# Scrientific Ameritan. 

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL, AND OTHER IMPROVEMENTS


Fig. 1 is a perspective view of an ingenious $\quad$ which is held in contact with the periphery o and compact automatic lathe, for the production of beaded work of any kind, invented by G. W. Walton and H. Edgarton, of Wilmington, Del., and patented on July 7, 1857. The cutter head is hollow, and the cutters are mounted in such manner that, by a very simple movement, the edges are removed from or brought nearer to, the axis of motion, the movement being governed by a cam outside. This cam may be made in any required form, and the configuration and disposition of the beads are thereby under complete control. Fig. 2 is a transverse section of the cutter head, and Fig. 3 a diagram of the cam or pattern, with the lever which controls the movement of the cutters being kept in contact with its periphery by a weight.
A is the frame of the machine, B the pulley which receives the motion from a belt, $\mathrm{B}^{\prime}$ a larger pulley, which transfers the motion of the first shaft to the hollow cutter head, and $B^{\prime \prime}$ cone pulleys, which give the feed motion. C C represent the cutter head, the acting portion of which is embraced between the two disks shown. D represents cone pulleys to receive the feed motion from $B^{\prime \prime}$ by a belt, and $E$ represents a train of gearing which conveys the motion of $D$ to grooved feed wheels denoted by F. G G are smooth rollers mounted above the feed wheels, and pressed down by rubber springs, which are fixed in the housings represented. $H$ is a movable gear wheel, which may be thrown into or out of gear, by properly manipulating the lever or handle, I. J is a spring, with notches to hold I in or out of gear, at pleasure. The object of this movable wheel is to start and release the pattern wheel at pleasure. K is a gear wheel mounted on one extremity of the shaft, L. M is the pattern wheel or cam. N represents one of two levers, mounted on the rock shaft, $\mathrm{N}^{\prime}$, seen in Fig. 3 ; and on the extremity of this rock shaft is the longer lever, $\mathbf{N}^{\prime \prime}$, Fig. 3. $\quad \mathbf{N}^{\prime \prime}$ carries a small friction wheel,

N , by the gravity of the weight, $\mathrm{N}^{\prime \prime \prime}$, suspended on an additional arm. These parts, although very important, are necessarily shown but imperfectly in the perspective view, but may be readily understood by comparing the latter with Fig. 3. $\mathrm{O}^{\prime \prime}$ represents one of the horizontal rods which extend from N N to lugs, $P$, one of which is fixed on each side of the movable collar, $S$, which surrounds the hollow axis of the cutter wheels. $R$ is a slide, on which $P$ is supported, and $T$ T are

bearings, which support C C. V V represent small guide rollers, which aid in supporting the work as it issues from the lathe. $\mathrm{W} \mathbf{W}$ are india rubber springs, which hold V V in contact with the work. The material is supplied to the machine by inserting pieces previously split or sawed in suitable size, between the feed wheel, $F$, and the smooth rollers, G. By these rollers it is fed forward into the hollow axis of C C, subjected to the action of the cutters, and escapes at the other ex tremity, between the guide rollers, V V. Th
device described results in giving a more or less regular longitudinal motion to the col lai, $S$, which motion moves the cutters outward and inward, by means which will now be described:-
From the front side of the collar, S , project two short rods, $S^{\prime} S^{\prime}$, into which are inserted screws, $\mathrm{S}^{\prime \prime}$. The cutters, two in number, are shaped like the ordinary gouge employed in turning, and are mounted on pivots or centers, X X, Fig. 2. Z represents the tool and tool holder, which are free to rotate around $X$. $Z^{\prime}$ represents a curved proje ction extending from the outer extremity of $Z$, which is perforated by a slot which extends obliquely through it. The screw, $\mathrm{Y}^{\prime}$, which is fast in $\mathbf{Y}$, stands in this oblique slot, and as the col. lar, S , is moved, compels the tool holder and lar, $S$, is moved, compels the tool holder and
tool, Z , to swivel round on the centers, thus tool, Z , to swive round on the centers, thus
bringing the cutting edge closer to the axis of motion, or removing it further therefrom, according as $S$ is moved. The effect of the whole is to make the position of the cutters dependent entirely upon the position of the rock shaft, $\mathrm{N}^{\prime}$, and this latter being entirely dependent upon the form of the pattern wheel, M, it follows that any number or form of bead desired may be produced.
We have seen the lathe in operation in this city, executing plain cylindrical and beaded work, as broom handles, \&c., with great rapidity, and presenting, of course, absolute uniformity in the product.
For further particulars address Henry Edgarton, Baltimore, Md., or George W. Walton Crook's Hotel, 80 Chatham st., New York.

## Hematinone.

Under the name of hæmatinone, a kind of glass was in use among the ancients, for the purpose of making ornamental vessels, mosaics, \&c. It has been found very abundantly in the excavation at Pompeii. This glass is distinguished by its beautiful red color. It is opaque, harder than ordinary glass, susceptible of a fine polish, of conchoidal fracture, and its specific gravity is $3 \cdot 5$. By fusion it loses its red color, which cannot be restored. Hæmatinone contains no tin, or any other coloring matter, besides sub-oxyd of copper. All attempts of the moderns to imitate it had entirely failed, until the successful result of experiments made by M. Pettenkoffer, who not long ago brought forward a method of producing the material in large quantities, so that with requisite precautions, it was alleged the material might be cast into plates of any size, and worked into articles of every description. It was generally anticipated that this discovery would furnish a clue to many of the processes of the ancients in the manufacture of colored glass, but the anticipation does not appear to have b een realized.-Exchange.

## Oil ve. Hydropathy.

We have on several occasions invited attention to the ancient practice of anointing with oil, and to the fact that oil makers and oil porters, whose clothing is presumed to be more or less oily, are often singularly free from contagious diseases which sweep off others. An exchange takes up the same subject, and remarks that in the East Indies, children are rarely washed with water, but they are oiled every day. A child's head can be kept much cleaner if oiled, than without it; and many young people with hectic cheeks would probably never know the last days of consumption, if their parents would insist on having their cheeks, back, and limbs anointed with sweet oil two or three times a week. The Hebrew physicians seemed to have considered oil as more efficacious than any other emedy. The sick were always anointed with oil, as the most powerful means that was known of checking disease.

[Reported officially for the Scientific American] LIST OF PATENT CLAIMS Issued from the United States Patent office for the week ending august $25,1857$. Filter-Wm. W. Ayres, of Worcester, Mass.: I ilaim
the ocmbination of cylinders, Band C, with the spindle,
S, when constructed with reception and discharge cavi-
 Werting And CUrting Paper-Moses S. Beach, of
Brooklyn, N. Y.: I do not. therefore, claim broadyy
the wetting of paper by mans of wet or, moiten
 means of a saw-edged knife, whether the knife be at-
tached to a tationary frame or to a c cllinder and
whether projected against the paper by means of cam
and lher are Whe her projected against the paper by means of cam
and lever or springs
But I Llam first, Simultaneously wetting or moisten.
ing both sides of the paper in the manner substantially as described.
Second. Leaving the paper dry at the point or line of
cuttin substantially as described.
 circumference of the cylinder, retaining it while so re-
tired and releasing it from the operation of cutting by
means of the catches, f f the springs, i. and the tripp ing
pins, 1 , in the manner substantially as described.


 operating substantially as set forth the fan shaft upon the
T also claim the arrangement of the fan
sindle of the revolving hurde. sibstantially in the
manner and for the purpose set forth.
 tral screw stem, c, and sheath, e, in the described com-
bination, with the pliable lid, f g ll j , nut, d , and gaskets
i and k .

 ness of the sheet metal. applied to umbrellas and para-
I claim the clasp, as app
sols. I claim nothing else described as my invention.



 staple.
But I claim the application of the piercing points, $h$,
tothe sliding dog, sothat the elat may be pierred for the
wire staples by the same action as that by which they wire staples by the same action as that by which they
are held secure, for forming tenons thereon, as descri-
bed.

 Nor do I claim separating substances of different spe
cific gravity by a current of air applied on the old and
well
Neinown winnowing proces.
Neither do confine my improvement to any specific

 ore evenly spread, and resting thereon, as described, for
the purpose of gently agititaing the said layer of ore, and
footaing the lightest substance therein to the to theor,
and allowing the heaviest substances therein to gravitate hoatng the ightest substances therein the he
and allowint heaviest substances therin t
to the bottom of the said layer on the said bed.
LThere are a number of channels formed by narrow
strips of metal across the inclined perforated bed, and (the material having been previously assorted by screening, so that all the particles introduced at one time shall
be of pretty nearly a uniform size,) by each of the puffs of air the dirt rises and again descends in lines nearly perpendicular to the face of the bed; but the heaviest
particles being more likely than the light ones to leap particles being more likely than the light ones to leap
over the strips of metal, it follows that, at the end of a
certain period, the solid metal will be nearly all collected in the lower grooves, while the light dirt remains in the upper grooves. It is an ingenious and admirable
improvement on the means horetofure in use for the improvem
purpose.]
 vention to the special mode of constructing the stock, or
of holding the two parts of the swage otether or the en-
tire swage in the stock, as other and equivalent modes may be substituted.
I claim forming the acute angle of the acting face of
the swage to bring the cuttin edge of tae saw teeth to the swage to bring the cutting edge of tae saw teoth to
a sharangle ing thating the said swage in two parts,
substantially as specified. BRICE MAcHINEs-P. S. Devlan, of Reading, Pa.: I
claim, in combination with a clay receptactel suppiied
by a positive feed, and a rocking or partially rotating
 parts being so arranged as that said wheel will rock or
roll from ond prunger to the thir and be held in the
manner and for the purpose set forth.

 able reel fluted conc
ed, arranged and op
purposes specified.

 thin lip, F, propecting horizontaly from the upper por
tion of its circumference, and with a rib of ring form pro
jecting jecting from its under side, and near its circ
substantially as and for the purposes set forth. [This enables the persons sitting around a table to
serve themselves with great ease, and deserves an ex-
tensive introduction.]

[This saves passengers from being affected by the roll-
ing and pitching of the ship, and thus prevents seasickness. In the day-time, when not in use, it can be turne
 cating follower to be any part of m y invention, sinceip the
hate been used, as in Wisners', and other improvement
(patents usin (aveither do I claim anything of the nature of floating
balls, as the balls in my ymprovement practicaly do no
float and should be made of some heavy material.

 lar disk rubber, arranged and
and for the purposes set forth.
Reviering Trungs Water.TIGHT-Charles H
Hinckley. of Stonington,
expanding jointed clasp waspatented baware that the expanding jointed clasp waspatented by Sellers \& Pen.
nock, June 12, IIto and that india rubber packing has
been used in various iorms, other than that of the inflat
 tion, and patented by Robbins \&\% Allen, Sept. 7 , 185n, but
without the inflated ribs ; but neither of these do
clat
claim. But I claim the application of the inflated casement
or ribs, as described, composed of indiar urbber or orthor
or or suitable material, to the sides of contact of clasps for bags
or cases, so that th their yielding contact the clasp may
be closed so as to be impervious to water.
 otherwise securing it. firmly to the outer end of a socket,
in which are slots for the reception of the tangs of the
itnes of in wse of a fork, to provent lateral. Working, wheng in con
nection with a wedge, cast or otherwise formed, between horews, a, for the the the the tangs, to prevent ond play, and
the rease socket and han
die to each other, substantially as set forth.

 my invention, the attachment to e elongated shot or shells
of a cylinder of wrouht iron fastened to the body of the
shot byi mbeddin its be shot byi mbedding its bottom or sides in the cast metal o
the hot, the cylinder attached to the butt of the shot o
sholl and itio sides ot project beyon.
 passing into certain vat.
main body of the shot.
But
with I claim the formation of a cast iron shot or shel

 or by a combination or these me mods, leaving an inter
mediate portion of the covering free to obe expanded b
the action of the gases. of the discharge pasing throug certain channels or passages betweon the covering an
the body of the hhot made or left for that purpose.
I also claim making the wrought iron covering the I also claim making the wrought iron covering thicker
at its rea end which admitson annular spaces boing cut
into it to hold groase, or for the action of the atmosphere
 for mus
jectile
curacy.
 braced, b b, joint, a, swivel pin, d, and socket, o, in com-
bination with braes, BB B and the rubber shaf, , con-
structed, arrange and operating substantialy as and for
the purposes specified. CUpola Furnaces-Philip W. Mackenzie, of Jersey
City N. Y.: I do not claim the boshing or outside air
chamber
 In combination with the elongated form and incre
size below, $a^{\prime} a^{\prime}$, where the blast enters the fuel. Harvespers-Pells Manny, of Waddam's Grove, III.
I claim the method of constructing the fingers of the cut ting apparatus of harvesting machines of two members,
B and E, and securing them upon the finger bar in the manner as set forth.
IT also clain the recses, $r$ and $z$, in the inner faces of
the fingers. in combination with the supplementary in
cline clin ningers, in combiter, unandion with procth
sickle, substantially as set forth
sich
 wheel, as this is not new.
stan, ither do I claim the application of gearing to a cap
she the purpose of increasing the power by which


Water Vrsers for Hot AIr Furfaces-William
Moultrie, of New York City: ing of a water vessel within a furnace chamber simply
for the purpose of imparin humidity to the air therin
Nor do Iclain to have discovered the utility of vapo
draft for the aumpot
 the water veasel, , , whereby either or rooth of said ob
jocts are atanained, substantially as described, in connec
tion with furnaces and other heating apparatus. Cooming Rangess-Samuel Pierce, of Troy. N. Y. : I
claim the combination of the recess, p, betwen the
ovens, having a division plate therein open at the top


 Boring Machive-Emmett Quinn, of Trenton, N. J.
Y claim the combination of the sliding guide an, with the
levers, ff, and timber carriage, C, operating as and for

 In combination with the above, I also oclaim om aupport
ing roll, located, arranged, and driven substantially as se
forth.



Looms-Edwin A. Scholfield, of Westerly, R. I.: I am
aware that the star gears under a modified form have
been used for changing the position mot the shyt




 latform or secondary tub, E , in the manner substan-
tially as descibed.
Second, Providing the outer
 [In this machine the clothes are mounted in a rotating
frame or open tub within the principal tub, and can be raised at pleasure to examine or arrange the same with out stopping the
 ings, gg, in the manner subutantially as dascribed, to
pack the rovving heods which carry the pistons to the
tationary head of the cylinders of rotary engines and stationary
pumps.
[These
[These rings are fitted cheaper than the usual packing, tight joints thoreby on the steam side of the pistons or
revolving wings, bat leaves the joint or open, and consequently frictionless, at the points which are at the moment on the oxhaust side of the pisons. In other words, the packing is only tight when
and where it is required to be tight.]
 he swinging frame, CD DEE F Ge with posts, A A, in
he manner and for the purposes set forth.
Second, I claim the swinging board, F. Fin combination Second, I claim the
with the swinging fram
hho wn and described.
 pair of shears by two adjustable conter pivotsupon an
adjustaloe ililar block , substantially inn the manner de.
scribed. and for the purpose of so adjusting the movable scribed, and for the purpose of so adjusting the movable
loade of saidshears tas to give it the most ofectual shear-
ing position in relation to the stationary blade, as set
orth.



 ya so atteaching a mechanism in connection with a a cover.
or the ink cup, that the opening and closing thereof hall effect the raising or discharge of the ink or other
uid into or from said cup, as described.









 Third, I claim the use of a double hooked needle, as
described, in taking the thread both ways through the
cloth one way or up through the cloth, by means of one cloth one way or up through the cloth, by means of one
hook, nad the other way or down through the cloth by
means of the other hook of the same needle, all substan-
tially as above deacribed. SEwiva Machinss-Wm. Wickersham, of Boston,
Mass. Fatented in England, Dec. 29, 18sit; I Claim,
first, The method of taking up the slack throad above
 cloth, drawing down through the cloth the end of the
thread connected with the shutte bomens of the shut-


Second, I claim the formation of a seam of one thread
which cannot te unraveled, of stitchese sach of which is
which cannot be unraveled, of stitches oach on on hhich is
made by having the loop or oundo of the tread assed
through from one side to the other of the cloth, and made have from one side to the other of the clothh, and
hacugh fanin anther place to the first side of said cloth,
band a a ooop formed by means of a hook needle, and
and




Sxwisg Macarives-Henry Behn (assignor to himself
and Thos. Sewall) of New York Coty. Iclaim the spe
ific looping devieo herein set forth, consisting of two and Thos. Sewall) of New York City: I coaim the spe
cific looping devieo herein set forth, consisting of two
pointed bars, the one moving in a plane above the plane
of motion of the other, and operating in combination

 brakes of various descriptions have been uned to control
the tensionof the thread in sowing machines, and there.
fore Id do not claim the employment of a spring for such a purpose. I claim any arrangement or combination of a
Nor do
spring and other dovices which operates upon a diffe








 of securing the jaws to the stand, consisting essen
thesilitg with iss shoulder i, and the tenonh,
shoulders, i , operating in the manner set forth.

GLAss Jourval Box-Edward Campbell, of Colum.
bus, scribed my new compound journal box, I wish to be un.
sorrsto od as not claiming the union of plass and iron or
other metal while the former is in a a plastic state, and
 urface of vitreous material, when said vitreous material
scombinod with irs metal back, substantially as and for
he purposes set forth.


 Third, I claim the peculiar arrangement of slats s,
cord d, and weight c, when operated in the manner and
for the purposis set torth

 flues and furnacos, substantially such as are hertion be.
fore specified. with an endless arpon or its equivalont,
sub, tantially in the manner before described, whereby the amountof heat impanned toeieitheresescribed, of an wheren or
chain may be regulated independently. chain may be regulated independently.
second, In combination with an endess apron and
oven or their equivalents discharging and charging
apertures, located substanialily as betore set forth in
 motion of anes edless apron
Stinmboats-John Schaffer, of West Manche

 manner and for the purposo described
Stoves_Thomas barry, of New York City. Six
Patents. $\underset{\substack{\text { Stoves-Samuel H. Ransom, of Albany, N. Y } \\ \text { Patents. }}}{\substack{\text { Six }}}$ Cluogen Cidse
Meriden. Cit.
FThis is This is a very elegant
scrolls, vines and basket.]
BRICK-G. W. Sholl and Chas. Stewart, of Cincinnati.
Ohio.
Stoves_Thomas D. Worrall, of Lowell, Mass
Errata.-In the List of Claims issued on the 11th of August is one to Jesse Shilling, of Troy, N. Y. The
official report to us was incorrect; it should have read official report to us was incorre
Jesse Shilling, of Troy, Ohio.

An Interesting Patent Decision
In answering questions on certain law points referred to that functionary by the Secretary of the Interior, the Attorney General has rendered the following as his opinion, viz. :-

1. The payment of a duty upon a patent or caveat to the credit of the Treasury is not a pledge or deposit of the money, but an absolute and unconditional payment.
2. If the patentee or caveator afterward demand the money to be repaid to him, he must show that his demand for it is founded in some law, within whose terms he can bring his case distinctly and clearly.
3. There is but one provision in the act of July, 1836, authorizing a duty once paid to be refunded, and that provision is found in the seventh section.

That sentence authorizes twenty dollars to be returned, not to a caveator nor to one who has made an incomplete application but only to one who has made an application
which is perfect enough to be examined, and which, in point of fact, has been examined and rejected.
5. It follows that a party who merely file a caveat, paying the legal duty of twenty dollars, cannot withdraw the caveat and demand a return of ten dollars.

## The Hoosic Tunnel.

The construction of this tunnel through the Green Mountain ridge, to facilitate connection of Boston with the West, has been brought to a temporary stand-still, in consequence of the contractors not receiving aid which had been expected. They have penetrated the mountain 1,030 feet- 720 feet from the eastern end, and 410 feet from the western end.

## Franklin Institute

We are informed that this old and respectable institution is obliged to omit its usual annual exhibition this year, for wa
able building in which to hold it.

