trates it, finaily reaches tbe other pipe, by which it runs to Kosloff succeeded in overcoming the dificulties by using the issue at $t$; in mcst cases this water is again useful for other purposes. As to the cooled air, it penetrates into the upper part of the apparatue, escaping by the tube, E , and reaches the places whare it is wanted.

## MEDICAL NOTES.

An antidote for Mercury and Lead Wanted. It is well known that the doctors of the regular or all pathic scbool insist on the free use of mercury, especially in secondary eyphilis, that dreadful scourge of civilized countries. Many of our Western and $S$ uuthern doctors po ur in the calomel and blue pill for almost everything, as freely as the profession used to do in former times. Since this is so, and since the other medical achools have not yet furaished a practical substitute for mercuiy, the great want in medithan the disease. Chemistry and experiment must help the doctors, and still more the sufferers from mercurialization, doctors, and still more the sufferers from mercurialization,
if it be possible. Chemists and physiologists long ago found if it be possuble. Chemists and physiologists long ago found two, and only two, elticient agente, capable of rendering mer-
cury in the system harmless; and these two substances, namely, iodine and sulphur, happened also to be the best neutralizers of another common cumulative poison, lead. But the difficully was and is to cause the assimilation of iodine and sulphur, or either. Sulphur is nearly insoluble in any menstruum capable of being taken into the stomach. Iodine is very soluble in alcohol, oil, etc., and even in water to some extent, but largely soluble as iodide of potassium, a drug now used to excess. Unfortunately this iodide, also the tincture, are but slightly assimilated, passing off by the bladder. The small amount of iodine contained in that well known organic substance, cod liver oil, would be likely to prove more effective as an antidote to lead and mercury than a large quautity of iodide of potassium, because the organic oil enters into the blood and tissues. We put forth the sug. gestion that some vegetable may be found which is rich in odine, also other plants, and harmless ones, may contain sulphur in an assimilable shape, for sulphur is an exceeding ly common element of organisms in general. If we could have strong extracts of such plants, the object spoken of would be accomplished. In that case, our calomel givers could salivate their patients to their hearts' content, and have them live through a dozen courses of mercury, a mat er of profit and pleasure to every regular doctor.
Thousands of cases of chronic rheumatism, as well as consumption and other fatal diseases, have been traced to the use of mercury. Lead poisoning has become alarmingly prevalent of late years, producing colic, constipation, hard ened liver, neuralgia, nervous dyspepsia, and paralysis, which sometimes attacks people even in the prime of life. We will not discuss the question of lead in water pipes farther than to observe that every decent chemist knows that pure water acts on lead with astonishing quickness. To have water pipen, as used at present, coatted internally with a sulphide or sulphate seems to be the only good practical preventive of lead poisoning. But in the case of lead pipes kept for weeks in hogsheads and barrels of ale and cider, there the solubility is certain and its effects destructive or pernicious to no smail degree. Such dangerous nuisances should be abated by law. Again, soda fountains where the water, highly charged with carbonic acid, acts on lead, and sometimes on copper iu old fountains, are things deserving of legal attention. Many of the hair dyes in market, and some of the cosmetics, are well proven poisons.

Ice as a Medicine
The great value of ice in certain diseases is not fully recognized by the medical proiession, or by the public. Many years ago, it was found by one of the best English physi-cians-we think Dr. Marshall Hall-that amall pieces of ice hrust into the rectum proved a safe and spetdy remedy in tried without effect. Very recently, that distressing complaint to which old people, travelers, and others are liable, retention of urine, has been relieved by the same ure of ice as mentioned above. This plan is due to M. Cazenave. Common experitnce has shown that the swallowing of ice instead of ice water by people, in hot weather, is perfectly safe.

Effects or Uric Acid.
Dr. Gigot-Suard has given uric acid to dogsin doses of from 3 to 61 grains in 24 hours, and continued it for one or two months. The acldoccasioned remarkable morbid lesions, throwing light on a large number of clronic diseases. The alkalinity of the serum of the blood was often diminished, and it contained crystals of the acid and urate of soda. The organs and tiseues upon which uric acid exerted its action are, in order of frequency: the skin mucous membranes axd their glands, the lungs, kidneys, liver, pancreas, brain, lymphatic lands, articulations, spletn, ellveiopes of the spinal cord and heart. Various forme of disease appeared in all these parts. Cancerous and tuberculous degeneration was produced several times in the lymphatic glands. These ex periments are very interesting, and may lead to a more accurate view of the cause and cure of consumption and several other grave diseases.

The New Electric Light.
On the evening of the 5th of May, some interesting experiments with MM. Ladygin and Kosloff's electric light were conducted at the engineering works of Messrs. Warner, Euston Road, London. To obviate the difficulty of carbon being consumed when burnt in contact with oxygen, M. Ladygin p'aced aticks of carbon in a closed glass chamber filled with a gas not containing oxygen; but owing to the use of ma-
apecial metal of which he forme the holders for the carbo rods, and these are placed in the closed glass chamber.
The lamps which were experimented with were nine in number, six of them havingtwo carbon rods, either of whic could be placed in connection with the current of electricity Tbe carbon rode were all $\frac{4}{4}$ of un inch in length, and one in each lamp was $\frac{1}{12}$ of an ioch in thickness, the others being a trife less in thickness. The other three lamps contained each a carbon rod, three inches in length, $\frac{1}{T^{2}}$ of an inch thick, and also connected with the main current. The firat experimen consists in burning a carbon rod in contact with the atmos phere, the rod being consumed in a few minutes. The current was then turned on the thicker rod in each of the six lamps, and a brilliant and steady light was procuced, which improved as the current was increased is intensity. The reason for lighting the thicier rod first, wa that it might consume the oxygen in the lamp, by which the rod was slightly reduced. The current was then directed through the second rod with equally satisfactory results in all the six lamps. The three lamps with the longer carbon rods were then lighted and successfully exhibited, changes being frequently from the six to the three lampe and back again. The apparatus used for producing the current was Gramme' magneto electric machine. With the niachine running at about 200 revolutions a minute, a moderate light was obtained which wascgreatly improved at 300 revolutions, the maximum of intensity being obtained at 450 revolutions. The strength of the light depends upon three things-on the power of the macbine and the number of its revolutions, on the length and thickness of the carbon rods, and on the quality of the carbon. The experiments showed that, with the same strength, of cur rent and the same number of revolutions, double the amount of light was obtained with three long carbon rods as compared with the six short ones. The experiments demonstrated satisfactorily the fact that the electric current could be subdivided, and hence, if practice confirms experiment, which it is be leved it will, there is a wide field open for the application of Kosloff's aystem.-Telegraplic Journal.

## An Unfortunate Discoverer.

W. T. writes to say: "In No. 24 of Volume XXX of the Scientific American, Mr. John Hepburn, of Gloucester, N. J., states, in his communication on zodiacal light, that he was the discoverer of the glacial epoch theory, which Professor Agassiz only proved to be true. I do not deny that Mr. Hepburn discovered that theory; but it is a fact that Agassiz adopted it from Karl Schimper, the late brother of the African traveler Schimper, who was released by the English-Abyssinian war. Karl died in February, 1868, in Schwetzingen, near Heidelberg, Germany, of drupay and of the ill treatment by a malicious neighbor. Schimper men. toned this fact to me, and complained that all his discoveries had been atolen from him, and he had no power to defend himeslf against the lions of Science. In fact, they left him nothing but his law of the position of leaves. When he was dead, a valuable collection of stones, curiously shaped by the action of water, was destroyed. He was trying to find a law or such shapes; but he never told me more about it, for fear I would misuse the information, although I was an in timate friend of his.

The State of New York has appropriated $\$ 50,000$ for the erection of a monument at Saratoga to commemorate the surrender of the British army under General Burgoyne to the American forces under General Gates, October 17, 1777. The monament is to be 230 feet high.

The new aquarium, now in process of construction at Manchester, England, will be a splendid affair. The tank frontage will have a length of 750 feet.

## To our Friends and the Publ c

Wth the full statement hereto forepublishedo f the dificulty of our firm of the hatems autnorles, and the sub:equent exbanstivexaminatio in the entire remodeling of the "Motety" and "Silizure Acts," we had not and be necesaary to add anytbing furtber in the way of exhanation. But in the brutal and cowardly attack made upon us dur!ng
the closing hours of Congress by General Butier, certain charges were preferred by him in bls character as a Representative, upon the floor of the House, against our frm, so defnite and with so nucb of apparent autho-
rity that we feel called upon, in justice to ourselves and the public, to mate once more a briet atatement.
The charke 8 specifically preferred were, in the main,
First. That we had, as a frm, attempted to defraud
vade the statuary. In reply to thort to mencer to whith General Butler referred were made before the frm of Phelpe. Dor bers of thefirm bc came concenected with the metal theorting buaniness ; the sentor member of the firm, Wllliam E . Dodge, belng at the the en-





The Brojew books and publications.
Othooklyn Council of 1874 . With Decuments and a Otficial Report of the Proceedinga. New York: Woo
worth \& Graham. worth \& Graham.
sisth annual Report on the Noxious, Beneficial, and Other insects of tee State of Missuuri. By Charle V. Riley, State Entomologist.

Thisis a document to be readath.ntively by the scientist, naturalist, and the farmer; and its value is not conined to the eaterorisisig s rate winch pub-
lishes it. Professor Rilley has a profound and minutely accurate bnowledge of the intereating and complicated sclence to watch his life has been devo ted ; and his reportaare part of the contemporary history of our country and should be circulated everywhere.
The Law of Design Patents, with Digests and Treatise By William Edgar Simonds, Counsellor at Law. Price
$\$ 4.50$. New York: Baker, Voorhis \& Co., 66 Nassuu stret.
The Supreme Court bavingrecently passeii somewhat fully upon a destra patent cause, the author has deemed the present a H : ooportunity to co late cases on the subject of design patents, and to present them digested
and supplemeuted with deductivc commeats in the volume above named The status of these patents has heretotore not been uoattended with doubts; and hence the present worts, alming as t does to cover the entire
field, and to give a clear comprehansion of the decisions of the courts on field,and to give a clear comprehanston of the dectsions of the courts on
the subject, will doubtiess meet with a ready welcome at the hands of the the subject
profesblou.
Old $\triangle$ nd Nrw. The July number of this admirable magazine, edited by Edward E. Hale, openg a new volume, the teutn. Yor vigorous thought,
entertalning and useful contente, the magazlue has no buperior. $\$ 1$ a year Boston: Roberts Brothers.
Arow's New Yore: City Directory for 187-75 gives some interesting statistical information regarding the fucrrase in populat on of the metrop.
 ewoly newly engraved and excellent map, of the city, Includiug the two new
wards recently added. The arrangement of names, etc.. Is the same as in former years, and therefs a very large number of advertisements of proml nent business houses. Published by the Trow City Directory Cospanny, University Place, New York. Price six dollars.
Inventions Patented in England by Americans. (Complled from the Commissioners of Yatente' Journal.
From June 2 to June 1 1. 188 , tnclusve.
ar truck and axle Bux.-A. Higley, Cleveland, Oblo.
Clothes Wringer.-T. G. Corlibe, New York clity.
Foldina Bedstead.-E. E. Everitt et al., Phlladelpha. Pa.
 Maring Paper Boxes.-H. R. Heyl. Pniladeipha, Pı.
Making Strece Traps, ktc.-W.A. Sutler. New York
Making Wmite Lead.etc.-A. P. Meglert, New Britaln. Con
Millbtone Drebsing Machine.-S. Dean et al., La Crosse, Wi

## zecent sumericau aud foreign watents.

Jomproved Car Replacer. which is much needed upon ctity horse car lines, where it 18 a datly occur gers and very severe workto the horses. The device ts simply an iron plate
grooved benfath to fit the rall, and havling finges to secure it thereto. fom themiddle of the replacarau fregular thapod groove inclines down ward to the rall in each difection. The plate extends over the outside of part of the replacer is supported on the pavement. The ciannels ex'end from the center of the replacer, and inelline downward in each directlun so as to terminate at the bottom outside of the "tread" of the rail, to receive the flange of the wheel of the displaced car, and to conduct it up to the cinter, and then down the loogitudinal groove to the rall. By bilg btly
modifying the form of the grooves and finges on the under fide to fit it to the rail,the di aplaced wheel between the ralls masy be repiaced in thesame manner. Theinventionmay beapplled to theralls of eitherhorsecarroad or to the $T$ ralls of locomotive roads.

Impreved Watchmaker's Tool.
Jullus F. Foung, Owatonua, Mtnn. - The cbj-ct of this invention 18 to
furntsh means for reduclng the tension and elasticityot halr aprings of furntib means for reductng the tension and elasticliyot hair springs of watcbes, so as to vary the time or actlon of the watcla movemeot trom
fast to slow, as may be destred. There is an adjuatable rest, which is de anged to hold between it and a stationary atand any diameter of watch slgned to hold between it and a stationary atand any dameter of watch
balance wheel with the halr spring and parta conn cted therewith. This rest 18 adjusted by a fluger screw. The balance wheelwith the hair apring elog thus con Aned, the end of the birir - pring is takea hold of witt a patr of pliersand is gently drawn along under spring clamps which are screwed
down. These hold the hatr sprlog flat to tne bed, so tba', with a scraper of any suitable kind, the hatr spring mas be reduced so as to alter the run ning of the watch from five minutes to an hour and a half to tweoty fou hours. When the ciamps are raised, the hair spring is allowed to slip back
by its own tenion, so as to assume to former diameter, and is readly by its own
recolled.

Improved Hos Trap
James M. Oversblner and George M. Overshiner, Ein ood, Ind.-This is James M. Overs trap for catching and bolding hogs. In ualink the trap, the end to opened; a ad toe hog belng driven into the trap, the lower end of lever ts mored outward to open a space large enoubh for the passage of
lo the bog's bead. As the hog attempts to eac ape, the lower end of the lever
18 moved inard, clasplngthe bog's necer and holding him eecurely, a paql 18 moved tnward, clasplng the bog's neck and holding him becurely, apasi
locking sald lever tn place. The nog can wow be conventently operated locking saldlever in place. The nog can wow be convententily operated
upon as desired, there beling sultable devices 10r placiog the akizal in upon as desired,
proper poatlion.

Improved Standard for Vehiclea.
James J. Martun. Houst n , Tes.-Thts 18 a stanchton plvoted In a strong
metal box adapted to be fastened to the side of the platiorm of the car. The box is open at the top and at one end $\quad 0$ that the stanchion ca.
turned down on tita ploot by the side of the platform to turned down on its pliot by the side of the platiform to be ont of the way
A spring is arranged in eact box to so act on the atanchion as to hold it in the uprigut positic $n$; alvo to hold it when down. The inventlon also consista on a metal bar on the lo bide of the stanchion, extendingron am the plat.
form nearly to the to p, and having a screw boit at each end pasaing torough for clamplag side Doards to the stacchion when a temporary box is wanted for the platform. This bar drame oack into a grave in the side of the
post, flush wita the surtace, when it is not to be used. Improved Thill Coupling.
Ell Quaintance and Remus D. Hale, Tranaitville, I
Ell Quantance and Remus D. Hale, Transitville, Ind.-This invention thon of the plates shall enter and be embedded in the rabber apring. aloo conelsta in a novel mode of boloting the rubber by a tongue projecting from the cross bar of axle clip. The ends of a $T$ journal pin form journals In Jaws. One Jaw of cact pair is slotted from the top to the Journal bole
Iron plates, when the tonguc or shaftaare turned to an apright position, Iron plates, when the tongue or sbaftaare turned to an apright position,
will pasi larougl the fluts and allow the tongue or shafts to be detached. Berwe, n the Jaws and byek of the fournal ping are pleces of india rusber which are for the puroose of preventing rattling, and are held in place by
meang of the tongues of the cllp batia and arrow ribs an the back ilde of the $T$ Journal pins. When the tongue or ebafisare in use, it is imposibile
for them to become detached. Byraling them to an upright position they ar them to $b \in$ come detached.
Improved Saw Set.
Sylvanus Bartlett, Westport, N. H . - The ssw set is of the usual shapeand
material. $A \mathrm{U}$ - blaped gage plece is applied around the rear and uldes of he anvil, a a justed by a screw boit and set nut, and is uxed firmly in position by a set serem, so that the sidewlise projectivg front ends of the gage
move form ard or backward aloug the fore end of anviland bammer till the

Iuproved Railway Rall Joint.
Ansun B. Johnsen, Whashington, assignor to L. Jonnson, Vincenues, iad. The ends of the ratis ane curved outwaraly, and in the epace thus formed
is placed a metallic tongue. The latter bas central projecting shoulder whtch form a support for the top part of the ralls. The top part of the tongue orms a contlinuus connection with the top part of the ralls, and
shows the smooth passage of the car wheels, without battering or otherWise fo furlog the ralls. The ralls, tongue, and base plate are firmly fastened to the crosstie by spixes placed into grooves of the base flanges of the ralls
and tougue, in the usual manner, passlng through perforations of the base plate.
Improved Washing Machine.
James $L$. Austio, Little Ruck, Ark. In using the machine, the driving Poller is ralsed out oi the euocs box by means of levers, and the clothes to roller is then lowered upon them, and as it to revolved the clothes are carHea between aprous and two other sets af rollers. The clothes are made io pass bencath the driviug roller, and are again carrited in between the
endieas aprons, and will thus contunue to clrculate until thorougbly cleansed.
lupruved Combined Lamp Collar and Bhade Holder. George W. Hadield, Brooklyn, N. Y.-The collar is applled in the usual
way. The shade liolderis aftred oy supports to a buse ring. whtch to made Way. The sbade holder lo atflyed by supports to a base ring. Which is made
of such a size as to tit upon the coilar. Upon the outer surface of the lat-
ter is formed a screw thread, into which fits the screw thread cat apon the inner surface of the base itng of the shade bolder. Bythismeanithe shade hold will be filmily ad securly connected with the lamp in such a way
as to be entirely incentadent of the burner, and allow the burner and chim. as to bo entirely fnuentandent of the burner, and allow the burner and chim-
ney to de conventently attached and detached and replaced with new ones ney to oe conventently at tacbed and
without disturbing the shade bolder.

Improved Clothes Frame.
Olean, N. Y.-ThIs laven ition consi

 upported on the lower one, and buth folding together when not in use. Improved Hat Ironing Machine.
ux, Orange, asd Louls Drovan, Newark, N.
Antolve Giraux, Orange, ayd Louts Drovon, Newark, N. J.-The Laventhon consists of trons suspended from balance lerers by flextble Jotnts, and
f levers arranged on swinging supports in such a manner that the labor of levers arranged on swinging supports in such a manner that the labor
of presenting and bolutag the trons to the work is inaterially leasened, and the frons can be applied and the pressure regulated to better advanand the.
tage.
Improved Mitten.
Jobn l. Whitten and J. Hermon Waitten, Burlington, V t.-The esseatial feature of this invention is tin so cutting the parts as to torm the mitten
or giove whithoula sean on the palm or luner side of the thumb, and so as to bring the seani on the outalde of the inger, and aoove the ball of the thumb.

Improved Safety Guard Watch Chain.
Jobuson, New York ctiy.-Tbis ta a neful device
Robert A. Johuson, New York ctiy.-This is a aseful device for connect Ing a watch with a guard or chatn in such a way that the watch cannot be
dctached uy twistling oft the ring frum the stem. It constits of a sbort extra chain, one end of which to attached to the guard near the ring, and
its other end 18 secured to the stem. By this construction, stould a pleck. its other end is secured to the stem. By this construction, should a plck. not be carricd cif. Thls will prove of vaiue to people who are obliged to do much craveling in New York street cars.
Improved Sowing Machine Treadle.
Dantel E. Llll:a, Jackson, Mich.-A movable footboard is attached to a cranked rod, so as to bhift on it crosswise the length of a slot, in whtchis a binding screw for bolalng it in any adjustment. Guide rods at tached to tor to so place his feet upon the board as to work it elther by a swinging leg movtment or by an ankle movement.

with ite open end, and has a difcharge tube placed at one side and near the front end. The latter bas walls parallel on the inner side throughout tis
eugth, the cud retng a fat surface or a little concare, and at a right angle eugth, the cud relng a fat surface or a little concave, and at a right angle
to the axis of the buib. The device dropa by pressure, the same alzed tube and callor dropplogequally well all degree of fuldits, from airups to ethe drops, so as to make au accurate count.
limproved Excavator.
 suspended in acjustable supports oy chains to a crank axle provided with
arms, to the ex remitles of which areatiached ropesthatare mound and arms, to the exiremittes of whichare atlached ropestbatarewound aronnd
a windiass. Sald scoop tis ratised or lowered through the agency of the lass, and the apparatus, as thus described, ts supported upon wheels provided with shafte.

Improved Apparatns for Steaming Grain. wheat is subs cted to the action of steam as it passes downward througb cyllnder. In the latter is arst a bopper, then a contcal plate, apex upward,
then anotherbopper, another plate, and so on, through and over which porthen anotherbopper, another plate, and so on, through and over which por
tlong the grain passe B , alternately contracung and expanding in itg flow. In the tube which supports the conical plates are made apertures throug whtch steam to conducted to the interior of the cylinder.

Improved Candlestick for Chistmas Trees. George W. Resesing, CLicago, m. This is a candlestick, the socket o
which is composed of a coll and the fastening device of a stem, the latte belog grranged to cro
port for the_casdie.

## Improved Miner's Candle Holder.

Nells Larsen, Mill City, Col. Ter.-A pin 18 riveted in one end of a bow
pring, and passes through the other extremity so that the spring can spring, and passe8 through the other extremity so that the spring can
spread or move outward freely. An elongated curved end of the spring Corme a socket for the candle. Working on the pin, in almilar manner to id thua provided with a conventent combination instrument.
Improved Miter Box.
$\begin{gathered}\text { Calendar Potter, Bloomsburgh, Pa.-The object of this invention is to } \\ \text { construct a miter machine which may readily be set to any desired angle }\end{gathered}$ construct a miter machine which may readily be set to any desired angle
for cattig the molding accurately and quickly with a band sam, and wit
out loss of time. Tne inventlon conslate of out loss of time. The invention consints of a plvoted sam gulde, which it
made reversible by a lever arrangement on the bottom of the bed plate whtle a second lever connection, operated from the opposite side, anfusts the stops which defin
cutting the miters.
Improved Pump.
Willain Urqubart and John U. Livingston,
解 sentlalthatlucy all whey are sented on a plate, whlch bolts to standardsand bas a slot througb the outside pumps, fastenting them by a washer and nut applied to the suction from below.
Improved Can for Cooling Milk during Tranaportation.
George $w$. Flake, Mount Pleasant, Iowa.-Tula 1 an improvement on a nilk can patented by thesame inventor, March s, 1874. No. 148,114, by whic the ice chamber may be made in smaller size, saving space in shlpplng the ment consist in proviting the ice chamber of the mill can with an inside inning of wood at the ulde wall. top, and bottom of the aame, with the ex-
ception of the portion of the matn can Inside of the tce chamber. The in ception of the portion of the matn can inside of the tce chamber. The in-
clined false bottom is grooved at the under alde for conducting the melted Water to the extt opening of the true bottom.
Improved Inking Apparatus.
Gllbert E. Jones, New York clty.-This improvement consists in the substances, whtch find their way into the tak fountain, are apt to collec on the under flde of the knile and form pads which press against the roller and wipe of the tnk from the surface thereof. The effect orthe movement
of the blades added between the roller and knife is to dislodge the pads of the blades added between the roller and knife is to dislodge the pads
before mentioned, thus insuring the supply of an even tilm of ink to the

Improved Churn Dasher.
John E. Blielton, Blckman's Mills, Mo.-To a abort vertical tube are se cured two paraliel diske, in which are formed numerous amall fquare boles, The outer edges of the disks are connected by short vertical bars. To
thecenter of these and to the tubeare plivoted borizontal radial rods, to whicbaresecured plates, which are made of such a atze as to turn freely milk 18 finely divided, and ts thrown into numerous currents and counter currenta, bringing the butter in a very abort time.

## Improved Illuminating Roof Plate.

Niels Pouison, New York cily.- This lavention is an improvement 1 uluminating plates for roofing purposes, and consists in providing the shanks of frills eyes withlugs inclined upon their upper side, to adap
them to be frmly clamped to a metallic plate in openings in which the are inserted.
Willam O. strong, Ypplanti, Mich.-Egg carriers formed of biltted an Interlocked paper strips soon become aseless in consequence of the pro-
jectlig ends of the atrps beco:alng broesen. And when the slits of each its of each disconnecting all or part of the strips. To remedy these and other objec tlons, theinventor connects the projecting ends of the strips to the side of the exterior cross atrips by meane of linen, masin, or other suitable
fabric. Jullus Hartuaua, Gllman' Polnt, Ky. The mol
share, which is narrow and nearly vertical. When the share is turned to
and one side or the other, the moldboards are thereby adjusted at ditteren angles, one to act as a landaide, the other to turn the furrow like an ord nary moldooard. These parts a,
of a lever and notched arc bar.
Improved Composition for Emery Wheels and Whetstones.
leaci Butterfidd, Welsaport, Pa.-Tbis invention consists in the combl nation of the ashes of dark with a cutting grit and cementing material, in
themanufacture of emery wheels and whetstones for the parpose of form ing a atone of effictent cutuling power, the friable ash performing th mechanical function of, falling pout of the interstices as thestone wear Improved Rub Roll for Condense Alonzo place-This invention consists of a tube baving the feather or apline formed on 1 t , and soconstructed that it its on the spindleof the rub rolle nicely. It is stcured by a nut or other meang, so that it can be readlly
taken off and another put on. A new feather can also be pat on when the caken off and another put on. A new feather can also be put on when th
old one to worn out, without disturbing the spindle.
Jobn Rumrill, Sallia, Kmproved Hay Cart.
ay, after baving been, Kan.-This invention relates to means whereby stack by one c cntlnuous operation, thereby greatly lessentng the usual labor and the customary waste by
andctrcumjacent ropes or chaing.

Improved Railroad Bed.
George Potts, Unionport, O.-This invention consista in a contlinuou fastenings for the same, and allows it free vertical morement. To this end, the iron ralls rest lengthwise on wooden sleepers, and are seccured by
chairs which are bent in ward at the top to form fianges that bear on the base of the rall. Thus the rall ts confned only between the top of the chalre and the wooden sleepers.

Improved Car Coupling.
Crestine, 0 . -This invention rep
MartinKurtzeman, Crestine, Coupling pin to held ap drawheads oftwo cars come into colliolon, and are automatically conpled the object betng to relleve car conplers from the usual peril of their occa-
pation. The invention consists in an uncoupler of a very pecallar construction, and which seeme admirably adapted to accomplish ite pur pose.
Improved Bcrew Plate.
George D. Dean, New York city, asignor to Frank G. Green, aace
nlace.-The object of this Invention is to furnish a convenient and efflectent means for cutting screw threads on gas plpes, in the operation of putting such plpes into bulldings. The invention consists in a screw or die plate In which are comblned all the standard sizes and threads used for the pur
pose, with a gulde for each die, the dies and guide boles belng arranged ti a conventent and compact form.
Lmproved Whiffietree.
Harvey $M$. Kelley, Irving, ill. - A atrong ring fit
biffetree, and has an eye forma apon the ond of the Dpon the forward and eye formed upoa the ain ine receive a hook projecting prongs, the whifetree, which have apon their ends inwardi) drawn off. A band ts sllpped upcin the whiffetree, and tis destgned to ni closely upon it near the ends of the straps and closely conine the ame in
place. It to secured ta place by a screw. The eye of the book is made

 land, same place.-The corn part and the cotton part of thehopper arr aep-
arated by a parition. In the cotton bopper there are two saws on a borlzontal shaft, over adid partly in the discharge ibroat, for forcligg the cotton seed through and preverting the throat from clugging. Bg the atde of
these nawa is a spliked contcal blocir, also on the shait. to wors the coiton seed down to ne saws. This blart bas a pulley nutside of the hopper,

Improved Planter, Cultivator, and Stalk Chopper
Jobn L. McCaleb. Atascosa, Tex.-In the midale part of the axle Pormed a bow, so that it may readily pass over tall , lants without oreak-
ing or injuring them. Beama are secured to the ax'e and pass oack parallel with each other, and at right angles with the axlefor a sbort distaice and are then bent outward at an obtuse angle. The rear parts are beld by an arch, in the top of which the banales are ingriled. The rear parts of
the bandles are beld at the proper elevation bya C -shaped brace, the bow
 oy the plows, which are bolted to standards whtch swing upon the axile
and the tnelination of wh:ch, and convequently the depla to mbich the plows enter the ground may be regnated at will. lo adusting the machin Yor use as a cultivator, the furrowing plows, the shatte and boppers, and
their attachments, are detached, and three or more standards, provided thetr attachments, are detached, and three or more standards, provided
with suitable plows, are placed upon each of the beams. To the rear end with suitable plows, are placed upon each of the beams. To the rear ends
of the beama are detachably attached standardis, having outwardly proof the beama are detachably attached standards, having outwardiy pro-
Jecting journals formed upon their lower ends to recelve the small wheels

1uproved Horse Power-Improved Baling Presu. tion patented by the same inventor, June 25, 1992, which was a plan fo tion patented by the same inventor, Juae 25, , 192, which was a plan io
arranging the shipping connectlons within a bollow journal, on which re.
volves the large drive wheel, baviog the drum arranged under it. Thi bore of sald wheel was made large and fitted on a hollow stationary center or Journal. In the present inventiun thesame plan is made avallable fo
further almolifylug suct machines, and economizing space by greati further almplifylug suclu machines, and economizing apace by greatly
enlarging the central opening or the bollow stationary center circle, so that the drum itself is placed within the bollow Jouraal, snd the hight of the machine thus materisilly lessened. Hence, the invention consists of a
statlonary circle or bollow center within whitch the drum is located, and whlch forms the Journal for the wheel. The sawe inventor las also de vised an improved baling press, which is particalarly adapted to baling
cotton, in consequence of the pressed materal beling open to receive the cloth after passing from the press box. The cotton is deposited into hopper. whence it falls of its own gravity into a press bix and is forced connecting pltman. Any cotton overlapping the planger ts folded down oy a roller suapended by springs in the end of the hopper, and passes be
bind sboulders, which may be formed with teeth, which prevent fis return This operation ta repeated antll the bale 18 bullt up in sections baving all of its sides clear of all obatructions for putting on the cloth. The bal after being ted off, 18 removed by slacking back ou the friction bead, which
is then placed against the frout of the prees box, ready for the next operation.
Improved Beed Planter.
John Johuson, of Perry, and Lather W. Ingram and John Harper, o Naples, Ill.-Thls invention improves the construction of the seed planter
cor which letters patent No. 28,490 were tasued to Yor which letters patent No. 28,490 were $1800 e d$ to John Johnson, May 29,
1860. The front frame consists of two cruss bars, connected near thetr ends by two longitudinal braces, to the ends of the former of which ranners are bolted. The lower parts ofthe latter are recessed to recelve rotary arevent the seed-dropning device from catching upon them. Tion the runners are formed double share plowa, by which the furrow is opened to era. The seed then falls upon the wide flat part of the furrow before any on can fall in. The upper parts of the runnersare recessed to recelv end of the rod passes to the dropper's eeat, and to secured by a nut. By altaole mechantsm a boy, sitting upon the geat, can readily vibrate th opperst it, of such a alze as to contaln enough seed for a hill, and ecessed to recelve a small circular plate, which has two notches cut in it edge, at a little distance from each other. to allow the seed to pass througb to the boles in the hopper bottom. The part of the plate bet ween the
notches is placed directly over the bole, through whten the seed pasees to the ground, yo as to serve as a cut-off, to prevent any more seed betng opper. The sides of the furroware pressed in at the rear of the plows by he concaved rima of the wheela, which preas tiesorl down upon the eeed

Improved Cotton Planter.
Willam T. Huff, Atlanta, Ga.-The rear and lower end of a shoe rebts in
notch in the upper part of a spout, which paeses down between, is ecured to, and supported by bars pivoted to the rear uprights. The bars est in inclined grooves in the sifes of the apout, are clamped to the same, from its rim. By thts construction, as the wheel revolves, the + nds of the
bars drop from one pin to another, whtch jars the spont and shoe, and bars drop from one pin to another,
canses the seed to pass out regularly.
Asa Palmer, La Cygne, Kan.-Tbis thention relates to an oscillating hurn box, having vertical spring supports, and secured thereto by ciampng devices. A lever ta detachably secured to the upper ends of the springs
n such a positlon as to bear upon bars on the cover, and true hold the tater down, and at the same time bold the cream box in place upon the prings. The das ber 18 formed of a aerles of slats, aetlinclined. Lo operativg from one end of the box to the other through the dashe ; , the taclination f the slats throwing it into numerous currents and into violent agitation, silght pusb belng all that fe required to keep it in motion.

Improved Folding Cot Bedstead.
Werdell Wright, Puculcla, N. Y. - The legs at each end are connected by a transverge rall, and are plivoted to the side ralis so that they will readily
cold back againgt inelnner sides of the side ralls. When the bedsteai is in use thelegs stand bractng, and are supported by the beid and foot boards, The foot board tis pivoted, so that it will fold down between the side ralls. The head may also be plvoted so as to fold in a similarmanner. By means fa projection on the bead and foot boards, the legsmay be more perfectly upported than they would be by the ralle.
William Shtelds, Mount Sterling, Ill.-This
pplled aral truse or osndage for the purpose of theating and curing suc. espfully diseases

Jmproved Oro ©8eparator.
Pentecont J. Mitchell, Brigham clty, Dtah Ter., aseignor to bimself and under an overbead frame. Thesteve, which to suspended in the vat from a rock sbatt, drop, when let fall, on bars supported by sprit gs. Below
thesieve the rat is bopper bbaped, with pasages through it, baving an adjuatable gate. Below the vat it a recelver, lato which the matters fall o be conducted in tothe uoper compartment of a descending reciprocatiog
car. The matertals then pass through a contracted pasage, over an amalgamator and into a bain, over the top of the lower end of which the light matters pass off with the water, leaving ores not previously collicted de-


