Since the gradual abolition of the cruel and infamous system of indenturing apprentices to masters a great improvement in the character of our workmen and the machinery they make has been manifested. Our machine shops, a few years ago, were full of English planers, slotting machines, compound planers, screw-cutting machines, etc. Now there are none imported. We can make better machines at much less cosi at home. We can make them better and sell them in England at a lower price than they can be manufactured there. This statement is admitted by the London Engineer; (see Scientific American, page 297, Vol. IX., article "Energy and Aptitude of American Mechanics"); and this in spite of the fact that wages and iron are both higher with us than in England.
Our plan ot educating youths in trades, as it exists at present, is the very best conceivable. The term "master," which is especially offensive to the American mechanic, is unknown, and the relation between the workman and bis employer is that of good will and a disposition to work for mutual benefit. Instead of learning one branch the apprentice is put through each in turn, and the consequence is a more thorongh knowledge of the trade. There is no eye-ser vice in the present plan, and no compulsion; if a youth does not like his business or his employer, he puts on his coat and goes home, and neither carries off his victuals, his clothing, nor his schooling, for he has had neither. This course is the best for both, tor every one knows that enforced labor is good for nothing, and a man who has to be watched to do his work is not worth watching.
The character of American machines and American mechanics, is higher to day than it ever wa.a. There are no shops in Europe which turn out more perfect work than the establishment of Sellers \& Company, in Pbiladelphia; A. M. Freeland, in New York; the Putnam Machine Company, in Fitchburg, Mass.; Browne \& Sharpe, in Providence, R. I.; Portland Machine Compans, in Maine, and hosts of others too numerous to mention; these are only noticed because we know their work; aside from this fact we have never spoken a worl to any ot their representatives.
English workmen are far behind our own, both in point of dispatch, accuracr of workmanship, personal cleanliness and moral character. We judge from the samples we see among us. They are arrogant, boastful, uneducated, and continually prating about "the Clyde," and what wonderful achierements are performed on that classic stream, or else eternally sounding the praises of Maudsley and Fields, Napier-rs, etc. -to the disgust of our mechanics, who think, not unreasonably, that what "Napier" may do or not do is of very slight importance. Let any man go into the shop of the Waltham Watch Company, where machinists of a high class are employed, and if he can find a cleaner, more intelligent, better dressed set of mechanics, write us word where they can be found, for we want to see them. Comparisons are invidious, however, and it is not in this shop alone that we are to look for steady, intelligent and active mechanics. New England is full of them; so are the other States; and the workshops of the North are the schools where men are taught patience, endurance, and manual dexterity.
In foreign courtries sou shall find the workmen congregated in beer shops, engaged in dog-fighting, or some low enjoyment. It is not so with us. There are few who do not spend their time in the development of some scheme to make fortunes, or, at the least, becomg their own masters. That would be a dark day for the trades when we should return to the bondage of signing indentures and making a trade something llke punishment for an offense, instead of enlisting all the energies and sympathies of its members in its eleration. We bave no fears for any such result, and so long as our present plan is in force will the character of American mechanics maintain its high standard.

## INCRUSTATION POWDERS.

We bare been many times solicited to puff this or that remedy for preventing deposits in boilers, but have never sanctioned the use of powders in general, for we have felt that anindiscriminate use of them was more likely to result injariously than beneficially; moreover, cases are frequent where one particular
remedy is of no avail. The better plan is to remore the impurity before it enters the boiler, and that this can be done eflectually will be seen by referring to the letters which we publish in another part of this paper. We have also given from time to time, in the columns of the Scientific American, a list of different articles to prevent scale from adhering, and we direct attention to page 107, Vol. IX., for informa tion on this point. Nost of the scale powders and nosrums of this sort are composed of the materials there spoken of, and can be bought in any drug store for one-fourth what is charged by agents for the same stuff.

## dEFECT IN STEAM ENGINES

Zealous professors of science occasionally call at lention to the fact that steam, as a motor, costs much more than it should, and that little over one-tenth of the actual heating valve of the fuel is realized in practice. Experiments and experience prove the statcments to be virtually correct, and it is a reproach to the mechanical skill of the period that it should be
The loss is not in the theory of the engine, tor that is perfect, but in the practice of that theory; or, in plain terms, in the construction of steam engines. It is an undeniable fact, however, that but few of the steam enginès now constructed work with the economy that they should, or even approximate in pertormance to the theoretical value of the fuel.
Portable engines are turned out by scores which, although well enough externally, are far trom being in a healchy condition in those parts which affect economy. The slide ralres are only such in name; they exercise few of the proper functions of this most important detail, and the boilers are heary, enormously large in fire and heating surface, and every way disproportioned to the size of the cylinders. The feed pumps are poorly got up; the valves lift too much; the water passages are cramped and crooked, and the absence of any proper method for heating the feed water withont creating more loss from back pressure on the piston than is gained by injecting hot water to the boiler is often noticeahle. We make these statememio tor the interest of any il max con. cern--not to find fault. Many stationary engines are in precisely the same condition.
It is not the only thing required in a slide valve that it shall open and close the ports at a certain time, but that it shall be properly set tor the work it has to do, that it shall exhaust the contents of the cylinder at the proper time, that it shall close properly, and that the lead shall be proportioned to the duty. That this is important every one is aware who has ever inspected, or is familiar with, indicator diagrams.
It is a common thing, on railways, to hear a locomotive exhausting "one-sided," as it is termed, or giving palpable public evidence that it is out of order and that the master-mechanic on the line is either indifferent or careless of his duties. The know of nne road where our ears are daily saluted by the sound of a locomotive drawing a long train of conches and regularly exhausting 1-2-3-4, 1-2-3-4, or with a rery positive interval between the successive exhausts. It would be quite as sensible to dran two or three empty coaches, day atter day, as it is to permit an engine to run in this way; for at every uneven or irregular interval, the steam is compressed or choked in the cylinder, and delayed in getting out until it acquires a high tension, so that the actual pressure is much greater on the exhaust side than on the steam side. This subtracts from the efficiency of the machine, adds to the cost of repair, of fuel and every thing used in running the engine. A locomotive en gine, exhausting unequally, carries dead weight which costs a great deal to keep.
We know that engines are often regarded as in chronic or incurable difficulties, because some myste rious cause conflicts with setting the ralres properly, but we have frequently found that individuals were more fond of declaring that the defect was very mys terious, than they rere zealous to remedy it.
It is very plain, from the simple facts here citedmany of which are so well known among profes sional engineers as to be traisms-that one of the greatest oustacles in the wny of economy in the sterm engine 19 a want of mechanical accuracy in construction, erection and oversight; and that the cost of a
horse-power could be very much reduced by attention to ohvious and well-known defects existing in steam engiues.

## The Pneumatic Dispatch Wyorks.

The Pncumatic Dispatch Works, so Iar as regards the extension of the line from the Euston-square ter minus of the London and North-western Railway to the Bull and Gate Station, Holborn, a distance of over a mile and a half, are nearly completed, and the tube will shortly be opened for the transmission o goods and parcels. The new tube is much largel than the first experimental one, and is about four feet high and four feet six inches in breadth. A commodious station has been erected near the arrival platiorm at Euston, and at the end of this there is an opening in the floor leading to the entrance of the large tabe, which is laid beneath some of the busiest streets of the metropolis as far as Holborn Hill, near Hatton Garden, whence it will ultimately be extended to the General Post Office. The engine station, whence the system will be worked, is in the Bull and Gate Yard. Holborn, and the soil in this place had to be deeply excavated to find room for the tubes, which extend from beneath the street into the station, and lie at some depth below its upper works. At the extremity of the yard is the immense circular fan, composed ol wrought-iron plates. This tan is a sort of disk containing numerous cellular compartments, with the divisions radiating from the axis of the wheel, the diameter of which is about twenty-two feet. The fan lies in a large chamber, and will be driron by two very fine engines, each of twenty-five horse-porrer, made by J. Watt \& Co., of Birmingham. The machinery is already fixed, and the transit of goods, it is stated, will commence soon. Thus a goods traffic propelled by atmospheric porrer will be the next novelty for the metropolitan public. English Paper.


ISSUED FROM THE UNITED STATES PATENT-OFFICE for tife weef endina june 6, 1865. Reported oficially ior the Solentific $\Delta$ merican

- Pamphlets contaning the Patent Laws and full particulars of the mode of applying for Letters Patent specifying size of model required and much other in tormation useful to inventors, may be had gratis by addressing NUNN \& CO., Publishers of the Scientifio american. New York.
48,036.-Paper Bag.-James Arkell and Benj. Smith We clanam softening tbe .:
We claim softening tbe upper parts of paper bags and makin
them pllable, substantlally as and for the purpose above deecribed 48,037.-Stove.-Wm. Bamford and J. F. Tate, Jr., Mil waukee, Wis.:

 Thrat Phe popensing or nipo, II, wben used for pasing tbe outer air
through a heated space and into an inner chamber, provided with
 each of said'p
48,038.-Pipe Conpllng.-A. E. Barnard, Cleveland, Ohio:
I claim the cam, F. and hos, D. in comphination with the lugs, dc
 Seron
tor wh
fortb.
8,039.-Buckle Attachment.-Wm. E. Barton, East Hampton, Conn.
Iclaim the metallic buckle fastening for fasteuing buckles to Also the saild metallicbocuctiol fastening, in combination with buckle nd strap, substantialls as described
8,010.-Sleigh-bell Attachment.-Wm. E. Barton, East I claim the withlndedescribed metallic bell-holder. cast of brass on
 impinging points on the strap side, and on the bell sid prong
adapted to enter the bell through suitable holes there: and hold the same by bending orclenching, substantially as set forth.
second, The aid bellholder strap and bell, in conbliation whe Second, The :aid bellhonder atrap and bell, in comblnation when
put together so as to hold the bell toosely and away from the strap. substantinlly as described.
43,041.-Composition tor Lining oll Barrels.-Jullus
Baur, Biooklyn, N. Y.: Baur, Biooklyn, N. Y.:
I claim the employment or use in a compound for uning petroleum
packages of chloride of zinc and glue, made aubstantailly as herein Also the
att
at
Also the uge in a compound for lining petroleum packages ot
chloride of zlnc mixed with glfcerin, as described. Aleo a con.pound made of chloride oi zinc, give and glycerin mixed jgether, Bubstantially in tbe manner and about in the proportion
zreln apectiled.

48,042,- Power-gaining Machlne.-Henry Bickel, Eliza beth City. N. J.:

(An engraving and deecription of thi invention will be pull/ished won in the Scientific Americin.
48,043:- Alr Engine.- Dana Bick ford, Boston, Mass:
the gate, K .
I also claim the combination of the lifting spring, 0 , with the , the
${ }_{K}$ ton and as descrinder provided with the vibratory conduit, H , and gate



 and gate, $K$, or their mechanical equiralente, as specitied
48,0+4.-Hoisting Machine.-James Bird, New York $\xrightarrow{\text { Clity: }}$
 same staitt with the lioistins pulless and their gear wheel, as atove
set forth.
[This invention consists in a novel arrangement or power and gear wheels in an apparatus for hoisting heary weights, whereby the ma chine is made very efflcient and the expense of making it is much reduced.]
48,045.-Corsct.-James Bower, New York City:
le claim a garment connected by means of lacings or their equiva-
ants passing through the eveletted stans nithina d duplicate tibric
alen eyeletted, all substant ially as shown and des cribed 48,046.-Stovepipe Damper.-John Bradshaw and Sain uel C. Wilson, Albion, N. Y.:
We claim the employment of the within damper, cast in the form
described, and a ranged to operate as and for the purpose specitled. 48,047.-Thrashing Machine.-C. B. and Wm. T. Brown, Alton, Ill.:
structed and arranged as herein described, so that the operators can standon the ground, dspensing with the use of a platform.

IThis invention relates to a new and useful improvement in the mplifect and rendashing machines, whereby the same are grcatly mpined and anto and the machine nearly balanced on its wheels in order to facilitate the operation and the transportation of the Name.]
48,048.-Watchman's Time Detector.-Jacob E. Buerk Boston, Mass.:
I claim, First, The uee of a false revolving dial, $\mathbf{E}$, in combination
with the stationary index, D, and spring points,
operating substantially as and for the purpose set forth.
second, Producing the penforations on the paper dial or its equiva-
sent from ths inside out, mstead of from the outside in, as beique.
(An engraving and description of this invention will be pul) lifhe in one of the next numbers of the Scientific American
48,049.-Gang Plow.-John C. Brown aid G. H. Slim pert, Pinckneyville, Ill.
First, We claim the arrangements of the hinged adjustable beam
 scribed, Connecting the hooted rocking levers, $J \mathbf{J}$, to the plow beamsby means of bent swinging rods, substani,
Fourth, The laterallyadjustable slotted plates, $d$, applied to the sloted frame, $\theta$, add adapted to serve as puides for the plow beams
$F F^{2}$, and also epress said beams, substantially as desci-1bed
Frth, Pivoting the forward ends of the plow beams to rocking
tita, which are arranged one in advance of the other, and ap bars, a a', Which are arranged one in advance of the other, and ap
plying the plows to said beams at about cyul distances from thei
respective protil connections, Bubstantialy as deacribed respective protal connections, Apparatus.-D. P. Butler, Bos
ton, Mass.: bilty of adus tment, zubstantially as described.

## 48,051.-Weight-pulling Apparatns.-D. P. Butler, Bos

ton, Mass.:
I clam, a weight-pulling apparatus having a construction an
provision for adjustment, suistantially as set forth.
48,052.-Shank Laster.-John Cain and A. B. Cain Dubuque, lowa :
First, We claim the compound jaws, ob g g, when the taner iaws
re made of leather or other flexible substances, substantially as Second, Extending the edges of the jaws, $d$ d, beyond the toothed
Ser 8,053.-
48,053.-Washing the Blankets of Printing Machines.-
Thomas W. Clark, Manchester N. H.:
Thomas W. Clark, Manchester, N. H.
I claim the employment or use in the blanket. Washing devices of
nachln nes for printin fabrics, sucl1 as calicooes delaines, etc, of a
scraper or pressure roller to the washing rollers, to operate in t the
manner substantially as and for the purpose set forth.
48,054.-Tool for Cutting Off Boiler Tubes.-Dennis A
Dacey, New York City
I clamm the implement herein described, constructed and operated
substantally in the manncr set forth, for cutting of bolier tubes
and for other work. and for other work.

保 for tapping holes of any size, and also for drilling and reaming holes in metal, and ingeneral for any use whercin a tool can be operate by a pawl wrench.l
48,055.-Sheep Label.-Chas. H. Dana, West Lebanon N. H.:
I claith the within described link-shaped label for marking sheep
oth ends being fastened closels to the ear, in the manner substan 8,056.-Machine for Attaching Balls to Cartridges. Darwin Elis and George R. Stetson, New Hayen Conn.:
We claim. the combination of the two sharts, g and , with the
revolving crimper, F, when the whole is constructed, arranged and
fitted to produce the result substantially as herein described fitted to produce the result substantially as berein described.
 Third, We claim the combination of the revolving crimper, F, with the receptacles, , , and the anti-riciction roller, r r, when the whole is
constructed and ftted for use, substantialil as herein described. 48,057.-Heddle Frame for Loom.-Milton Finkle, New
First, I claim the adjustable heads, $\mathbf{C}$, constructed in the manner
substantially as alovedescribed, for receiving the ends of the shafts, A, and rods, a.
socond, I claim the combination of the heads, $C$, and caps, $D$
made and applied subetantially as above descrlbed. made and appied substantiall as avore described.
Thard, I also claim the stays D, with hooksor eyes attached, with
or without th connecting rods, $\mathbf{B}$, substantially as above described. 48,058.-Stovepipe Damper.-A. V. and A. F. Fletcher Athol, Mass.:
First. We claim the disk, $F$, constracted and arranged substan
ially in the manner shown and described.

Second, The $\begin{aligned} & \text { ghral cord, E. a tached to a storep } \\ & \text { stantially as and tor the purposes herein specifled. }\end{aligned}$.
[This invention consists in the application to a circular frame of a disk on the one side, so arringed that when the damper is turned in one position said di-k will be pressed tightly against the frame, and thus prevent the heat from escaping up the chimnes; but when furned in an opposite direction, will fall away from the frame, and permit the products of combustion to pass freely to the flue or chm er; it also consists in attacbing to the opposite side of the frame phral coil, made of strips of metal, and so arranged that the smose, e coill, etc., wif acquire a circular motion while passing throug ve a better radiation of the heat therein contained.
48.059. Y. Carding Machine.-P. S. Haines, Newburgh I claim the combination of the shaft, $\mathbf{H}$, and $\mathbf{c o m b}, \mathbf{C}$, with the anging bearing, ${ }^{\text {, }, \text { and cha }}$ and
the purposes above described.
(This invention consists, among other things, in a new mode of operating the dofter comb of a carding machine, by which it is re ciprocated in a nearly vertical direction, and caused to strip th doffer cy
8,060.-Mode of Applying Covering to Roofs, the
Decks of Vessels, Etc.-James Hall, Dorchester Mass.:
I claim as my invention the application of heated metala to the
surfaces or the cloth in the process of mbedding the cloth in this paint, uutitloc the cloth to the surface more firgly and smothly
han can be done without the application of heated metals.
48,061.-Handle for Tea and Coffee Pots.-G. B. Halsted
New York City:
I clam as a new article of manufacture a handle for sheet-meta
ea and coffie pots and other similar slieet-metal ressels, construct
 desii ed form, of sheet-metal, and connect
otherwise, substsentially as herein set forth.
48,062.-Stone-grinding and Polishing Machine.-Jas Harsha, Circleville, Ohio
I claim, First, The combination of the carriage, $\mathbf{B , ~ g a t e , ~ D , ~ a n d ~}$
inner fraine scribed.
Recond, The grinder, $\kappa$, with its orifices, constructed in the man-
ner described, for the transmission of the grinding material to the impinging surfaces.
Third, The scraper, s. in the described relational position to the
48,063.-Combined Seeding Machine, Roller and Drag -Wm. H. Hartman, Fostoria, Ohio:
I claim, First, The oscillating drag, M, provided with a seed-box,
V , as and for the purpose specifted. Second, I claim the distributing board, $K$, in combination with the
eed-box, $G$. and roller, , when arranged and operating as and for the purpose set forth.
Third $I$ claim thent of the roller, $B$, in its relation to the drag. $M$, as and for the purpose described.
48,064.-Nachine for Gathering and Loading Flax Etc.-G. W. Hatch, Parkman, Ohio :
First, I claim the springs, e, and rake, C , attached to the pleces
B,d, ot the frame, and in combination with the adjnitable sid


48,065.-Ventilation of Mines.-Herman Haupt, Cam bridge, Mass.
bridge, Myass.:
Ining, tunneling, and other sub terraneous op
rations of ste am ge neratos, in combination with a vacuum plpe. erations of steam gencrators, in combination with a vacuum plpe.
48,066 .-Cultivator.-Samuel G. Horning. Mount Car 8,066.-Cultivator.-Samuel G. Horning, Mount Car
roll, Ill.: roll, Ill.:
I claim the
 and arranged as and for the purpose substantially as herein se
forth.
8,067.-Boiler for Steam Heating.-Henry Howard I claim the boiler, A, for heating water and generating steam when
ormed ormed, constructed and arranged substantially in the manne
herein oet forth.
48,068.-Cultivator.-Henry Howe, Darlington, Wis.: 1 claim, First, The oblique bars, E E, connected to the draugh ith the bars, , I, and driver's seat, $L$, substantialli as and for the Second, Tho poow frames, FF, connected to the bari, E E I I, and
bhaft, K, substantially as shown, and to admic of being orerated as
described.
IThis invention relates to a new and improved cultivator, designe or plowing corn and other crops which are grown in hills or drills, shown and described, whereby the plows are placed under the com plete control of the operator, and rendered capable of being moved terally, to conform to the sinuosities of the rows of plants, and also of being readily raised and lowered.]
8,069.-Grain Drill.-Joseph Ingals, Mllton, Ind.
First, claim the spring brace bar, G, attached to the drap bar,
and impinging at the clurve, h, upon the end of the flange, Fh the
working position of the hoe, and baving an inchine, upon which the cribed the flange rises when the hoe is deflected backward, as de scribed and represented.
second, The indentation, $n$, on the flange, $F$, in which the end o
the springrests, detaining the hoe from firther backward deflec 48,070.-Slide Valve.-John G. Ives, Springfield, Ill.: I claim the combination of the sectiozs or ringa. EE, composing ting steam to the said space, b, from tbe space, d the whore bein
const ucted and arranged to operate in the manner and for the obeoct specifled.
(This invention relates to a peculiar construction of slise valves ight joint with the cage or chamber in which iber more Als in novel formation of the ralve cage, so as to obviatc and prevent the valve fiom abutting or being canght acainst the edges of the post, moves back and forth.
8,071.-Washing Machine.-Josce Johnson, New Yor Claity : and 4, of the tubproved conastruction of washing mac hine the side the lever, $C$, and pounder, E, operating relatively to each other an
to the sid, s, ${ }^{\text {and }}$, substantially in the maner a nd for the pur
48,072. - Meat Crusher. - Robert V. Jones, Canton, Ohio Ind provided wombination of the roller, C, rotatingin fixed bearing belng pruwlded with teeth and the other with longitudinal grooves nd Eit arranged to operate a.s specifled
保 more desirable for the table than it otherwise would be.

48,073.-Breech-loading Fire-arm.-Benj. F. Joslyn clai m, Frgton, Conn
 or trame adapted to the said shoulder, $n$, all substantially as se Se cond. The block. G, with its projection, k , spring catch, W, and
spring rod. H, in comblnation wrth the brech piece, D, pin, dand notched disk, E, the whole being arranged for Joint action substan-8,074.-Submarine Port-hole Closer.-John H. Kar anagh, Joliet, Ill.:
I claim, First, The combination of the outer and inner valves. $O$
and $\mathrm{G}^{\prime}$ with the outer and inner plates, $\mathbf{A}$ and $\mathbf{B}$, surrounding the
porthon port.hole, constructed and operated substantially as described.
$\mathbf{S}$ (cond. The combination of the ralves, $G$ and $A$, with their axles,

 48,075.-Shutter Hinge.-Christian F. Krlaucr, Pitts First, I claim a hinge for window shutters, blinds, etc., compose ftangs an d shanks, at ripht angles to each other, and provided re
pectively with pintles and cyes, silntantially as bereln shown and
described. described.
Second, In combination with a hinge, on nade, I claim the corru
gated or roughening of the tangs, sub.tantially as and for the pur pose speciAed Third, The doble pintle, a, and two proiections. e e, on the part part, C, all arranged substantially as shown. to admit or the hinges beings.
blinds.
48,076.-Car Conpling-(i. C. Lawton, Syracuse, N. Y First, I claim the prculiar shaped head, B, of the draw rod, A
wi:h its shoulders c c, and itsextengion abore and the sloping posi tion at which it is attached to the draw abore and the sioping pos
and operating as substantially described. constructed, arranged


 galn or siot in the buffer head, all constructed, comblnced arrange
and operating toge ther as substantially shown and described. 48,077.-Corn Husker. Sheller and Cleaner.-C. J. Legg Penn Yan, $N$. $Y$
I claim, in combination with the sheiling cylindiers, B D, con
tructed as described, and provided with the screen, $G$, and fan, the arr angement of the bagoing elevator, N, with the valve, 9 , the
whole operating subitantially as ancl for the purposes herein speci
48,078.-Machine for Tallying Lumber, Etc.-G. R First. I claim the disks, C and D, in combination with the index
 Thrd, I claim the cam, T. with the catch, J, and pinion, $\begin{aligned} & \text {, in } \\ & \text { combination with the disis, } \mathrm{C} \text {, and }\end{aligned}$ cam, $h$, as and for the purpose Fot forth. I claim the slide, p, and cam, K , in combination with the
indicator, F , and disks, As and for the purpose set forth. 48,079.-Button.-C. M. Loomis, Hartford, Conn. Ante
dated May 23, 1865 : I claim the employment of the staple, $C$. In combination with the
disk, A, having the curved or concave surfaces inside the button ubstantilly as and torthe purpose herein descrbe
48,080--Mining Pick.-Harvey L. Lowman, Virginia I claim as a new article of manufacture, the pick, constructed a
herein descibed, that is to say. with an elliptical socket, the oppo
 4,081.-Propulsion of Street Car.-Chester M. Mann Detroit, Mich.
I claim the arran ement of the lever. a, links, H H, and cranks,
I, in combination with the ratchets, H and H , provided with pall
reverse the motion and connected by gearng to the drivin
48,082 .-Mold for Button Maktin.-Ceorge Mathew
 Second, We claim in connection with the above the shelf, $c$, or it equivalent arranged as represented, and adapterd to support th betore set forth
Thitrd, We claim supporting the parts, $B C$, cn the bed, A, so tha
the pressure of the upper die, $G$, upon the face of the buttons shal cause the parts, B and ${ }^{\text {and }}$ to he sprung or conpreessed more tightly
together substantially in the manner and for the purpose herein
set torth.
 48,083.-Bag Holder. - L. W. Morlan, New Lisbon, Ohio:
 Ing the mouth of the pags, when they are to to tilla, ' constructe
and applied, substantiall' as described. (This invention consists in an apparatus thate so as to be portable for holding the mouths of sacks while they are being filled with grain, flour or other artic les. 1
48,084.-Car Spring.-John Murray, New York City I claim the pecular, construction of the divisinn plate. C. co m made to answer the two fold purpos of a cap and a basef er the two
boxes and sets of springsrespectively; and at the amane time acts a
a culde and surport to the spludics and allows them the required a gulae and surport to the splndles and allows them the required 48,085.-Railroad Signal.-Gabriel Natcher, Sidney Onio:
I claim the bar. L. laid transversely to the track and porvided with
an arm,, , and counterbalance weight, $M$, for the purpose, and ar ranged substantaliy as described.
I claim the combination and arranserment of the stiffeners, b $C$
ats, a a, and wires, $c$, substantally in the manner, and for the
 nd notches, $m \mathrm{~m}$, suid parts belng made el ther entircly of me n
or partially of metal and partially of wood, substantially as herei 48.087.-Steering Apparatus.-Albert H. North, Nau buck, Conn.:
I claim the emplopment of the cam or eccentric wheels, CE, oper-
ated by proper mechanism, substantlally as and for the purpose de cribed.
48,088.-Butter-molding Machine.-Amos Nudd, Wam
pun, Wis.:
I calm, in a butter-molding machine, constructed as described
cate

48,089. - Deep Well Pump.-James Old, Pittsburgh, Pa. Iclatm the use of a Fpring , po placed in combination with th in part, the nydrosutic pieprare of the superincumbent column of
Uquald, and inure the operfig of the valve. on the descent of the
platon, fubstantlally as herein before described.

48,090.- Rein Holder.-S. J. Olmsted, Binghamton I claim as an article of manuf
substantially as berein recited.
48,091.-Mode of Raising Sunken Vessels.-Austin B. Page, Weaversville, Cal.:
I claim the combination and arrangement of the lever, E, and

18, 092. - Hat.-Charles L. Rahmer, Brooklyn. N. Y.: provided with a series of sharppointed pins or other proper fasten
pryderices, rubber orther suitable elastic cubhions arranged to
getber substantially as described and for the object specifled. 48,093.-Sheep Rack.-John P. Ray (assignor to him self and Wesley W. Ray), Honeoye, N. Y.: I claim the grain trough or receptacle, $C$, constructed in sections,
11, so arranged as to open and rest against the id des of the box, or
to close centrally to feed the sheep, the same being used in combina11, so arranged as to open and rest ayainst the sides of the box, or
to closecenrally to feed the shep, the same being used in combloa-
tion with the bux, A, substantially as described, in combination with the graun trough, constructed as described.
I also claam tlie double tolditip and compressing racks, B B, ar
ranged and ope rating substanially as specifled. anged a
48,094.-Mode of Operating Churns.-Jacob Redding
New Castle, Ind:

48,095.-Button.-W. H. Reed, Philadelphia, Pa.:
I8 claim -Be vution, A, with its opening, e, countersunk on the un-
der side ot the button, substantially as and for the purpose de-
der side of the butca,
scribed.
8,096 .-Churn.-Albert Rhoades, Pontiac, Mich.:

48,097.-Horse Leg Fender.-Stephen Romssan, Hudson, N. Y.:

I Claim the former inter linng or stifener, Fty. 5 , and the brace, a
when both are unctosed, combined and urrang ed substantially in th or the purpos
48.098.-Piston for Pumps.-Phil p C. Rowe, Boston Mass.
1 claim the elastic cylinder, C, in combination with one or more
astic leather cups, $F$, with disks and nuts all placed on the piston elastic leather cups, F, with disks and nuts all placed on the pist
rod and arranged stbstantially as and for the purpose set forth.
IThis invention consists in the employment or use of a prece of leather, one or more, of cup form, and an elastic cylinder placed on the piston rod and arranged with metal disks and nuts, in such a tlghtly within the pnmp cylinder by compressing the elastic cyl inder.l
48,099.-Manufacture of Glucose and White Lead. I clatm the combined manufacture of glucose or grape sugar and
white ead in such a mannerthat both articles are manufactured independently of each other but that the waste gases and vapor
arisig trom the manuacurof the former are used for the coro
sionof lead into white lead, substantially in the man ner herein de-
scribe
48,100.-Snap Hook. - Cyrus W. Saladee, Newark, Ohio: 48,100.-Snap Hook.-Cyrus W. Saladee, Newark, Oht, The buckle-shaped guad, B, with or without the
spur c, in combination with a hook, b, substantially as described
 b , substantiallv as described, and forthe purposes specitled.
Third, The book, o, on the end of the spring, C. orthe purpose de-
seribed. Beribed. The combination of a snap book, A B, with a buckle, $H$,
Fourth,
when the buckle is provided with an extra bar, I, for the attachment
of a stram. of a strab.
48,101.-Wheelbarrow.-N. C. Sanford, Meriden, Conn.: Iclaim the combination of the trussed trame and tilting bottom,
substantially as and for the purpose peclied 48,102.-Cultivator.-William G. Savag
48, 1 claim the arrangement of the plow standards, Clinton, Ill.:

 Ifurtber claim the combination of the two plow standards, treadles and levers, all arranged to, operate in the IThis invertion relates to a
This invention relates to a new and improved cultivator or corn the driver will have full or complete control over the same and a the same time a very simple and efficient implement for the purpos specifled.]
48,103.-Sail Clutch.-E. T. Saw yer, Portland, Me.: First, I claim provildiug on each end of a sail hank or noop a fer
rule. which isconstucte substantially as described.
Second, Locking the hoop or hank, und clasping the rope and the sail by means of a clutch or clasp, constructed substantially as de
sc ibed Third, The two part clasp, constructed substantially in the manner
and for the purpose described. 48,101.-Seed Planter.-Geo. M. and Samuel H. Seward, Guilford, Conn.:
Firgt, We claim constructing the bopper, G, so as to revolve with
the risk, E, When che ssme is combined,
brith the plate, D, and the
burpo Korits equivalent, substantially in the manker and for the the ash,, or its equ,
brurp, K,
purpose described.
Second, Adiusting the bopper, $G$, constructing and operating in
the manner described by means of the screv, $P$, substantially as and
for the purpose s pecifled.
48,105.-Deep Wcll Pump.-John Sheffield, Pultneyville, N. Y.:

I caim the employment in a lift pump, with two tubuler platons, Dulves, and bars, $d$ d, substantially as and for the purpose deacribed. [This invention has tor its object the removal of gases from oil and other wells, and it consiots in applying a gas or arr pipe alongside
the well tube through the packing so as to conduct the gases out of the well tube througb the packing so as to conduct the eases out of
the well. It also consists in providing a chamber or trap at the lower end of the well tube, which will prevent the entrance of gases into said tube, but will not obstruct the entrance of oll or other liquids.]
48,106.-Oil Ejector, --Jofn Y. Smith, Alexandria, Va.: larged valve chambers, when arranged iotermediately between the
tube or pipe sections, and concentricaly therewith, substantially as tube or pipe sections, and concentrically therewith, substantially as
set forth. In combination with a revolving central steam pipe and
seconi, In stationary alve seats upon the latter, substantially as and for the
anit therir ver
purrose set forth.




ated as described, I clamm the welggted valve covers, so as to clos
the valveopening if the externalpressiure of the liquid exceed tha
from witbin, substantially as set fort 48,107.-Apparatus for Making Extracts.-Lyman Smith Erie, Pa.:
Iber equivalent derice for producing a vacuum, substantially $\begin{aligned} & \text { as } \\ & \text { or }\end{aligned}$
on forthe purpose set forth.

## 48,108.-Thrashing Machine.-Samuel Spencer, Groton

 I claim the concave, D, when attached to the regulating and tight-ening blocks, BB, to re ender it adjustable with the elevator, $C$, when onstructed and operated as above described.
48,109. - Horse Rake-A Ariel B. Sprout, Hughesville, Pa. Frst, I claim the toot lever, E, so provided to thy rake head as bv
eing depressed to throw the rake from its elevated to its working
position, and by being held down with the foot to retain the rake in position, and by being
ts Forking position.
sther rigid parts aitthe ring the fulcrum bar, $F$, to the cleaners or
onean of straps, g, connecting the
tho parts of a binge joint, so as to allow a hmited amount of vertical two parts or a binge joint, so as to allow a limited amount of vertical
plap to the bar, Fior the purpose described.
Third I claim lo combinatlon with the straps, $g$, the movable rugs, or thair equivalent, for the purpose of preventing the vertical
play of the bar, Fi relatively to the cleaners, under the circum-
stances described Fourth, I claim the extension in front of the axle of the cleaners
, wiich support the rake head, so as by their vertical adjustmen G, winich, support the rake head, so as by thenr vertical adjustment
oregulate hight of the rake bead from the ground at a given
olevaion of the shats Firth, I claim the rotating notched pintie bolt, H h' with grooves
therein corresponding to similar grooves un the lug. H , for coiling the rake teeth, until the requisite force is a atained, and for holding
the tootu when coiled in position under the act:on of the nut on the
bolt.
48,110.- U.: I claim the machine or apparatus as a whoie, when used in conI claim the machine or apparatus as a whoie, when used in con
nection or combination with any vise, as and for the purposes abov
set forth. 48,111.-Carriage Axle.-George Hayward Thomas, New York City:
I claim the mode herein described of securing a wheel upon it detachable or movable collar or ring, in connection with a nut the two being artanged together and operating substantially in the
manner herein above set forth. 48,112.-Drag Bar for Grain Drills.-J. H. Thomas and Pe claim soconstructingfield, Ohio :
 48,113.-Manufacture of Machine-sewed Shoes.-Edwin Thompson, Abington, Mass., and L. N. Mears
Brookyy, We claim the process or method of temporarily uniting the vamp
and sole of a shoe for their subsequent union by stitches, substan-48,114.-Axle for Wheel Vehicles.-Jonathan G. Tib-
 of the parts, A A $A^{\prime}$ titted together by a cone joint. with radial open-
We further cla, providige the heads,
ings or air passages, and having said heads bushed with Babbitt ings or air passages, and having said
[Thisinvention relates to a ner and mproved axle for wheel ve hicles, such as are generally termed compound axles, on account of being compesed of two or more parts so arranged that one part may
rotate indepexdeatly ol the other. The invention consists in a pe rotate independeatly of tice other. The invention consists in a pe-
culiar constiction of the axle, whereby the same is renderea strous and durable, and at the same tlme light, and capable of being kep perf cetly lubricated, so as to run with but little friction.]
48,115.-Coal Stove.-W. B. TreadWell, Albany, N. Y. purboses, so co nstructed tbat hot air circulates in a cla ciamber formed on the bctton of the oven, and also through the chamber of the body
of the oven, substantially as and for the purposes descrived. Second, The construction on the oven, which is a component part
of a stove, with a doull bottom, a double walle hole coverer and
circter circulating paskages tor hot air, substantially as and for the pur
posesd escribed.
Third, The fire pot or chamber, Cc if constructed as rese poses described.
Third, 'the etre-pot or chamber, C c 1 f, constructed as represented
in Figs. 1 and 2, and substantially as berein described, tor the pur pose set forth.
Fourth, The combination of the plate, $H$, with removable section,
i, and a fire-, ot having a removable eectional lining, $f$, substan
 passage, o o, and receiver, E, substantially in the manner and for
the purpose descried.
sixth The coll-air passage, formed by means of plates, $b$ b and $c$ connected with cavity, g , in combination with the ring or receiver,
E, tubes, s s, and oven, D , all constructed and arranged substan-
tially as described. 48,116. -Window Blind.-Albert Van Wagenen, Boston, Mass.:
I claim, First, The method herein described of constructing win-
dow blinds so as to admitt of the ready removal of the slats, in the dow blinds so as to admit of the ready removal of the slats, in the
man ner and for the puposeset forth.
Second, The method described of maining the slats of window
bilnd binds at any given incllnation wimt resp.
means and in the manner herein set forth.
48,117... Seed Drill.-A. H. Wagner, Chicago, Ill. accos she lower vand to feeding the trates, H, prand feevided with a partition
Incomblnation with the vibrating feeding tubes Hing tubes.
tlaim the
 pin simultancously with the raising of the drilling teeth.
48,118.-Vegetable Slicer.-Sylvenus Walker, New I claim the gudes, $b$ b, forming the s1des of the knife stock, $A$, with the adjustable mouth-piece, B, and spring, , when
one continuous piece of metal, substanulialy as described.
48, 119.-Citar.-Chauncey Walton, Washington, D. C.: 1 rlaim the new article of manufacture herein described, made in
the manner and for the purposes substantially as set forth I also claim a longitudinally-perforated cigar, combined with a
sponged mouth-piece, as and for the purposes set forth. 48,120.-Throttle-valve Gear.-H. W. Warner, GreenI claim Mass.:
 screw, F, male scre
and controllng the
as berein set forth.
48,121.-Lever Buckle.-H. W. Warner, Greenfield, I claim the $p$
T claim the proiections or bandles, b, one or more, in combination
with tite tongue of a lever buckle, substantially as and for the pur-
pose herein set forth.
48,122. - Boot-jack.-Jonathan Wheeler, Athol, Mass.:
 other, longitadinally arms, $\begin{aligned} & \text {, a arved sandard } \\ & \text { whole constructed and arranged as set forth. }\end{aligned}$
[This invention consista in a peculiar mode of constructing bootjacks, by which theyare simplided in construction and ope ation.] 48,123.-Knob Latch.-Albert Williame, Norwich, Conn.:
1 claim the arraggement of the slotted arbor with the dead and
shde latches and knob, subetsantialk as shown, so that the dead
latcch may be operated orth own back by the inserton of the key
throukh the knob and arbor while the latter is used for operating
the slde latch, as describer.
( $T$ is invention consists in combining in a novel way a dead latch and an ordinary slide latch in such a manner that the slide latch號 ne of the knobs and the knob-arbor, whereby a very simpe aco nomlcal and efficient lock is obtained, and one that cannot be readul picked or opened illegitimately.]
48,124.-Device for Steering Boats from another Boat
J. D. Willoughby, Washington, D. C. Antedate

I claim attaching th
I claim attaching the steering cords, if, to the cross tiller, c , of ause the tension of either cord to pull the ruuder into a position that will incline or steer the boat in the same direction that it is in
clined by the tensicn of the cord, substantially as described and
represented
48,125.-Boiler Furnace.-Thos. B. Wilson and Wm. R Shawr, Meadville, Pa.:
First, We claim the debector, , arranged as shown within the
furnace, and operated by means of the hand lever, $A$, without, sub-
 se door space of 're furnace, and the
pace, substantially as above described
[This invention! consists in the arrangement of an air-deflecto within a furnace and over its mouth, for the purpose not only or regulating the amount of draught to the fire, but also of directing be draught sothat the air will become thoroughly mixed with th ases arising from the fuel, and a more perfect combustion be thereby obtained.]
48,126.-Sash for Roofs of Hot-houses.-J. N. Woodward We claim the sheet-Metal strips, constructed with gutters, cc, and
employed in combination with the sash, A, glass, , , and putty or [This invention consists in covering the upper or outer portion of e sasb with sheet metal, and using in consection therewith putt or other suitable cement or material, whereby the sash is rendered sashes as now glazed.]
48,127.-Bread Cutter.-Joseph Buckett (assignor to himself and L. W. Warner), New York City: We claim the combination with the eccentric circular cutter, D
projecting plates, E , shaft, $\mathbf{B}$, opening, ${ }^{\prime}$, of the holder, $G$, com projecting plates, E E, shaft, B, op
posect of a series of pates, a, conn
as and for the purposes described.
IThis invention consists in the cmployment or use of a cutter of baft, placed on a suitabl aming, the cutter working between to the in them, into which the arlicle or subtace to the cotton; the frame or table on whlch the article being cut is places bavine a the resird work reatest facility.]
48,128.-Lamp.-Mills L. Callender (assignor to the Cal-
lender Lamp Manufacturing Cempany), New York City:
Firist tianh, thasaiung the cone or deflector by supporters $t$ at
e bent or tolded, to increase their length, for the purpose and Second, I clain the plate, h , extending across thedefiector, g, and
baving an opening with lips, il , composing an inner dettector, and
cormed with the tlame-sprealing projections, 22 , as and for the pur
 urner, as set forth.
48,129.-Sad Iron.-Robert Drake, Newark, N. J., as signor to himself;, Jas. F. Bless and Danl. F. Bless.
I claim constructing the botom of the heating chamber of a sad In wim constructing the bottom or an inclined orcured puuling
iron with an
dapted to operate as herein described.
IThis invention relates to sad irons heated by a gas flame, and con有 ron, whereby the combustion of the gas is reatly increased, andalso
uly consumed before issuing at the chimney of the iron, the im. portance of which is manifest.]
48,130.-Corn Planter.-John Gross, Decatur, Ill., assignor to himself and Thos. K. Alexander First, I claim the employment or use of the circular intermittingly otating plates, N, provided with openings or holes, $\mathbf{j}$ j, in combina
tion with the vibrating seed plates, M , substantially as ind for the purpose described.
second, The vibrating bars, $\mathbf{O}$, placed below or underneath the
plates, $\mathbf{N}$, connected with the plates, M, and receivis their nnotion
therefrom, and provided with pawls, m, forthe purpose oi operatiuk
 Fouth, The parrangingoof the cur-orfs or strikes, d, with springs or
elastic rods, $N$, in tne manner substantially as and for the purpose specitled. The scrapers, A A, at the outer ends of arms, $R$ R, which aro
Fitth,
connected by rods, $t$, to treadles, $u$, substantially as and for the pur
[This invention relates to a new and improved seed-distributing apparatus, and in animproved scraper, whereby it is believed that an improved machine for planting corn and other seeds is attained 48,131.-Petroleum Stove.-Ira Holmes, Moscow, N. Y.,
assignor to himself and Scott Lord, Genesee, N. Y.: First, I I claim concentrically arranged lamps or burners, with the
rotary platform, A C combined and arranged substantially in the manner and for the purpose set forth.
Second, The pipes, b, tealing from each reservoir into the main
mation
 forth. $\begin{gathered}\text { Fourth, The wiregauze, c, located in the central pipe, B, abovetho }\end{gathered}$ entrance of piptes, b, for the purpoze set forth of the several parts de
Fifth. Thee cumbination and arrangemento
scribed, operating in and for the purpose, substantially as set forth 48,132.-Safety Match Holder.-Helen M. Jewett, (assignor to Universal Safety Match Company),
loxbury, Mass.: claxim a satety match
1 claim a safety match box or bolder composed of the match pack
and waste recettacles, A C , and one ormore igniting card hold-
ers, the whyle being tor use as specifled. ers, D, the while being for use as specifed.
Ialiso cluim the matil sare made of tue three receptacles, A B C,
and one or mure card holders, D, and having the cover, $\mathbf{c}$ of the and one or more card holdersa, D, and havee receptacles, A B C,
rearmost receptacle, so constructed as whenclosed cover, of the cover, $b$, of the pack receptacle it shall entirely overlap it, as set
forth.
I also claim the match safe as not only made with a match pack, waste and pack receptacles, the same peing in order tliat the pack
recertace may be protected rom fre or gnarks dropped from a
meth while in the act of being moved over the pack receptacle 10r
the purpose of being insert din the waste receptacle.

48, 133.-Breech-loading Fire-arm.-William MorgenPhiladelphia, Pa.: I claim, First, Rasing the rar of the morable breech from 1 its
engagement, and retracting it by means of the tumbler lever, $B$,

plece, Third, The swinging cam or lever, $J$, coustructed and arranged
 48,134.-Roll for Machines for Preparing Fibrous Mate rial for Spinning, Etc.-Daniel Read (assignor to Amos A. Taylor), New York City:
I clad m coverng ro Is 'for preparing materials for splaning yarb
 two coverings, be
purose described.
48,135.-Buckle.- John E. Smith (assignor to himsel and Henry. C. Griggs., Waterbury, Conn.:
claim the combination of the frame, a, with the ton
 described
48,136.-Cranberry Gatherer.-Charles Thacher (assignor to himself and George Shove), Yarmouth, Mass., (and asslgned by said Thacher to Luther $\mathbf{W}$. Clark, Boston, Mass.)
Tclaim as isiy invention the combination of the holding comb, c ,
with the receiver. A, provided with teet, subtantialy as described.
I also clam the combination of the grate or sieve, B. the holding
comb, and the recelver A, provided with the teeth, substantially as described.
48,137.-Cherry-stoning Machine. - Theophilus Van Kannel, Cincinnati, Ohio, assignor to himself and Joseph Beaire, Chester, IIl.:
 side
asisis in discharging the pulp from the machine, snbstantially as de-
scribed scribed. $\begin{aligned} & \text { Second, In a machine for stonng cherries, which has a rotary } \\ & \text { driving shaft, I claim piving a lateral motion to the needle carrier in }\end{aligned}$ scribed. Constructing the needle carrier with a nose, $g^{\prime}$ ', for the pur
Thidd
pose substantially as pose substantially as described.
Fourth, The feecer, b, arranged to work between the hopper, and the basin, a, subssantially as described.
Fitth, The emplopment of an elastic perforated bottom for the
basin, a, substantialls as described. Sixth, The arrangement of the hopper, Al feeder, b, basin, a, and
discharging spout, A2, on that cherries will be moved from one on
the other of these contrivances, der ived of their pits, and disthe other of these contrivances, deprived of their
clarged trom the machine, substantial y as described.
48,138.-Artificial Leg.-James W. Weston and Thomas B. Stanley (assignors to James W. Weston), New York City:
We claim, First, A bolt-Sormed with two joints at right angles to to
each other, and secured to the leg and foot respectivelg, as set forth
so tlat the foot cananot tu m out of its place, but motion is allowed so that the foot cannot tu th out of its place, but motion is allowed
at the ankle, as specited
8econd, Welaim the india-rubber block perforated with holes or Second, We claim the india-rubber block perforated with holes or
formed with caities at those points wleere the spring requiret to
be most yielding, the same belng introduced at the ankle joint, as specifed. We clalm the side knee-pieces oxtending from the artifcial
Thirrd,
limb, as and for the purposes set forth.
 48,139. - Steam Engine.-Robert Wyatt (assignor to
II clain. First, Connecting the two pistons, $B, C$, with a crank out to the inner piston, C, and passes through tie outer piston, B, and
which hasa lateral movement with the two pistons, $\mathbf{B} \mathbf{C}$, substantiaily as and
for the purpose herein specided.
Second The stutins box $E$.


 48,140.-Oil Press.-John Marshall, Pentonville Road Eng. Patented in England Oct. 27, 1863 I clain the expression of oil from oil- -yielding substances, and the
production of ortcale and other reasidury matter, by means of a
chamber, in combination with a ram and plug and a stramer or chamber, in cort bination witth a ram and plug and a stramer or
flleer, these parts bing constructed and acting substantially as de
scribed.
48,141.-Machine for Making Cigarettes.-Manuel J Lopez y Manoz, Havana, Cuba:
f claim, First. The arrangement of the feeding rollers, $Q$ G $G$, con
nected tooether and pressed together in the manner specied, and
worked byean of
substantially as descring in the manher and for the purpose
 manner and for the purpose substantially as set forth.
Third, Cc claim the
manner
mot the pinions, 11213 , in combination with the pinion, 14 , when said $p$ p
lons, 1213 , form part of the surface of sald rollors. Fourth, $I$ claim the arrangement of the frames, $X X$, swinging
upon central sildes, $\bar{y}$ attochedto the frames of the machine, and secured in its place during the operation of the machine by spring
levers, $r$, and a lever, $E$, acted upon by a cam, $F$, in the manner specifed. I claim the arm, $q$, and the pin, $q$ ', or their equivalent,' act-
Fitth,
ing upon the spring levers,' $r$ ', for the purpose of disengagig the
 saic ramesaround central studs, $y$, the whole operating togethe
in tbe manner and for the purpore deseribed
Sixth, I claim the wheel, $W$, acting upon the pinion, w", and th inion, I claim tive wheel, W', acting upon the pinion, W', and the
n the mating throly the pinions. 4 and 6 , the forming rollers, Seventh, I claim the forming levers, $N$, attached to a crank shaft,
o, and operated by teeth 242520 and pins or propections, 272828 ,
30 and 31 , in the manner and for the purpose substantially as specl-
fled. Eighth, $I$ claim the arm, b, in combination with the spring lever
x, and the cam, n, in combination with the lever, n', acting on the
crank shaft 0 , and the forming lever, N, in the manner described

 erating in the manner specifed.
Eleventh, I Iaim the tevers, . operated in the manner specifled
or its equivalent, for the purpose of turning
own the upper parts of

 Po rteenth, I claim holding frml the paper while being cut, by
the "tllon of the Enife, L, by means of the feeding rillers,
by the and

 ranged, combined and working together in the manner and for the
purnop embstantially as set fornh and deecribed.
Biteenth, I claim the construction of the Wheels,
attached to the drlving shaft, and operating the different $p$ arts of
the machine, in the manner and purpose as set forth. 48,142.-Lamp Burner.-James Wood, Nottingham, I claim. the combination of the door, B e e, thumb piece, e, stops,
gh (al) made outof one piece of metal), with the guldes, f, the latter
bing h h (ail made out of one plece of metal), With the
being formed of strips or pleces of the shell, a,
manner and for the purpose herein described.
[This invention relates to a new and useful improvement in that classof lamp burners whichare providedwith chimneys for burning manner of applying a doorin the side of the burner, whereby a eady means is obtained for lighting the lamp without removing the cbimney from the burner, and without adding in an appreciable degree to the costof the construction of the burner.]

48,143.-Coal Stove.-Philo P. Stewart, Troy, N. Y.: -
 manner and for the purposes substantially as herein described an
set forth. set iorth, I claim the employment of the wire gauze door, $\mathbf{P}$, or its
Second,
equivalent, in combination with the said perrorated cone or cap, $\mathbf{E}$, or any equivalent therefor, and with the said radiating chamber, $B$,
in the manner and forthe purposes substantially as herein described Third, I claim the perforated cone or cap, E, constructed and ar-
ranged in sections, a c , with smalla apertures bet ween each eection
or division, in the manner and for the purposes substanti ally as herein described and set forth.
Fourth, I aliso claim the arrangement an, employment of the th ner vertical tube or conical cylinder, L, and the outer verti al tube the
or cylinder, $E$, in combination with the radiating or cylinder, E, in combination with the radiating cliamber, B, and
with the horizontal fue, \& , in the manner and for the purpose
substantially as herein deacribed and set forth. substantially as he rein described and set forth.
FIfth, I aliso clai m the arangernent and combination of the verti-
cal radiating tubes or columns, $G G G G$, with the return fues, nd 1 , in the manner and for
 forth.
Seventh, I also claim the combination of the said perforated cap
or cone. E, or Its equivalent, wlth the air cham ber surrounding the chamber of combualion, and communi cating with numerous aper
tures, and the said
purposes substantially ad haze door, in in the
man ner and

## REISSUES

1,979.-Cock.-Nathaniel Jenkins, Boston, Mass. Pat ented April 18, 1865:
I caisim First, The swivel, $\mathrm{H}, \mathrm{in}$ combination with the follower, E and seat. L, substantially as and for the purpose described.
neecond, The combination and arrangement of the tifimble, I
swivel, $\mathbf{H}$, and packing, $K$, substantially as and for the purpose de scribed.
Third, A hemisinherical, or hemispheridal valve or packing, con-
structed witli a flange, $m$, substantially as and for the purpose de Fourth, The elastic packing, or valve attached to the follower by
means or a a ange, m, and a corresponding socket, substantially as
set forth and specifed. forth and specifed.
1,980.-Ladies' Collar and Cuffs.-Wm. E. Lockwood,
Philadelphia, Pa. Patented April Philadelphia, Pa. Patented April 26, 1859:
papar and muslin or an equivarent fabric.
1,981 .-Ladies' Collar and Cufts.-Wm. E. Lockwood
Philadelphia, Pa. Patented April 26, 1859: I claim an ornamental collar or cuft; made of a fabric composed of
paper and muslin or of an equvalent abric ornamented by printing
or otherwise marking on the surface plain or colored devices? 1,982.-Ladies' CoIlar and Cuffe.-Wm. E. Lockwood, Philadelphia, Pa. Patented April 26, 1859
I claim an ornamen'al collar or cuft made of a a fabric composed of
paper and musin or an equivalent fabric, ornamented by perforations as set forth.
,983.-Ladies' Collar and Cuffs.-Wm. E. Lockwood,
Philadelphia, Pa. Patented April 26, 1859 : fclaiman ornamental collar orcuff made of a rabric composed of
paper and muslin, or an an equalent fabric, ornamented by the in
terlacing of colored tapes or ribbons as set forth. 1,984.-Street Washer.-Joshua Regester, Baltimore,
$\underset{\text { claim, }}{\text { Marst. }}$ A metalic
I claim, First, A metallic sectional stop-cock case, which is so con
structed that in the act or securing the sections to ether the stop-
cock and itt appendages are connlied within said case, in a perma nent position, substantially as dzseribed. Second, Centering the stop cock at its lower end by means of a
collar bearng, F, or its equivalent, in comblnation with a metalic case. substantialiy as desscribed.
Third,
Third, The combination of a twining discharge pipe. B, with a
stop cock and a metalic case, which is constructed with an upper
and a lower bearing, F, aubstantially as de cribed.
and a lower bearing, F, Charles L. Stacy, Cincinnati, OOhio. Patented Oct. 4, 1859
I claim, First, The provision in hydrant piston of a fexible cup, aperture in the act oi drawing, and to be uressed acainst said aper
ture by the head of water in the discharge pipe, substantially as set
forth.
 forth to
the inge
set iorth
1,986.-Spring-back Chair.-Robert H. Staples, Lowell Mass. Patented Nov. 8, 1864 :
I clalm a back swinging independently of a seat, and pivoted above
t to stationarysupports ir the arms of the chair, in coinbination
with a spring or springs, or equivalent device, to return it to its with a spring or
normal condition
,987.-Improvement in Stoves by the Use of Superheated Steam upon the Fuel.-The Hagan Manufacturing Company, New York City, assignees to
William E. Hagan, Troy, N. Y. Patented March 8 , 1864 :
I claim as my discovery or inven ion in the management of com
bustion in fre chambers the application, subs tantually as hereln descrined, of sepereated steampin jett, so as to to impinge without ad
mixture with atmospheric airdirectly egainst the incandescent coals
mes mixture with atmosheric sirdirectly against the incandescent coals,
in addition to or ${ }^{\text {in }}$ combination the supply separatel
atmospheric air, either by draft or blatt, in the usual manner, as sct atmospheric air, elther by draft or
forth and for the purposes specife
I also claim in the construction
of feed and provided with a apertures at or near the bottom for the admission of atmospheric alr combling therewlth asteam ch amber
or chambers for superteated sieam, the tiner wail oim the steam chamber or chambers having numerous smail apertures next to the
fuel ror the escape ot the superheated seam to impinge, without ad
mixture of atmospheric ir against the incandescent coals, substan
in tially as and for the pucposes specifed.
And
substar uny as herein described with a chame chambers, combined
superheated steam, a nd with numerous apertures for thers for
 equival ent thereof, to reduce the thickness thered at the perfora
tions, substantially as and for the purposes specifed. 1,988.- Furnace for Treating Ores by Superheated York City, and Wm. E. Hagan, Troy, N. Y. as signees by mesne assignments of Wm . E. Hagan.
Patented March 8, 1864:
I claim, First, The empinyment or application of superheated
steem, in the manner as or subbtantiall as herein describe and
set forth, for the purpose of refinting or reducing motale, and for the
romopal of Euphur, arsencic, phosphoras, or other imp ittes from kecond, rhe employment or application of superheated steam, as
cr substantially as herein describle for the purpose of calclingg and
disintegrating quartz rock, containing silv ver, gold or other metals. disintegrating quartz rock, contailing silver, gold or other metals.
Third, The employment or appicaton of guperheated seame for
the refling of iron, and for the converting of iron into semi or pur Third, The employment or application of puperheated steam for
the refning of iron, and for the convertingo ir irn into semi or pure
steel, In the manner substantially as herel described and set forth.

## DESIGNS.

2,079. - Coffin Handle.-Stephen D. Arnold, New Britain, Conn., assignor to P. and F. Corbin.
Burton \& Co.), Cincinnati, Ohio
2.081.-Animal Trap.-Hubert C. Hart, Unionville,

2,082.-Bust of Abraham Lincoln.-Fisk Mills, Wash ington, D. C

## 23 ATENTS <br> GRANTED

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cation o the SCIENTIFIC AMERICAN, have act d as Solicitors and Attorneys an inventiona in the United States and in all foreign countries during the past scomecon yoars. Statistics show that nearly ONE-THIRD of al brough this office. while nearly tiree-fourtrs of all the patent ken in frelgo countries are procured through the same source It iken in fereign countries are procured through the same source. It paring specifcations and drawings for the United Statespatent O"̈ice the proprietors of the SCIENTIFIC AMERICAN are perfectly con versant with the preparation of applications in the best manner, and the trasaction of all businese before the Patent Office; but the take pleasure in presenting the annexed testimonials from the thre ex-Commissioners of Patents.


 the oftice, a marked degree or promptness, skill, and
interests a your employers.
Yours very truly,
$\qquad$
Judge Mason was succeeded by that eminent patriot and statesman Hon. Joseph Holt, whose administration of the Patent Offlce was so distingulshed that, upon the death of Gov. Brown, he was appemted entering upon his new duties, in March, 1859, he addressed to us the llowing very gratifying letter.
Mpsars. MunN aco.:-It affords me much pleasure to bear test

 Very respectfully, your obedient servant,
J. Holt

Hon. Wm. D. Bishop. late Member of Congress from Connectucut,
succeeded Mr. Hott as Commissioner of Patents. Upon reagning the
 ing the eime of my holding the office of Comissinner or Patenta,
very large proportion ot the business or inventors betore the Paten
 skill and accuracy. Very respectiully, your obedient servant, $\begin{aligned} & \text { WM. Dissop }\end{aligned}$

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Persons having conceived an ldea which they think may bo patent ubmit it adised to make a sketch or model of therr invention, an to us, with a full description, for advice. The porion ith the facts is CO., No. 37 Park Row, New York.
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