OUR TITLE PAGE AND INDEX.
We invite the attention of our readers to the beautiful title page printed on this number of the Scientific American. It was designed by A. Lumley, and engraved by R. Ten Eyck, whose skill in the art is so wel e.ttested in our columns every week. As a specimen of engraving on wood, and as a felicitous design, we doubt If a more superb thing of the kind was ever published. The center of the page is adorned by the figure of Minerva, expounding the laws of natural philosophy In the upper view on the left are to be seen specimens of the unrivaled steamboats which ply on Long Island Sound and the Hudson river, and an ocean steamship; while on the raght are shown those floating palaces of our western rivers, which furnish cheap and comfortable modes of transit. Below there is represented a perfectly correct view of the interior of the principal office of the Scientific American Home and Foreign Patent Agency, showing the various examiners, draughtsmen and clerks engaged in their professional duties. On the right of this interior view is represented a portion of the United States Patent Office at Washington, while on the left is shown an exterior view of the Scientific American Office, Park Building, this city.
The Index which we publish this week will, we doubt not, be higlly valued by all those readers who have preserved their numbers for binding. As the first volume of the "new series" of the Scientific American contains about double the amount of letter-press given in any of its predecessors, within the same space of time, and as many attractive and valuable features of novelty are embraced in the reading matter, we deemed it incumbent on us to correspondingly enlarge and otherwise improve (hy sub-divisions) the list of contents, which will be found more ample and comprehensive than any we ever previously published, and reflects much credit upon S. F. Cohen, our careful and competent proofreader, who collated the same.
Next week we shall furnish our readers with another full page engraving of over twenty-five practical working machines, illustrating almost every department of me chanism and engineering. Thus brilliantly do we close the first, and shall inaugurate the second, volume of the new series.

issued from the united states patent offiue for tirt wreas ending necrabier 13, 1859
[Reporded Officially for the Sormetrio Anarians.].
$\because$ Pamphete giving full particulars of the mode of applying for


26,403.-Luther Adams, of Blanchester, Ohio, for an Improvement in Car Couplings:
b, claim the combination and arrangement of the latcl, c f, spring:
26,404--Peter B. Baker, of Wall Hill, Miss., for an
Improvennent in Cotton-seed Planters:
Improvernent in Cotton-seed Planters:
orlaim the arrangement of the teeth, $b \mathrm{~b}$, in front of the drill
 the manner and for the purpose specified.
26,405. -Nelson Barnum, of St. Louis, Mo., for an Improved Sash-fastener:

yelang etrip, B , for the putpose specinied.
,406.-A. R. Bartram, of Redding, Conn., for an Inprovement in Running Gear of Vehicles:

 tially thus arranked, are used in connection with thills or
pole attaoled rigidily to the axle, $A$, for the purpose set. fortll.
26,407.-Alexander Beckers, of New York Cit", for an Improved Double Eyc-piece for Optical Instruments:


26,408.-Elizabeth Bellinger, of Mohawk, N. Y., for an Improved Composition for Kindling Fire:


26,409.-John H. Birdsell, of West Henrietta, N. Y. for an Improvement for Bolting and Cleaning Clover Seed:
I claim, first, Operating the bolts, A A A, so as to impart to them an crank, $D$ E suide rods, FF , arms $G$ H and connecting rod $B$
 Second, I clain
 veed of, tallingst to be again sulmitted to the operation of hulling, an and
deesribed.
TThis invention conslsts in giving the two bolts, when the machine sinoperation, an oblique alternating motion, so that they will alte ther, for the purpose of more cffectually separating the coverpo from the straw by giving to it a dropping motion, while at the som ime it is propelled to the rear of the machine. It further consists in providing an endless converor so arranged that it will convey the eed which have not been effectually hulled back again to be submit ed to the process, for the purpose of more thoroughly freeing it of it hulls.]
26,410. -William Blessing, of Jeffersonville, Ohio, for an Improvement in Sced-planters:
I claim the arrangement of the top portion of the distributor made
with a semi-lunar opening and the recess under the covered portion with a semi-lunar opening and the recess under the covered portion
of the said top, when the periphery of the top is made with the chaff
penings, II, on either side of the reciprocating seed boyr so the sie openings, H, on either side of the reciprocating seed bar so that said
bar, bits reciproating action hall work out the chaff through the
passeg, HM, on either side of the seed bar and thus prevent choking
the distributor.
26,411.-Jeremy W. Bliss, of Hartford, Conn., for an Improved Striking Apparatus for Gongs:
I claim first Arranging the etriking mechanism of a bell substan inlly within the hollow of the bell, when the wire which actuate
that mechanism moves in lines parallel to the axis of the bell or nearly so, ,sdescribed.
And latlly I claim a rock-shaft arm arranged with reference to siving catch, and a hammer and hammer wire and proper gprings;
the whole constituting a striking apparatus, eubstantially as lierein the whole constituting a striking apparatus, eubatantially as herei
set fouth. 26,412.-John Broughton, of New York City, for an
Improvement in Grinding Mills: I claim, first, The double and reverse-acting conical grinding gur-
aces, $\mathbf{E}$, F , constructed and operated substantially as herein get Second, In combination with a revolving grinder and hollow case
drum, A, claim the wings or frn blades, $J$, operating substan-
or illy as aud or the purpose get forth
(This invention relates to certain improvements in metallic grindwithin a co-centric and stationsry shell. Tho object is to preven the clogging and consequent heating of the mill, and at the same time obtain a perfect and rapid grinding operation with a very simple and economical arrangement of parts.]
26,413.-Peter M. Brown, of Carrollton, Ill., for an
Improvement in Portable Fences:
of my improved fence that the eaid sections can be securely inter ocked with each other by means of supporting posts of the within
deaccibed shape in euch a manner that the taid gections can be in lis as set forth.
26,414. -Isaac Y. Chubbuck, of Roxbury, Mass., for an Improvement in Fin Governors for Stcam-engines: I claim combining the main spindle, $C$, of the fan governor with
the stem or paindle, $B$, of the vailve, by means of a toothed arc formed

[This invention consistsina novel mode of combining the spindle a fan governor with the etem of the regulating valve, whereby the goveraor and valve are brought together in a very compact form, tending to drave the said epindle out of truth and so interfering vith the proper operation of the valve.] 26,415.-Hezekiah Conant, of Willimantic, Conn., for an Improvement in Machines for Winding Threa on Spools. Patented in England June 22, 1859: I claim, first, The combination, substantially in the manner, aft with nuts which are alternately in gear with such screws; the com
bination operating as a whole substantially in the manner and for the Second, I claim a traverse changer provided with successiv
Itabs chat upon lips an sct forth.
Third, I claim a stop motion, substantially such as is described, for ion with antomatic apparatus, substantiall such as set forth, for re gulating the length of motion and clange of direction of motion, of a
guide through which the thread 1 1 delivered on to a bobbin or spol.
Fouth, I chaim adjustable ligs, substantially such as set forth, in
form lengths may we wound by the chase of the same wheby spools of differen
Fifth,
lave changer. lengths may be wound by the use of the same traverse changer.
Fifh, I claim mountingt the presser and thread gulde directly upon
or attheling it frmly to the traverse rod as before described, rately. lastly, In combination with apparatus substantially such as de claim a tension apparatus and stop motion which arrests the of a machine when a thread breaks, substantially by themode of ope 26,4
26,416.-John B. Cornell, of New York City, for an
Improvement in Sash Weights: Improvement in Sash Weights:
weight, the peculiarticy of which consists in its improved metallic sash nular. grooves formed at suitable distances from cach other, in the
lower portion of said sash-weight, for the purpose set forth.
26,417.-Thos. R. Crosby, of Newark, N. J., for an Improved Machine for Wiring Blind Rods: I claim, first, The use, in wiring machines, of the yielding mouth
tolold the wirc when being driven and formed, substantially as deSecond, I claim the use of the adjustable slide, K, substantially in the manner and for the purposes described.
Third, I claim in asid machines the use of the dof, $V$, in the end
of the arm, E, substantially in the manner and for the purposes de Foulth, I claim the combination torecther of the driver, $O$, nnd the
viel ding mouth formed by the rack, $D$, and plate, $I$, eubstantially as described.
26,418.-P. Crowley, of New York City, for an Im-
provement in Needle Wrappers:
the heads of the needles and produce a covering or flap, , of ofthe
form shown, or equivalent form, and for the purposes setforthand form Rhown
described.

2G,419.-Jonathan Culer, of Chicopee, Mass., for an Improved Machine for Making Clasps: I claim first, The sliding former, A, end the pilirating lever, $B$, in
onbination with the die ind punche in the naunner de seribel.


 ganized dutomatic machinin, in the mannerand for the purycse spe -
26,420--O. H. Dennis, of Altona, Ill., for an In.provement in Seeding-machines:
I cluim the combination and anrapy ement of the cslinds. G , of cir-
culur cuttes, 11 , with the cultivating and opening tecth, c c, and


 hiaft, O lever, $Q$, and catel, R , subetantially as specified,
26,421.-D. S. Fancher, of Logansport, Ind., for an Improvement in Stonc-loading Wagons:
I claim, first, The inclined firmene of bed, $A$, and the hinged drop,
B , incombination with the friction rolles, $\mathrm{c} G$ and the windlass, a $b$ b , far the purriose set for th.
 forth.
26,422.-J. W. Fawkes, of Christiana, Pa., for an Im provement in Steam Plows:


 then applised to the mad
26,423.-Thos. B. Fogarty, of Charleston, S. C., for an Improvement in Gas Mcters:
I claim, first, The combination with the water reservoir, $B$, and
the revolving measuriug dum, 11 , of an inclined feed wheel, $E$, sub seantially yas and for the parposes set forth.
Second, The arraucement of tle overtiow $p$ ine, $K$, in combination with the water reserviri. meter clamber, and -dry vell, L , and plye N, in the manner substantially as set forth.
Third, The arrmecment of the water inlet, S , substantially in ,
[This invention consists, first, in the arrangement of an inclined wheel within a separate reservoir made by elongating the ense of he meter; and infixing upon the periphery of this wheel suitable buckets which shall alternately dip into the water contained in said eservoir, and convey the same into the main reservoir, therebs maintaining a correct water line under all ordinary circumstances, in preventing the metor from being overcharged; by the emplos uent of a pipe extending up near the water line, and communicat ing from the supply reservoir to the bottom of the dry well in front of the meter, so that should any attempt be made to overcharge the reservoir, the water will escape through this pipe, and rise into the ry well and st op the flow of aas completels. Also, in a peculiar ar catioment of the water inlet pipe, so

26,424.-A. M. Ford and C. W. Warner, of Jericho
Vt., for an Improvement in Horizontal Water Wheels:
 band , as shown in Fig. . , and of the buckets, a and b, co.
the manner and for the pur 1 ooses substantially as set forth.
26,425.-Geo. Foster, of Brooklyn, N. Y., for an Im-
provement in Axles or Shafts:
I claim a shaft or axle cellular in its character, and composed of a
scries of wrought iron rods, or tubes, covered and held together uy a casting cast upnon the same, and forming the journal wheel, bearing
26,426.-W. P. Goo
426.-W. P. Goolman, of Dublin, Ind., assignor to
himself and Saml. B. Morris, of Wayne county,

Ind., for an Improvement in Mole Pluws:
ridly attached to a pivoted mole, R,
in the described combination with the rack, F, the whole being con-
structed and arranged and operat1ng sulbstantially as and for the pur-
poses set forth.
Second, TLe cam, $D$, in the described combination with the coul,
ter $Q$, and adjustable pivoted mole, $R$, cperating substantially as ter Q , nd adjustalle pivoted
and for the purpose set forth.
26,427.-Magnus Gross, of Washington, D. C., for an
Improvement in Preserving Flesh and Meats:
I claim the aprlication of an air-tight apparatus of displacemient to which hydiostatic pressure is up
ner set forth in the specification.
26,428.-Chas. Hadfield, of Brooklyn, N. Y., for an
Improvement in Sticks for Exhibition Rockets:
I claim the rocket stick enclos ing or in connection with a magazine
of yowder, in the manner and for the zuiposes set forth.
26,429.-H. Halvorson, of Cambridge. Mass., for an
Improvement in Candle Molds:
I claim the combination with an outer tube, A, of the inner clastio nose set forth.
And in combition with the, elastic tube, B, I claim the tip ${ }^{\text {c. }}$, of
elastic or yielding material, applied and operating sulstantially as elastic or yielding material, a
and for the purpose described.
26,430.-Ira Hann, of Hope, N. J., for an Improved
Washing Machinc:
I claim the combination of the fixed rubber board, $n$, with the re
movable rulbber, $m$, frict ion roll, preeser carriage, $a \mathrm{ab}$, and onerntin movable rulber. m , friction roll, preeser carriage, a a , and onerating
lever, F B and M, the whole arranzed nind noerating as specified for

26,431.-J. S. Harhison, of Sacramento, Cal., for an Improvement in Bee-hives:
I claim placing the hac comb, known as worker cells, in a harizon
tal or neary horizontal position, so that the cells shall be vertical nearly vertical instead of horizontal, hy the means, or their equivi ents,
(This invention consists in placing the bee conib, known as worke celle, in a horizontal or nearly liorizontal position, so that the cils
shall be vertical or nearly vertical, in order to facilitute the laburs of the bees in making the green cells.]
26,432.-Wm. Hoffman, of Benicia, Cal., for an Im proved Butler's 'Tray :
I clain, as a new article of manufacture, a single-handed butler's
tras, furrished with a hingct. or pivoted handle, so as to be detacled or iving out of the way, to facilitate the placing or removing of ar-
ticle.e upon it, and to economize room and space in carrytug or stowing
it away, ss set forth and explained.

26,433.-J. B. Holmes, Jr., of New York City, for Improved Ratchet Pulleys for Blind Cords:
claim the metalic bar, a, priecectiply from the windor casing, and
 26,434 .-A. H. Hook, of New York City, for an Im provement in Clanps for Metal Straps
I claim the outer griper, at and nath e for fastening the ends or
bale aun other traps, constructed substuntially as and for the pur
poses sat fort
26, 435 . - Daniel Hughes, of Rochester, N. Y., for an Improvement in Hoop Locks:
 and prov.euro we set forth.
[This invention consists in placiug within a metal case or box rough which the ends of the hicop to be connected or sccured togeth cr pass, a clamp or jaw, so hung and arranged within the case or box as to permit the ends of the hoops when the latter is around the balc to be shoved one ver he of er in the he con the ond the hoop are slightiy drawn back under the expansion of the compressed bele cuse the juw to bind firmly on the ends of the hoops, so that the latter will be firmly secured in the case or box, and conse quently locked or connected together. The invention is more espe anlly de signed to be applied to the hoops of cotton bales, but it ma be applied to all metal bale lioopy:]
26,436.-Peter Keffer, of Reading, Pa., for an Improve ment in Boots
I claim the above-deseribed mode of muking the leg of the boot. the
leather being folded in front, and the crimp lunmered in, instend of
 Beam and one pie
poses described.
26,437.-L. G. Kniffen, of North Salem, N. Y., for an Improvement in Harvcsters



26,438. -G. A. Lathrop, of East Saginaw, Mich., for an Improvement in Metallic Window Blinds
 TThe object of this invention is to produce st
t once simple, cheap, easily operated and fireproof conbining with a metullic plate provided with and it consists in water sheds or slats, a slotted slide in such a manner that the light may be admitted or excluded at pleasure.]
26,439.-J. H. Lee, of Camanche, Iowa, for an Improvement in Seed-planters
clium the arranyement of the ba
 Thisinvention consist in sivi connected therevith an adjutivs medox and parts imme dithe draught frame, soas to greatly facilitate the proper planting of the seed whether sown in drills or halls. The invention also co
lo a novel meaiss to assist or aid the turning of the machine ] 26,440.-Horatio Leon.urd and Henry Ryder, of New Bedford, Mass., fur an Apparatus for Molding Candles:
 operate therevith, substantially in the mailiner und for the purpose
set forth.
We also claim the deacribed impreved


26,44 1.-Benj. A. Mason, of Newport, R. I., for Machine for Cutting Railway Bars:
I chaim for siving to rails the form, sulstantially snch as herein
described, the combination of the series of cutters, arranged in rela tiont to each other, sulstantally as deseribed.
26,449.-O. C. McCune, of Darby Creek, Ohio, for an Improvement in Corn Planters:

[This invention consists in plazing in rear of the plow, used to form the furrow in which the corn is deposited, a bhovel, or coverer, and in operating the same by zuitable connecting rods and levers, 2G,443.-Channcey Parmelee, of Wilmington, Vt., fo a Vegctable-slicer:
In onime suibporting the front end of the adinstibible plane of bottom , relatively to the sute, add arranging at the end of the the blitate, $K$
the mechinism for ruisininitit of the board or partition. O , to the hop

2G,444.-Wm. H. Peckham, of Hoboken, N. J., for an Improved Spectacle Frame:

26,445.-Clarles A. Seeley, of New York City, for an Improved Method of Protecting Frictional Electric Machines from Moisture:
In inim enclosing in electrical machine in $n$ covering or bor, which

20,440.-Andrew J. Shepard, of Buffalo, N. Y., for an Improvement in Nut Machincs:
I clinim, fint, Purforating the punclhe e, as described, for the pur




26,447.-Joel Y. Schelly, of Hereford, Pa., for an Im provement in Attaching Spokes of Carriage Wheels I claim, first, The ferrule, D, when furnished with riugs, a a, an


26,448.-G. B. Singeltery, of Greenville, N. C., for an Improvement in Manure Drills
I chim the arrangement of the plow, B, guide board, E , lifting bar,
guiding bar, $G$, and rotating hopper or receptacle, D , as and for F, guiding bar, G, and rotating
[This invention is designed for sowing cotton seed as a manure, either alone or mixed with guano or other fertilizer. The invention consists in the use of a bilge-shaped rotating hopper, applied to a le and economical arrangement of means.]
26,449. -Stephen Stafford, of Carrollton, Mo., for an Improvement in Hemp-breaking Machines
I claim constructIng the brake with two disks and heads, and uni
ng said disks by means of rounds or slats armed with oblignel eeth, and arranged so that spaces shall exist between them, and the can bo rdjusted to give the teeth
The nature of this invention consists in constructing the brake保 rounds or slats armed with obliquely-set teeth, and arranged so that teeth any desired obllquity.]
26,450.-John F. Sterling, of San Francisco, Cal., for an Improvement in Watch Keys
a holliam, as at new article of manuf acture, a watch or door key with into it that would obstruct its action vill' drop or be punched ou through the open stexi, as set forth.

6, 45 I . - Euclid C. Thayer, of Providence, R. I., for ai Improvement in Belting for Pulleys:
or other material in the mode described, and roling and the leat he ame in a spiral form with any required number of conical layers in of the belt, and cementing the layers in the process of manufacture ubstintially as described
2G,452.-T. S. Underhill, of St. Johnsville, N. Y., for an Improvement in Beehives:
I claim, first, The arrangenient of the movable frame, IN, in com Second, The arrangement of the adjustable boards, $G$ H and $D$
paced on $n$ irame, $F$, when said parts are constructed as described nd used in connection with the sliding hive, $A$, for the purpose spe
ne

26,453.-Antony Welsch, of Chicago, Ill., for an Im provement in Hand Car for Railroads:
I claim the movable platform, and the attachment thereto of th
crank and wheel, in the manner and for the purposes set forth.
26,454.-William Wharton, of Philadelphia, Pa., for an Improvement in Dispensing with Switches on Railroads:
I chaim the employment of a car wheel provided with one or more
reads in addition to the ordmary twail, ulon either the outer or in
 rails with a erindual rise, either curved or straisht, so placed that sucl
of the said extra trads as desired shall be. cused to run upon them
thereby raising the car entirely clear of the ordinary track, and caus ing it to follow the direction of said raised rail or rails, whethe
curved or straight, for the pryetose of avoiding the necessity for rail road switches, arranged aut operated substantially as set forth.
. William H. Worth and Leonard Finlay, of Canton, Mo., for an Improvement in Seed-planters plate, $N$, vertical gate,, , sliding bart, $G$, neperading lever. $H$, shoes,
and rotary colters, $K$, as and for the purpose shownand deccribed.
[The nature of this invention consists in the arrangement of rotary ivers placed berore the shoes for forming the drin, and hung upon tes of thb aurfee of the ground in the operation of phating corn. Hes of thin surface of the ground in the operation of phacing corn positlng the seed in the shoe, in arranging a vertical gate, working in the heel of the shoe, and operated by means of a peculiarly-slotted pece fixed to the seed slide, so as to deposit the seed in the drill from he shoe at regular and required intervals along the line of the fu is moved bucliready to receive another charge of seed.]
26,2 56. - Henry Bell, of Clinton, Ill. (assignor to Fen on I. Bogar and Joseph W. Tidball, of sam place, , for an Improvement in Seed-planters


 that the feed slide can be worked either by the hand or foot, substan
tially as nnd for the purposes set forth.
Third, The combination with the foregoing peculiar arrangemen of parts fordromping the seed, the onrrangement of ab arrangemen
for oregu
ating the depth of the furrow-openers, substantially as and for the purpose set forth.
26,457.-William Bellows, of Cincinnati, Ohio (assigno
to himself and Charles W. Smith, of same place)
for an Improvement in Re-vivifying Bone Black:
rranged and constry improved apparatus for re-vivifying bonc black
Second, The flanning bottoms of the retorts, a a, when armanged
and combined with the described npparatuan for the purpose epectied
Third, The flaches, c c, in combination with the retorts an


Fourth, The chamber between fanches, c c, and lower plates, d d
when, for the purpose of preventing undue radiation of heat and Jor the purpose of passing off the offingive pases arising from retorts,
when said chamber is combined with flanches, c c, and cover plates, d , for the purp
6,458.-George H. Bronson. of Cincinnati, Ohio (as signor to himself and David Millard, of same place), or an Improvement in Hydro-carbon Vapor Apparatus:
Iclaim the arrangement and combination of the zigzag folded sur


26,459.-Mortimer S. Harsha, of Sycamore, Ill. (as signor to himself, Rufus S. Sanborn and H. B Jones, of saine place), for an Improved Churn I claim an entirels stationary brake-dash, in combination with
cream-receiver, made to rotate on a vertical or upright shaft, as de cribed and for the purposes set forth.
6,460.-Thos. C. Hendry (assignor to himself, J. Dill worth and F. E. Askin), of Conyers, Ga., for an worth and F. E. Askin), of
Improvement in Gravel Cars:
Improvement in Gravel Cars:
I claim the combination of the double Inclinen bottom, $D$ D, and
swinging doors, GGG, the latter beeing operated by ber rod,
and lever, $J$, substantially as and for the purpose set fortli. [The object of this in vention is to obtain a gravel car which ma have its load readily discharged simultaneously from both sides, an which may be constructed in a strong and durable manner, at reasonable cost.]
26,461. -Jas. W. Lawrence (assignor to himself, Henry Brewster and John W. Britton), of New York City
for an Impruvement in Connecting Elliptic Spring to Vehicles
I claim the manner of combiningand secuing the back axle and the elliptic spring, specifically as described.
26,462.-Charles Miller (assignor to George Ricardo), of New York City, for an Improvement in Sewing machines:
I claim, first, The combination with the shuttie driver, $K$, of the
elcasiug plate and lifter, $g$, as and for the purpose shown and described. $\quad$ two epringe ij Second, The omployment of a shuttle made of two springs, ij, in
the pecculiar manner shown and described, in combination with the
[This inveution consists in the employment in combinatior with sewed with a simple reciprocatin at the back of the material bcin surface of the material and a presser acting on the top or in front of the material to press it against or towards the teeth or face of the dog, of a plate, which may be termed a releasing plate, arranged on the same side of the material as the dog, and having a movement in direction perpendicular, or nearly so, to the face of the materia or the purpose of lifting the material and keeping it released from he dog during the backward movement of the latter. The invention aso consists in effecting the releasing movement of the said releasin plate by means of a wedge-like projection, or its equivalent, forme pon or carried by a shuttle driver.]
6, 463.-E. R. Morrison (assignor to S. C. Hill), of Brooklyn, N. Y., for an Improvement in Shingle Machines:
I claim, first, The arrangement of the knife, $H$, and projection, $r$,
o connection with the reciprocating bed, substantiully as apoted as the bed passes und


## RE-ISSUES

Isaac Rulofson (assignor to himself and Lemuel Harvey) f Penn Yan, $\mathbf{N}$. Y., for an Improvement in Plows Patented March 1, 1859 .
I claim noving and adjusting the beam, $A$, aterally upon th mand ${ }^{\text {and }}$ or their equivalenta, in, sund a manner that the line of
mand or direction of the bam shall alvays remann paralle with the
drand landside of the impl
hown and described

Daniel R. Prindle, of Bethany, N. Y., for an Improve ment in Boilers and Steamers. Patented Sept. 13 1859:
I claim the construction and arrangements of the two sections, A
nd $B, 0$ othat the ecction, A, may be used scparately as $n$ caldron. oth sections be securely united and employed as an enc losed boilc
for generating steam, as specified.


 apecing between the tlanges from injury by heat, substantially a John M.
John M. Lunquest, of Griffin, Ga.. for an Improvement in Pumps. Patented Nov. 1, 1859:
I claim the arrangement oftwo or more cylindere, B, B, piston heads being kept in position by proximity to each other and the sides of the
clamber, $F$, substantially in the manner and for the purpose spccified.
M Clintock Young, Jr., of Frederick, Md., for an Im provement in Harvesters. Patented Scpt. 21, 1858 c-issucd July 10, 1859; again re-issued Dec. 13 $1859:$
I claim giving the rake the two described resuiarly sncceedia
xial movements over and ncross the platiorm of said machine, tha is to say an elevated curvilinear movencent from rear tof ront ove
aid patiform nald a liorizontal movement from frontto rear unon or said plat form nnd a horizontal movement from front to rear upon o
nar to said phat orrm, by the means substantially as described and
or the purpose set forih.

Ephraim Parker, of Marlow, N. H., for an Improvement in Clothes Pins. Patented Jan. 15, 1856
I claim adding bits to the machine $\begin{aligned} & \text { oas to bor } \\ & \text { is } \\ & \text { leing shaped and turned at the same operation }\end{aligned}$ I also claim, na above, the boring the stupffirst and then putting it
Ind upon a sminll mandrel, which revolves, sothat the work shaplibe turnc
and shaped to the right pattern tad finished at each end upon it wn ccinter hole all at one operation.
Ialsoctlime the above impovements as before set forth, or any
quivalent, which substantially effects elther of the above objects, by equivalent, which substantially effects either of the above ebjects, b
any other arrungements of mechanism or mechanical de vices.
Wm. Sims, of Dayton, Ohio, for Improved Refrigerators Patented Feb. 8. 1859
I claim the arrangement. severally, of the escape pipe, $G$ in com
ination with the induction pipe, $E$, so as to operate cousointly there with and in cormection with a flue, $K$, substantially as and for the
extension.
Samuel Pierce, of Troy, N. Y., for an Improvement in Cooking Stoves. Patented Dec. 6, 1845 ; re-issued April 24, 1847 ; a a ain re-issued July 31, 1847 : brick, or otherearthw substance, when this ts combined with a styve
in which the products of combnation from the frecchamber pasig
over the top of the oven, substantially as described, whereby the hea

$\qquad$
Note.-Out of the number of patents in the above list-sisty-al which were issued last week, TWENTY-rour of them were cases which were prepared and prosecuted through the Scientific American Pat-
eat Agency. ant Agency

E. P., of Conn.-Porcelain or china-ware is ornamented with metallic oxyds, which are ground up with a fusible flux, painted on the porcelain, then fused in a furnace and afterwards burnished with a proper tool. If it is required to gild with pure gold, a powder of the metal, obtained by grinding or by deposition from an acid solution, is mixed up with a flux of borax and some oil of lavender or turpentine, untilit is of a creamy consistency, When it is put on the article by the artist with a hair pencil. It is now does ale fort as does not affect the porcelain, while it melts the metal and burn the part which has been gilded is of a dull dark brown color but by rubbing it with a usual metallic luster. A red color for porcelain is obtained from sub-oxyd of copper, a yellow from chromate of lead, sud blue from the oxyd of cobalt or the "lapis lazuli." These are painted on like the gold, to produce the various shades and colors. The artists who decorate porcelain usually possess a very cultivated taste and great skill in forming figures, flowers, \&cc. Every patented article, when practicable, mist be stamped with the date of the patent each omission subjects the seller of the article to a fine of $\$ 100$. S. B., of N. J. -If your theory is correct regarding atmospheric electricity 5 always being minus, all the accidents which have occurred to life and property fromlightaing must have been by upward strokes from the earth, not.dolmward, as is gencr-
crally supposed. And if, as you state, atmospheric electricity always descends silently in the rain drops, the electricity of the earth should flow upwards by the same conductor; and as a consequence, we never should have ans lightning at all. Write out our views and observations on the subject in an uncontroversial manner, and they will be in a better shape to go before the public. J. T., of Ind.- You say of Koch's mode of applying muscular power:-"This method of applying power is much the same as the old spring pole lathe. The bow-drill, and many other common machines, act upon the same principle. But the use of the ratchet wheel and spring for continually winding up the machine, why it has not come into more general use and favor. If, however it has been comparatively unknown in the improved form, and therefore unused, the publication of the patent of Louis Koch may bringto notice its superior merits, if it possesses them; and we which will doubtless prove very good and useful." If you will examine Mr. Koch's claim, you will find that his combination is
W. A. K., of Mass.-To draw hollow wire in a tapering formfor blow-pipes, it must be drawn over a tapering or conical mandrel of the exact size which it is desired to make the tube. The metal win require to heated forthis purpose, and the whole
W. A. S., of Ohio.-We do not know where you can .
H. L. C., of N. J. -We cannot recommend any lamp as being perfectly safe for burning the explosive fluid composed of which you burning fluid will not explode until it is generated into gas and mixed with six volumes of the atmosphere.
H. A. B., of N. Y.-Soft gold solder is composed of four parts gold, one of silver andine of copper. Youcan make it much solder becomes more liable to ox ydize.
H. M. Brown, of Richmond, Va., wishes to purchase the best machinery in use for making brooms.
W. B. L., of III. -You state that you cannot get fresh plaster-of-Paris to stick on the back of your mill-stone-that it luke pick ono the the make it stick fresh plaster with warm water and pour it on, taking care to stir it, so as to displace any air bubbles that $\mathrm{m} v$ prevent it adhering to the surface; and allow it to dry thoron ? is set in motion. The have been informed that piaster of Paris, made into a paste with dilute alum liquor, and applied quickly' to millstones, makes a very adhesive and hard cement.
T. C. R., of Wis. -The word "equivalent," in a claim, is quite superfluous. By the decisions of the United States courts ll claims cover equivalents.
C. C. P., of Ohio. -You will find articles on crystals in most of the hand-books of chemistry, which will probably give you all you want to know on the subject. Draper's Chemistry and Porter's both treat of the subject. The subject of "fluids is so
broad and varied that, unless we know more definitely what you want, we cannot direct you where to find it.
G. E. S., of Pa - We can see no reason why a concen tric is not as good as an eccentric fan. We suppose you inters t employ it for a blower. We therefore advise you to be careful in so constructing it that the air will not escape backwards over the points of the wing. The Dimples Bl a it case, prove
E. C. J., of Ill.-The ament of gas required to raise 75 pounds $2: 10$ feet high, depends on its temperature, and it can be compressed indefinitely according to the pressure to which it is subjected.
suggest.
J. A., of Mass. -Exhaust steam may be conveyed int water so as to prevent the noise; this is frequently done.
W. A. S., of Ill.-The price of large plate glass, say $5 \times 10$ feet and $1 / / 2$ of an inch thick, is from $\$ 3$ to $\$ 3.50 \mathrm{per}$ square foot. Schanck \& Downing, No. 45 Chambers-street, this city,
have a plate 9 feet 2 inches by 14 feet 2 inches, which they will have a plate 9 feet 2 inches by 14 feet 2 inches, which they will sell for $\$ \stackrel{5}{5} J$. It is said to be the largest in the country.
B, C. S., of Tenn. -For a small gymnasium, the first thing required is a ladder, to be suspended over the boys' heads for them to swing on by their hands. The next most useful articles are a set of dumb bells, and next to these a pair of ropes, with iron rings at the ends, forswinging by the hands. You will find that this simple apparatus will give most of the gymnastic exercises But if you want to enlarge, add, in the order named, parallel bars, a climbing pole, weight and pulley, and stuffed bag for fist exercise. J. J. S., of N. Y. -We are not aware that the heat con ducting power of india-rubber or gutta-percha has been measured it is small, however, we should think smaller than that of marble o ans of the substance g in your list.
D. J. S., of N. Y. -Your letter, regarding the strength of wrought-iron beams, will be answered in our next.

## Money Received

At the Scientific American Office on account of Patent office business, for the week ending Saturday, Dec. 17, 1859:-
D. B. S., of N. J., $\$ 10$; H. \& J., of Ohio, $\$ 30$; J. V.T., of ml ., $\$ 25$ S. W. R., of Mich., $\$ 35$; $\Lambda$. H. C., of Wis., $\$ 20$; G. \& G. N. M, o Conn., $\$ 30$; N. A. P. of Tenn., \%5 ; J. W. M., of Mass., $\$ 355$ P. C N. Y., $\$ 45$; H. M., of N J., $\$ 30$; F. \& M., of Mass., $\$ 00$; J. B. M N. Y., $\$ 17$; J. G. W., of Ga., $\$ 30$; W. S. K., of Conn., $\$ 30$; G. \& R of Mass., \$17: E. A. S., of Pa., $\$ 33$; J. B., of N. Y., $\$ 23$; S. C. 1 I. , of N. Y., $\$ 35$; G. E. H., of N. Y., $\$ 10 ; \mathrm{R}$. C. H., of N. J., $\$ 30$; T. C R. of Wis., $\$ 35$; B. D. \& Co., of Pa., $\$ 35$; J. G., of Ga., $\$ 30$; L. B
. of Wis., $\$ 30$ M. P. W., of R. I., $\$ 25$; E. B., of N. Y., $\$ 30$ E. M in Ind., $\$ 30 ;$ O. M., of N. Y., $£ .00$; W. E. B., of N. Y., $\$ 30$; J. D. M.
 Ill., $\$ 30$; J. A.C., of C. W., $\$ 30$; R. IL.. of N. Y., $\$ 35$; L. 1.4 Mich., $\$ 3!$; J. M.L., of R. I., $\$ 35$; R. M. C., of Mich., $\$ 35$; H. H., o N. Y., \$30 ; J. M. D., of N. Y., \$30; P. Var V., of N. Y., \$35; G. C. D., of Ohio, $£ 15$; li. L. B., of Ill., $\$ 3 \mathrm{~J}:$ R. S., of Conn., $\$ 20$; T. B.
Co., of Va., $\$ 25 ; \mathrm{C} . \mathrm{V} . \mathrm{L} .$, of Texas, $\$ 35$; V. M. B., of Pa., $\$ 25$; M. of Vt., $\$ 40$; J. K., of N. Y., $\$ 30$; I. M. P., of Mo., $\$ 35 ; \mathrm{C} . \& \mathrm{~L}$ N. J., \$15; J. P. M., of Ind., $\$ 29$; G. D., of Ohio, $\$ 30$; B. \& W Y., $\$ 25$; S. F. Van C., of Cal., $\$ 15$; I. H., of Ind., 25 ; H. R., of Mass $\$ 100$; I. W., of Maine, $\$ 30 \leq$ L. F., of Mass., $\$ 30$

Specifications, drawings and models belonging to par lies with the following initials have been forwarded to the Patent

 T. of Cal., J. W. M. of Mass.; P. Yer V., of N. Y.; R. II., of N. Y
T. B., of N. Y.; K., of N. Y.; J. V. T., of Ill.: J. D. M., of Pit. S. of Conn.; II. \& V., of N. Y.; W. II. MeN., of N. Y.; N. A. P., Tenn.; C. B. W., of N. Y. (3 cases) ; J. B, of N. Y.; J, M. L., of R I.; E. M., of N. Y; R. M. C, of Mich,; V. D., of N. Y.; V. M. B., of Pi.; L. B. D.. of Wis. (2 cases) ; B. \& A., of Pa; A. B., of N. Y.; P . C., of C. W.; J. P. M., of Ind.; J. H., of Ill.; G. B. L., of N. Y.; I., of Ind.

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