## Examples for the Ladies.

A. Cady, of Cambridge, Nass., has used her wheeler \& Wison Machind constantly in all kinds of dress-making, sincc the sprius of 1888 . without re Buruett's Cocoaine for the hair takes precedence all over the Unitea

## Guturers $\mathfrak{t o ~} \mathfrak{C o r r c s p o n d e n t s . ~}$

SPECIAL NOTE.-This column is designed for the general interest and instruction of our readers,not for gratuitous replues to questions of a purely
business or personal nature. We will publish such inquires, hovever when paid.for as advert isements at 1.00 a line, under the head of "Busines. and Personal."
ALL reference to back numbers must be by volume and page.
D. F. C., of N. J.-There have been no less than eleven pat
J. M., of -_. Inquire of your bookseller, or write to Baird, Philadelphia, for Box"s "Practical Hydraulics." It contains all necessar
W. W. M., of ——.-Your query is not sufficiently intelligi-
E. C. B., of Wis.-To increase the capacity of an engine, be yond the capacity of the boiler, gives rise $\neq$ loss through increased radia-
tion and friction, owing to increased surfacc and weight of parts. A. B. B., of Thames, N. Z.-We have no information relative to the use of rubber sp: ings, for storing power
ears, etc., that we lave not already published
G. S. A., of Indi.-A fly wheel is an accumulator and distribu-
E. K. J.. of Mich.-The only way to positively determine the initial pressure in the cyliuder of your engine is to use the steam engine
indicator. It is useless for us to guess at it for you.with only one element orinformation, namely, distance of cylinder from boiler.
J. W. G., of --.-To restore horseshoe magnets that have lost their power from disuse, proceed as with new ones. Place the poles, of the magnet to be charged,against the poles or another, making opposite
poles meet. Then draw a piece of soft iron, placed ar right angles upon the magnet to be charged, from the poles to the bend. Do this a number o duces a maximum power. It is the method of Jacobi, and is considere one of the best.
W. G.. of Pa .-We do not think tannate of soda is an article general commerce as yet, though if it is as cffectual in scaling boiler as stated by a former correspondent, it must inevitably become in crea
demand. It may be formed by slowly adding a solution of tannin to a solution of causticsoda.
A. P., of Cal.-Ewlank puts his steam current outside of the vacuum nozzle, which requires steam in large quantity to get the ex.
haust. Professor Draper puts the steam nozzle inside of the vacuum tube

Damaged Mirror.-Pour upon a sheet of tinfoil about three drams of quicksilver to the square foot of foil. Rub smartly with a
piece of buckskin until the foil becomes brilliant. Lay the glass upon a flat table, face downwards; place the foil upon the damaged portion o the glass; lay a sheet of paper over the foil, and place upon it a block o ficient weight to press it down tight; let it remain in this po ition a yew nours. The foil will adhere to the gliss.-C. T., of Vt.
H. B., of Pa., writes, in regard to an answer on hydraulic boilers. "I have always thought from what I have seenin testing boiler boilers. "I have always thought from what I have seenin testing boilers
thal water had greater effect than steam; as I have seen them leak under test, and have steam to same number of pounds, and no perceptible leak. I
supposed it was because water was denser and the boiler was tight from supposed thas because water was denser and the boiler was tight from
not having the iron warm. I have two more subjects which have caused me some thought: Is not the bottom of the boiler more strained than th
top, in proportion of the weight of water over steam?" . To the frst we reply that the effects described as occurring with boilers under
water pressure do not indicate greater strain, and are accounted for by water pressure do not indicate greater strain, and are accounted for by
our correspo:dent correctly. To the second querv we answer in the af our correspo:dent correctlv. To the second
firmative. The third query is not intelligible.

## Quetits.

[W Wepresentherevith a seriesof inquiries embracing a varitety of topics o oreater or less general interest. The questions are simple
prefer to elicit practical ansvers from our readers.]
1.-Tinning Sheet Inon.-I wish to know how tinning 2.-Water Wheisl Power.-Will you please inform me how large a pipe it will require to supply a 20 feet overshot waterwhecl with
sufflient water to run one run of threefect sixinches and one run of two sufficient water to run one run of threefect sixinches and one run of two
eet six inches burrs, with bolt, smutter, and two elevators. I can run the whole thing now with forty poun:'s steam, (boiler 18 feet by 3 feet 6 inche
3.-Balloons.-What is the lightest and toughest material or small balloons?-J. H. B
4.-Incrustation in Bollers.-I noticed in a recent number of your paper that the tannate of soda has been successf nlly used to pre-
vent incrustation in boilers. Please inform me how much is required for a vent incrustation in boilers. Please inform me how much is required for
locomotive boiler 18 feet long, 00 inches diameter, with 120 two inch flues
and how often it should be uscd.-J. H. W.
5.-Spring in Shafting.-Will shafting that has been neated and bent, and afterwards straightened and turned up, be likely to
8 pring at the place where it was bent?-J. M. G.
6.-Worms in Hickory.-I am engaged in a business in Which a good deal of green hickory wood is used, and would feel obliged in
any one can tell me of a simple preventive of worms, which often render it any one can tell
ueeless. $-\mathrm{S} . \mathrm{F}$.
7.-Cutting Bevels.-Can any of your readers give me rule for cutting miter corners on beveled work? I am working in a wagon
shop, and often want to cut a miter corner on a seat or body, where the cor ners are square, but the sides sidends, or some of them, are beveled. I have to go by the old cut and try ry
great service to me..-C. H. S .
8.-Facing for Sand Molds.-What can I use to dust overthe surface or green sandmolds to prevent the sand from burning,
as to produce clean bright castings? Should I use a flux in the process of melting?-W. Z. M.
9.-Cement for Leather.-How can I make a cement or glue, for loining leather, thatshall be waterproof, strong, and not expen. 10.-Pulverization of Gelatine.-Can any of your H. м. с.
11.-Pant for Outside Work.-Will some of your cor respondents give a recipe for an economical and
outside work? Neutral color desircd. -C. H . M.
12.-Pressune on Slide Valves.-In a steam engine ending to produce friction, is there on the solid ends of the valve whe sliding on the seat and not over the ports? How much is the pressure on
the back counterbalanced by the steam between the valve tace and the seat without regard to ports or openings? What proportion of the weight ot steam engine, with flat slide valve, including steam pressure on its back, equired to move it, weight being applied direct?-F. A
13.-Propontion of Key Ways.-Please inform me if here is any rule laid down for the different sizes of key ways in shafts an
heels; and, if so, where I can procure it.-T. H. B.
14.-Speed of Steam Engine.-Suppose that a steam engine has a cylinder $12 \times 18$ inches, with ports $1 \times 10$ inches, and is making 12 revolutions per minute, being very he:ivily loaded. Would it be better to
give the engine more speed and enlarge the pulley driven by the engine running the machinery as before? Would there be as much strain on the engine, and would there be much more friction on the slides, wristpin, and
main journals, the work done by the engine being the same in both cases? The boiler that furnishes this engine with
357 square feet of heating surface.-E. F.

## Declined.

ommunications upon the following subjectshave been reccived
by the Editor, but their publication is respect fully duclined
Are alil Planets Inilabited? --C. M.
Cifenical Fire Engine.-H.
Psrchic Force.-C. E. S.-J. S.-H. G.
Woolen Manufacture.-S. S.
wers to Correspondents-R. F. H.-S. C.-S. P.
T. A. R.-T. W.-W. G. E. H.

Queries.-E. N. S.-H. M.-J. W.-P. B.-R. F. H.-W. W. W. M.

2atcot 备merican and toreign 2atents.
nent home and foragn vatents.
Screwing bolts into Boilers. - Allan Talbott, Richmond, Va.-The ob
ject in this case is to prevent leakage of water or steam from boilers by rea ject in this case is to prevent leakage of water or steam from boilers by rea quence of strains of the upon them in various ways. The desired end is at inserted in the bolt holes to weecive the bolts.
Process of Welding Copper.-Christian L. Schurr and William G. Reh bein, Baltimore, Md. - This invertion relates to a process whereby copper may be welded so as to produce as perfect a union between the surfaces in
contact as can be produced in iron, a thing which has heretofore bee deemed impossible
Ore Crushivg Machine.-Samucl Hugles, Charleston,S. C.-This inven tion relates to a metal stell lined with crushing ribs, and combined with an
inclosed cone bearing similar crushing rills on its cxterior, the object o
the machine being to reduce phosphatic rock to a size suitable for a thorugh washing of the same.
anital Trap.-Oscars. Eiving, Rome, Tenn.-This invention relates to a trap in which the animal entering steps upona hinged floor that yield
beneath it, which yielding, by means of intermediate mechanism. spring the trap; or, if the floor does not yeld, the same result is accomplished b the pulling of the animal on the bait, the trap being provided with teeth
which impale the animal, and also cast it out of the trap, so as to leave it in cadiness for another.
Steasi Generator. - William Byers, Philadelphia, Pa.-This inventio hem, and it consists in sucparate compartments with flre spaces betwee or swelled surfaces between the transverse retaining bolts.
Harvester.- -John $S$. Truxell, Greenburgh, Pa.-This invention consists
in an arrangement which enables the draft of the team upon a harvester to In an arrangement which enables the draft of the team upon a harvester to be regulated insuch a manner as to counteract the resistan
sickle lar by the crop, whether the same be little or much.
Desk and Chair Combined. - Archibald A. Porter, of Gritin, Ga. - Th is an improved school desk or oflice chair. provided with a desk or writin
board, so constructed that the said desk or writing board may be colveni ently turned back out of the way.
Blasting Pleg.--Julius H. Holsey, of Butler, Ga.-Thas is a new imple ment, to oe inserted, previous to blasting, in the holes drilled into wood or
rock, gnd is to receive the explosive charge, with the object of insuring greater safety in the preparation of the charge and more perfect results o blasting, without danger to the attendants. The invention consists in the
use of a hollow pin, of wood, metal, or other material, made in two sections, oreceive the charge and control its force.
Bell Prano.-Carl G. G. Buttkereit, of Toledo, Iowa.-This inventio esired result a combination of keys, maspers, toltruments. To effect th desired result a combination of keys, dampers, toggles, and springs is em
ployed, the details not being susceptible of verbal description, but involv SELP well tested and efficient elements of mechanism.
Self heativg Sad Iron.-Joseph Melder, of Munchen, Bavaria.-This is a self heating sad iron, so constructed that it will consume all the product ficombustion before the same can escape, thereby avoiding inconvenience
from smoke and gas. The invention consists in the application to the heat er ot plates and wire gauzs, which, when heated by the fire, will serve to consume the products of combustion. The invention consists also in the arrangement of receptacles for heating crim
irons being either removable or adjustable.
Clothes Dryer. - Hiram Knight, of Westminster, Mass -This is a new onstruction of clothes frame, so made as to be self supporting in ever into a narrow space.

Propulsion of Vessels.-John P. Bruce, of Brooklyn, N. Y.-This in driving the screw or propelling propelling marine vessels; and consists | driving the screw or propelling whecl by means of water wheels revolved or |
| :--- |
| drivenby water elevated by pumps, the latter being driven ly a steam en |
| gine, the whole arranged in the specification with reference to accompany | Eine, the whole arranged in the speciffcation with reference to accompany ing drawings, without which the details cannot well be explained.

Forge.-Joseph R. Morris, Houston, Harris Co., Texas.-This invention passing off unconsumed, intothe atmosphere, enter a furnace and are burnt therein, thereby furnishing heat for the generation of steam in a boiler connected with said furnace, which steam is used to drive a fan, that impels blast into each forge, and is also used to propel an engine that operates hammer; the exhaust from the engine being conducted to the tweers of
the forges through pipes, in which are placed red hot iron plates, which de. compose the steam,
burnt in the forges.
Machine for Mabing Pating Blocks.-Samuel Wallace Brooks, of Brownsville, Texas.-The cutting knife of this machine is hexagonal, or of ny other form desired, and, being actuated by suitable mechanism, the wood, which has been previously sawn into proper lengths, is forced, by a weight,
down, endwise upon the grain, upon the knife, which thus shapes the blocks It is claimed that wood paving blocks may thus be rapidly and perfectly
prepared.

MACIINE FOR SA wING SPOKEs.-Thomas J. Tolan, of Deiphos, Olio.-Thi. is a combination of a rotary saw, with two disks and a spring, , ogether with
ther peculiarities in the machine, whereby spokes may le sawn from boits, which is claimed to possess advantages over other machines hitherto used or this purpose.
cmprovement in Planing Macienes.-Charles E. McBeth, Frederick nuscatine, wham C. Margedant, of Hamilton, Ohio, and Henry Climer, o Sientific American, for a full description, with engravings, of this ma hine.
Cora Planter.-Abraham H. Stark and John C. Mitchell, of Nevada gg of a combination of a hopper having a single hole in its bottom; a meas urc of the quantity of grain to be planted; a case, arranged thereunder laving two holes and a slot in the top, and having one central discharge hole in lottom; with plates, rigidly connected, movable together, and having case. Also, a combination with an :diustable shoe, clasp and arm to fasten shoc etachaily to the frame of the planter and the run Pipe Wrencil attachient for Monkey Wrench.-A. h. Woodruff, of with teeth upon its inclined face, which is placed upon the movable jaw of monkey wrench, and which has on each side a spring catch. which engages with the shank, of the wrench when the block is in position. The teeth of the block will, when thus ad
ter can lie turned as desired.
Sulky Cultivator.-Philip Hewitt, of Farmland, Ind. - The nature of this improvement precludes an explanation of details. The object sought is
to render this class of cultivators more effectual and convenicut in use, and this end the inventor, while using manv well known devices, adds fenders formed of spiral wire cords attached to plates on the inside of the cultivato:
plows, to protect the plants, and a peculiar construction of frame with its plows, to protect the plants, and a peculiar construction of frame with its scal and levers, to render
trollable by the operator.
Harvester. - George S. Grier, of Milford, Del. -This is an attachment o: studded carrier to the self roking apparatus of harvesters, with a gear out of gear with its actuating mechanism, ancl thrown into gear by the drivel, the design leeing to so improve the selt raking attachment that its acion may correspond to the varying quantity of grain in different parts of a la. and thal
Horse Hay Fork. - Charles A. Howard, Pontiac, Mich.-One part of the
fork has two curved tines, the other part has only one curved tinc. These arts are pivoted together and are further connected by bars, which ar crossed and pivoted to the shanks of the two divisions of the fork. To these
bars or links is attached a tripping device, which by pulling a cord release the parts so that they open and discharge their load. We judge this to be convenient improvement, and it certainly is simple, strong, and durable. Hand Support and anvertising Medium for Street Cars.-Mahhol ising medium for railway cars. A circular frame is composed of two sim arly constructed parts, each provided with a groove, so that, when put to is ther, they form a hollow ring for the reception of an endless cord on which wooden bar or handle. The cord is tightly clamped be s placed a round wooden bar or handle. The cord is tightly clamped be
tween the circular sections by means of screws, but the handle slides freely thereon. The upper ear is slottea to admit of the attachment of a strap whereny the device is secured to the roof rails of a car. Each of the sec
tions of the frame is cast with an inner flange or rabbetted edge, whereby when put together, a recess or annular groove is formed, suitable for the re eption of circular plates of ylass. Between these plates it is designed to ed will be legible through the glass, and similar or different advertisement may be placed in the same frame, which, from the position of the frame in the car, it is manifest cannot tail of quickly attracting the notice of passengers. The support is free from a tendency or liability to cramp the hand o:
the person graspmg it, adapted to conceal the junction of the ends of the the person grasping it, adapted to conceal the junction of the endiz of the
cord, as well as tighty clamp the sane, and is also a device calculated to adorn the car in which it is suspended, while incidentally constituting a
and most efficient means of displaying advertisencuts.
Conbined Dinger in provided with a lamp whereby its contents can b heated, and with a transparent side or door through which the rays of ligh rom the lamp can be projected. Horace $\mathbf{C}$. Ketcham and willie $\mathbf{w}$
Harness Brekle.-Othniel Brown, of Albia, Iowa.-This invention re hates generally to haruess buckles, but particularly to that patented Decem-
ber 21,1858 , by O. B. Smith. The cross lar of the frame of the buckle has tud pin rising vertically from it to enter the hole of the strap to be buckled which is passed under one cross bar and over another. A clamping bar o:
lever is pivoted in cars rising from the side bars of the frame, and bearing at the short end on the strap around the pin, a hole becing made in the short end or the pin. The long arm is bent inward, so as to bear against the strap in hat the straightening of the strap by the tension of the draft will force th ong arm of the lever out and the short one in, in a way to hold the strap more firmly, according to the strain.
T'wive CuTter.-Charles Carrington Lewis, of Gainesville, Ala.-This is
anew, simple implement to be used in stores, warchouses, etc., for the pur pose of cutting twine and cords used for the tying of packages. The inven. tion consists chiefly in applying the cutter to a pivoted balance weight, drawn in during the cutting process and moved out subsequently to bring the end of the twine or cord within convenient reach for future usc. A
spring holds the twine in contact with the movable bed spring holds the twine in contact with the movable bed.
Lightwing Rod Couplinge. - David W. Demorest, of Newark, N. J.
This is an arrangement of a lap and lock splice on the sections of rod, where by the same are not only jointed but actually locked together. The inven Hon consists, also, in the application of a screw to the coupling or hearing absolute support.
Cigar Ligiterr.-Joel b. Miller, of Rondout, N. Y.-This is a new pen dent cigar lighter, similar to those now used in cigar stores, but so arranged
hat it will produce the flame by the consumption of lerosene or other burn ing fuid, instead of gas. The invention consists chicfly in so hanging the endent burner and reservoir to frame or arm that, bs vibrating the for mer on its pivot,
may be required.
Water Wheel.-Samuel D. Taylor, of Hazleton, Pa.-An improved mode of applying gates to turbine wheels; the effects of which are, first, to enable Che gate to work close to the wheel, and thereby to bring the unchecked
celocity of the water to bear upon the buckets as soon as it passes the hroats; secondly, to admit of adjustment without changing the course o the water to the wheel. These cffects are produced by means of a series o
movable are plates, and arc extensions of stationary chates, combined concentrically and closely wil', the wheel and each other, so that the course ot the water will not be changed (as where the chutes move) nor the velocity mpeded, after passing the throats, by an adjustment of the gates.
Bark Mill--Owen Coogan, of Pittsfleld, Mass.-This is an improved machine for reducing or breaking up bark for tanners' use, whether the same
be in a dry, damp, or green state. This invention consists in the arrangement of a hinged adjustable leaf with the feeding table and roll, and in the can be used for reducing all kinds of bark to a suitable degree of fineness, to best serve the purpose for which it may be intended. The manner of reduc-
ing or cutting, will, it is claimed, be quite uniform, and therefore most sot. ing or cutting, will, it is claimed, be quite uniform, and therefore most sat.
isfactory. The feed roller, besides slowly supplying the cutters, serves also to hold the bark, so that it cannotslip or move out of the way when acted of the table. The cutting-points of the saws or cutters may be of hardmetal and removahle on their blades, to he replaced when worn.

 consists in $n$ double and reversilile catch, which locks the s.ash to the stile
and the stile to thice frimul. The sainh is pivoted to the stilc in the usual way, and fitted snusly thereinto argiinst a a suitioble flanthe or stop. An inuproved atch bar, having studs respectively on each site orits free end and pivote the stile, is used. Siotted plates on the tolp of the sishl, and slotted plates o
the entive the studs of the catcl bar. By this construction on double stu
Stspended Liftivg Jack.-Hector C. Ha vemeyer, of New York city.This invention relates to a new manner or applying hydraulic lifting jack with the obiect of using them in warehouses, magazines, sugar houses
shops, \&c., for holding, goods, hogsleads, or other devices, suspended, an conveying the same along elevated tracks from one to another part of the buildings. The invention consists iu suspending the lifting jack from a truck
running on an elevated track; in providing it with guide rods and a lower running on an elevated track; in providing it with guide rods and a lower
cross-piece, whereby it is adapted to the suspended position and to the operation of lirting goods from the floor; and in the application running the truck off the rails, or springing the plunger. This is a good and practica

Pavemevt.-Hermann A. Gunther, of New York city.-This invention
consists in making a concrete pavement or sidewalk, constructed so that it may be taken up in small sections. Eetween blocks of artiftial stone or concrete, is placed gu:n, tar, rubber, (or other water repellant substance,
poured into the joints between the blocks while said substance is in a molten state. The effect produced is to form a completely water tight joint, whin small sections of the stone may be taken up whenever desired by the appli cation of heat to the joints
Apparates for Releasing horses.-James Harrison, ofNew York city.
-This invention furnishes an improved apparatus for application to the -This invention rurnishes an improved apparatus for application to the in said stalls to be discngage: and led or drawn from said stable, when, in disengare and lead out the animals one at a time, or when the said animals may be so frightened that they will not leave their stalls. An excellent device, which slould be in every large stable.
Rockivg Chaik.-John W. H. Doubler, of Darlington, Wis., assignor to himself and William Logue, of same place--This invention has for its objec to furnish an improved rocking chair, which will rock easily ancl noiselessl A low stool or rocker bed, the side bars of which are flanged along the outer edges of their upper sides, said flanges serving as guards to keep the rockers
rom lateral displacement, support the rockers, which are placed under the seat of the chair. To the outer sides of the flanged side bars of the stool rocker bed are attached side boards or guards. to prevent anything from
getting beneath the rockers. The chair legs are made short; and to their setting beneath the rockers. The chair legs are made short; and to their
ower ends are attached short rockers; or, if desired, the legs of the chair gradually retard the movement of the chair in either direction, and tinall stop it at the proper point, and then assist, by their stored up power, in r

Earth PulverizeraxdHarrow.-James Lefeber and George W. Shults, of
Cambridge City, Ind.- This invention relates to a new way of more effectuCambridge City, Ind.-This invention relates to a new way of more effectu-
ally pulverizing cloddy ground, atter the plow, by arranging the broad point ally pulverizing cloddy ground, atter the plow, by arranging the broad points
of rotary crushers in two sets, whicli act on the clod in lines at an angle to and a rear set of star wheels are arranged on horizontal parallel shafts extendingacross a frame mounted on them vertically to the direction in which
the apparatus is to move. Each star wheel works independently of the other, and has a hub, working at the end against the hub of the wheel: O each side, or one end of the hub of each outside wheel works against the
frame. The arms of each set of wheels tre arranged to work between the the ther set, at the sides between them for cleaning each other. The points of the arms of the front set are made broadest in the planes of roti-
tion of the said wheels for cutting notches or clannels in the ground in the direction of the movement of the machine, and the points of the rear set ar the cuts made by the front set for increasing the cutting action on tis Hround, a nd these latter pointe are made broader at the outer ends the toward, the axle, for facilitating the escape of the stones, clods, or other
matters which might wedge between them ir they were narrowest at the points. A cranked rod extendsacross the frame parallei with the slaft and in such relation that when swung downward the points of the front se
of wheels will be engaged bry it so as to be held against rotation, and there by act as common scratching harrow teeth. A hand lever is pivoted to the frame and arranged with the cranked rod, so that the latter may be lifted
out of connection with the points, when they are to be left tree to turn, out of connection with the points, when they are to be left free to turn,
which may be done while in motion. This machine is adapted to cultivating which may be done while in motion. This machine is adapted to cultivating
each side of a row of plants by removing one or more of the star wheels Hom both sharts ace apply ing loose sleeves, corresponding that the vacantspacesmaymake room for the plants; and for the greate protection of the plants, especially from the action of the points, which ar more likely to throw earth upon them, the protecting disks are applied on
the shaft, inside or the wheels next the space, which effectually prevents any the shaft, inside of the wheels next the space, which effectually prevents any
earth being tirown upon them. Such disks may be applied to both shafts removed and the star wheels replaced
Solderivg Apparates.-Luke Albert Smith, Kansas City, Mo.-This re nd it consists in an expanding and contracting cylinder. A ring, with a ver tical flange on the inner edge, is mounted on a suitable support, with an ex and supported by an extension. At the side opposite this extension, the shel of the cylinder is separated longitudinally, and the parts lap each other considerably, suitable mechanism being employed to contract the cylinder. The cylindrical part of the can to be soldered is placed over the cylinder when
contracted. The cylinder is then expanded, and the can to be formed swelled out against the flange into the required sbape, and then held for soldering out against the flange into the required sbape, and then he,
after which the cylinder is contracted and the can removed.
Horse Power.-Hemphill Smith, Shelby Station, Tenn.-This invention connection with the frame of a horse power, in such a way that the wheel ca be used either inclined or horizontally, either as a tread wheel or draft wheel. When used as a tread whzel, a rone is stretched along the frame and
connected with a windlass, wlich may have a ratchet and pawl to be prevented from unwinding. The horses are hitcled to this rope, the windlass woights suspendede their power. In connection whe the rope these weights, and their breaststrapsconnectedwith the rope. Their Dowe will be increased the more they draw on the weights while treading on the
wheel. This arrangement of rope and weight serves properly to control the animals during actio
Fly Trap.-Samuel F. McGown, Rockville, Ind.-The invention con sists in a revolving wheel flue and a water tank containing water or
other liquid. The face of tne wheel is covered with molasses and water, or someothersubstance that will attract flies. The bottom of the flue covers
a section of the wheel extending from or near the center to the edge of the Wheel, and in width being equal to about half its length. The wheel revolve under the frontedge of a flue or space, without disturbing the flies: but the
back edge of the flue is dropped down so near the wheel that the flies, being disturbed, will rise from the wheel and fly upward toward the light, an striking a plate class, will drop to the water and be drowned. The wheel revolved by clockwork, and is noiseless and continuous in its action.
STENCH Trap.-Michael Gafney, Newark, N. J.-This invention consists
in the emplovinent of large vessel in connection with the pipe, made in two sections, the one leading into it extending nearly to the bottom, and the other leading from it connected near the top; the said vessel laving a large
openiug at the bottom for cleaning it out, said opening being closed by a
 he sunall traps used in sinks, whicll become suaticiently he:ted by the quan


mproved Rallway Ratl Ciatir.-Thomas Donahy, Empire City, Ne vada.-This invention lias for its object to furnish an improved railroad rai chair, designed for use one length of a rail from switch chairs, to avoid the necessity of frequently cutting rails to allow the switch to work. By this etaken out and put in to keep the space between the rails properly flle an, at the same time, to prevent the rail next the switch from being pushe working. The chairs are cast right haild and left hand, so that the detacha e piece may always be upon the outer side of the raii. If desires, the chai being between them to get the doubled length of extension and contraction, thus giving a greater scope for adjustment.
Tilt hamaer. - Patrick Breen, Auburn, N.Y.-The objec: or this inve ind for retaining the drop on its rebound, and prevent it from taling ay: after the main stroke. The pattering or the drop on its return stroke is, in
many cases-as, for instance, in minting-injurious, spoiling the finc excenmany cases-as, for instance, in minting-injurious, spolingy the fine exectu-
tion of the main fall. To avoid this, the inventor has arranged a peculiar the rebound, and prevent it from falling as as to catch it with a short arm o new combination of mechanism, whereby the cam is enabled to act on the drop, and in a new general arrangement of parts for moving or locking the
cam, as may be desired. This brief notice will enable those familiar with th ubject to see $t$
or fine work.
Rotary Steam Engine.-George V. Atwood, Mount Hope, Ala.-This解 within a revolving cylindrical wheel, in combination with the spiral groove
in the cylinder,for the almission of steam, and a steam wheel, cylinder and in the cylinder,for the almission of steam, and a steam wheel, cylinder and
piston wheel, combived and arranged in a.peculiar manner, constitute the piston whee
invention.

Lightnivg Conductor.-Othniel Prestor, South Dansville, N. T.- While the inventor is aware that it is contended that the conductivity of a light,
ning rod is according to the area of its cross section, his own experience hich has not been very limitel in the business of manufacturing and put ng up lightning conductors, leads him to douht the entire conectnes o with the conductivity of lightning rods. Conductors composed of broad straps of metal haviny great sispericial area and but slight cross sectional
area, h hve been employed with :ood results. With a view of increasing e superficial area, conductors have been made of woven;wire and also however, made of wires twisted together around a core or tube, and is in outward form the same as a wire rope, and continuous from end to end, an may be of any required length. In twisting the wires around a solid core,
the core is withdrawn, which leaves the conductor itubular. If twisted he core is withdrawn, which leaves the conductor ituhular. If twiste conductor tubular. In either case the conductor is a tube composed of ires twisted together, and having the strength and flexibility of a wire rope when made with the tube

Wood beyding Macirnes.-Hiram McDonald, Shortsville, n. y.-Thills of one horse velhicles, to be bent, being confined to a former (whereon they
have been previously bent, in a machine, to form vertical curves at the ends) re placed a This consists in a long thin plate of metal, having the upper edge provide
with the conflaration necessary for imparting the form to the under side the thill, and has four (more or less) pairs of bars attached to its sides and extending above the edge considerably higher than the depth or the picces to be bent. The upper ends are mortised for keys. The pair or bars, at the en
of the die where the curve is greatest, are arranged radially to the axis o the curve for having a better action on the pieces than they otherwise
would. The unner former or die also consists of a long thin plate about te hickness of the pieces to be bent, having its lower edge formed on the der projecting downward from said line at the point where the front ends of the thills terminate. It also has a prolongation at this end, arranged in the vertical guide. and is connected at the center of the top to a vertically
reciprocating bar of a press for forcing it down upon the wood pieces to be
 said die being placed on a suitable bed against stops, which latter serve as cuides in aljusting it to the right position to receive the die between the bars, to admit of driving a key into said bars, above the said pieces, after hey have been bent by said upper die and be fore it is raised, to key the
pieces fast to the lower die, to be held until they become suficiently set to retain their for
same inventor.

## NEW BOOKS AND PUBLICATIONS

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Parks, for the Year ending May, 1871. New York: William C. Bryant \& Co.
This is a voluminous and handsomely printed document, making a roya octavo volume of 427 pages. It is prof pusely illustrated with photographs,
lithographs, and wood engravings-the latter, however, on account of their inferior quality, detracting from, rather than adding to, the attractions of the volume. It contains a List of Commissioners and Officers-the Annual Report of the Department-Reference to the Central Park Map-a Lega
History of the Department Jurisdiction-Report of the Comptroller-Topo graplical Description or the Central Park-Grs, Docs, and BequestsLists of Animals-Reports of various Offcers, etc. etc. The Renort wil
prove of great value to those interested in the progress of our city im-

The Great Fires in Ciifcago and tie West. History and
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arge sale. As a record of incident connected with the greatest fire that has

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trand, Publisher, 23 and 27 Warren Street.
Thispaniphet is undoubtedy one of the most ane reviews of he narrow gagc question that has yet appeared. It expresses the views of one of the
most clear headed and farsiglted ot our American railway engineers, which hose who peruse the book will see coincide tothe opinions we have,from time ot time, expressed relative to the tallacy of most of the arguments in favor
of narrow gages. In another column, we publish some of the most pointed of r. Seymours able arguments in favor or wae gages; and hough, as the title implies, these arguments are intended to apply to "Main Trunk Lines," The pamphlet is timely, and will do much toward correcting false deeas upon he polic
eisure.
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For the week ending November 14, 1871.

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120,860 .-Bridle Bit.-H. M. Cornell, Brighton, Ill. 120,860-Bridle Bit.- H. M. Cornell, Brighton, Ill.
120,861.-Rein.-J. P. Crutcher,T. Y.Vancleave,Cornersville
120,862.-Gunpowder.-C. W. Curtis, London, England.
120,863.-CHuck-A. F. Cushman, Hartford, Conn
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120,866.-Fiber.-J. Felber, St. Louis, Mo
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