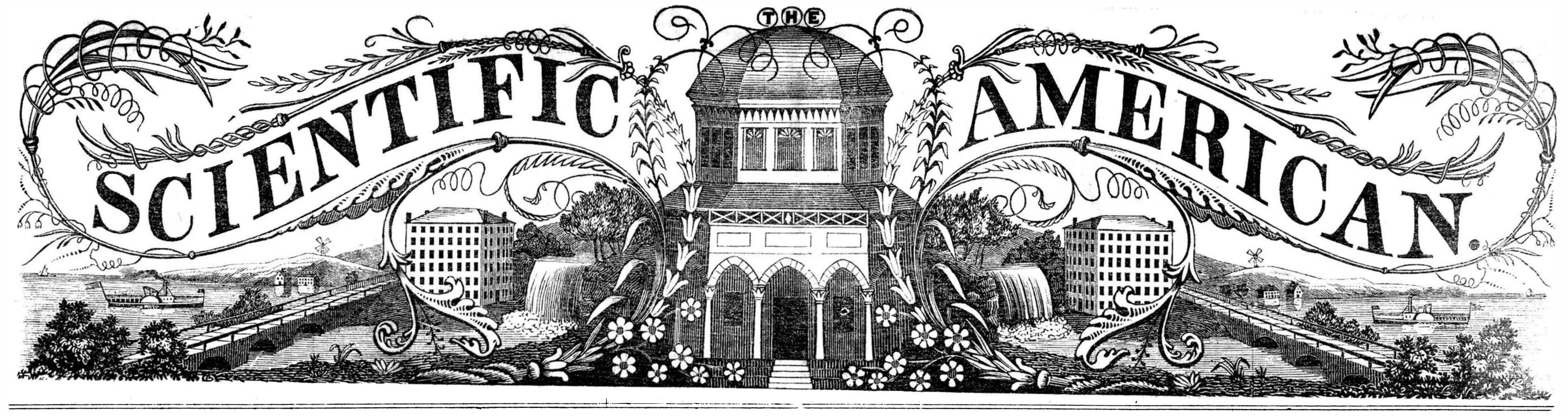
THE SCIENTIFIC AMERICAN



THE ADVOCATE OF INDUSTRY AND ENTERPRISE, AND JOURNAL OF MECHANICAL AND OTHER IMPROVEMENTS.

VOLUME I.] NEW-YORK, THURSDAY, JANUARY 8, 1846. [NUMBER 17.

THE SCIENTIFIC AMERICAN,
PUBLISHED EVERY THURSDAY MORNING, AT THE
SUN BUILDINGS,
—Entrance 128 Fulton st., and 89 Nassau st.—
ALSO, AT NO. 12 STATE ST., BOSTON, AND NO. 21 ARCADE, PHILADELPHIA.
(The Principal Office being at New York,)

By RUFUS PORTER.

Each number of this paper is furnished with from two to five Original Engravings, many of them elegant, and illustrative of New Inventions, Scientific Principles, and Curiosities; and contains as much Interesting Intelligence as six ordinary daily papers, consisting of notices of the progress of Mechanical and other *Scientific Improvements*,—American and Foreign Inventions; Catalogues of American Patents;—Scientific Essays, illustrative of the principles of the Sciences of Mechanics, Chemistry, and Architecture;—Instruction in various Arts and Trades;—curious Philosophical Experiments;—Miscellaneous Intelligence, Poetry, and, occasionally, Music.

This paper is especially entitled to the patronage of Mechanics and Manufacturers, being the only paper in America devoted to the interests of those classes; but is particularly useful to Farmers, as it will not only apprise them of improvements in agricultural implements, but instruct them in various mechanical trades, and guard them against impositions. As a family newspaper, it will convey more useful intelligence to children and young people, than five times its cost in school instruction. Another important argument in favor of this paper, is, that it will be worth two dollars at the end of the year, when the volume is complete, and will probably command that price in cash, if we may judge from the circumstance that old volumes of the "New York Mechanic," by the same editor, will now command double the original cost.

Terms.—"The Scientific American" will be furnished to subscribers at $2, per annum,—one dollar in advance, and the balance in six months.

Five copies will be sent to one address six months, for four dollars in advance.

Any person procuring two or more subscribers, will be entitled to a commission of twenty-five cents each.

Terms of Advertising.—For 10 lines, or less, 50 cents for the first, and 12 1-2 cents for every subsequent insertion.

The Mechanic's Saturday Night.

Oh! sweet is the home of the toil-worn Mechanic,
When labor is hush'd in the stillness of night;
When the hum of commotion, disaster and panic,
Is still as the stars in their orbits of light,
But sweeter by far is the neat little mansion,
When o'erflowing boards of his industry speak;
When the sweat-covered wages by widest expansion,
Replenish his stores at the close of the week.

With plenty all smiling in natural splendor—
With products of Nature, delicious and sweet,
And the choicest of viands his earnings can render,
All clustering high in the lowly retreat,
How rich is the banquet—how great the profusion;
How happy the man when his laborings cease—
When his efforts are yielding the greatest diffusion,
Of harmony, happiness, pleasure and peace.

Oh! bright is the hearth of the Workman at even,
And kindly the feelings his bosom must know,
When his generous heart in its fullness hath given,
The bread he has earned by the sweat of his brow,
And how sweet is the scene of the family of pleasure—
The holy affections they fondly retain;
When he clasps to his breast his own loving treasure,
And fondles his little ones over again.

Ye spirits of mercy look down on his dwelling,
And guard his abode in the midst of alarm
When the surges of poverty frightful are swelling,
Or frown o'er his cottage adversity's storm,
Oh! come like a pilot of truth on the ocean,
And guide his lone bark to the haven he'd seek;
And render his life in his country's devotion,
As sweet as his home at the close of the week.

* * *

The World—as it is.

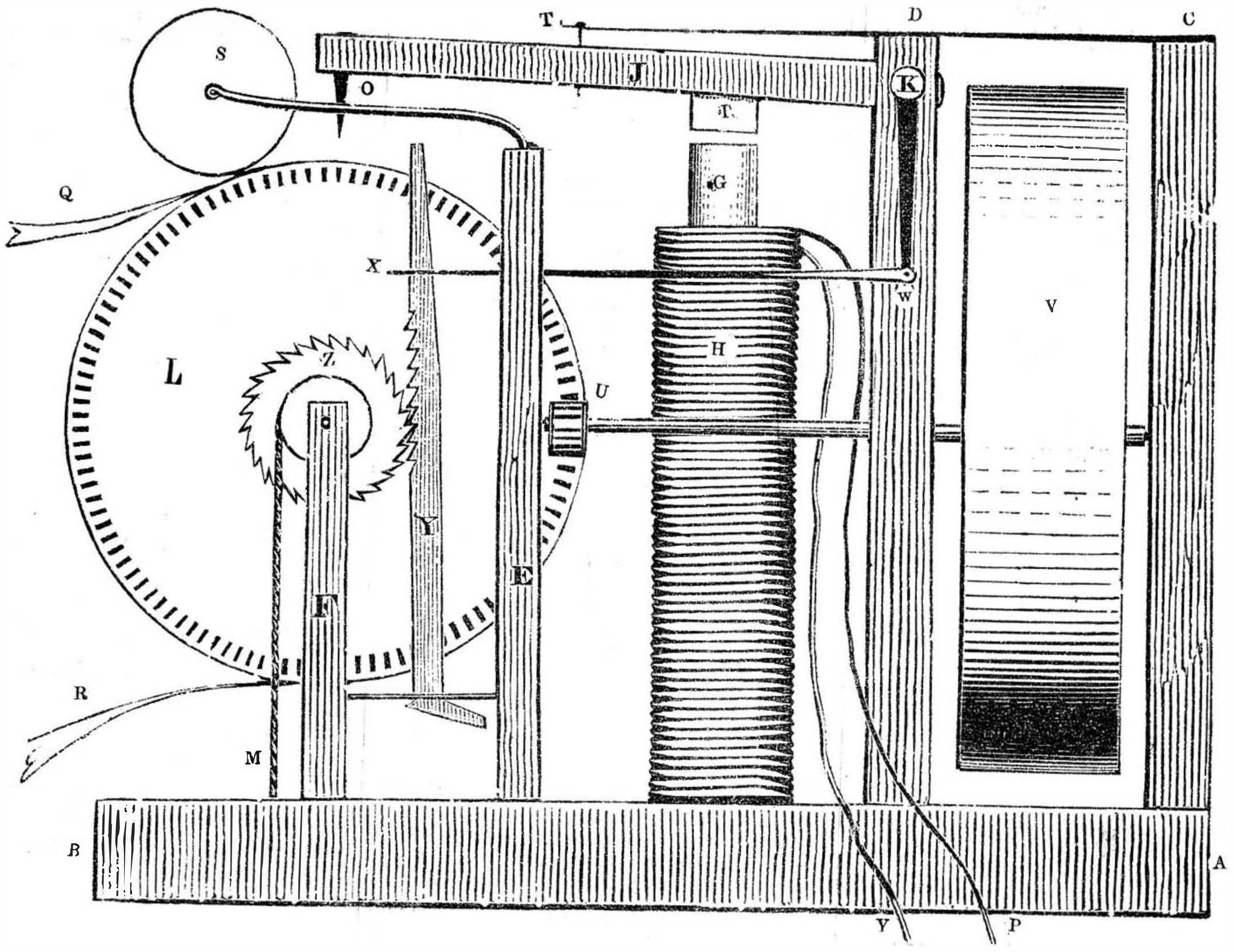
The world is not so bad a world,
As some would like to make it;
Though whether good, or whether bad,
Depends on how we take it.
For if we scold and fret all day,
From dewy morn till even,
This world will ne'er afford to man
A foretaste here of heaven.

This world in truth's as good a world,
As e'er was known to any
Who have not seen another yet,
And these are very many;
And if the men and women too,
Have plenty of employment,
Those surely must be hard to please
Who cannot find enjoyment.

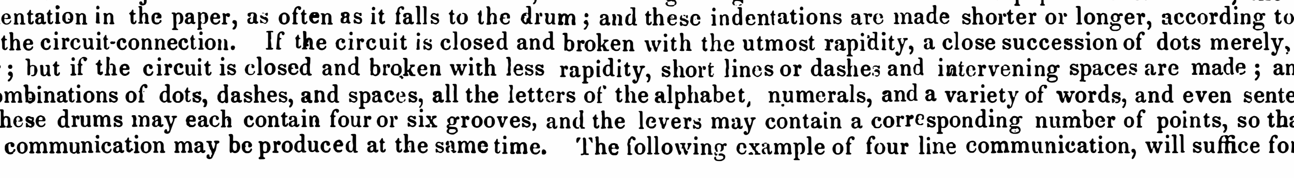
This world is quite a pleasant world,
In rain or pleasant weather,
If people would but learn to live
In harmony together;
Nor cease to burst the kindly bond
By love and peace cemented,
And learn that best of lessons yet,
To always be contented.

Then were the world a pleasant world,
And pleasant folks were in it,
The day would pass most pleasantly
To those who thus begin it.
And all the nameless grievances
Brought on by borrowed troubles,
Would prove, as certainly they are,
A mass of empty bubbles!

ELECTRO-TELEGRAPH MACHINE.



Explanation.—To the platform, A, B, the posts or uprights, C, D, E, and F, are secured, as also the electro magnet G partly enclosed in the helix H. This is an U magnet, (a front view of which is shown on the next page,) but this being a side view, only one pole thereof, G, appears in view. The armature I—one end of which only is shewn,—is attached to a lever J, which is mounted on the pivot K. A metallic wheel or drum, L, is mounted on two posts, F, and is occasionally put in motion by a weight attached to the cord M. (This weight falling below the machine, is not shown in this view.) In the periphery of this drum is a slight groove; and a hardened steel point, O, is so adjusted in the lever J as to fall into this groove, when the lever is forced down. Whenever a circuit connection is formed between the helices and a galvanic battery, by means of the wires P and Z, the attractive power of the magnet instantly brings down the armature I, and with it the lever and the steel point or pencil, O. A long strip of paper, Q R, is drawn from a roll, and is passed over the drum, L, being pressed between that and the roller S, which is held by two wire springs, which project from the post E. Another spring, T, projects from the heads of the posts C, D, and holds up the lever when the power of the magnet is suspended. On the end of the drum, and near its periphery, is a circle of geer-teeth, which take to the pinion U, and thereby puts in motion the fly-wheel V, which is mounted on the same shaft. This wheel, V, is hollow, being made of thin plate copper, and contains four or more apartments, formed by partitions extending from the axle nearly to the periphery. This wheel also contains a small quantity of alcohol, which retards the motion of the wheel, as it requires time to flow from one apartment to the next, as the wheel revolves. An arm, W, projects downward from the pivot K, (to which the lever J is attached,) and to the end of this arm, is connected by a pivot, a small metallic rod, W X, which extends horizontally through the post E. The X end of this rod is flattened horizontally, and contains a vertical aperture, through which passes a vertical rack Y, the teeth of which take to those of a ratchet, Z, which is attached to the end of the drum. The bottom of this rack passes through a horizontal plate which extends across between the posts E and F; and the foot of the rack being turned or bent back, it can not be drawn through the plate, and consequently holds the drum from moving. But whenever the circuit-connection is made, the lever falls, which throws back the arm W and the rod X, which detaches the rack Y from its hold on the ratchet, and the rack descends by its own weight till its foot strikes the platform. It will be seen that the form of the foot is such as to incline the rack forward, which causes it to again take hold of the ratchet. As long as the telegraphic operation continues, the rack will be so frequently detached from the ratchet, that it will not retard the motion of the drum; but whenever the motion of the lever ceases, the rack will stop the drum in two or three seconds. The small drum or barrel from which the weight-cord M is suspended, is so constructed that the power or influence of the weight, as applied to the drum L, is not for a moment suspended, even while being wound up, [which may be done either by means of a crank attached to the axle, or by a treadle, operated by the foot of the attendant,] so that the forward motion of the drum never ceases during the continuance of telegraphic communication. This barrel,—denominated the *power retainer*,—is by itself an important invention, not hitherto known, and will be made the subject of an article in another number, with an engraving. When the drum and paper are in motion, the point O will make an indentation in the paper, as often as it falls to the drum; and these indentations are made shorter or longer, according to the time or duration of the circuit-connection. If the circuit is closed and broken with the utmost rapidity, a close succession of dots merely, will appear on the paper; but if the circuit is closed and broken with less rapidity, short lines or dashes and intervening spaces are made; and by means of certain combinations of dots, dashes, and spaces, all the letters of the alphabet, numerals, and a variety of words, and even sentences are expressed. These drums may each contain four or six grooves, and the levers may contain a corresponding number of points, so that 4 or 6 copies of each communication may be produced at the same time. The following example of four line communication, will suffice for the present



Extract from an old Scotch Newspaper.—
Edinburgh, Feb. 7, 1707.

Copy of a painter's bill presented to the Vestry for work done in our Church.

To filling up a chink in the Red Sea and repairing the damages of Pharoah's host.

To a new pair of hands for Daniel in the Lion's Den, and a new set of teeth for the Lioness.

To repairing Nebuchadnezzar's beard.

To cleaning the whale's belly, varnishing Jonah's face and mending his left arm.

To a new skirt for Jacob's garment.

To a sheet anchor, a jury mast and a long boat for Noah's Ark.

To giving a blush to the cheeks of Eve, on presenting an apple to Adam.

To painting a new city in the land of Nod.

To cleaning the garden of Eden, after Adam's expulsion.

To making a bridle for the Samaritan's horse, and mending one of his legs.

To putting a new handle to Moses' basket, and fitting bull-rushes.

To adding more fuel to the fire of Nebuchanezzar's furnace. Rec'd payment, D. Z.

* * *

To make Cistern Cement.—Ashes two parts, three parts clay, one part sand mixed with oil, will make cement as hard as marble, and impenetrable by water forever. So says an exchange paper,—though we have not proved it.

The Great City.—London upon, an average the last ten years, has paid annually $48,840,000 in custom duties, or nearly half the whole amount of revenue raised from that department. There are 2,000 merchants and brokers within half a mile of the Exchange. The water companies supply 237,000,000 hogsheads every year, and the gas companies 10,000,000 cubic feet of gas, every twenty-four hours, In 1839, there were sold in Smithfield market 180,780 head of cattle, and 1,500,000 of sheep. The London newspapers consume 10,000,000 stamps annually. The steamboats carry 10,000 passengers every day. There are 10,000 miles of railroad, stretching from London into every part of the kingdom, completed at the expense of $222,000,000. There are 58 canals, which cost about $20,000,000. The business of the London bankers alone, averages $333,000,000 a month!

* * *

Ingenious Expedient.—A workman who, by means of a rope, had ascended to the top of an immensely tall chimney, in Preston, Eng., found himself in an awkward predicament, by losing his rope. After turning the matter over in his mind a few minutes, he unravelled his stocking, lowered the length of worsted to the ground, and a piece of fine cord being attached, he was soon enabled to hoist the rope up again.

Never judge a person's actions until you understand the motives which prompted them.

* * *

It is a sign of wisdom to be willing to receive instruction—the most intelligent sometimes stand in need of it.

Days without Nights and Nights without Days.—There is nothing that strikes a stranger more forcibly, if he visits Sweden at the season of the year when the days are longest, than the absence of night. The sun, in June, goes down at Stockholm a little before 10 o'clock. There is a great illumination all night, as the sun passes round the earth towards the north pole, and the refraction of its rays is such that you can see to read at midnight. There is a mountain at the head of the Gulf of Bothnia, where, on the 21st of June, the sun does not go down at all. Travellers go up there to see it. A steamboat goes up from Stockholm for the purpose of carrying those who are curious to witness this phenomenon. It only occurs one night. The sun goes down to the horizon, you can see the whole face of it, and in five minutes it begins to rise. At the North Cape, lat 72 degrees, the sun does not go down for several weeks. In June, it would be about 25 degrees above the horizon at midnight. The way people there know it is midnight, they see the sun begin to rise. The changes in those high latitudes, from summer to winter are so great, that we can have no conception of them at all. In the winter time the sun disappears and is not seen for six weeks. Then it comes up and shows its face. Afterward it remains for ten, fifteen or twenty minutes, and then descends. And finally, it does not set at all, but makes almost a circle round the heavens. Birds and animals take their accustomed rest at their usual hours. The hens take to the trees about 7 o'clock P. M., and stay there until the sun is well up in the morning—and the people get into this habit of late rising, too. The Swedes in the cities are not very industrious, owing probably to the climate.

* * *

Florida Everglades.—The labors of the surveyors who have recently been in the Southern portions of Florida, seem to demonstrate the correctness of the opinions which all who have carefully examined the subject have entertained upon the practicability of draining the everglades. They are found to be considerably above the level of the sea, and it is supposed that an enlargement of the Miami, and other rivers flowing from them into the Atlantic, will drain the waters from millions of acres. If this be ever done, South Florida will indeed be the garden of our country; for in addition to its adaptation to the culture of tropical fruit and hemp, this immense tract will secure unequalled advantages of soil, climate, and position, to the sugar, cotton, rice and tobacco planters.

* * *

COUNTING HOUSE ALMANAC---1846.

	Sunday,	Monday,	Tuesday,	Wednesday	Thursday,	Friday,	Saturday,
JANUARY					1	2	3
31 days.	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	22	24
	25	26	27	28	29	30	31
FEBRUARY	1	2	3	4	5	6	7
28 days.	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
MARCH	1	2	3	4	5	6	7
31 days.	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				
APRIL.				1	2	3	4
30 days.	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30		
MAY						1	2
30 days.	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
JUNE		1	2	3	4	5	6
31 days.	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30				
JULY				1	2	3	4
31 days.	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	
AUGUST							1
31 days.	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					
SEPTEMBER			1	2	3	4	5
30 days.	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
OCTOBER					1	2	3
31 days.	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
NOVEMBER	1	2	3	4	5	6	7
30 days.	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30					
DECEMBER			1	2	3	4	5
31 days.	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		

SCIENTIFIC AMERICAN

NEW-YORK, THURSDAY, JANUARY 8.

Our own Affairs.—We announced a few weeks since that we had made arrangements with Mr. S. S. Mallery to become associated in the publication of this paper; but subsequent events connected with that gentleman's other business engagements having rendered such arrangement inconvenient on his part, the publication will be conducted by the original proprietor as heretofore.

To our Respected Cotemporaries.—We wish to have it distinctly understood, that we promptly send duplicates of this paper to all those who publish. or have published, our advertisement, as it appears at the head of our first column.

Hotels and Reading-rooms.—Being desirous of having this paper more extensively seen or heard of we have decided to furnish it to hotel keepers and reading rooms for one dollar per annum, being half the regular price.

Agents Wanted.—Many travelling and local agents are wanted, to introduce and extend the circulation of this paper, in every principal village in the United States.

Our Norwich Subscribers,——should they not receive their papers in the usual way next week, ill please to call for them at the Post Office.

Science of Mechanics.

(Continued from No. 16.)

Power.—Another kind of water-wheel has been recently and extensively introduced, which is operated by the re-action of a stream of water, which is forced into the centre of the wheel, and thence horizontally out through several apertures in its periphery; hence this wheel is called the *re-acting* water-wheel. The motion of these wheels, is horizontal, and the apertures by which the water escapes are so arranged that the direction of the escaping water is nearly parallel to the periphery; and as considerable force is required to overcome the inertia of the water, and force it rapidly out of the wheel in directions contrary to that in which the wheel is supposed to be moving, so there must necessarily be a corresponding re-action on the interior surfaces of the wheel which impels it in the direction contrary to the motion of the water. The greatest quantity of power that can possibly be derived from a fall of water by wheels of this kind, however, is somewhat less than one fourth part of the whole power of the water. If the head of water be eight feet, or four lbs. per square inch, and each aperture is equal to four square inches, then if the whole weight of water be applied to force itself out through the said apertures, while the wheel remains stationary or at rest, the re-action would be 16 lbs., or nearly equal to the pressure; and the velocity of the water through the apertures would be at the rate of about 20 feet per second. But if the wheel is in motion equal to 10 feet per second—equal to half of the natural velocity of the water, which is in fact the most advantageous motion that a re-acting wheel can have—then the actual motion of the escaping current, is reduced to ten feet per second also; and as the re-action of a fluid always corresponds to the resistance of inertia, and to its momentum; and as the momentum of a fluid with a velocity of 10 feet per second is only one fourth of that of 20 feet per second, it follows that the re-action of the water on the wheel when in motion, is only 4 lbs., or one fourth of that on a wheel at rest. This is not the only disadvantage of a re-acting water wheel; for in most cases the water is made to change its direction by an angle, at least once before reaching the centre of the wheel; and again in passing thence to the apertures; and in each of the changes of direction nearly one-fourth of the momentum of the water is lost. Besides this, if the pent-stock or spout that conducts the water to the wheel, is not very large, there will be a considerable part of the power of the water lost by choking in the channel. This theory would bring the power of a re-acting wheel, to correspond nearly, with the result of an experiment on a re acting wheel by Oliver Evans—which was one 9th of the whole power of the water. In treating of these several disadvantages, however, it may be observed that we have made no allowance for any *friction* of the water, in passing through the channels, &c. We consider the friction of a fluid in passing through a straight or curved smooth channel, to be merely nominal nothing to be discovered. If a small tapering tube projects from the bottom of a cask or cistern of water, and the point or extremiy of the tube is turned upward, a stream or jet of the water will be projected as high as the surface of the water in the vessel, with the exception of what little it may be retarded by atmospheric resistance.

To be continued.

Attraction of Gravity.—All bodies have a natural tendency to approach each other. An instance of this, on a minute scale, may be seen by placing several small pieces of cork or other light substances on the surface of a vessel of water, near the centre, but a small distance apart. They will soon be seen to approach each other until they meet; after which the whole will move towards the nearest side of the vessel, unless some other solid object is placed in contact with one side of the vessel, in which case they will move towards that object, though farther distant.

Trial of Prisoners.—The jail at Whitesboro' lately took fire, and the prisoners were released; but instead of making their escape, they rendered efficient service in subduing the fire, and when that was extinguished, they returned voluntarily to their cells. This incident shews what class of men are subjected to the rigid cruelty of imprisonment, by the more malicious creditors, who escape the misfortunes of poverty.

The Art of Painting.

(Continued from No. 16.)

Imitation Painting.—This branch has probably never been so much in vogue as at present. Imitations or pretended imitations of oak, maple, mahogany, or marble, may be seen on three-fourths of the doors of houses in the cities, besides wainscoting, chimney pieces and furniture. The grounds for this work are painted with common oil paints, and of colors corresponding with the lightest parts of the materials intended to be imitated. The ground for maple, is a straw color made of white lead slightly colored with chrome yellow and yellow ochre. When this is dry, a thin coat of terra-de-sienna ground in water slightly sweetened with sugar; and while this coat remains moist, the deeper shades, termed *graining*, are laid on with a peculiar flat brush called a *grainer*. The first staining is usually applied by a piece of cotton cloth, and so thin as to show the ground color through it. This staining is then rubbed off, or removed from such parts as are intended to remain light, with a piece of cork. If *birds'-eyes* in the wood are to be represented, a flat piece of cork with several points formed on the edge thereof, is used. It is important that the learner should have several varnished pieces of the real wood before him while practising, to guide him in forming the grains and shades, which must be performed before the graining is dry. In case of any mistake, the whole may be washed off with water, and the work re-commenced. When this graining is dry, it must receive a coat of copal varnish. In imitation of birch, the same color is used for the ground, and either terra-de-sienna or umber, may be used for staining and graining. For imitations of oak, the ground color is slightly tinged with venitian red, sometimes approaching a salmon color. The principal color used in graining, is terra-de-sienna, with occasionally burnt-umber. In this branch, a tool similar to a comb, made of soft wood, is used in removing the staining in streaks, lengthwise: and a piece of cork is used in forming the cross-lights. The deeper graining is made with a graining brush as before directed. Either of the ground colors before mentioned, will answer for mahogany imitations. The principal and almost exclusive color used for staining and graining, is burnt terra-de-sienna; though sometimes venitian red is used in staining, and occasionally burnt umber or gum asphaltum, in the darkest shades. In this process, a part of the graining is applied, and blended with the staining by having a soft stiff brush passed over it: after which the sharper shades are formed by the grainer. The graining colors for this work, *may* be ground in a mixture of oil and spirits of turpentine, and this is, in some respects, less difficult to manage, than the water staining, though there is less facilitation in the process. Imitations of marble are produced on white, or light slate-colored grounds, and the shading colors,—which are ground in oil,—are applied immediately to the ground color, and blended therewith before the former begins to dry. The shading used in light marbles, is generally a mixture of blue, black and white, though occasionally, green, yellow, and red, are used;—true marble being often found shaded with each of those colors. In imitating the Egyptian marble, the ground is painted nearly black, and the graining or clouding is formed with various lighter colors In all attempts at imitation, the practitioner should be furnished with choice specimens of the real article, and imitate by sight and judgment; as no specific rules can possibly be given whereby he can succeed without a sample.

To be continued.

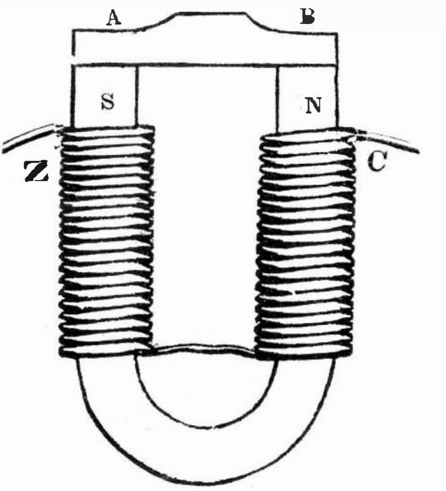
Splendid Iron Bridge over the Neva.—Messrs. Bury, Curtis, and Kennedy, the celebrated engineers of Liverpool, have received instructions from the Emperor of Russia to construct an iron bridge of powerful dimensions to be erected over the river Neva, at St. Petersburg. This river is at present crossed by three bridges of boats only, and in the winter season the damage done to them by the ice is so considerable that it has been determined to erect the bridge in question; and it is probable, at a future time, the other two will be replaced by bridges of iron. The length of this bridge is 1078 feet, and will consist of seven arches —the centre one being 166 feet span; and the three on each side 143 feet, 125 feet, and 107 feet, respectively. A separate arch at one end will be devoted to a swivel-bridge, 70 feet wide, by which vessels can be admitted to the custom house. Total weight of iron in this enormous structure will be nearly 10,000 tons, or about five times the quantity which was employed in the Menai bridge; the cost of the iron alone will exceed £109,000.

Casualty on the Mississippi—On the night of the 19th ult. the steamboat Belle Zane, while on her way from Zanesville, to New Orleans, struck a snag and immediately turned bottom up. There were about 90 passengers on board, of whom fifty perished by drowning, or by freezing after reaching the shore. It is truly surprising that Government continues to neglect so important a work as the improvement of navigation on this river. We have not ascertained at what price human lives are valued by Congress, but there can be no doubt that $100,000 appropriated to clearing the Mississippi River, would save more than one hundred lives The river might be dragged, and the snags removed twice a year, at an expense which would hardly be missed from the useless naval appropriations.

Hard Service,—It is stated by a correspondent of the Sun, that in the case of Knapp recently tried in this city on a charge of murder, the jury were locked up in the court room without any thing to eat, or accommodations of any kind; and that after remaining there twenty honrs, they were told that there was no use in entertaining any hope of being discharged, but would be kept without eating, twenty-four hours longer unless they agreed. Under these circumstances there was no alternative; they must agree right or wrong: and as several of them were already sick and their lives in danger, one portion of them were compelled to submit to a verdict contrary to their own decided judgment. Thus was an important case decided by a mere game of chance.

Galvanism.

(Continued from No. 16.)



Electro-Magnetic Telegraph.—In our last number we explained the principle of the induction of magnetism by electricity. We here present a front view of an electro-U-magnet, with its north and south poles, N., S., and with a helix coiled on each prong, whereby the current of galvanic fluid is made to pass several hundred times round each prong of the magnet, in its progress through the circuit from the negative to the positive poles of the battery. Certain indispensable rules are to be observed in coiling this wire in the formation of a helix, in order to produce the strongest attractive property in the magnet. The progress of the wire in the spiral coil, must be from left to right, or in the direction of the thread of a common screw; and if the wire is coiled back towards the point of its commencement in forming a second tier, it must be doubled in a short bout, so as to run parallel to the first tier, that the wires may not cross each other. In forming the helix or helices on an U magnet, the coil *may* be continuous from one prong to the other, or separate coils may be made, first on one prong and then on the other, which is the most common method: the two coils being connected by a single wire, as shewn in the engraving. The armature A, B, is a simple bar of soft iron, and is strongly attracted to the poles of the magnet, while the wires, c and z are connected to the copper and zinc plates of the battery; but if this connection be broken and renewed 500 times per minute, and at the distance of fifty miles from the magnet, the attraction between the magnet and the armature will be as often suspended and renewed. The strongest batteries, and which are preferred for the magnetic telegraph, however, are the "Grove's batteries," imperfectly described in a former number; but even this may probably be superseded by Dr. Page's improved magneto-electrical machine, by which a sufficient current of electricity is produced, without the use of any battery whatever, and of which we shall give a description in a future number.

(On our first page we have presented an engraving and description of a telegraph machine—not the machine already in use, but a valuable improvement, and one that may possibly astonish even Professor Morse himself. As this description properly constitutes a part of our treatise on the subject of Galvanism, we shall not proceed farther with the subject in this number.)

To be continued.

"Boston, Dec. 28, 1845.

"Mr. Editor,—Sir: I was very much obliged for the trouble you took in your last paper, to enplain to me why three times the power was applied to the apple, thrown from the railroad car, &c., but to me it is still quite incomprehensible. Does not the man, when he stands upon the ice, without friction, exert twice the power that he would if he stood upon the floor of the car? Suppose that the man stood upon ice, when he gave the apple its first velocity, would he not then exert two powers, just as much as when he stood upon the ice, in the car? You may think my questions too ridiculous to be noticed. I should like an answer, but if you have any thing of more importance to fill the columns of your paper, lay mine aside.

"An Investigator.

We may not be able to make this case clear to our respected correspondent. As we have said before, this point in natural philosophy, is very difficult to demonstrate, although it is fully established by experiment. To the first question in the above, we answer, No; for if the man, while projecting the apple, stands firmly on the floor of the car, he still exerts *two powers*, one of which is applied to the apple, and the other, in re-action, on the car, which deprives the car of part of *its* momentum. We admit that in this case the bodily exertion is less, because a less relative motion is required: but the actual power applied is the same. In answer to the second question, we would say that if the man stood on ice, in the first instance a double power would be required in effecting the first projection. We are aware that this opens the way for the argument that a double power would also be exerted, even if he stood on firm earth in the first instance, because one power is applied by re-action, to the earth; and on this ground it would appear that *six* powers, instead of four, are required to produce double velocity. But the fact is, that when a power of re-action is applied to the earth—terra firma—it is never brought into the account: otherwise, every single velocity would require a double power, and a double velocity would require the exertion of six powers—not 8—instead of four. The reason why *six* powers only, instead of eight, are exerted in this case, is because the *duration* of the re-action against the earth, is only half as long, as in case of a single velocity projection; and the power exerted in re-action must be in proportion to the time multiplied by the *force* applied, and not according to the force alone. But, as before remarked, no allowance is made for re-action against the earth, or any permanent object. If "an Investigator" does not understand this, ne is at liberty to enquire further.

A project is on foot to establish a colony of colored people on the government lands north of the Grand River, in Michigan. The purpose is to settle an entire county with blacks exclusively.

Curious Arts.

To Write on Paper with Gold or Silver.—Make a sizing as strong as will flow freely from the pen, by dissolving equal quantities of gum arabic and loaf sugar in water: write with this on paper and let it dry: then moisten the paper by breathing on it, or by holding it over hot water and immediately lay pieces of gold or silver leaf on the lines of the writing, pressing them down gently with a dry hair pencil. Otherwise, brush gold or silver bronze lightly over the writing; but this will not have so brilliant an appearance. Allow the sizing to dry again, and then brush off the redundant gold or silver with cotton. This writing, (if performed with leaf gold or silver) may be burnished with a flint burnisher or a cornelian or bloodstone. Gold letters may also be written or drawn with a hair pencil by means of gold bronze, mixed with weak gum water, to which may be added a little solution of soap, which will make it run more freely. But no preparation of solution of gold has yet been discovered, which may be easily revived on paper.

Etching Letters or Flowers on Glass.—Select a piece of glass that is thick and straight, and lay a coat of melted beeswax on the fairest side; then, with a needle, penknife, or any other convenient pointed instrument, trace any design, or picture, (which being placed under the glass, may be seen through the wax;) or form any letters or figures on the glass, carefully cutting or scoring quite through the wax, and making the lines large or small as occasion may require. Then warm a piece of the wax, so as to form it into a roll, about one-fourth of an inch in diameter; lay this roll round the work upon the glass, and press it down so as to make it adhere to the glass, thus forming a border. Then take some finely powdered fluate of lime, and strew it evenly over the glass, on the waxed side, that it may fill all the lines in the wax; and then gently pour upon it, so as not to displace the powder, as much sulphuric acid, diluted with thrice its weight of water, as is sufficient to cover the powdered fluate of lime. Let every thing remain in this state for three hours; then pour off the mixture, and clean the glass by washing it with spirits of turpentine. The figures which were scored in the wax, will be found engraven on the glass; while the parts which the wax covered, will be uncorroded. This glass plate may be charged with ink, (or any thick oil paint,) and impressions may be taken from it on paper, the same as from copper-plates, only caution is requisite, that the glass be not broken by the pressure. *Note.*—the fluoric acid, which is partly absorbed by the water in the above process, being very corrosive, should not be suffered to touch the hands, nor any valuable vessel whatever.

New Inventions.

Improved Vise.—A Mr. Matthews, of Bangor, Me., has invented a new iron bench-vise, which, instead of the usual screw and pivot of common vises, has two screws both operating at the same time, and in equal proportions by means of an endless chain attached to both. This aarangement brings the jaws of the vise to bear exactly square, however widely distended by the screw.

Maps in Relief.—A gentleman in this city has discovered a method of producing maps with surfaces embossed and colored according to nature, in a manner to shew a complete view of the section of country therein represented, including mountains, rivers, cities, roads and plains. Models of the country are first made in wax or plaster which is reversed with copper by the electro-moulding process, and this moulding embedded in tin, serves as a die on which the paper map is moulded after having been printed in lithographic colors corresponding to the mould in dimension, and to the natural appearance of the country in colors. They will be sure to come into extensive use if afforded at moderate prices.

Splendid Depot.—The new depot of the Boston and Maine Railroad, now nearly completed, will be the most splendid in the United States, and perhaps in the world. It is situated on the west front of the old Haymarket Square, Boston, and is 200 feet in length, eighty feet wide, and two stories high. The front is beautifully ornamented with Corinhtian columns of red sienite, with face brick both in front and the sides. The upper story is to be a large public hall twenty feet high, and well ventilated. The large freight Depot on Canal street, farther to the north, is five hundred feet long, and fifty in width. The whole arrangement is on a most magnificent scale, and so near to the centre of business, that the road can hardly fail to command a most extensive travel.

Trade of Southport, Wisconsin.—The Southport American gives a statistical report of the productions and trade of that Territory, which is truly-surprising. The amount of wheat from the port of Southport alone, during the past season, is stated at 188,252 bushels; also 1300 barrels of flour; 7,928 lbs. of wool; 38,440 lbs. of hides; 1,800 lbs. calfskins, besides considerable quantities of grass seed, furs, &c., all together amounting in value to $143,360. The wheat remaining in store on the 9th ult., was 42,279 bushels. It will thus be seen that Southport, though seldom heard from in the Atlantic states, is a place of extensive and rapidly increasing importance.

Madame Rothschild.—The venerable Madame Rothschild, of Frankfort, now fast approaching to her hundreth year, being a little indisposed remonstrated in a friendly way with her physician on the inefficiency of his prescriptions. "Indeed, madam," replied the doctor, "unfortunately we cannot make you younger." "You mistake, docter," rejoined the witty old lady, "it is *older*, not younger, that I desire to become."

Affliction.—The family of Amos Kendall have been subjected to a large share of the afflictions of this world within a few months past. His son, it will be remembered, was shot in a street fight; and more recently his wife's father and brother have been burned to death by a prairie fire in Missouri.

VARIETY

A model for a steam battery, on a new plan, is being constructed in this city, and will probably be exhibited when completed. It is expected to furnish more efficient protection than any thing hitherto introduced.

A Vicksburg, (Miss.) paper describes, as a great curiosity, a protuberance on an oyster-shell, in perfect resemblance of a dog's head. Probably some one of the oyster's projenitresses was frightened by a dog.

We learn from the Albany Knickbocker, that the ladies of that city, in making the customary calls of the season, on Friday last, had to proceed—not to say paddle—through the streets in boats, on the occasion.

A damsel in Ayrshire, Scotland, having two lovers, and not knowing which to prefer, settled the matter by marrying one, and immediately eloping with the other.

In the bill before Congress for the occupation of Oregon, it is provided that every white male settler who is over 18 years of age, shall receive 140 acres of land.

Mr. John B Gough and lady have, it is reported, been invited by Ex-Governor Cox of Virginia to spend the winter with him at his residence, and that they will accept of the invitation.

The editor of the Louisville Courier says he has "scuffled with poverty from his youth up, and were he now to be relieved from his society, it would be a sort of deprivation."

An English paper states that twenty-one pounds of iron have been made into wire upwards of 111 miles in length. A part of the wire was humorously converted into a barrister's wig.

The property held by *Trinity Church* in this city is estimated to be worth *one hundred millions of dollars!* the injunction "lay not up for yourselves treasures upon earth," to the contrary notwithstanding.

The machinery for the first cotton factory ever attempted in Florida, recently arrived at Pensacola. We see no reason why the enterprise should not prove highly successful.

A German paper states that the Jewish Reform Committee, sitting at Frankfort, has decided that the Jewish Sabbath shall be henceforth kept on Sunday.

A dreadful case of attempted suicide has been reported, in which a man blew his own brains out with a *pair of bellows*. It is thought the poor fellow has sustained no serious injury however.

By an error of types, in one of our exchange papers, the word "holidays," is made to read "hotidags." Though this error is not so quaint as some others, it is at least, very uncouth.

An Ohio paper reports the marriage of Joseph W. Ladu to Louisa T. Orris, in a buggy waggon, in front of Millis's Hotel, in Montau. The parties belong to Shalerville, and were in a hurry.

It is no small job to count a million. Allowing a person to count one hundred and fifty per minute for ten hours each day, eleven days would be required to accomplish the feat.

One thousand live hogs lately arrived at Cincinnati from the north part of the State of Ohio, having travelled on the route at the rate of fifteen miles per hour—by railroad.

Some of the Boston papers are puffing the neatly executed bills of the new Boylston Bank. We should like to know whether the editors get each a copy of the work'

The Virginians must have fine *sleighing* in the vicinity of *Wheeling*. The Wheeling papers report that snow has fallen on the Alleghany mountains to the depth of two and a half feet, and was still falling.

A beggar at Edinburgh was recently examined, and found to possess a considerable amount of money in the banks. A bank deposite receipt of nearly $300 was found in his pocket.

"Pompey," said a good-natured gentleman to his colored man, "I did not know till to-day that you had been whipped last week." "Didn't you, massa?" replied Pomp, "why I knew it in the time of it."

A marriage has been recently reported in Arkansas, of a man who has four wives, to a lady who has three husbands, all living. The husbands and wives were probably all contented.

There is a factory building in Preston, England, which covers an acre and a half of ground, and contains 1650 pairs of looms, attended by 825 hands, though the building is only one story high.

Singing has become a popular branch of education in the common schools of Boston. The exercise of singing is believed to be of great value in promoting the healthy condition of the vocal organs.

The skeleton of the giant lately found 50 feet below the surface of the earth, in Tennessee, has been put together and set up, at Nashville, and stands about 16 feet high.

Watches are manufactured at Geneva, less than one-eighth of an inch thick; yet they are good time-keepers, and said to be durable. They are elegantly finished, though large in circumference.

Thirty-two editors of newspapers in the British West Indies, and twenty-two members of Legislative Councils, are colored men, several of whom are negroes.

The quantity of flour used as hair-powder, in the British army, at one time, was estimated to be equal to the bread rations of fifty thousand people.

Our Glorious Banner.

O'er the Nation let it wave,
With its potent spell to save,
Till its stars' bright beams shall lave
Every sea and shore.
Let it spread its saving name
O'er the Earth, and wide proclaim,
Virtue's ways can lead to fame,
When other names are o'er!

Let it speak with hidden spell,
Of the joys where temperance dwell,
And portray in accents, well
Every secret charm,
That in peace and joy is found,
While its echoes still resound,
Battles fought without a wound,
Save from false alarm!

Let the eagle face the foe,—
Let the monster ever know,
We his batteries can o'erthrow
And preserve the land:
Aided by a heavenly power,
To protect in every hour,
And when dangers seem to lower,
By the Almighty's Hand.

Ho! ye warriors, now unfurl
The glorious banner to the world,
And in power the missiles hurl
'Gainst the tyrant's chain,
Till its power is known no more,
Till the conquest dire is o'er,
And o'er earth from shore to shore
Temperance shall reign!

The History of Life.

I saw an infant in its mother's arms,
And left it sleeping:
Years passed—I saw a girl with woman's charms,
In sorrow weeping.

Years passed—I saw a mother with her child,
And o'er it languish;
Years brought me back—yet through her tears she
In deeper anguish. [smiled,

I left her—years had vanished; I returned,
And stood before her;
A lamp beside the childless widow burned—
Grief's mantle o'er her.

In tears I found her whom I left in tears,
On God relying;
And I returned again in after years,
And found her dying.

An infant first, and then a maiden fair—
A wife—a mother—
And then a childless widow in despair—
Thus met a brother.

And thus we meet on earth, and thus we part
To meet—oh, never!
Till death beholds the spirit leave the heart,
To live forever.

Look Aloft.

In the tempest of life, when the wave and the gale,
Are around and above, if thy footing should fail—
If thine eye should grow dim and thy caution depart,
Look aloft! and be firm, and be fearless of heart.

If the friend who embraced in prosperity's glow,
With a smile for each joy and a tear for each wo,
Should betray thee, when sorrow, like clouds are arrayed,
Look aloft, to that friendship that never shall fade.

Should they who are dearest—the son of thy heart:
The wife of thy bosom in sorrow depart,
Look aloft, from the shadows and dust of the tomb,
To the soil where affection is ever in bloom.

And O! when death comes in terrors to cast,
His fears o'er the future—his pall o'er the past,
In that moment of darkness, with hope in thy heart,
And a smile in thine eye, look aloft and depart.

◆

Rapid Growth.—Gypsum, or plaster of Paris, is often effectual in producing the rapid growth of various articles. It is reported of a tall Vermonter, that when he was a boy his father brought home a bag of ground plaster for his fields; but the old lady mistook it for a bag of meal, and actually made a pudding of it for Jonathan's supper. The consequence was that when he awaked next morning, he found his feet protruding two feet beyond the limits of the bed on which he slept, having overturned a tea-table in their progress, all in consequence of the plaster of Paris pudding.

Fox Chase.—The Portsmouth Journal gives an account of the chase of a fox by the locomotive on the Eastern Railroad. Poor Reynard ran like the wind for a mile or more, but was finally overtaken, and as he turned his head to escape from his pursuers, was struck by the engine wheel and crushed to death.

Remarkarle old Age.—William Pridson, of North Carolina, died on the 14th ult., at the extraordinary age of 124 years. He had served a full term in the war of the revolution, although *then* legally exempt by reason of over age. His grand children are old infirm people, and several of his great-grand-children are advanced of forty. He was able to walk until a few days before his death. He was probably the only man who has ever attained that age in the United States.

A Destructive Monster.—Barklay's Brewery, in London, covers an area of fifty acres, and contains conduits half a mile in length, with railroads, steam engines, &c. Nearly 200 horses are constantly employed; thirty tons of coal are consumed, and 1500 barrels of ale are made daily. The actual damage or injury produced or occasioned by this one establishment to the United Kingdom, can not be less than $1,000,000 daily, besides the destruction of many lives.

Railroad Intelligence.

We sometime since predicted that the enterprise of Pittsburg, Pa., would not long forego the convenience of a continuous railroad to the Atlantic. We now learn that an application is about to be made to the Legislature for the incorporation of a company for that purpose.

A bill is before the Virginia House of Delegates for the construction of a railroad from Richmond on James River, to some point on the Ohio River near the Kanhawa. Also a bill for the extension of the Baltimore and Ohio Railroad, to the Ohio River.

The work on the Vermont Central Railroad, was last week commenced at Windsor, by ex-Governor Paine, amidst the ringing of bells and the acclamation of the citizens.

Six different routes have been surveyed for New-York and Hartford Railroad, which average in estimate, 122 miles of line at $27,594 cost, per mile. It is expected to secure the business of towns containing 108,156 inhabitants, and 1000 factories, producing annually $11,000,000.

The railroad between Portland, Me., and Montreal, C.E., is to be put forward in the spring, and finished within the time originally contemplated by the respective parties. The stock is popular in England.

A branch railroad is projected, and will probably be carried through from the Fitchburg road at West Cambridge, to the Concord, N.H., railroad at North Chelmsford, passed through Lexington and Billerica. Also another branch from Hanover, Mass., to Abington.

A connection has been made of the Boston and Providence with the Boston and Albany railroad near Boston, so that a train from the West *may* run directly through to Providence, Fall River or Plymouth.

Three thousand nine hundred and nine miles of railroad have been completed in the United States at a cost of *one hundred and nineteen millions, two hundred and forty-one thousand and ninety-seven dollars*, (never mind the odd cents,) and more than three thousand miles more are projected.

◆

Another Collision on the Western Railroad.—It is remarkable that more disasters occur on this road, than on all other railroads in the United States; and that gross negligence, or inefficiency in the conductors employed, is evinced by the circumstance that the disasters generally occur on the most plain and favorable sections of the road. We are reluctant to notice casualties of this kind, because it tends to induce an unfavorable influence on railroad enterprise; but since a reprehensive management, in the employment of unsuitable conductors, has become too manifest to be concealed, it is time for the press to speak plainly on the subject. It is but a few day since an accident occurred on this road, by which a man by the name of Patrick Colman was so severely injured as to cause his death; and while the widow, children, and several friends were last week in the cars, accompanying the corpse to Boston, another collision of two trains occurred, by which several persons were injured, and among them one of the children of the deceased Colman. The loss of property occasioned by these frequent collisions, would be supposed to prove a sufficiently severe admonition to the proprietors; but as this proves inefficient, they must unavoidably suffer the loss of a considerable portion of the patronage which would most naturally fall to their share under more judicious management.

Warming Houses with Ice.—It is well known that a convex lens made of ice, in the form of a burning glass, will, in the same manner, converge the rays of the sun and produce heat. It may therefore be inferred that if a large cake of ice, say twelve feet in diameter, be reduced to the convex form, (which might readily be done by a carpenter's adz,) and placed as a roof over a hut or cabin, it would effectually warm the interior—at least so much of it as came within the rays of the sun, when the latter were converged to the space of six or eight feet in diameter. And were the sun's rays admitted to pass through a trap-door into the cellar, and that of sufficient depth to bring the rays nearly to a focus, a sufficient heat would be produced to bake or roast provisions for a family.

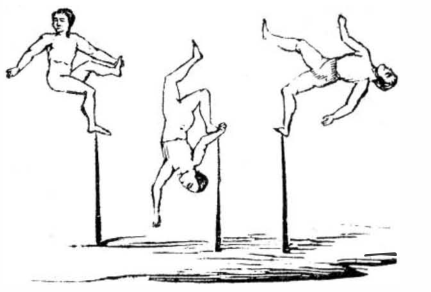
Subterranean Heat.—It is estimated that water will boil at the depth of 2,430 yards beneath the surface of the earth. Lead melts at the depth of 8,400 yards. There is red heat at the depth of 7 miles. Gold melts at 21 miles. Cast iron at 74 miles. Soft iron at 97 miles. And at the depth of 190 miles, there is a temperature equal to the greatest artificial heat yet observed; a temperature capable of fusing platina, porcelain, and, indeed, the hardest substances we are acquainted with. These temperatures show that the earth is fluid at the depth of 100 miles. So then, estimating the diameter of the earth at 8,000 miles, about 7,900 of it are fluid.

Manufactures in South Carolina.—The Charleston News congratulates those friendly to a change in the system of South Carolina industry on the passage of two bills by the legislature, for chartering manufacturing associations. It says that the path is now open to almost unfettered enterprise for those in South Carolina who are disposed to engage in manufactures, and urges them to "come to the task of changing the present scheme of industry with the energy and caution that will insure success." We shall see them waking up to their true interests in that section, ere long.

Honesty and Generosity.—A young man found a pocket-book in one of the streets of Pittsburg a day or two since, and learning the owners name, discovered his whereabouts and restored the property. The contents amounted to upwards of $5000. The next day he received a note in reply containing $50, and an assurance from the writer that his honesty had saved an honest family from starvation.

Black Sea Wheat.—Wheat is abundant in the ports of the Black Sea. The quantity reported in Odessa, is 440,000 bushels, and high rates of freight were being paid for its exportation.

Incredible Attitudes.



Wonerful Balancing.—The Chinese, Siamese and Bengalese have often astonished the citizens of the more civilized nations, by their dexterity and ingenuity displayed in various feats of legerdemain, one of which is that of assuming various attitudes and positions apparently inconsistent with the laws of gravity and equilibriums, while standing on an elevated vertical point, as above represented. This deception is effected by having a pair of boots with stout iron soles; or the soles merely without the boots, lashed firmly to the foot. From the bottom of each sole an iron pin projects downward about half an inch, but which is carefully concealed from view of the spectators. Two or more iron posts are erected, about four feet high, tapering nearly to a point and apparently solid; but in the centre of each post is an orifice corresponding in size with the pins before mentioned; but the orifice is filled by a rod which comes even with the top, being pressed upward by a spring below; but when the performer dexterously springs upon the top, the projecting pin depresses the rod and enters the orifice far enough to retain its position, and keep the iron sole in a horizontal position, whatever may be that of the performer.

Very Alarming—*to incendiaries, &c.*—A new use, or application of mesmerism, has been recently put in requisition, and with apparent success, at Oxford, Mass. A barn was destroyed by fire, last spring, at Pomfret, Ct., and supposed to have been the work of an incendiary. A few weeks ago a professed mesmerizer passed through Oxford, and was employed to put a subject to sleep, from whom such intelligence was elicited by a Pomfret man, concerning the firing of the barn, as to lead to the arrest of a person, who is now in prison, awaiting a trial. Should he be convicted, on circumstantial evidence, in consequence of the mesmeric relation, knaves may well dread the approach of mesmerism henceforth; and if this practice is successfully followed up, there will be no such thing as concealment of crime, nor escape from detection.

A Heroine.—An interesting statement is made in some of the German papers, concerning a woman now living in Pillau, Prussia, who has already rescued three hundred persons from certain death, at different times. Her name is Katharine Kemfeldt, the widow of a seaman, whom she accompanied in several long voyages. She is now about 47 years of age, and when a storm arises, whether by day or night, she embarks in her boat, in search of shipwrecks. The population of Pillau venerate her, and the seamen regard her as a guardian angel. All heads are uncovered as she passes along the street. The Prussian, and several other governments, have sent her their medals of civil merit; and the municipality of Pillau has conferred on her the freedom of the town. She is described as possessing an athletic figure and great strength, seeming to be furnished by nature in view of a capacity to go through wild scenes and high deeds. Her physiognomy is somewhat masculine, with the expression softened by a look of gentleness and goodness.

Blow them up.—Bitter complaints have recently appeared against the management of the railroads west from Albany, both with regard to excessive rates of fare, and negligence of accommodation. Every railroad company command in a greater or less degree the power of monopoly: and when this power is abused, the most ready remedy is an exposition thereof in the public journals. Such companies should be made to know that they are in some measure dependent on the public; and all travellers, and men of business, should from principle, refrain from patronizing companies who act on the principle of aristocratic independence, and neglect of due accommodation of the public.

Beauties of War.—When Napoleon with his army, arrived before the walls of Vienna, he planted his batteries, and in less than ten hours threw three thousand of his horrible projectiles into the city. Three hundred of these bomb shells exploded every hour, five every minute, in the streets, of this crowded metropolis. Who can imagine the terrors of that dreadful night when, amid the terrors of artillery, the cry and uproar of contending armies, and conflagrations breaking out on every side, these terrible shells, like fiery meteors with portentous glare, were streaking the air, and descending like hail stones upon the doomed city. Crashing through the roofs of the dwellings, they exploded at the very fireside, by the very cradle of the infant, blowing their mangled limbs, with fragments of their demolished homes, far and wide into the air. Yet there were thousands who exulted in the carnage then, and the same spirit prevails to a great extent, at the present day, in those who advocate war.

Affection in Death.—While two boys were skating, near Baltimore, the oldest broke through the ice. The younger brother attempted to save the unfortunate youth and would have himself been lost in his daring effort, but for the timely aid of a gentleman. The older, who was drowned, called out to his little brother to leave him to his fate, and not risk his own life, in his affectionate but vain efforts to save him.

Utility of the Tariff.—Many assume the ground that the tariff of '42 has not benefitted the operatives in our manufactories; but it is stated in the United States Gazette, that a gentleman who has visited two thousand manufacturing establishments within the last year, has ascertained that in almost every instance, wages have been increased from 25 to 33 per cent.

For the Scientific American.

Communication.

Mr. Editor,—Sir: I have just read in the "Scientific American" a notice of the "Improved Churn," propelled by weight power. The application of this power to propel machinery has certainly been overlooked by men of mechanical genius. The "fifty-six," descending, in the case of the old English Jack, turns the roaster, however it may be loaded with meats. The length of time it continues to turn, in its descent to the bottom of the cellar, is generally known, and the slight tax it is on the time of the cook, or her labor to wind it up, is equally familiar. Now, sir, the fact is, that the descending weight, known as a fifty-six, supplies the place, and saves the expense of employing, to effect this desirable object in cookery, a living being, who might be otherwise well employed, and almost without wear or tear. The vast weight that one person may readily raise to a moderate height, by the aid of machinery, even with a common wheel, and balance wheel added, is palpable,—that this weight will give a powerful impulse in descending, is equally certain

Without attempting to say what can or cannot be effected by this species of power, aided by ingenious machinery, I will fearlessly advance the opinion that, in consequence of the valuable uses in domestic economy to which it could be applied, it would be invaluable. It could be made a power, without wear or tear, the first being the only cost,—and not only save manual labor, but the time of those capable of labor.

To come more to the point, I will also advance the assertion that no convenience of mills at a distance, can equal that of having the grinding of much bread-stuff done in the kitchen or out-house, and under the management of the cook. I think the question may be fairly asked,—cannot all machinery, that can be propelled by the arms of one man, be moved effectually by weight power? We have now Pratt's smallest size Corn Grinding Mill, that, with the aid of the balance-wheel, is readily worked by one man—the Cutting Box, also, a small machine for cleaning rice and pounding; and also one for grinding hominy. Now, sir, all these machines have been rendered perfectly domestic, and can be introduced into the kitchen or outhouse of every family, and especially so at the South, and are of incalculable benefit and convenience; and if they could be made to operate by a weight power, would certainly be much more valuable.

The horse power is valuable, but it is far from convenient for every family to own and keep a horse—it being a serious expense, and of uncertain existence. The weight is always there—eats nothing—nor is ever disabled from labor.

I really think, sir, that this subject is worthy the attention of men of Mechanical genius. Of one thing I am certain, that in the South the remuneration for bringing this power to operate effectually, would be splendid, and, in a lucrative point of view, surpass all others. I never yet have seen a man that was not tired of going to mill—though not of eating good bread, hominy, or rice. It ought to be known that the South is generally so situated, as regards grinding of grain, &c., by water power, that going to mill is a severe tax on southern planters, many of whom have a hundred mouths to fill with bread. Taking this into view, the value of some domestic flour establishment will be obvious. Corn is the general bread-stuff—and next is rice They are perfectly aware of the horse powers that are in use, but there a horse, together with a driver, has to be supported, besides the cost of each; and such is the nature of their crops of staple articles, that every horse and man that can be raised, is loudly called for in the making and saving the crop; hence a horse power ceases to be a convenience in the South, as it is found to be in the North, when applied to merely domestic machinery.

I respectfully submit the foregoing to mechanical genius. A Subscriber.

St. Stephens, Ala., Dec. 18, 1845.

◆

A Splendid Book.—The most elegant and interesting work we have seen this season, appears under the title of "Dew Drops,"—a volume of 200 pages, edited by Seba Smith, and published by J. K. Wellman, 118 Nassau street. Its contents are not only very interesting, but such as will aid in moulding amiable character, and thus contribute to the happiness of the reader during life. It is bound in a style seldom surpassed in elegance, and we are confident that no parent who presents a copy to his sons or daughters will ever have occasion to regret the expense.

Elegant and Cheap.—We have received the January number of the 3d volume of the "Literary Emporium," beautifully embellished, and filled with miscellaneous articles, well written and selected also the first number of the "Young People's Magazine," embellished with an elegant steel plate engraving, and a superbly colored engraving of the wild rose. Each of these periodicals is published monthly, at the very low price of $1,00 a year, by J. K. Wellman, No. 118 Nassau st.

Graham's Magazine.—We should have noticed earlier the January number of this unrivalled monthly. The number before us is embellished with four superb engravings, one of which,—the Young Cavalier,—is worth the price of the whole, including forty-eight pages of choice reading matter. This is the first number of Vol. 7, and is pronounced the most elegant number ever yet published. Office 98 Chesnut st., Philadelphia, corner of Nassau and and Spruce streets, New York, and 12 State street, Boston.

"**The Bible a Universalist Book,**" is the general title of a forthcoming book by J. V. Wilson. If it has the effect to induce people to study the bible independently of universalist commentaries, it will prove a valuable work.

Latent Heat of Steam.—1000 degrees of heat are required to convert water into steam from the boiling point. Of course water must be heated to 1212 degrees, in order to contain heat enough to expand wholly into steam when liberated.

Mysteries of Divine Providence.

It is not more certain that the earth itself exists, than that it was produced and organized by a Supreme and Intelligent Being; and it is not more certain that the earth, with its wonderful and beautiful system of nature, has or had an author, than that all the events, even the most minute, which occur on the earth, or in the universe, are each and every one in particuler, controlled and directed by the same Divine Author. We would not be understood to admit, but on the contrary, we deprecate the pernicious and erronious idea, that the Divine Author is the author of sin. But, that His purposes are sometimes accomplished through the instrumentality of those who are inveterately opposed to Him and His laws, is fully admitted in the Sacred Scriptures, and is not to be denied by men; although this does not in the least degree palliate the criminality of those who are impelled by evil motives. The most generally prevailing sentiment on this subject is, that the Divine Author attends to the great and important affairs, such as guiding the vast planets in their courses, ordering the destinies of kingdoms, and sending occasional rains to water the earth; but that he leaves the small and trivial affairs to chance, or the management of men and animals, aided by the use of a vast operating machine, denominated "the laws of nature." Even learned theological teachers, nearly all of them, practically deny the existence of the universal and special providence and attention of the Supreme Being, in minute and trivial affairs and circumstances: or that he hears, regards and answers the prayers of poor, obscure and ignorant people, in matters pertaining to this world, and of little apparent consequence. Even the celebrated, rational and erudite Rowland Hill, in one of his "Village Dialogues," ridicules the idea that God should regard the prayer of a poor washer-woman, to remove the clouds and cause the sun to shine, that her washed clothes might get dry.—But in this, Mr. Hill evidently betrayed a weakness, hardly consistent with the general tenor of his writings; and overlooked the well known fact, that all *honest* prayers—dislike the dishonest, artificial prayers used in formal church worship—are generally inspired or directed in perfect accordance with the originally established laws and course of nature; so that prayers may be, and often are answered, in conspicuous and wonderful manner, yet without miracle. The supposition may be admitted, that the poor woman had a number of small children, and that the only apparent possibility of procuring sustenance for them for the next 24 hours, depended on her returning her washed work to her employers in due season. Under these circumstances her prayer for a change of weather would have been quite as rational and likely to be honored with divine regard, as those of an ecclesiastical congregation for "showers of rain," to favor the growth of vegetation, and increase the wealth of the land-holders. All reason, observation, experience, and common sense, combine to prove, however, that each minute fibre and muscle of the most diminutive insect, and every particle of the fine dust that floats in the atmosphere, are under the special care and direction of that Being, "in whom we live and move and have a being." There are very few of those who are "independently rich," that are ready to acknowledge their constant dependence on Divine Providence, but generally attribute their good success to chance, or their own ability; but a poor man who has studied and labored incessantly and with close economy for forty years, without gaining even a few dollars beforehand, but losing all his earnings in various ways by untoward and unforeseen events, is ready enough to admit, that his misfortunes are attributable to an overruling Providence; and if he is an observing and reflecting man, he may also be satisfied that it is all for the best. It is often difficult, however, to comprehend in the least degree, the *reason why* certain apparently untoward and adverse events are permitted, or suffered to take place: and few are they who do not occasionally repine, or express dissatisfaction with such occurrences, especially when the immediate agents thereof, evidently act from pernicious motives: but be it known and remembered by all, that to him whose aim is to do right in all things, and act in complete accordance with the Divine injunctions, that *all* events without exception, however unpleasant they may appear, will eventually prove to have been the very best and most salutary that could have occurred for the advantage and welfare of each and every such individual.

The Sabbath.—The people of nearly all nations have a special regard for one day in each week, although many of them can not tell why. Christians observe Sunday; the Greeks, Monday; the Persian, Tuesday; the Assyrians, Wednesday; the Egyptians, Thursday; the Turks, Friday, and the Jews, Saturday. Thus every day in the week is a Sabbath in some country, and it would be well for all to remember that "it is right to do good on the Sabbath day."

Gaiety.—There are two kinds of gaiety; the one arises from *want* of heart, being touched by no pity, sympathizing with no pain, even of its own causing; it shines and glitters like a frost-bound river in the gleaming sun. The other springs from excess of heart: that is, a heart overflowing with kindness toward all men and things, and suffering under no superadded grief, it is light from the happiness which it causes—from the happiness which it sees. This may be compared to the same river, sparkling and smiling under the sun of summer, and running on to give fertility and increase all within, and even to many beyond its reach.

◆

Remember that labor is necessary to excellence. This is an eternal truth, although vanity cannot be brought to believe, or indolence to heed it.

General Agents.

Haliburton & Co., 12 State street, Boston
Colon &Adriance, 28, 29, 30, 31 Arcade, Philadelphia.

Local Agents.

C. A. Hinckley, 122 Baltimore st., Baltimore.
Lees Garside, Corner of Main and Market streets, Paterson, N. J.
J. W. Davis, Lowell, Mass.
S. Thompson, Worcester, Mass.
W. H. Pratt, Springfield, Mass.
H. P. Barnes, Pittsfield, Mass.
T. Dickinson, Newark, N. Y.
T. S. Hawks, Buffalo, N. Y.
G. W. Hildreth, Lockport, N. Y.
William M. Beauchamp, Skaneatles, N.Y.
Peter Cook, Hartford, Ct.
W. & E. Downes, New Haven, Ct.
William Woodward, Middletown, Ct.
S. Jones, Colchester, Ct.
J. Hunter, Thompsonville, Ct.
H· S. Snow, Meriden, Ct.
Safford & Parks, Norwich, Ct.
Col. A. P. Chesley, Huron, O.
Chas. O'Neal, Darien, Ga.
Major J. Nathans, Quincy, Flo.
Daniel Cobb, Providence, R. I.
H. J. Pitman, Bristol, R. I.
R. Kidney, jr., 123 Broad street, Newark, N. J.
W. Solomon, New Brunswick, N. J.
Thomas Boynton, Windsor Vt.
Shipley W. Ricker, South Berwick, Me.
W. H. Ward, Washington, D. C.
J. Buffam, Nashua, N. H.
David P. Perkins, Manchester, N. H.
C. M. Smith, Manchester, N. H.
J. M. Francis, Hoboken, N.J.
C. D. Bearce, Portland, Me.
Benj. Perry, Salem, Mass.
W. P. Seaver, Taunton, Mass.
P. W. Tenny, Newburyport, Mass.
J. A. Fay, Keene, N.H.

Travelling Agents.

Clark Silleck.
J. A. Lattin.
John Derham.
Porter Anthony.

Book for Mechanics.

THE ENGINEER'S AND MECHANIC'S COMPANION.

Comprising Weights, Measures, Mensuration of superfices and solids, tables of squares and cubes,—square and cube roots, circumference, and areas of circles, the mechanical powers, centres of gravity, gravitation of bodies; strength, weight, and crush of materials; water-wheels; hydrostatics, hydraulics, statics, centres of percussion and giration; friction, heat, tables of weight and metals; pipes, scantling, and interest; steam and the steam engine.

By J. M. SCRIBNER, A. M.

Recently published, and for sale by
HUNTINGTON & SAVAGE,
216 Pearl st., price $1,12 to $1,50.
For sale, also, at this office. jny1

ELEGANT DAGUERRIAN

Portraits,

Furnished in neat morocco cases for
ONE DOLLAR,
By H. E. INSLEY, 122 and 124 Broadway.

W. N. SEYMOUR & Co.

IMPORTERS AND DEALERS,

AT THE
Old Established Hardware and Tool Store,
No. 4 Chatham Square,
(at the Foot of the Bowery, N.Y.)

HAVE the greatest assortment of Hardware for builders; Mechanics' tools of all descriptions.

Wm. Graves & Sons' warranted caststeel files & tools.
Worrall's warranted cast steel saws.
Hoe & Co.'s do. do. do.
Cabinet Trimmings. Tin and wooden ware.
House-keeping articles of great variety.
Agricultural tools. Patent Safety Fuse for blasting.

Sole Agents, for this city, for J. A. Fay's patent Mortising Machine.

THE INVISIBLE DOOR SPRING.

W. N. S. & Co. have taken the exclusive agency, for this city, of Ellis's Invisible Door Spring, which commands a ready preference over all others, and has made arrangements to have them put on and adjusted to the doors of those who may require them; Mr. Shaffer, 75 Warren st, is engaged to superintend this department, and will promptly attend to all orders in this line.

Dec. 25.

Engraving on Wood.

THE subscriber is prepared to execute
WOOD ENGRAVINGS
of Machinery, Landscapes, Plans of every description for newspapers, book embellishments, &c. &c., in good style, and at short notice, at 89 Nassau street, in the
SUN BUILDINGS,
and adjoining the office of the Scientific American.
Dec. 12. C. W. BUTLER.

TEETH! TEETH!

$1.00 & $3.50

THE cheapest office in this city for Dental operations is Dr. Brown's, 280 1-2 Broadway, between Reade and Chambers st.

Natural and mineral teeth inserted from	$1 to 3 50
Decayed teeth filled with white cement, and warranted useful for mastication,	50

Toothache cured effectually without pain.
Teeth extracted with less than half the usual pain.

Dr. BROWN,
280 1-2 Broadway, 3 doors above Chambers, next to Stewart' & Co.'s new store.

References can be had from several hundred families, also to the medical faculty of the city. nov18

J. M. DOLAN,

SCOURER AND CLOTHES RENOVATOR.

HAS the pleasure to announce to his customers and their friends, that he has a New Composition for removing stains, without injury to the cloth, (having a thorough knowledge of material used in the manufacture of cloth,) and restore its original color, without injury, on the most reasonable terms.

Gentlemen, this is worthy your attention. Please call and examine for yourselves, at
561 Pearl st., one door from Broadway.

☞ J. M. D. will call in any part of the city for their accommodation. Altering and repairing with neatness throughout. sep18

Galvanic Apparatus.

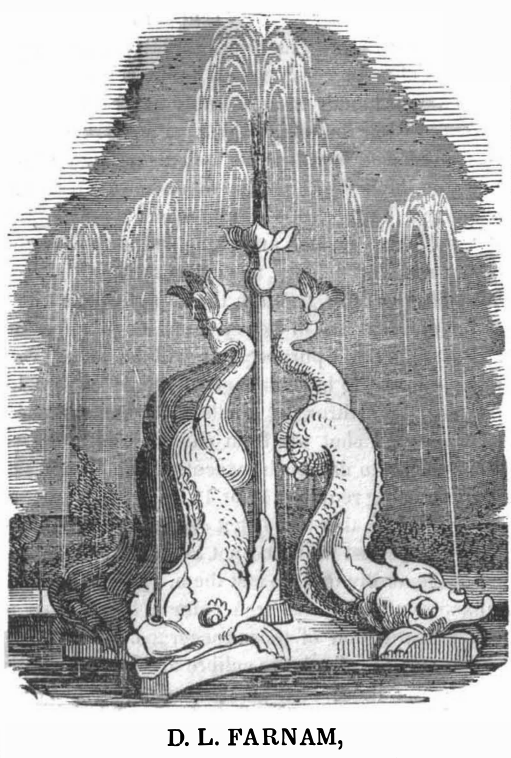
DANIEL DAVIS, Jr., 428 Washington street, Boston, manufactures all the variety of philosophical apparatus, connected with Magnetism, Galvanism, Electro-magnetism, and Magneto Electricity. He has constantly on hand a variety of Electro-magnetic machines, permanent magnets, Galvanic Batteries, &c. For sale on the most liberal terms. nov18

JOHN W. DAVIS,

GENERAL DEALER IN
DAILY, WEEKLY, MONTHLY, AND ANNUAL PERIODICALS,
nov9 No. 5 John st., Lowell, Mass.

GURNEY'S PREMIUM DAGUERRIAN Gallery, 180 Broadway, New York.—Pictures taken at the establishment are not excelled in this country—so say his numerous patrons. The public are respectfully invited to call and judge for themselves.

Farnam's Patent Hydraulics.



D. L. FARNAM,
(29 FULTON STREET, N. Y.)

MANUFACTURES Cast Iron Fountains in great variety, at prices from Five to Five Thousand Dollars;—also Lift and Force Pumps, calculated to raise from ten to six thousand gallons per minute, and fitted for every variety of purpose for which they can be required. Fire Engines, of superior powers; Leather Hose, Wind Mills, Water Wheels, Horse Powers, Lead Pipe, Air Pumps, Brass Work, &c. &c.

D. L. F. has pulished a work on the subject of Hydraulic apparatus, Fountains, &c., which contains much useful and practical information, and among others 18 cuts of Fountains, with their prices;—the book can be forwarded by mail to those requiring information on the above subjects. nov9

JUST PUBLISHED,

A new edition of

THE BUSINESS MAN'S GUIDE,

and

LEGAL COMPANION:

CONTAINING a selection of Forms for Mercantile and money transactions, so prepared as to enable business men to effect these transactions without legal assistance, to which is added

Interest and Money Tables,
and
TABLES OF WEIGHTS AND MEASURES,
computed by a member of the Massachusetts bar.

Price 25 cents. HALIBURTON & CO.,
No. 12 State street, Boston.

All agents and newsmen supplied at the usual discount, by addressing their orders as above. nov28

Marshall's Troy Shirt Depot.

AT this Establishment may be seen the largest assortment of Shirts, Bosoms, Collars, &c., to be found in the city—all of our own manufacture, in Troy, which we offer to dealers and citizens in general, 25 per cent. below city prices. The above goods have won too high praise to need any puffing from us. It is sufficient to say that we are now patronized by all the principal dealers in the city, and the above goods have been generally approved of throughout the country, for being well made and for cheapness.

Just received—Linen bosom shirts with linen collars and wristbands—warranted—at 62 cents, 75 cents, 87 cents, $1, $1,25, $1,50, $1,75, $2. Also linen collars at 4 cents, 6 cents, 12 1-2 cents, 18 3-4 cents, and 25 cents.

MARSHALL'S, 90 Chatham st., N.Y.

N.B.—Northern, Southern, Western and Eastern Merchants, who are making their purchases at the wholesale dry goods houses, will do well to inquire for goods of our manufacture, as it is sometimes the case, that other kinds are kept by them.

ALLEN STREET

Dyer and Coat Renovator.

COATS Renovated at 50 cents; Vests, 12 1-2
Ladies' Dresses Dyed, from 50 cents to $100;
Parasols and sun shades cleaned at 25 cents;
Carpets cleaned whole at 6 cents per yard;
Hearth rugs cleaned or dyed;
Velvet of all descriptions cleaned or dyed;
Crapes or gauzes dyed; blankets cleaned;
Gentlemen's clothes repaired.
N.B.—Terms, cash. T. SMITH,
No. 70 Allen st., near Grand, N. Y.

CUMMINGTON QUINEBAUG SCYTHE STONES.

From the celebrated Robbins' Ledge.

MANUFACTURED by J. S. STAFFORD & CO., Cummington, Mass.—The unprecedented sale of the Cummington Quinebaug Scythe-stones, during two years, has fully established their claim to superiority over all other stones now in use, and renders unnecessary any recommendation from the proprietors.

☞ A continuance of public patronage is respectfully solicited. All orders addressed to J. S. Safford, or Jacob Morse, (sole proprietors,) or Stephen Morse, Agent, Cummington, Mass., will meet with prompt attention.

For sale at all the principal hardware stores. nov9

JOHN BROWN.

Carpenter and Printer's Joiner.

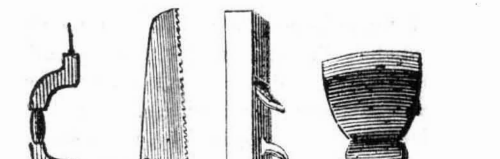
Nos. 29 & 61 Ann-street, N. Y.

MANUFACTURER of Cases, Stands, Furniture, &c. Stereotype Blocks, of various sizes.

Box-wood and mahogany, for Engravers, always on hand.

Stereotype plates blocked at short notice.
Press, paper, and letter boards, of every description.
Book-binders' cutting and pattern boards.
Stereotype boxes, made to order.
Printers', stereotypers, type-founders's, and book-binders' jobbing work done at the shortest notice.

N. B. Orders from various sections of the country solicited, and promptly executed. nov9



AT HENRY ROWNTREE'S old established *Tool Store*, at the Corner of Chambers and Chatham streets, Mechanics, Farmers, &c., will find an assortment of good Tools, suitable for almost every branch of trade.

H. R. feels obliged to his many customers, of every class, for their past patronage and hereby assures them that no pains shall be spared to procure the best articles in all variety.

H. R. has a greater part of his goods made expressly for him, and Mechanics, &c., may place confidence in them, having had the gold medal awarded him, at the late Fair, for the best tools.

First rate Razors; Pen and Pocket Knives; Table Knives and Forks, &c.

☞ Remember, at the corner of Chambers and Chatham streets. dec26

Patent Agency.

DRAWINGS and specifications of machines, with other papers requisite for procuring Patents of New Inventions, will be furnished at short notice, at the office of the Scientific American. No charge will be made for advice or instructions on the subject of securing Patents.

Lap-welded Boiler Flues.

PROSSER'S PATENT.

THESE Flues alone, are now used in their marine engine boilers, by the French and English governments, and also by companies and private individuals for marine, locomotive, and stationary boilers where rapid generation of steam, with economy of fuel, weight and stowage is an object of consideration.

They can be obtained only, of the Patentee, at No. 6 Liberty street, New York. THOS. PROSSER,
Nov 19tf. Patentee.

NEW AND STERLING WORKS

RECENTLY PUBLISHED BY

HARPER & BROTHERS, NEW-YORK.

I.

GENERAL GREEN'S TEXIAN EXPEDITION.

Journal of the Texian Expedition against Mier; subsequent Imprisonment of the Author, his Sufferings, and final Escape from the Castle of Perote, &c. With Reflections upon the present political and probable future Relations of Texas, Mexico, and the United States. By General Thomas J. Green. With numerous Engravings. 1 vol. 8vo. $ 200.

II.

BARNES'S NOTES ON EPHESIANS, &C.

Notes, explanatory and practical, on the Epistels of Paul to the Ephesians, Philippians, and Colossians. By Albert Barnes. 1 vol. 12mo. Engravings. 75 cents.

III.

MORRELL'S AMERICAN SHEPHERD.

The American Shepherd: being a History of Sheep, with [illegible] Breeds, Management, and Diseases; illustrated with [illegible] of different Breeds, Sheep Barns, Sheds, &c.: with an Appendix, embracing upward of twenty Letters from eminent Wool Growers, &c., detailing their several Modes of Management, &o. By L. A. Morrell. With numerous Plates. 1 vol. 12mo.

IV.

STEWART ON DISEASES OF CHILDREN.

A Practical Treatise on the Diseases of Children. By James Stewart, M.D. New improved Edition. 1 vol. 8vo. [illegible]

V.

REV. JOSEPH WOLF'S JOURNAL.

Narrative of a Mission to Bokhara in the Years 1843-45, [illegible] By Rev. Joseph Wolf, D.D., LL.D. With numerous Illustrations. (Now Ready.)

VI.

PLATO AGAINST THE ATHEISTS:

With Critical Notes and Dissertations. By Tayler Lewis, LL.D. of New-York University. 1 vol. 12mo. $1 00.

[illegible] acceptable or timely contribution to the cause of sound classical education could possibly have been made than this. The leading objects of the work, even paramount to its relation to education, seems to have been to furnish an antidote to the progressive atheism of the present age.—*Courier and Enquirer.*

VII.

TRAVELS OF MARCO POLO,

[illegible] valuable early Manuscripts recently published by the French Geographical Society: with copious Notes by [illegible] Murray. 1 vol. 18mo. 50 cents.

This well-known production has long been regarded as unique in geographical science. Marco Polo has justly been styled the "Herodo[illegible] of the Middle Ages."—*Evening Post.*

VIII.

HUMBOLDT'S COSMOS.

[illegible]: a Survey of the general Physical History of the [illegible]. By Alexander Von Humboldt. (Publishing in [illegible].)

A [illegible] production, by the greatest of scientific writers.—*Courier.*

IX.

DR. ABERCROMBIE'S NEW ESSAYS.

Miscellaneous Essays. By John Abercrombie, M.D., Author of "Inquiries into the Intellectual Powers," &c. 1 vol. 18mo. 50 cents.

These essays will be read with pleasure and profit by all who will [illegible] them.—*Anglo American.*

X.

MACKENZIE'S LIFE OF PAUL JONES.

A Life of Paul Jones By Alexander Slidell Mackenzie. [illegible] 12mo. $1 60.

XI.

MISS BEECHER'S DOMESTIC ECONOMY.

A Treatise on Domestic Economy, for the Use of young Ladies at Home and at School. By Catharine E. Beecher. Revised Edition, with many Engravings. 12mo. 75 cents.

A volume of especial value to the domestic circle, comprising a large amount of important instruction respecting the duties of [illegible] life and the educational training of females.—*Courier.*

XII.

THE DUTY OF AMERICAN WOMEN TO THEIR COUNTRY.

1 vol. 18mo. 37½ cents.

This appeal might well be in the hands of every female in the land; its design is to aid in the correction of abuses in several departments of popular education. We therefore commend the volume to the especial notice of our readers.—*Commercial Advertiser.*

XIII.

A PILGRIMAGE TO TREVES,

Through the Valley of the Meuse, and the Forest of Ardennes. By C. Edward Anthon, Esq. 1 vol. 75 cents.

A very pleasing and more than ordinarily useful book of travels.—*Evangelist.*

The volume is replete with antiquarian lore relating to the city of Charlemagne, and the renowned city of Treves. It is evidently the work of a scholar, and cannot fail to enlist a profound interest —*Oswego Advertiser.*

XIV.

ENCYCLOPÆDIA OF DOMESTIC ECONOMY.

A complete Repertory of all Matters connected with the Economy of Housekeeping. By T. Webster, Esq. Edited, with Additions, &c., by an American Physician. Copiously Illustrated. $3 50.

This is decidedly a book for the million: it contains all that precise kind of information adapted to the use of families, and which one may seek for in vain elsewhere.—*New-York Evening Gazette.*

XV.

BISHOP THIRLWALL'S HISTORY OF GREECE

Complete in 2 volumes, 8vo. $3 50.

This, as a general history of Greece, is, perhaps, superior to any other in the English language.—*Biblical Repository.*

Thirlwall's Greece is now universally acknowledged to be the best work ever written of its class.—*Albany Journal.*

XVI.

ANTHON'S LATIN VERSIFICATION.

A System of Latin Versification, in a Series of Progressive Exercises, including Specimens of Translation from English and German Poetry into Latin Verse. By Charles Anthon, LL.D. 1 vol. 12mo. 90 cents.

XVII.

PROF. WHEWELL'S MORALITY AND POLITY.

Elements of Morality, including Polity. By William Whewell, D.D. 2 vols. 12mo. $1 00.

A book which ought to be read, because it cannot be read without advantage. The age requires such books.—*London Athenæum*

XVIII.

PRAISE AND PRINCIPLE;

or, For what shall I Live? By the Author of "Conquest and Self-Conquest." 1 vol. 18mo. 37½ cents.

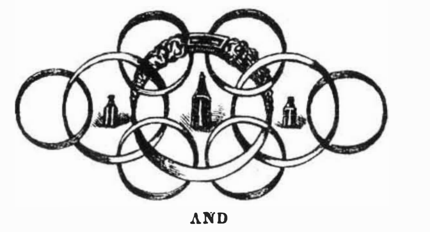
The story is really admirable—equal to Sandford and Merton, and somewhat resembling it in general tone and manner.—*Broadway Journal.*

XIX.

DR. BLAIR'S SERMONS.

Sermons. By Hugh Blair, D.D., F.R.S., &c. To which is prefixed the Life and Character of the Author. By James Finlayson, D.D. Complete in 1 vol. 8vo. $1 50.

GALVANIC RINGS



AND

MAGNETIC FLUID.

DR. CHRISTIE, the original inventor and patentee of these celebrated articles, informs the public, that the ONLY place in New York to obtain them GENUINE 134 Fulton street, Sun building. In all cases of RHEUMATISM and Nervous Complaints, no matter how chronic or severe in their character, the GALVANIC RINGS and MAGNETIC FLUID are a *positive* and *permanent* cure, and every day brings fresh evidence of their wonderful efficacy in cases where every thing else has entirely failed.

☞ Bear in mind, that all articles of the kind not obtained at 134 Fulton street, Sun Building, are base and worthless counterfeits.

For sale in any quantity, and at prices within reach of all. Pamphlets can be obtained gratis. nov9.

GENERAL PERIODICAL DEPOT.

HALIBURTON & CO.

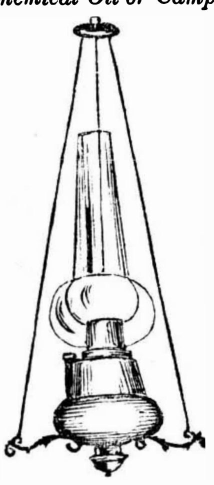
No. 12 State street, Boston.

ARE constantly supplied with all the most fashionable and attractive Magazines and other periodicals, together with a variety of cheap literary works, pictorial papers, and elegant prints. nov13

Horn's Patent Solid Bottom

Glass Fountain Lamps.

For Chemical Oil or Camphene.



Manufactured by J. O. FAY, 136 Fulton, st.
Sun Buildings; wholesale and retail,

THESE LAMPS have become universally celebrated and admired by all who use them. for their neat appearance and splendor of light; they are, in fact the most perfect lamp ever invented for camphene or chemical oil. Try all others, but don't fail to try the best, the cheapest, and, above all, the lamps that will give the greatest light with the least expense; they are the most simple and easy to manage and trim; cannot corrode or become heated while burning; easily cleaned inside and out, and not affected by a draft. They are perfectly safe to use at all times, as an oil lamp. Less than half a cent per hour will give you a splendid light! "TRY ONE."

N. B. Stand or Parlor Lamps; also for stores, hotels, and churches, &c.; splendid chandeliers made to order —at reduced prices—cheaper than any other camphene lamp, and of superior quality. nov13

JOHNSON'S

DINING SALOON,

No. 144 FULTON STREET.
(Near Broadway): New York.

BILL OF FARE.

Roast Turkey,	18d	Boiled Ham,	6d
" Goose,	18d	Pork and Beans,	6d
" Chicken,	18d	Veal Pie,	6d
" Duck,	18d	Beef Steak Pie,	6d
" Beef,	6d	Chicken Pie,	12d
" Pork,	6d	Mush and Milk,	6d
" Veal,	6d	Rice and Milk,	6d
" Lamb,	6d	Lamb Pot Pie,	6d
" Pig,	12d	Fried Fish,	6d
Boiled Chicken,	12d	Fried Clams,	6d
" Mutton,	6d	Ham and Eggs,	12d
" Corned Beef,	6d	Chicken Soup,	6d
" Pork,	6d	Beef Soup,	6d
" Fish,	6d	Coffee,	6d

Dessert.

Suet Pudding	6d	Mince Pie,	6d
Indian Pudding,	6d	Apple Pie,	6d
Rice Pudding,	6d	Peach Pie,	6d
Plum Pudding,	6d	Plum Pie,	6d
Bread Pudding,	6d	Pumpkin Pie,	6d
Apple Dumplings,	6d	Custard Pie,	6d

Breakfast and Tea.

Beef Steak,	6d	Hot Corn Bread,	6d
Veal Pie,	6d	Indian Cakes,	6d
Mutton Chops,	6d	Boiled Eggs,	6d
Ham and Eggs,	12d	Fried Eggs,	6d
Fried Tripe,	6d	Toast,	6d
Fried Sausages,	6d	Hot Muffins,	6d
Fried Fish,	6d	Hot Rolls,	6d
Fried Clams,	6d	Tea,	3d
Fried Liver,	6d	Coffee,	3d

LEE & CO.'S

WIRE WINDOW SHADES,
do. FIRE SCREENS,
do. GRATE do.
do. HALL AND OTHER DOORS, &c.

MANUFACTURED to order, in great perfection, of any size or shape, and elegantly painted with any Landscape, Lettering, or other devices or colors required.

These Shades, for which we received the highest premium at the two late Fairs of the American Institute, are unlike all others, in the following particulars:—

They admit all the air and Light into the room.
They admit a full view to the street from the room.
They obstruct the view from the street into the room.
They keep out all Mosquitos, Flies, and other insects.
They are very durable, being heavily coated with oil paint.
They are extremely ornamental.

By sending your address, (if in the city,) you will be called upon and every explanation given.

Offices, No. 577 Broadway, opposite Niblo's, and No. 18 Factory street, between Waverly Place and Amos street, N. Y.

⁂ Manufactured in Sheets for the Southern and Western markets.

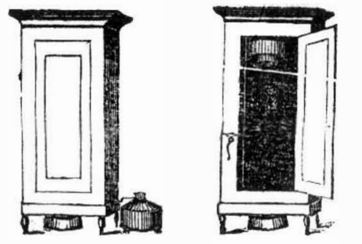
A. G. Bagley's Celebrated Improved

EVER POINTED GOLD PEN.

THIS Pen received the highest premium at the last Fair of the American Institute, and has been pronounced by the first teachers of Penmanshid in the country to be infinitely superior to any Gold Pen ever before introduced to the American public. The lasting properties of this Pen are undoubted, owing to the total absence of corrosibility from any of the inks in use, and the peculiar shade of the nibs, (which was first introduced by Bagley, (makes it more pleasant to use, renders it less liable to damage, more easy to repair, and prevents the necessity of the great care that other articles of the kind require.

MANUFACTORY, 189 Broadway, N. Y. nov9.

Locke's Portable Shower Bath.



THE subscriber has the satisfaction to announce to the public, that he has perfected, and is prepared to furnish at short notice, a portable shower-bath, far superior in utility and convenience of management, to anything of the kind hitherto offered. It constitutes a light and genteel article of furniture for a bed-chamber, and so perfectly constructed, that either a lady or gentleman can at any moment enjoy a copious shower without the aid of servants, and without having a drop of the water sprinkled on the carpet or floor. And by a slight change in a part of the apparatus, the same may be converted to a steam-bath, either plain or aromatic. These baths are manufactured and may be examined at No. 31 Ann st. JOHN LOCKE.
Dec 4.

VALUABLE AND IMPORTANT

PUBLICATIONS.

THE MISSIONARY MEMORIAL,

AND

AMERICAN RELIGIOUS GIFT BOOK.

Beautifully printed, and embellished by a superbly executed Frontispiece, in oil colors; bound in morocco, extra gilt.

Some of the contributors:

Rev. J. W. Alexander, D.D., Miss H. F. Gould,
Rev. Erskine Mason, D.D., Rev. J. W. Browne,
Rev. W.R. Williams, D.D., Rev. Eugenie Kincald,
Rev. Gardiner Spring, D.D., Rev. Robt. Baird, D.D.
Rev. J. Dowling, William W. Laird,
Rev. W. B. Sprague, D.D. J. G. Whittier,
Mrs. Sigourney, James Russell Lowell,
Mrs. E. Steele, Rev. J. O. Choules.

Also an edition without the oil colored frontispiece bound in handsome muslin and gilt.

E. WALKER, Publisher, 114 Fulton st.

Companion to John Bunyan.

The fourth edition of Dr. Cheever's Lectures on Pilgrim's Progress, and the life and times of John Bunyan, illustrated with beautiful steel engravings.

Two editions of this popular work have already been published in England. It is a beautiful volume, and a most desirable companion to Pilgrim's Progress.

Knowledge is Power.

Just published, the *tenth* edition of the "People's Guide to Knowledge:"—this valuable and intellectual volume comprises within itself a

Complete Library of Useful and Entertaining Knowledge,

and is embellished with upwards of 300 appropriate engravings—embracing an extensive range of subjects in literature, science and art.

WONDERS OF THE WORLD.

Just published, the *fourteenth edition* of this truly popular work,—

The Wonders of the World: in Nature, Art and Mind;

a handsome octavo volume of upwards of 500 pages, accompanied with nearly 300 illustrations;—the extensive sale of this work is a sufficient evidence of its intrinsic value. It is a book admirably adapted as a present for young people, as it embraces architecture, mechanics, inventions, ruins, manners and customs of different nations, religious rites and ceremonies, cataracts, volcanoes, curiosities, monuments, trees, birds, beasts, fishes, reptiles, &c. &c., carefully compiled from the best and latest resources.

Romanism vs. the Bible.

DOWLING'S HISTORY OF ROMANISM.

Just published, the *seventh* edition of "Dowling's History of Romanism," with fifty beautiful engravings;—this is a large octavo volume, of nearly 700 pages, in handsome emblematic binding.

The publisher returns his thanks to the Protestant public, for the extensive patronage they have bestowed on this timely production. It is but little more than three months since its first publication, during which short space of time, six editions nave been entirely exhausted.

It is evident that this faithful account of the traditions, vain ceremonies and customs, and the cruel practices of the church of Rome,—not against unbelievers, but inflicted on the very members of Christ's true church,—is destined to reach the fireside of every Protestant and candid and inquiring Romanist throughout our land.

E. WALKER, Publisher, 114 Fulton st.

WREATH OF WILD FLOWERS.

By John Milton Steanes.

This is a handsome duodecimo volume, containing pieces in prose and verse; religious, moral, and entertaining. In handsome morocco binding; and is a beautiful Christmas and New Year's present for young people.

Important National Work.

In the press, a new and enlarged edition of
Presidents' Messages,
in two handsome volumes, 8vo.;—the whole collected from official documents, by E. WILLIAMS, Esq.

CONTENTS:

1. The Addresses and Messages of the Presidents of the United States, from Washington to Polk; with a copious analytical Index to the same, of subjects, names and dates.
2. An account of the Inauguration of each President, and a brief notice of the principal political events of his administration.
3. A Biographical sketch of each President.
4. Declaration of Independence.
5. Articles of Confederation with a brief history of the events and circumstances which led to the union of the States, and the formation of the Constitution.
6. Constitution of the United States, with notes and references.
7. A synopsis of the Constitutions of the several states.
8. Chronological Tables of Historical events in the United States.
9. Tables of Members of the Cabinets of the various administrations Ministers to Foreign Countries, and other principal public officers.
10. Statistical tables of Commerce and population;
11. With Portraits of the Presidents, and the Seals of the 26 States.

This important work is indispensable to the American Statesman, and every lover of his country, forming, as it does, an unbroken link of the history of this great Republic.

Wanted, in every town and village in the United States. responsible men to procure subscribers, and engage in the sale of the above works, to whom a very liberal per centage will be allowed.—address E. WALKER, 114 Fulton st.

⁂ Country newspapers, copying the whole of this advertisement, and giving it six inside insertions, shall be entitled to a copy of any one of the above works,—all who may comply with the above terms, will please send a copy of the paper, each time of insertion, to the publisher, E. WALKER, 114 Fulton st., New York.
Dec. 3tf.

JOHN. H. MILLER

Book, Job, and Music Printer.
No. 41 Wall Street, in the rear,
New York. nov18

ALEX. MACDONALD: PRINTER.