of the sparks of the fire burning within. Rocket-making of course forms a large part of the work of any firework factory. In one shed the cases are being split up, and in another building sticks are being split up and reeled at the head so as to fit the rocket-cases. In a third all sorts of curious burdens are being prepared for the fiery messengers whose heads are hollow chambers capable of holding "tail stars," comets, colored stars, golden rain, floating lights and a score of other surprises when the rocket can rise no higher. These floating lights, by the way, are well worth a passing notice. They are produced by little tubes of color borne aloft by a small silver parachute, which, together with the tube, is skillfully packed into the head of the rocket.

## FAIRM AND FIDESIDE.

—One of the best preventives of hog cholera is good care, and that includes good shelter, good feeding and good watering.

—A farmer of experience in wool-growing says that there is more money in growing wool at even twenty cents a pound than in loaning money at ten per cent. interest.

—The scales which drop off from iron when being worked at forges, from ironsmiths, filings or other ferruginous material, if worked into the soil about fruit trees, or the more minute particles spread thinly on the lawn, mixed with the earth of flower beds or in pots, are extremely valuable. They are especially valuable to the peach tree, and, in fact, supply necessary ingredients to the soil. For colored flowers they heighten the bloom; they are also found to be beneficial to the pear tree when worked in round their roots.

—Grease spots may be removed from linen by putting a good quantity of soda into the water in which it is washed. From silk of woolen goods there is no more effective method than the old one of placing a sheet of thick, soft brown paper over the spot, passing a hot iron over it, and quickly lifting the paper, on which the grease will be found absorbed. Paint spots should be rubbed first with a sponge dipped in turpentine, and afterward with a clean cloth from the circumference to the center, that the spot may not spread. A weak solution of ammonia will generally eradicate fruit stains.

—The most effectual way to break a horse of pulling at a halter is to tie it by the tail. The crupper should be made strong with a ring sewed on the strap on top of the hips, which strap leads to the crupper. In this ring fasten the end of a rope which should be conducted to the head through one of the line rings attached to the bridle. When in the stable a crupper should be hooked around the tail and the tie rope attached to it by a ring sewed on it; and then passed through a ring fastened to a six-ring round the body and fastened through a ring in the halter. A horse thus fastened will not pull more than once and cannot get loose. A horse in the habit of pulling at the head will break any halter; but when fastened by the tail, as described above, a small rope will suffice to hold it.

—Pumpkins, adapted to culinary purposes, can be preserved, not only all winter, but up to the following summer, which, perhaps, longer than may be desired. But for winter a pumpkin pie is not excelled for deliciousness by any other, if the cook knows how to make them, as every one should. Some people use it also as a sauce, and it is a good sauce, if properly prepared. When we were in the habit of preserving the pumpkin we selected the "Yankee Squash," as it was called, but other good kinds will, no doubt, answer as well. These we placed on a scaffolding, put up in the cellar, allowing them to lie side by side, but only in a single layer. We used them as needed through the winter, and found that from a dozen a dozen and a half were ample to supply the family as long as we cared for them. On two occasions we kept one or two over to discover how long they would keep; and we found them in good condition in August, but that was about the end of their time. —Canada Farmer.

—A citizen of Central New York is the owner of twenty-two factories, and is one of the largest cheese manufacturers in the country. His annual product amounts to 45,000 cheese.

—Over 760,000 square miles of timber lands in this country the South embraces 460,000, or nearly two-thirds.

## THE MARKETS.

NEW YORK, December 31, 1881.  
 LIVE STOCK—Cattle, \$7.00 @ \$8.12 1/2;  
 Sheep, 4.25 @ 4.35;  
 Hogs, 4.25 @ 4.35;  
 FLOUR—Good to Choice, 4.25 @ 4.35;  
 PATENT, 4.25 @ 4.35;  
 WHEAT—No. 2 Red, 1.40 @ 1.45;  
 No. 3 Spring, 1.30 @ 1.35;  
 CORN—Yellow, 71 @ 72;  
 OATS—Western Mixed, 71 @ 72;  
 RYE—Western, 91 @ 92;  
 POTATOES—New York, 11 @ 12;  
 LARD—Steam, 11 @ 12;  
 CHEESE—Cheddar, 11 @ 12;  
 WOLFE—Domestic, 30 @ 35.

BEEVES—Extra, 80 @ 85;  
 Choice, 75 @ 80;  
 Good, 70 @ 75;  
 Medium, 65 @ 70;  
 Butcher's Stock, 55 @ 60;  
 CATTLE—Good to Choice, 10 @ 15;  
 SHEEP—Good to Choice, 10 @ 15;  
 BUTTER—Creamery, 25 @ 30;  
 EGGS—Fresh, 25 @ 30;  
 FLOUR—Winter, 4.25 @ 4.35;  
 Spring, 4.25 @ 4.35;  
 PATENT, 4.25 @ 4.35;  
 GRAIN—No. 2 Spring, 1.40 @ 1.45;  
 No. 3, 1.30 @ 1.35;  
 RYE, No. 2, 91 @ 92;  
 POTATOES, 11 @ 12;  
 LARD, 11 @ 12;  
 CHEESE, 11 @ 12;  
 WOLFE, 30 @ 35.

One sleigh,  
 One horse,  
 One moon,  
 Of course,  
 One arm  
 Around  
 Around  
 One waist,  
 One robe that's closely tucked round you both.

A race,  
 A dash,  
 A crash,  
 A drink,  
 A bite,  
 A fond  
 Good night,  
 A groan when you look at your purse next day!

—This is the story of the one person who ever, on a life policy, received the amount for which she was insured, and yet was not dead or supposed to be dead. At Battle Creek, Mich., about a year ago, Mrs. Henry Ingham had her teeth pulled at once, and the result was a paralysis of the stomach, which she suffered with her eating that from one hundred and seventy pounds her weight fell to fifty. Her family was poor, and she seemed certain that the woman would soon die the amount of her insurance was paid as a charity. Now she is better, and likely enough may entirely recover.

—Ex-Governor E. A. Straw, of New Hampshire is insane.

## CALENDAR FOR 1882.

JANUARY.							JULY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31				

FEBRUARY.							AUGUST.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31				

MARCH.							SEPTEMBER.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31				

APRIL.							OCTOBER.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31				

MAY.							NOVEMBER.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31					29	30	31				

flowers they heighten the bloom.	method.
are also found to be beneficial to	reply.
near tree when worked in round	In rep
roots.	treatin
	'do lik
ease spots may be removed from	ceived
giving a good quantity of so-	they h
	ough