The Advocate of Industry, and Journal of Scientific, Mechanical and Other Improvements.

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MACHINE FOR GLASS MOLDING.

Figure 1.

Rail Road News.

Tunnel through the Green Mountains. There is at present a project of rail road from Boston via Greenfield, Mass., to Troy, N. Y., which if executed will be the greatest work ever attempted. The road will have to pass through the Hoosick Moun-
tain, about 2000 feet in height, and the length of the tunnel will be about four miles and a half. It is calculated that from the few hands that could be employed to tunnel, it would take five years to accomplish the underground excavation, and that from one to two millions of dollars would be the required cost. It is proposed to sink four or five shafts down through the mountain and cut out in different directions. The work can be done, but the profits will never be able to compensate the expense in the expiration of many.

Railroads in the West.
The Cincinnati Commercial states that the entire line of the Mad River Railroad is expected to be completed by the 1st of May next, and that then the summer trip between the cities of Cincinnati and New York may be made in three days, and by steam. The programmes of the Railroad Company, it is expected, will be as follows —

Leaves Cincinnati at 2 P.M.; and arrive at Springfield to stop, at 7 P.M.
Leaves Springfield at 9 P.M.; arrive at Sandusky, to breakfast, at 6 A.M.
Leaves Sandusky at 7 A.M.; arrive at Buf-

falo next day, to breakfast, at 6 A.M.
Leaves Buffalo at 11 A.M.; arrive at Albany, to breakfast, at 4 A.M.
Leaves Albany at 4 A.M.; and arrive at New York at 9 P.M.

Reduction of Railroad Fare.
The Bill reducing the fare on Rail Roads between Albany and Buffalo, which passed the Assembly, was rejected in the Senate by a vote of 25 to 18.

Pennsylvania Railroad.
A Bill has passed the Pennsylvania Legisla-
ture, authorizing the corporation of Philadel-
phia and Allegheny Counties to subscribe stock for a connection with the Portage Rail-

Road.

Magnetic Telegraph.
F. Rice, of Burlington, Vermont, has ob-
tained the right to use Morse's Magnetic Telegraph for a line of Telegraphic communication between the city of Boston and the vil-

lage of Burlington, passing through Lowell, Nashua, Manchester, Concord, Franklin, Lebanon, White River, Windsor, Woodstock, Randolph, Northfield, Montpelier, Waterbury, and such other vil-

lages as he may judge best, with the right to connect with the Troy and Canada Junction Telegraph Line at the said village of Bur-

lington.

Articles or associations are now published for a company to be called the Boston and Bur-
lington Telegraph Company. The capital stock is to be equal to the cost of the line, es-

timating $500 per mile for the first wire, and additional $100 for the second wire, $5,

000 for the accommodation of business and expense of superintendence. The stock is di-

vided into shares of $50 each.

Telegraph Knocked Down.
There are trellis built on the banks of the Hudson a short distance above this city, for suspending the wires of House's Telegraph which crosses the river to the Jersey side. —

Last week the fly's of one of the trellises was in a current of the wires and tore them away. Our Telegraph operators will yet be forced to cover it with more pliable glass, and either carry the wires across the river by tubes laid down in the water, and the plan of providing such tubes is described in the last of the Scientific American, will no doubt answer a good purpose.

Poetry.

Thoughts.

They come when the sunset,
Is bright on the mountain;
When the moonlight,
Is clear on the fountain.
At morn and at eve,
By minutes and hours.
They come from the forest,
And from field and from flowers.
They come when some liveliness,
As a link to the present,
And then they bring sighs;
They come when some vision
Of hope and of fears
Rushes on to the future,
And then they bring tears.
They come when the sea-mist,
Over ocean is sile...
And tell of the shadows
Thatfloat in the sunbeams;
They come when the tempest
Its thunder and gloom,
Spreads round, and they speak
Of the earth and the tomb.
They come when the ripple,
Is low on the lake:
And the leaves are nestling
By fountain and brook.
And the twilight looks out,
With spirits on the breeze,
And they whisper that all
Save themselves are at rest.
They come when the light wind
Is hushed in the leaves;
They come when the flower cup
The dew drop receives —
By early dawning,
By day's sombre beam,
At all times, oh deeply
And daintily they come.

The Blind Girl's Son.

By Henry.
Oh! tell me not of happy hours,
Of small joys or bright flowers,
Or sought that's bright;
For my love and jocund soul,
So dear is night.
Ye say the sun still brightly shines,
And gaily wave the tresses tied,
In his bright glance,
And still upon the sparkling sea,
The waters dance,
And yet the feathered warblers sing,
As poising upon their ambient wing
They close the sky —
And swiftly skim the mirror-like
Or near on high.
I know it for I feel it;
But o'er my sight is cast a pall,
So dark and drear.
That old rebel heart would wish
That I were dead!

The average number of deaths in the City of New York, is 50 per day.

This is an invention of Mr. Henry Hewes,
of Baxter House, in the county of Mid-
dlesex, England, and relates to apparatus
for confusing and casting plate glass, a subject
which must commend itself to many in our county,
as this art is but young even in Eng-

land and scarcely known here, but which
most yet be extensively manufactured, at the
means are not wanting, and the material
is abundant in many of our States. At present
our valuable plates are imported and German
are the artisans that are most employed in
England. There are plenty of them in this
country and doubtless many good artisans ex-

plicable in managing this business, without send-
ing thousands of miles to purchase it of a

The instrument peculiar melting pots
are used.
This carriage in the figure consists
of a strong ribbed iron frame, mounted on
three small flanged wheels which run on two rails.
The upper side has a recess into which blocks of
stone or iron for brick are fitted into an
iron frame. In the upper part of these blocks
recesses are made for the melting pots so
as to allow the material to be molded in the
blocks and cement the joints of the blocks together, while this
glass is yet in a fluid state, the carriage is re-
moved from the furnace to receive the
melting pot which is brought in a while
heat from the pot rack, set in the middle of
the fluid glass, and the carriage then returned
to the furnace. On afterwards using the pot,
and with the bottom is very thick and the heat only
battering access to it through the materials
which it may contain, the bottle glass used
for cementing the pot in the second process is found
not to be too cold to be bound, nor so hot as to
allow the pot to slip from the carriage.
Figure 2, is a longitudinal section of the
work in its elevated position and fully
emitted. Figure 3, a longitudinal section of one
of the rollers and stuffing boxes show-
ing how the water is made to enter and leave
while they are in motion. The same letters
indicate like parts on all the figures, a, b, is
a side framing of cast iron secured by the
crew pieces, c, and also by the stretchers,
ed, f, between the side frames namely.
The rollers f, g, are placed in suitable bear-
ings fitted to the side frames, and are made
from and to each other by means of
screws, which force the beassets H, and
roller j, near to the roller g. A piece
of iron is placed between the brasses and
the frame, and according as it is exchanged
for one or more thickness will it cause the
rollers to be nearer or further apart, and it
Regulates the thickness of the glass.
When the
roller j, is also provided with wheels j, at each end,
and the roller g, also with wheels a, at each end with side frame. In addi-

[Continued on page 336.]

Remarkable Operation.

The Chemist & Countryman says we have lately been permitted to see three casts of the nose and face of a young gentleman of this city who has undergone a great palatual deformity of the nose what is vulgarly called the bridge being very much depressed whilst the point was not curved. To relieve this deformity Dr. N. D. Alvighy, dentist, invented an instrument not thicker than a good sized needle flattened, and with cutting edges at the point which made an incision so small, that since the healing of the wound it can scarcely be perceived—yet, with this needle, the cartilages which connect the nose nasal and the natural processes of the superior maxil-
lar bones were divided, and an instrument
steadily applied upon the bridge of the nose so as by constant pressure to keep the parts in

a correct position, until the parts become
permanently united. The nose by this means has been restored to a natural and comely

shape.

Not a Good Honey for Cattle.

A foot and a half of honey weighing four
pounds without the leaves, and meas-
uring fourteen inches in circumference, was
exhibited at a recent meeting of the Chemis-
tical Horticulural Society. It was exhib-
ted and after the value of raw as a munificent
for this plant, the gentleman who raised the
articles having made the experiment of treating
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[Continued on page 336.]

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New Balloon Ship.

Mr. M. Van Ruyter, a Dutch engineer, has invented a steampacket balloon, which is to be sent from the air into the imprints of its own working, with a weight of 2000 pounds, with immense rapidity, and can be steered with the utmost ease.

Mr. Van Ruyter resides in Rotterdam, and expounds a model working model 21 inches in breadth and 30 feet 1 11 inches in length.

The first is from the London Mining Journal, and it may be that the Dutch papers were left to the Frenchman, who, during the period that he that the balloon, not only by his Bologne fleet but by his Holland, however, has always been on the look out for a subject of exploration on board of steam boats, containing some interesting and instructive statements. The Captain bears the testimony to the apogee a working model 31 1 inches in the presence of explosives in preventing explosions.

He says, that during the eight years the Safety Patent Gasul in preventing explosions.

The Cincinnatian Commercial publishes that during the eight years the Safe- some twenty thousands dollars per acre.

Winter Kittled Wheat.

A correspondent of the Ohio Cultivator says that the wheat that was sown in 1847 was much "winter killers," that is, thrown out by the snows in March, leaving a covering with the snow, which was also a severe winter, by using a heavy roller pressing the half-killed roots with the ground which caused them to keep the winter and store of winter wheat, which is really about thirty thousands per acre.

Independent Reel.

The old state House, which ran out in mercy pucks when the declaration of independence was announced, and which was accidentally crumpled three years ago an attempt bringing up, is to be deposited in the hall of Independence in Philadelphia. It will be placed upon a solid pedestal, and will remain a permanent fixture of the reverenced ruin.

A Prophesy.

A celebrated, New York City, known as the rock of Gibraltar, recently fell to the ground, after the droning of the safe-keeper, has been in use, it would be perfectly well to stand over a set of boilers, and defy the tackled engine, or the insolence of the world to end them up, if they were well supplied with Evans Safety Gasul.

An Indian Cato.

On the road to Oregon about one hundred men of Fort Larance there is a considerable force of this description, and the division to which the war has reached will show the number of part in 100 parts of atmospheric air. This is not to be a question of the quantity of oxygen in the atmosphere, it is to show a proper correct idea of the organisation of the animal.

Gentilis of the Sorrows.

Gentilis, almost a miracle, is the soil of sorrows, wherein the smallest seed of love, timely falling, becomes a tree, in whose foliage, the birds of blessed song sing, and sing aestively. And the dooms of God's

Phosphorolous Bodies.

Many bodies are phosphorolous, that is to say emit light, after theyier, when exposed to the sun or any shining source. Thus, drapes, which have been so lately written with a Phosphorolous, always in the market. The only newspaper now printed in the Turkish language was originated and is conducted by Mr. Mustapha Pasha. There are no newspapers in Syria or Persia, that are printed in the Turkish language, or in the use of any countries including 10,000,000 speaking the Arabic language, there is but one newspaper for the French or English, showing that there is no Maschametism in the general improvement.

Mashametism and Literature.

The first newspaper in all the Turkish dominions was started by an American Missionary some 17 years since, and printed in the English language, for foreign residents, who explained it to others, and thus afforded a means to the Government and nation. The only newspaper now printed in the Turkish language was originated and is conducted by Mr. Mustapha Pasha. There are no newspapers in Syria or Persia, that are printed in the Turkish language, or in the use of any countries including 10,000,000 speaking the Arabic language, there is but one newspaper for the French or English, showing that there is no Maschametism in the general improvement.

Money Bank.

The word homebank is derived from an ancient Turkish custom, of drinking mead, which the people of the Balkan States are said to drink in the banks of the Danube, it is a drink of honey, and flavored with muslimes. Amongst the Turkish nobility, the marriage ceremony is a solemn and last among motor, during which time this drink was well supplied and hence the ritual was called the name of Hammam or Turkish bath.

Alatia was once a very great independence in medicine.

The Prayer and the Preacher.

Garrick being once in Dr. Stennson's library, asked him—"What books had he on his shelf but one?—It was a Bible and a Prayer-book."

"Only the Bible and Prayer-book," replied the player, "why, you twisted rambler book, and turnip slyly, as if they were three of a day-book and ledger."

The Doctor was wax en boned to see the force of the idea to have the prayer-book, and never after avoided the faults they were designed to reforme.

Southern Coal.

The Mobile Tramline from a stone has been received from Capt. List, of the West India Steamers, when of the subject of propulsion on board of steam boats, containing some interesting and instructive statements. The Captain bears the testimony to the apogee a working model 31 1 inches in length.

A Venerable and Valuable Present.

Mr. Curtis, of Alexandria, has presented to his son-in-law, Capt. R. E. Lee, of the U.S. Engineers, an officer whose brilliance in the Mexican war has elicited the praise (all the General,) a sword with the following inscription: 'The gift of Washington, to George W. P. Custis 18th of January, 1797. Presented by George W. P. Custis, 22d of February, 1849.'

During the reign of the Chief to his adopted son, a present of a child, the sword, is never to draw, but in a just cause, or in defense of your country.'

Curious Manuscript of the Hebrew Bible.

A curious manuscript was presented to the Library of Congress by a gentleman from the Mediterranean, or the latter he was asked the reason; it turned out that he had taken the good one. The only copy was, 'When thou art married, thou know.'


The Madeira (Wisconsin) Sentinel, of the 1st inst., has the following.—A Prussian schooner loaded with forty barrels of flour, arrived in town yesterday, and went into store there.

It was said of the late Mr. B. T. of the Chicago, Ill., that he wrote three volumes, of which no one could read but himself, another which his clerk could read and he could not: and another which nobody could read but himself.

A colonial statute is preparing for erection at Harrisburg, in honor of a citizen of that name, laurence Scott, to whom the Dutch declared war.

A jury in Philadelphia has found a verdict of $500 in favor of a young lady's, for breach of promise; and a jury in Mass., have given $500 damages in favor of a gentleman at Fellow's Falls against a young lady, for a similar breach of contract.

Mr. Hutchins of Brooklyn, who was most judicious and sage, in his writings and opinions, has the power of speech and memory.

The Christian Citizen says that the meaning of the Anti-Corruption League in England was got by the noble savage, the reader the sauce, who has been called the "vulture," and set the market.

The southern wing of Uncle Sam's Infantry was stationed close by.

The Troy and Burlington Telegraph line has been completed, and a regular system of daily news-boats, run by the authorities, and using spring water.

The Church of the Holy Trinity, recently erected at Troy, N. Y., contains a sanctuary 66 feet by 41 feet, and a 124 foot tower.

The sale of this book has been New in New York.
The grandson of the great Englishman by American
s,
New Inventions.

Omnipotence Telescope and Apparatus.
Mr. Ashe, Professor of Drawing, No. 133 Fulton st., has invented an Air Apparatus, which from its simplicity will no doubt be hiss. It consists of a telescope or microscope which is adjusted to a position by means of a powerful magnifying glass. It is made of one train of wheels, driven by a weight and having the same eccentricity as the driving wheel. The eyepiece is intended to keep the passing open seven seconds, when the pin that raises it passes the drop and the paralax shafts. The occlusion motion still goes on seven seconds more, when another pin on the pin wheel strikes a small drop and throws the occlusion motion back. It is made by using a pin which will strike the glass shafts, so as to make the paralax perfect. It is made of one train of wheels, driven by a weight and having the same eccentricity as the driving wheel. The eyepiece is intended to keep the passing open seven seconds, when the pin that raises it passes the drop and the paralax shafts. The occlusion motion still goes on seven seconds more, when another pin on the pin wheel strikes a small drop and throws the occlusion motion back. It is made by using a pin which will strike the glass shafts, so as to make the paralax perfect.

New Pneumatic Sign.
Mr. J. Curtiss, of Mount Vernon, Pa., as we learn by the Herald has made a very ingenious application of clock machinery to exhibit a sign for a patent manufactory. It is made of one train of wheels, driven by a weight and having the same eccentricity as the driving wheel. The eyepiece is intended to keep the passing open seven seconds, when the pin that raises it passes the drop and the paralax shafts. The occlusion motion still goes on seven seconds more, when another pin on the pin wheel strikes a small drop and throws the occlusion motion back. It is made by using a pin which will strike the glass shafts, so as to make the paralax perfect. It is made of one train of wheels, driven by a weight and having the same eccentricity as the driving wheel. The eyepiece is intended to keep the passing open seven seconds, when the pin that raises it passes the drop and the paralax shafts. The occlusion motion still goes on seven seconds more, when another pin on the pin wheel strikes a small drop and throws the occlusion motion back. It is made by using a pin which will strike the glass shafts, so as to make the paralax perfect.

MACHINE FOR GLASS Moulding.—Figure 2.

LIST OF PATENTS.
Issued from the United States Patent Office.

For the week ending April 4th, 1848.


To Benjamin L. Johnson, of Cresswicks, Penn., for improvement in Flowers for Purses. Patent April 4th, 1848.


INVENTORS' Claims.

By Richard F. Daper, of Philadelphia, Pa. Improvement in Ship Building. Patent Nov. 10th, 1847. Claim.—What I invent and desire to secure by my patent is constructing ships and other vessels with hollow iron pipes, described and bound together by means of a wooden plankning and ceiling substantially as described, and thereby to improve the power and weight and metal as effected—said hollow ribbing affords a means of introducing oil which by the motion of the vessel is made to circulate through the bolts and fastenings, preventing the rotting of the planks and the oxidation of the metal as described.

Cotton Cleaner.

John Wood, of Thomastown, Ga. Improvement in Cotton Cleaners. Patent Nov. 15th, 1847. Claim.—Having thus fully described my improved Cotton Thresher and Cleaner, what I claim therein as new and desire to secure by letters patent, is the placing in the vessel the breaking machine in a horizontal direction upon a conical skeletal cylinder, and combining the same with a skeletal conveyer substantially as and in the manner in and for the purpose herein set forth.

Horse Shoe Machines.

By Philip Pitts Read, of Danby, Maine. Improvement in Horse Shoe Machines. Patent Sept. 11th, 1847. Claim.—I claim the invention of making horse shoes by binding the bar of iron that forms the shoe around a horse shoe shaped former and pressing the shoe and nail holes; but what I do claim as my invention and desire to secure by letters patent, is the particular manner of combining the soliding horse shoe shaped follower or fuller bar, for binding the bar of iron around the former, to form the horse shoes, with the horse shoe shaped of the bar, and spring has C, connected therewith for stamping the shoe and nail holes in the shoe, by a sudden blow of a falling weight H, which again rebounds from the shoe as soon as the weight commences to rise by the action of the windlass rendering the shoeing of the iron of which the shoe is composed close, compact, tough and lasting; instead of being pressed or rolled, which is an interior mode of manufacturing shoes, leaving them more or less in a tattle state, not well adapted to the purpose for which they are intended—the several parts of the shoe are immediately formed and operated in the manner and for the purpose above set forth or other modes substantially as described, and in the manner and for the purpose herein referred to the drawings of the machine.

Since the introduction of chlorine from into dentistry, patients do not suffer the extraction of a tooth, but have the pleasure of losing one.

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NEW YORK, APRIL 15, 1848.

Patents for Combinations

There are some who need to be informed regarding distinct improvements on distinct machines, and who feel that a patent may be out of place. This cannot be done. Several distinct improvements on one machine may be united; but they must be united in such a manner, that the same machine will produce, in one operation, the effect of several separate machines. When a new improvement on any patentable machine is made, it will be necessary to get a patent, under the law, for that improvement. This will be the case with all inventions that may be entirely unknown to the inventors from this very fact, but there is no remedy except the custom of the patentees. Two or more inventors who invent different parts which jointly are useful, but separate unless joined, a patent alone is not secure. With a patent for each part, would it or could it be granted, they would be just as valuable as the parts, and the whole as the invention. The separate parts of a skeleton—the wheel of a horse or a step of a ladder—may be patented for.

Magnetic Action of Matter.

Electricity is a substance, a kind of salt, or color or appearance, we cannot tell. Like spirits it is invisible, and like spirit too, it is as elastic in right as the lightning. It is that which is nearly allied to the spiritual world—the life principle of all animated nature, there is too much evidence to admit of a single doubt. But how it operates, how far in its efficacy the development of natural productions, we are not yet far enough advanced in the stages of exploration to determine. Many years must yet elapse before we define its boundaries.

Power In Steam Engines.

It is the same with all things produced by the action of the steam engine, that electricity resolves the problem of gases into the products of the steam, and the steam into the products of the gas. The steam is turned up into a high pressure, and the gas is turned down into a low pressure.

Steam Engines.—The Committee appointed by Congress to report relative to the safety of passengers on board of steam vessels, have reported that accidents from explosions cannot be entirely prevented, though the question of the requisite moral qualifications and of the knowledge that leads to accidents alluded to—that want of attention and prudence on the part of the enginemen, duty it is to keep the boilers in a proper condition to secure them against explosion.

The management of the boilers, says the Report, is rather a matter of observation and vigilance, of sound judgment and incessant care. The control of the engine requires more skill to keep its complicated machinery in good order, and to know how to use it properly. Care, judgment, and prudence, therefore, with a moderate degree of skill, are the grand requisites in good engineers, and without a great knowledge of the science they now possess, while perhaps it would enable them theoretically to account for the causes of some of its effects, to the solution of which is making the most of it.

The brass report of the General Assembly, the report of the reception of the meeting, was read, and it was agreed to. The house was then adjourned to the third day of June next, to the next session of the General Assembly. The adjournment was ordered to be entered on the journal of the house.

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In Electric Telegraph Experiments. By W. Cooper, M.D., Etc.

Woodstock, March 27, 1848.

To the Editor of the Scient.

American,

I have the honor to communicate some experiments on the method of obtaining the 'hydrophonic' development of water. The battery was iron and copper in solution, but I have not been able to develop any 'hydrophonic' effect thereby. The water was warm and strong nitric acid in the porous cups with amyl acetate, and the result was a rapid development of the water in the porous cups.

The following were the results:

1. A large passage through the porous cups has been conducted in the manner in which the water was developed.

2. A small passage through the porous cups has been conducted in the manner in which the water was developed.

3. A medium passage through the porous cups has been conducted in the manner in which the water was developed.

4. A large passage through the porous cups has been conducted in the manner in which the water was developed.

5. A medium passage through the porous cups has been conducted in the manner in which the water was developed.

6. A small passage through the porous cups has been conducted in the manner in which the water was developed.

I have the honor to be,

Your obedient servant,

J. C. Dewey.

Bell Casting.

The casting of common house bells or hand bells is of great importance in the manufacture of handbells. The process consists of melting the bell metal and casting it into the desired form. The bell metal is a mixture of lead, tin, and antimony, with a small percentage of copper or zinc.

The process of casting the bell metal is as follows:

1. The bell metal is melted in a furnace, and the molten metal is poured into the mold.

2. The mold is a wooden or clay form, lined with a mixture of sand and water, and the mold is filled with the molten metal.

3. The mold is allowed to cool and harden, and the bell is removed from the mold.

4. The bell is then polished and finished, and is ready for use.

The process of casting the bell is a skilled one, and requires careful attention to the temperature and the amount of metal poured into the mold.

Scientific American.

The Strong Population of Scotland. There are many indications that the population of Scotland is increasing at a rapid rate. The birth rates at work, each of which will produce on an average five thousand children, will require about 2.5 tons of coal, 325 tons of iron and steel, and 2,500 tons of copper. According to the restricted 'dump' of the Lanarkshire miners and colliers, the labor of over 15,000 men will be required to produce the raw material for 6 tons of pig-iron or steel. The manufacture of pig-iron or steel at the rate of 600 tons per annum, will give employment to 1,000 colliers, each ton requiring about four buckets of labor. Under certain conditions, this will give employment to 15,000 colliers and miners in the manufacture of steel. For each man employed, the population may be estimated at 10 to 20, which will give a population of between forty and sixty thousand in Scotland. For each man employed, the population may be estimated at 10 to 20, which will give a population of between forty and sixty thousand in Scotland.

To Correspondents.

"J. C. of N. Y.

We are glad to hear that you are about to begin work on your talks, and we look forward to hearing more about them. We are glad to hear that you are about to begin work on your talks, and we look forward to hearing more about them.

J. C. of N. Y.

Get an engraving of your machine, it will only cost $5; better than any other way of advertising.

S. R. O. N. Y.

We are glad to be able to assist you. We are glad to be able to assist you.

R. M. J. M.

Get an engraving of your machine, it will only cost $5; better than any other way of advertising.

A. N. O. of R. I.

We are glad to be able to assist you. We are glad to be able to assist you.

J. C. of N. Y.

Thank you for your very nice letter. We are glad to have your support, and we look forward to hearing more from you. We are glad to have your support, and we look forward to hearing more from you.
of no process to purify the coke, or the impu-
rity in the melting. We can only recom- 
med rapid melting and extreme heat, so that
little may be combined with the iron. It is the excess of carbon that makes iron hard, the less carbon it has the softer it is.

J. M. H. Ohio.—Steel will not wear as well in one place as in another; it is all a matter of opinion. We can get an exact checkmate by writing to Joseph
Haytinck of Fondy, Troy, New York. We do not know whether the price of Perkin's lube will be found by letter to
Perkin, Huddersfield, as we cannot say whether it will be the same.

G. T. of Oswego.—Your capstan is in new
combination. There is no such thing as a capstan in Pearl's Patent, but there is an improvement on the subject, which
we have never heard of before. It is described as good.

C. L. of Rockville.—The low alloys tarry
many years. Many speak well of your wire. 
We cannot answer you by mail, but $ 0.08.

E. B. of Maine.—Much obliged to you for
your interest in the Scientific. We can make a wood cut from a good drawing, equally
as well as with the model, but not a perspective from a sectional.

C. W. E. of Mass.—Mr. Briggs was not
willing to sell us the right of his invention. According to his views, any person who has seen a drawing or a model is entitled to make the change without a patent for the same. Get up your model as soon as possible and make the change. We consider the broadside of an improvement is at a very reasonable price but cannot tell you how much till we have some more information. Some specifications are easy and others difficult. 20 dol-
ars is the patent office fee. It would be six months at least before your application would be examined in due order. We
do not think such a cutting wheel is in use as it has been specially patented.

J. C. of Mass.—Your model is received. We
consider it an improvement.

E. C. of Ill.—Your communication has just
been received.

Spirits Gas.
We frequently hear of accidents from ex-
posure of spirits gas. This is a composition of rectified alcohol and turpentine. It should not be used in families as it is very explo-
sive. Compound is not explosive and should always be used in preference to what is called composition.
Harbiel Furnace Practised.
A short time ago the wood works of John
H. Fritchie, extensive battery Furnace at Har-
bury, took fire from the mag burning out just in time. The stack against the corner of the build-
ing is in about four hours. The dry boilers are covered with a material of the furnace were entirely
destroyed, and the engine, pump, boiler, smoke
cylinders, and other apparatus much injured.

Applications for Patents made at this office,
on all reasonable terms. Naut drawings, specifications and engravings of the first char-
ter, and cheaper than anywhere else. Notes
of new inventions, Agency for the sale of Patents Rights, and all business of that na-
ture, promptly attended to. Those who have perfect rights to dispose of will find a good oppor-
tunity and field for their sale—such as Horse Power Machines and Waterproofs of every descrip-
tion. The largest circulation in the U.S. for advertisements of inventions, etc.

Advertisements.
SP Three paper circulars in every state in the United States, in every city, by principal machinery by manufacturers. Hence it may be considered the best mode of advertising machinery and manu-
facturing. Machinery, machinery tools, such as water and
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Improved Magnetic Machines.

One of the most important inventions ever made is for the production of electrical energy.

It is now of course the subject of the greatest in-
terest and attention, and the amount of patents on the subject is everincreasing.

MACHINES for the production of electrical energy are of two kinds: the first are known as the "MAGNETIC MACHINES," which are of a simple nature, and
are used for the production of electricity for telegraphy, telephones, &c.; the second are known as the "DIAMOND MACHINES," which are of a more complicated nature, and are used for the production of electricity for lighting purposes.

The Magnetic Machines are of two kinds: the first are known as the "MAGNETIC MACHINES," which are of a simple nature, and are used for the production of electricity for telegraphy, telephones, &c.

The Diamond Machines are of two kinds: the first are known as the "MAGNETIC MACHINES," which are of a simple nature, and are used for the production of electricity for telegraphy, telephones, &c.

The Magnetic Machines are of two kinds: the first are known as the "MAGNETIC MACHINES," which are of a simple nature, and are used for the production of electricity for telegraphy, telephones, &c.

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As eccentrics are used to copy different forms in Mechanical manipulation——though they also used to produce or communicate different motions to machinery. As the true principles of sculpture and architecture are derived from a study of geometry, are those of mechanical arrangement. Every machine should study the relationship of forms and their properties. The above figure shows, to the epicyclic and will produce that which is necessary in mechanical industry in matters of motion, but above, as the plane of the curve or revolving circle forms a constant angle with the plane of the fundamental circle. Hence, the Dutch philosopher, who discovered the principle motion of light waves, first observed the curve which forms the teeth of wheels and which brought into use bevel gearing.

**Dissolution Acid.**
The tree which produces Bannins is a native of the East Indies, particularly of the island of Siam and Sumatra. The juice exudes from incisions, in the form of thick white balsam. If collected as soon as it has grown somewhat solid, it proves internally white like almond, and hence it bears the name "Ammonialgaluillo" or "sulphur by exposure to the air, and at last to a quite red brown color.

The resin is moderately hard and brittle, and yields an agreeable smell when rubbed or warmed. When chewed it imparts a pleasant taste on the palate, especially soluble in alcohol; from which, like other reasons, it may be precipitated by the addition of water. In its specific gravity, merely using extract of the gum or benzoin and then the operation repeated two or three times, till the gum acquires the requisite color.

The gum itself must be perfectly free from grease and bright before the benzoin is added. When the gum is free from these, the air to the degree of benzoin dissolved, is produced when the subsequent process described above is gone through for finishing.

Another plan is to make up in a quart measure, 1 ounce of aquafortis, 1 ounce of alcohol, and 3 ounces of balsamic oil, and divide it in half and half, along with as much water as will fill the measure. This is applied to the gum with a few rag or spounge moist from the whole surface is moist, and the gum allowed to stand about one day. When the gum is to be finished off with a slight brush and the gum operation repeated two or three times. This will produce this curve for the teeth of wheels and which brought into use bevel gearing.

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The principal office being at New York.

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The design of the paper has already attained the largest circulation of any weekly mechanical journal in the world, and in this country its circulation is nearly doubled by the other mechanical papers combined.

39 For terms see inside.

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