THE
"CLEARFIELD REPUBLICAN,"
PUBLISHED EVERY WEDNESDAY, BY
GOODLANDER & HAGERTY,
CLEARFIELD, PA.

ESTABLISHED IN 1827.

The largest Circulation of any Newspaper in North Central Pennsylvania.

Terms of Subscription.

If paid in advance, or within 3 months....$2 00
If paid after 3 and before 6 months..... 2 50
If paid after the expiration of 6 months... 3 00

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Transient advertisements, per square of 10 lines or less, 3 times or less.....$1 50
For each subsequent insertion..... 50
Administrators' and Executors' notices..... 2 50
Auditors' notices..... 2 50
Cautions and Estrays..... 1 50
Dissolution notices..... 3 00
Professional Cards, 5 lines or less, 1 year.... 5 00
Local notices, per line..... 20

YEARLY ADVERTISEMENTS.

1 square.....$8 00 | ¼ column.....$32 00
2 squares.....15 00 | ½ column..... 45 00
3 squares.....20 00 | 1 column..... 80 00

Job Work.

BLANKS.

Single quire.....$2 50 | 6 quires, pr. quire, $1 75
8 quires, pr, quire, 2 00 | Over 6, per quire, 1 50

HANDBILLS.

½ sheet, 25 or less, $2 00 | ¼ sheet, 25 or less, $5 00
½ sheet, 25 or less, 3 00 | 1 sheet, 25 or less, 10 00
Over 25 of each of above at proportionate rates.

GEORGE R. GOODLANDER,
GEORGE HAGERTY,
Publishers.

CLEARFIELD REPUBLICAN.

GOODLANDER & HAGERTY, Publishers. PRINCIPLES; NOT MEN. TERMS—$2 per annum in Advance.

VOL. 48--WHOLE NO 2366. CLEARFIELD, PA., WEDNESDAY, APRIL 15, 1874. NEW SERIES--VOL. 15, NO. 16.

Cards.

FRANK FIELDING,
ATTORNEY-AT-LAW,
Clearfield, Pa.
Will attend to all business entrusted to him promptly and faithfully. nov12'73

WILLIAM A. WALLACE. DAVID L. KREBS.
HARRY F. WALLACE. JOHN W. WRIGLEY.
WALLACE & KREBS,
(Successors to Wallace & Fielding,)
ATTORNEYS-AT-LAW,
11-12'73 Clearfield, Pa.

R. V. WILSON, M. D. H. S. VAN VALZAH, M. D.
DRS. WILSON & VAN VALZAH,
Clearfield, Pa.
Office in residence of Dr. Wilson.
OFFICE HOURS: From 12 to 2 P. M. Dr. Van-Valzah can be found at night in his rooms, next door to Hartswick & Irwin's Drug Store, up stairs. nov26'73

DR. JEFFERSON LITZ,
WOODLAND, PA.
Will promptly attend all calls in the line of his profession. nov.19-73

JOSEPH S. M'NEALLY. DANIEL W. M'CURDY.
McNEALLY & McCURDY,
ATTORNEYS-AT-LAW,
Clearfield, Pa.
Legal business attended to promptly with fidelity. Office on Second street, above the First National Bank. 9:11:72

G. R. BARRETT,
ATTORNEY AND COUNSELOR AT LAW,
CLEARFIELD, PA.
Having resigned his Judgeship, has resumed the practice of the law in his old office at Clearfield, Pa. Will attend the courts of Jefferson and Elk counties when specially retained in connection with resident counsel. 2:14:72

WM. M. McCULLOUGH,
ATTORNEY AT LAW,
Clearfield, Pa.
Office in Court House, (Sheriff's Office). Legal business promptly attended to. Real estate bought and sold. je11'73

J. W. BANTZ,
ATTORNEY-AT-LAW,
Clearfield, Pa.
Office in Pie's Opera House, Room No. 4. All legal business entrusted to his care promptly attended to. July 2, 1873.

T. H. MURRAY,
ATTORNEY AND COUNSELOR AT LAW.
Prompt attention given to all legal business entrusted to his care in Clearfield and adjoining counties. Office on Market st., opposite Naugle's Jewelry Store, Clearfield, Pa. je14'73

A. W. WALTERS,
ATTORNEY AT LAW,
Clearfield, Pa.
Office in Graham's Row. [dec3-1y

H. W. SMITH,
ATTORNEY-AT-LAW,
n11:1.73 Clearfield, Pa.

WALTER BARRETT,
ATTORNEY AT LAW.
Office on Second St., Clearfield, Pa. [nov21,66

ISRAEL TEST,
ATTORNEY AT LAW,
Clearfield, Pa.
Office in Pie's Opera House. [jy11,'67

JOHN H. FULFORD,
ATTORNEY AT LAW,
Clearfield, Pa.
Office in Pie's Opera House, Room No. 5. Jan. 3, 1873.

JOHN L. CUTTLE,
ATTORNEY AT LAW.
And Real Estate Agent, Clearfield, Pa.
Office on Third street, bet. Cherry & Walnut.
Respectfully offers his services in selling and buying lands in Clearfield and adjoining counties; and with an experience of over twenty years as a surveyor, flatters himself that he can render satisfaction. [Feb. 26:63:tf.

J. BLAKE WALTERS,
REAL ESTATE BROKER,
AND DEALER IN
Saw Logs and Lumber,
CLEARFIELD, PA.
Office in Graham's Row. 1:25:71

J. J. LINGLE,
ATTORNEY-AT-LAW,
Osceola, Clearfield Co., Pa. ypd

ROBERT WALLACE,
ATTORNEY-AT-LAW,
Wallaceton, Clearfield County, Penn'a.
All legal business promptly attended to.

CYRUS GORDON,
ATTORNEY AT LAW,
Market street, (north side) Clearfield, Pa.
All legal business promptly attended to. Jan. 29, '73.

DR. T. J. BOYER,
PHYSICIAN AND SURGEON,
Office on Market Street, Clearfield, Pa.
Office hours: 8 to 12 a. m., and 1 to 3 p. m.

DR. E. M. SCHEURER,
HOMŒOPATHIC PHYSICIAN,
Office in residence on Market st.
April 24, 1872. Clearfield, Pa.

DR. W. A. MEANS,
PHYSICIAN & SURGEON,
LUTHERSBURG, PA.
Attend professional calls promptly. aug16'70

J. S. BARNHART,
ATTORNEY-AT-LAW,
Bellefonte, Pa.
Practice in Clearfield and all of the Courts of the Judicial district. Real estate business and collection of claims made specialties. n1'71

JAMES CLEARY,
BARBER & HAIR DRESSER,
SECOND STREET,
CLEARFIELD, PA. [1z

WILLIAM M. HENRY, JUSTICE OF THE PEACE AND SCRIVENER, LUMBER WRITER. Collections made and money promptly paid over. Articles of agreement and deeds of conveyance neatly executed and warranted correct, and no charge. jy23'72

Cards.

JOHN A. GREGORY,
COUNTY SUPERINTENDENT,
Office in the Court House, Clearfield, Pa.
Will always be found at home on the SECOND and LAST SATURDAY of each month. 2:5

John H. Orris. O. T. Alexander. C. M. Bowers.
ORVIS, ALEXANDER & BOWERS,
ATTORNEYS AT LAW,
Bellefonte, Pa. [jan28,'47-y

J. H. KLINE, M. D.,
PHYSICIAN & SURGEON,
HAVING located at Pennfield, Pa., offers his professional services to the people of that place and surrounding country. All calls promptly attended to. oct. 13-tf.

GEORGE C. KIRK,
Justice of the Peace, Surveyor and Conveyancer,
Luthersburg, Pa.
All business intrusted to him will be promptly attended to. Persons wishing to employ a Surveyor will do well to give him a call, as he flatters himself that he can render satisfaction. Deeds of conveyance, articles of agreement, and all legal papers, promptly and neatly executed. *12nov74

JOHN D. THOMPSON,
Justice of the Peace and Scrivener,
Curwensville, Pa.
Collections made and money promptly paid over. feb22'71tf

GEO. ALBERT.....HENRY ALBERT.....W. ALBERT
W. ALBERT & BROS.,
Manufacturers & extensive Dealers in
Sawed Lumber, Square Timber, &c.,
WOODLAND, PENN'A.
Orders solicited. Bills filled on short notice and reasonable terms.
Address Woodland P. O., Clearfield Co., Pa.
je25-1y W. ALBERT & BROS.

FRANCIS COUTRIET,
MERCHANT,
Frenchville, Clearfield County, Pa.
Keeps constantly on hand a full assortment of Dry Goods, Hardware, Groceries, and everything usually kept in a retail store, which will be sold, for cash, as cheap as elsewhere in the county.
Frenchville, June 27, 1867-1y.

THOMAS H. FORCEE,
DEALER IN
GENERAL MERCHANDISE,
GRAHAMTON, Pa.
Also, extensive manufacturer and dealer in Square Timber and Sawed Lumber of all kinds.
Orders solicited and all bills promptly filled. [*jy16'72

CHARLES SCHAFER,
LAGER BEER BREWER,
Clearfield, Pa.
HAVING rented Mr. Entres' Brewery he hopes by strict attention to business and the manufacture of a superior article of BEER to receive the patronage of all the old and many new customers. *12aug73

J. K. BOTTORF'S
PHOTOGRAPH GALLERY,
Market Street, Clearfield, Pa.
CROMOS MADE A SPECIALTY.
NEGATIVES made in cloudy as well as in clear weather. Constantly on hand a good assortment of FRAMES, STEREOSCOPES and STEREOSCOPIC VIEWS. Frames, from any style of moulding, made to order. apr28-tf

REUBEN HACKMAN,
House and Sign Painter and Paper Hanger,
Clearfield, Penn'a.
Will execute jobs in his line promptly and in a workmanlike manner. apr4,67

G. H. HALL,
PRACTICAL PUMP MAKER,
NEAR CLEARFIELD, PENN'A.
Pumps always on hand and made to order on short notice. Pipes bored on reasonable terms. All work warranted to render satisfaction, and delivered if desired. my20:1ypd

E. A. BIGLER & CO.,
DEALERS IN
SQUARE TIMBER,
and manufacturers of
ALL KINDS OF SAWED LUMBER,
8-7'72 CLEARFIELD, PENN'A.

JAS. B. GRAHAM,
dealer in
Real Estate, Square Timber, Boards,
SHINGLES, LATH, & PICKETS,
9:10'73 Clearfield, Pa.

JAMES MITCHELL,
DEALER IN
Square Timber & Timber Lands,
je11'73 CLEARFIELD, PA.

JOHN TROUTMAN,
Dealer in all kinds of
FURNITURE,
Market Street,
One door east Post Office,
aug16'71 CLEARFIELD, PA.

ELI HARMAN,
PRACTICAL MILLWRIGHT,
LUTHERSBURG, PA.
Agent for the American Double Turbine Water Wheel and Andrews & Kalbach Wheel. Can furnish Portable Grist Mills on short notice. jy12'71

DR. J. P. BURCHFIELD,
Late Surgeon of the 53d Regiment, Pennsylvania Volunteers, having returned from the Army, offers his professional services to the citizens of Clearfield county.
Professional calls promptly attended to. Office on Second street, formerly occupied by Dr. Woods. [apr4,'66-tf

H. F. NAUGLE,
WATCH MAKER & JEWELER,
and dealer in
Watches, Clocks, Jewelry, Silver and Plated Ware, &c.,
je19'72 CLEARFIELD, PA.,

S. I. SNYDER,
PRACTICAL WATCHMAKER
AND DEALER IN
Watches, Clocks and Jewelry,
Graham's Row, Market Street,
CLEARFIELD, PA.
All kinds of repairing in my line promptly attended to. April 23, 1873.

REMOVAL.
REIZENSTEIN & BERLINER,
wholesale dealers in
GENTS' FURNISHING GOODS,
Have removed to 187 Church street, between Franklin and White sts., New York. [jy31'72

Miss E. A. P. Rynder,
AGENT FOR
Chickering's, Steinway's and Emerson's Pianos; Smith's, Mason & Hamlin's and Peloubet's Organs and Melodeons, and Grover & Baker's Sewing Machines.
ALSO TEACHER OF
Piano, Guitar, Organ, Harmony and Vocal Music. No pupil taken for less than half a term.
Rooms opposite Gulich's Furniture Store. Clearfield, May 5, 1869-tf.

Miscellaneous.

THE LATEST MOVE!

THE LATEST MOVE!

HARTSWICK & IRWIN'S

DRUG STORE,

To their new building on Second Street, nearly opposite the store of Weaver & Botts,

CLEARFIELD, PA.,

Where they will continue to supply their old and as many new customers as may come, with

PURE DRUGS!

CHEMICALS!

PHARMACEUTICAL PREPARATIONS,

(Including all new remedies,)

Patent Medicines, Paints and Oils, Glass and Putty, School Books, Stationery, Paper, &c.; also, a full line of Druggists' Sundries, Hair Tonics,

Cosmetics, Perfumeries, Toilet Articles, Brushes, Toilet Soaps, Pocket Books, &c., all of the best quality.

PURE WINES AND LIQUORS,

for medical & sacramental purposes only.

Pure White Lead, Colors of all kinds, Raw and Boiled Linseed Oil, Varnishes, Turpentine, Coal Oil, Paint & Varnish Brushes, Flavoring Extracts,

Confectioneries, Bird Seed, Spice, ground and unground, of all kinds.

SMOKERS AND CHEWERS

Will find our stock of Chewing and Smoking Tobacco, Imported and Domestic Cigars, Snuff and Fine-cut to be of the very best brands in the market.

LAMPS AND CHIMNEYS,
All kinds of GLASS WARE
GARDEN SEEDS,
MUSICAL INSTRUMENTS
and Musical Trimmings of every variety.

Having a long experience in the business, and an extensive and well selected stock of medicines, we are enabled to fill Physicians' prescriptions at the shortest notice and on the most reasonable terms, day and night.

HARTSWICK & IRWIN.
Clearfield, Pa., May 31, 1871-tf.

H. F. BIGLER & CO.,
DEALERS IN
HARDWARE,
Also, Manufacturers of
Tin and Sheet Iron Ware.
CLEARFIELD, PA.

FARMING IMPLEMENTS of all kinds for sale by H. F. BIGLER & CO.

RAILROAD WHEELBARROWS for sale by H. F. BIGLER & CO.

OIL, PAINT, PUTTY, GLASS, Nails, etc., for sale by H. F. BIGLER & CO.

HARNESS TRIMMINGS & SHOE Findings, for sale by H. F. BIGLER & CO.

GUNS, PISTOLS SWORD CANES For sale by H. F. BIGLER & CO.

STOVES, OF ALL SORTS AND Sizes, for sale by H. F. BIGLER & CO.

IRON! IRON! IRON! IRON! For sale by H. F. BIGLER & CO.

HORSE SHOES & HORSE SHOE NAILS, for sale by H. F. BIGLER & CO.

PULLEY BLOCKS, ALL SIZES And best Manufacture, for sale by H. F. BIGLER & CO.

THIMBLE SKEINS AND PIPE BOXES, for sale by H. F. BIGLER & CO.

FODDER CUTTERS—for sale by mch30-70 H. F. BIGLER & CO.

T. M. ROBINSON,
Manufacturer and dealer in
Harness, Saddles and Bridles,
Collars, Whips, Brushes, Fly Nets, Trimmings, Horse Blankets, &c.
Vacuum, Frank Miller's and Neatsfoot Oils.
Agent for Bailey and Wilson's Buggies.
Orders and repairing promptly attended to. Shop on Market street, Clearfield, Pa., in room formerly occupied by Jas. Alexander. [3:4'71

Dry Goods, Groceries, Etc.

GROCERIES & PROVISIONS.

J. S. SHOWERS,
CLEARFIELD, PA.,
Gives notice that a fresh supply of the following goods has just been received and are offered at extremely low figures:

MEATS, &c.

New Sugar Cured Hams, Shoulders, Sides, Dried Beef, Ham Sausage, Lard and Cheese.

FISH.

Mackerel, Herring, Scoth Herring, White Fish, Cod Fish, Fresh Columbia River Salmon, Spiced Salmon, Smoked Salmon, Smoked Halibut, Bloaters, Sardines, Shadines and Fresh Lobsters.

SYRUPS AND MOLASSES, all kinds.
SUGARS, all kinds.
RICE, Carolina and Rangoon.

COFFEES.

Rio, Java, Maracaibo, Nectar and Turkey.

TEAS.

Young Hyson, Imperial, Gun Powder, Oolong, Japan and English Breakfast.

SPICES, of all kinds, strictly pure.

SHAKER CORN,	FARINA,
GREEN PEAS,	CORN STARCH,
SPLIT PEAS,	PEARL WHEAT,
BEANS,	WHEATEN GRITS,
PEARL BARLEY,	NUTKINA,
MACARONI,	HOMINY,
TAPIOCA.	HOMINY GRITS,
MANIOCA.	&c., &c., &c.

FLAVORING EXTRACTS, all kinds.

A full line of
Canned Vegetables, Fruits and Jellies.

TURKEY PRUNES and DRIED FRUITS.
PICKLES, in jars and in barrels.
CRACKERS AND CAKES.
Oyster, Soda, Wine, Butter, Sugar and Fancy.
SOAPS, Laundry and Toilet.
VINEGAR, Cider and Wine.
PEACH and APPLE BUTTER.

Flour, Buckwheat Flour, Corn Meal.

COAL OIL and LAMP CHIMNIES.

Cash paid for Butter, Eggs and Potatoes. A liberal share of patronage is solicited.
Goods delivered.
Clearfield, March 4, 1874.

ED. W. GRAHAM,
DEALER IN
GENERAL MERCHANDISE,
SQUARE TIMBER & LUMBER,
CLEARFIELD, PA.,
Has just opened, at the old stand, in Graham's Row, a complete stock of

NEW GOODS,

of every description.

DRY GOODS,
GROCERIES,
HARDWARE,
BOOTS AND SHOES,
CLOTHING, &c., &c.,
IN GREAT VARIETY.

FLOUR,
MEAT,
SALT,
RYE,
OATS,
CORN,
ALWAYS ON HAND AND FOR SALE AT A SMALL ADVANCE.

FLOUR
Received by the car load, and sold at a small advance.
A supply of ROPE constantly on hand.

Special inducements offered to those getting out Square Timber and Logs, as we deal largely in Lumbermen's Supplies, and are prepared at all times to purchase timber and lumber.

ED. W. GRAHAM,
Market Street,
CLEARFIELD, PA.
Oct. 23, 1872.

DANIEL GOODLANDER,
LUTHERSBURG, PA.,
Dealer in
DRY GOODS, NOTIONS,
HOSIERY & GLOVES,
HATS & CAPS and BOOTS & SHOES,
Tobacco, Groceries and Fish, Nails, Hardware, Queensware and Glassware, Men's and Boys' Clothing, Drugs, Paints, Oils, School Books, a large lot of Patent Medicines,
Candies, Nuts & Dried Fruits, Cheese and Crackers, Rock and Rifle Powder,
Flour, Grain and Potatoes,
Clover and Timothy Seed,
Sole Leather, Morocco, Linings, Bindings and Thread, Shoemakers' Tools and Shoe Findings.
No greater variety of goods in any store in the county. All for sale very low for cash or country produce at the Cheap Corner. Aug. 27, 1873.

PORTAGE NAIL WORKS.
DUNCANSVILLE, BLAIR Co., PA.,
NAILS!
The above works being again operated by the undersigned, offer to the trade a full supply of their justly celebrated Nails at the lowest prices.
JOHN MUSSELMAN.
Duncansville, March 18, 1874.-3m.

FARM FOR SALE!
The subscriber offers at private sale his Farm, situate in Jordan township, Clearfield county, Pa., within about one hundred rods of the village of Ansonville. Said farm contains
100 ACRES,
about 50 acres of which are cleared and under good cultivation, with a hewed log house and a hewed log barn erected thereon. Good orchard on the premises. A spring of excellent water near the door. This farm is one of the most valuable ones in Jordan township, and is convenient to both school house and church. A three-foot vein of coal underlies the land. The cleared portion of the land is almost entirely cleared of stumps. For terms, &c., apply on the premises, or address the subscriber at Ansonville P. O., Clearfield county, Pa.
mar18-6t S. P. STRAW.

THE REPUBLICAN.

CLEARFIELD, PA.

WEDNESDAY MORNING, APRIL 15, 1874.

JANETTE'S HAIR.

BY MILES O'REILLY.

Oh, loosen the snood that you wear, Janette,
Let me tangle a hand in your hair, my pet—
For the world to me had no daintier sight
Than your brown hair veiling your shoulders white,
As I tangled a hand in your hair, my pet.

It was brown, with a golden gloss, Janette,
It was finer than silk of the floss, my pet!
'Twas a beautiful twist falling down to your wrist,
'Twas a thing to be braided, and jewelled, and kissed,
'Twas the loveliest hair in the world, my pet.

Your eyes had a swimming gloss, Janette,
Revealing the deer old story, my pet;
They were gray with that chastened tinge of the sky,
When the trout leaps quickest to snap the fly—
And they matched with your golden hair, my pet.

Your lips—but I have no words, Janette;
They were as fresh as the twitter of birds, my pet,
When the Spring is young, and the roses are wet
With dew-drops in each red bosom set,
And they suited your gold-brown hair, my pet.

Oh, you tangled my life in your hair, Janette,
'Twas a silken and golden snare, my pet;
But so gentle the bondage, my soul did implore
The right to continue a slave evermore,
With my fingers enmeshed in your hair, my pet.

Thus ever I dream what you were, Janette,
With your lips, and your eyes, and your hair, my pet;
In the darkness of desolate years I moan,
And my tears fall bitterly over the stone
That covers your golden hair, my pet.

Animal Motion.

Last Monday evening, Professor William P. Trowbridge delivered the thirteenth lecture of the course to the mechanics, at the North Sheffield Hall, in Prospect street, New Haven. The lecture was full of interest and was amply illustrated by skeletons, diagrams and modes. The following is a brief synopsis of his remarks.

Without the force of friction we would be unable to sit on a chair or walk the floor. Without the mountains would at once become level, and indeed all nature would cease to exist. There is a spider who spins a thread so long that its friction in the air is so great that it sustains the little animal at the end of the thread. By this means he is enabled to stretch a line between points one hundred feet apart.

The source of power in animals is muscular contraction, and the possession of this faculty separates animals from vegetables. The muscles are composed of a large number of bunches of extremely small threads. Each thread is connected with a nerve, the nerves entering into the spinal column and thus connecting with the brain. By some means, as yet undiscovered, when the animal wishes to move a muscle the command is telegraphed from the brian through the nerve to the muscle, and the contraction takes place.

The cuttlefish moves by means of the application of the principle of the hydrostatic press. The body of the fish is enclosed in a sack, by the expansion of which it is filled with water, which enters through a valve so arranged as to prevent the water from going out. When the fish wishes to move, it contracts the sack, and the water is forced very powerfully out of a small tube connected with the sack. This jet striking against the water of the sea, propels the fish. The tube is generally pointed forward, and so the fish moves, backward, but if the animal moves forward, it directs the tube backward and it turns around with great rapidity by the same means.—The larva of the dragon-fly has a similar contrivance for locomotion. The principle of the hydrostatic press is also used by the heart in sending the blood all over the body. The progression of a fish in water is due not to the simple lateral motion of the tail, but to the fact that the tail is flexible, and thus presents an inclined plane to the water, which, by its action on it, produces forward motion. This was illustrated by a toy boat with a model of a fish's tail attached to it and operated by machinery. When placed in a trough of water, the boat progressed quite rapidly, to the delight of the audience. The forward motion of a bird in flight is due to the same cause. When a muscle is contracted and is held in that position, the fibres of the muscles vibrate 36 times per second, and this produces decomposition of the material of the muscles which must be supplied by the blood from the heart. When this process goes on for some time, fatigue occurs.

A person that becomes fatigued by walking thirty miles would be equally fatigued walking twice as fast when he had passed over six miles. It is computed that a young man in a boat race in an eight-oared outrigger does each minute an amount of labor of four foot-tons, or equal to lifting four tons one foot.

The tail of one species of the shark is connected with the body by a ball and socket, or universal joint, by means of which the tail moves through the water obliquely as an oar in sculling a boat. It is this that enables the fish to make the enormous leaps for which it is noted.

The English hunting horse and the grey-hound have immense muscles on the shoulders. This is because the fore-legs have to sustain the force not only of the animal but of the great momentum acquired in their long and rapid legs. A fast race horse makes about two and one-half leaps per second, passing over about twenty-five feet in that time.

The lecture closed with the exhibition of drawing of the skeletons of various animals by means of the stereopticon. From them we learn that:

The rhinoceros has three toes. This animal stands on its toes and not on the whole foot.

The elephant's legs are very straight and hence it cannot move rapidly. It can, however, stand without fatigue for an immense length of time.

The leaping animals jump by suddenly straightening their legs, which are supplied with powerful muscles for their purpose.—*American Sportsman.*

The Marvels of Mechanics.

During the last siege of Paris, the inhabitants from time to time effected communication with their friends beyond the German investing lines by means of carrier pigeons. In fact, a regular pigeon post was organized, having one of its receiving stations in London. Here the written messages for Paris were received, and by photography, reduced to miscrosopic size, each letter being reduced so small as to be invisible to the eye except as a speck. Some two thousand of these specks were then printed on bits of tissue paper about an inch and a half square, which was rolled and carefully attached to one of the tail feathers of the pigeon. On the arrival of the bird in Paris, the postal officials placed the paper under the microscope, which enlarged the several specks into readable communications, which were duly copied in writing and delivered to the persons to whom they were addressed. The total postage received for the transmission of one of those tiny bits of paper frequently amounted to two thousand dollars.

Small as this photo writing seems, it has been surpassed by mechanism. In a recent number of the *Lens*, Dr. J. J. Woodward, U. S. A. gives an enlarged photograph of microscopic writing done by machinery on glass, by means of a diamond, executed by Mr. William Webb, of London. The writing consists of the Lord's Prayer, which is written upon glass, within a space equal to one two hundred and ninety-fourth part of an inch in length by one four hundred and fortieth part of an inch in width or a space perhaps equal to the dot in this letter i. The photograph given by Dr. Woodward shows this dot of writing enlarged so as to occupy a space of about two inches long by one and a half inches broad. All the words are brought legibly out on the photograph, the total number of letters being 227: and such is the exceeding fineness of the original writing that 29,431,458 letters written in the same way would only cover one square inch of glass surface. The combined Bible and New Testament contain in all 3,566,480 letters; hence it would be possible for Mr. Webb to write the entire contents of more than eight bibles within the space of one square inch. Two specimen plates containing the microscopic writing above alluded to have been supplied by Mr. Webb for the United States Museum at Washington. Their cost was fifty dollars each.

The Webb machine, however, does not equal, in the fineness of its writing or perfection, the prior instrument of Mr. N. Peters, a wealthy banker of London, who, as long as 1855, was able to write nearly three times finer than Webb. So perfect was the Peters machine that it was competent to engrave the entire contents of the Bible and New Testament twenty-two times over within the space of a single square inch.

Machine Honesty.

Time was, when almost every stage driver in New York was know to abstract a greater or less share of all the fares received, and his employer had no remedy and no sure means of detecting the rogue. But thanks to the ingenuity of the inventor, our Broadway Jehus have been transformed into honest men. They can't steal if they would. The patent money box, in which the passenger drops his fare, relieves the driver from the duty of handling the money, and consequently none sticks to his fingers.

On the street railway cars, the pilfering conductor, although not rendered wholly honest, is considerably interfered with and his stealing reduced by means of the patent bell punch. He is required by the rules to punch a strip of paper for every fare received. The punch contains a bell, a dial numbering register, and a receptacle in which the punched bits of paper are received. The punch, paper, and money, are returned to the office by the conductor at the end of every trip. The dial pointer shows how many times the punch has been operated, and the count of holes in the paper, the punched bits within the punch, and also the money, should be all found to agree. Any discrepancy is at once shown. But this device does not fully answer the purpose of detection, because the conductor may take fares and not work the punch, especially in a crowd, without being observed.

The money box plan is apparently the surest. There is a chance for some ingenious person to invent a portable box for conductors, which will be promotive of their integrity in crowded cars.

One of the latest dodges in this line comes to us from Constantinople.—The driver or conductor of the car gives to every passenger a prize ticket bearing a number which is recorded on the company's books. A drawing takes place moathly, the company providing a certain number of prizes. We read of one passenger who lately drew a prize of $100 in this way.—The hope of drawing a prize makes the passenger careful to send in his tickets; and if the money returns of the driver or conductor are not equal to the number of tickets returned, there is a showing of dishonesty, and the particular culprits may be detected by comparing the return tickets with the records of the tickets issued to the several conductors.—*Scientific American.*

A lady at Madison, Ohio, thinking pleasantly to surprise one of her boarders, put a gold ring which he had lost in a pancake and placed the production on his plate at breakfast.—But the boarder bolted the pancake in such large bites that the presence of the ring was not discovered, and now it is lost again.

The *Cincinnati Times* says Nebuchadnezzar was not the first "Gaanger." Eve made quite a reputation in the apple business, and broke up A-dam monopoly, and was also the very first to patronize husbandry.

The American Volcano and the English Tidal Wave.

The concurrence of the volcanic disturbance in North Carolina and the great tidal inundation of the east coast of England have raised the question whether the two phenomena have any connection. Sir Charles Lyell, the great geologist, has asserted that the American coast in Georgia and the Carolinas is subject to subsidence; and this fact, taken in connection with the rumblings of Bald Mountain, suggests an agitation extending far into the waters of the Atlantic. The undulation of the ocean from the great Lisbon earthquake produced a marine wave which crossed the whole Atlantic, three thousand seven hundred and twenty-eight miles, in a straight line, and broke upon the West Indian shores of Barbados and Martinique; and in 1854 the Japanese earthquake sent its sea wave across the North Pacific and piled up its waters on the California coast. It does not appear alarming that Bald Mountain should be in tremor, and yet we can infer nothing from the apparent tardiness of the mountain to relieve itself from internal pressure. The subterranean sounds which preceded the fiery uprising of the Mexican volcano of Jorullo, which rose in a single night sixteen hundred and eighty-three feet, had lasted from June till September. The first alarm subsided, and tranquility was restored a few days before the most tremendous eruption of modern history took place with terrific destruction.

It is, however, more probable that the great flood tide on the English coast was due to meteorological causes. At this season the high water atmospheric pressure amassed over Northern and Central Europe and Asia is breaking up, and it rolls off to the westward in the form of long continued and high easterly gales on the English sea front. In 1818 (March 4) just such a tidal inundation occurred in the Thames and at Hull, Yarmouth and other points on the Eastern coast, and extended to Plymouth, where it washed off many enormous stones of the breakwater. So powerful are the agencies of the sea here that Aldborough, as it formerly existed, lies twenty-four feet under water, almost every remnant having been engulfed and the inhabitants long since forced to retreat inland and form a new site for their town.

There is an undoubted physical connection between the quackings and commotion of the earths crust and the commotion of the atmosphere over wide areas of both sea and land, but the causal connection is obscure and mysterious. In the present instance it is altogether improbable that the tide in the Thames can be due to any thing else than the stormy weather and easterly winds peculiar to the spring equinox. As already intimated, we may not have the last of the volcanic upheaval in North Carolina, and it may take many months for the mountain to finish its labor.—*New York Herald.*

How They Make Leather in Russia

The *Shoe and Leather Reporter* publishes some extracts from private letters of Hon. Marshall Jewell, United States Minister at St. Petersburg, which afforded not a little interesting information concerning the Russia shoe and leather tanneries and their mode of operation. Minister Jewell appears to be taking an interest in this important branch of industry, and has occupied much of his leisure time in inspecting the more prominent establishments for the purpose of comparing the methods of the Muscovites with those pursued in the United States. Tanning is one of the most extensive industries in St. Petersburg, where there are hundreds of large establishments, each tanning from 30,000 to 40,000 hides annually. They each employ about a hundred operatives, at a cost of from $10 to $12 a month each; and while little of their labor is thrown away, these men accomplish on an average only about half as much as an American beamsman. They use willow bark altogether and make only about forty per cent of leather out of green hides. The cost of tanning is about eight cents per pound, and the product is far inferior to that of our own tanneries. Minister Jewell thinks there is an abundance of room for American enterprise there, and that its introduction would be mutually beneficial. In regard to one other point not connected with the leather business, the Minister says he gets letters from New England manufacturers stating that bogus goods with counterfeit stamps are sold in Russia. These goods are made in Germany, and this cuts off our Collins axes, Fairbanks scales, the sewing machines and others. He finds that our treaty forbids the practice, but says nothing about vending or using the goods sold under the counterfeit marks. So the dealers there buy axes in Belgium, England and Germany and put an exact duplicate of the Collins stamp on them in transit, and he is powerless to prevent it. He is going to try to get this thing straightened out when he gets fairly at work and well acquainted. Touching the government to which he is accredited, the Minister finds that of its kind, it is perfection and clock-work itself. The Emperor is a man of brains, force and progress, and has a real love for his people.

In view of the closing of the saloons in Philadelphia on Sundays, the saloonists now display over their bars, on Saturdays, neat little placards containing such maxims as these: "Never put off until to-morrow what you can do to-day." "A wise man provideth for to-morrow."

The rector of the Glasgow university chapel, in a recent sermon, said: "Oh, for light, more light!" The janitor thought he meant it, and turned on the gas to fill head.

Artemus Ward once observed that he approved of temperance hotels, although he thought that as a rule they sold worse liquor than the other kind.

Musk-Rat Masonry.

As soon as the first frosts are felt, the musk-rats select a mud-bar, or spot where the bushes grow in the winter, often near lilies—as the root of this plant is a favorite article of food with them—and proceed to lay a foundation for their house. In the first place they gnaw off at the water's edge a quantity of coarse grasses, rushes and small bushes. Gathering this between the chin and fore-paws, as if carrying the material in their arms, they push it to the place where they intend using it. The place where they have harvested their grass and rushes looks as if some one had mowed it with a scythe.

After the musk rats have brought together material enough to make a solid foundation, and have raised the structure to the water's edge, they dive below and tunnel underneath it, coming up through the middle of the mass. The work is then carried on from the inside, mud, decayed vegetation, moss and other such material, are carried through this tunnel and pushed out from the inside until it is raised to the right height, and roofed over; or, as Whittier poetically describes it:

"The musk-rat plied the mason's trade,
And tier by tier his mud-walls laid."

Inside this hillock a small chamber about a foot in diameter is left, where within solid, and compact walls, sometimes two feet thick, the musk-rats have their comfortable Winter quarters.

Their tunnel gives them access to the water when the brook is frozen over. In the winter a rap on this nest will bring one or more of its inmates out, and you will see them scatter away on the bottom of the brook, picking their way among the stones and roots, leaving, wherever they go, if the brook is frozen over, a line of bubbles under the ice. When an open space is reached, the creature gently rises to the water's surface, and just putting the nose and one eye above water, takes an observation and a breath of fresh air at the same time, but instantly dives again.

These nests vary in size, and look quite rough when first built and until the snow and rain smooth them off.—If the nest is broken open, they immediately begin repairs, working from the inside. When the meadows and brooks are frozen over, the nests appear as if built on the ice, and sometimes, in the late Winter and Spring freshets the upper part of the nest is lifted up and moved, which would naturally confirm this impression; but upon examination it will be found that the foundation always rests on the solid ground below.

Dead, but Not Buried.

When a friend dies and is buried, there's an end of him. We miss him for a space out of our daily existence; we mourn for him by degrees that becomes mercifully less; we cling to the blessed hope that we shall be reunited in some more perfect sphere; but so far as this earth is concerned, there's an end of him. However near and dear he was, the time arrives when he does not form a part of our daily thought; he ceases to be even an abstraction. We go no more with flowers and tears into the quiet cemetery; only the rain and the snow flakes fall there; we leave it for the fingers of spring to deck the neglected mound.

But when our friend vanishes unaccountably in the midst of a crowded city, or goes off on a sea voyage and is never heard of again, his memory has a single tenacity. He may be to all intents and purposes dead to us, but we have not lost him. The ring of the door bell at midnight may be his ring; and approaching footsteps may be his footsteps; the unexpected letter with foreign postmarks may be from his hand. He haunts us as the dead never can.

The woman whose husband died last night may marry again within a lustre of months. Do you suppose a week passes by when the woman whose husband disappeared so mysteriously ten years ago does not think of him? There are moments when the opening of a door must startle her.

There is no real absence but death.
—*T. B. Aldrich in Atlantic Monthly.*

TORPEDO BOATS.—The launch of the torpedo boat at the Boston Navy Yard marks a new era in the history of naval warfare. No government except that of the United States has yet successfully attempted the construction of boats devoted especially to torpedo service; and, consequently, the boat recently launched at Brooklyn and that just placed in the water at Boston are the only vessels of the kind in the world. The Boston boat will carry twenty-five or thirty torpedoes of the most approved plan, each calculated to be capable of destroying any man-of-war. The torpedoes are to be attached, one at a time, to an iron shaft, running out forward, and can be exploded at any moment. The difficulty in arranging a torpedo boat so as to insure the destruction of an enemy's vessel, without injuring the boat, has been overcome; it being discovered that the radius of the circle of the immediate effect of a torpedo with a one hundred pound charge is about fourteen feet, it only requires that the shaft to which the torpedo is affixed shall extend that distance beyond the prow of the boat to insure the desired result. All other difficulties having been already met, the success of this new method of naval warfare is regarded as assured.

WHAT IS MEANT BY A HORSE POWER?—The power of prime movers is measured by horse power. Watt found that the strongest London draft horses were capable of doing work equivalent to raising 33,000 pounds one foot high per minute, and he took this as the unit of power for the steam engine. The horse is not usually capable of doing so great a quantity of work. Rankin gave 26,000 foot pounds as the figure for a mean of several experiments, and it is probable that 25,000 foot pounds is a fair minute's average work for a good animal. It would require five or six men to do the work of a strong horse.—Watt's estimate has become, by general consent among engineers, the standard of power measurement for all purposes.—*Scientific American.*

TO THE POINT.—An exchange says: "Compare the publisher of a newspaper, who has to go all around the country to collect his pay, to a farmer who sells his wheat on credit, and not more than a bushel to any person. If any farmer will try the experiment of distributing the proceeds of his labor over two or three counties, with an additional one to two or three distant States, for one year, we will guarantee that he will never, after that year's experience, ask a publisher to supply him with a paper a year or two without the pay for it."