tight fnr any leagth of time Instead of a great thickness of argilacenus material, called puddle, which is not always at hand, and only applied with great la bor and expense, the bed of the canal would have to oe ined with Seyssel asphalte to the thickness of about one inch and a quarter.
The application of asphalte to canals would doubtless help to keep the water they contain in a pure state, and do a way with that stagnant mud in which water weeds of the coarsest description flourish and impede the progress of the barges, while it in hot weathrr gives rise to fertid emanations as soon as the water sinks a little below its highest level.
For this purpose the artificial asphalte, which is nothing morethan gas tar mixed up with calcarcous 4 rit and eand, would not be found adequate, as it cannot be expected to afford a durable $n \mathrm{rr}$ an even surface The vecessity of employing na ural asphalte for thi and other purposes, instead of various artificial mistures intended to imitate it, has been recenuly insisted on by an eminent engineer, who states that economy and durability are "only aesured when the asphalte has a natural source like that shipped $t \mathrm{t}$ London in large
quantities from the mines of Pyrimont Seysel, in the Jura mountains." These mines have been worked by the Seyssel Asphalte Company since the year 1838, the perind at which the late Captain Claridge introduced their product to Eagland, and are still, we understand, far from being exhausted. -Scientific Reviev.

## Electric Clock in London.

A remarkable clock has been erected for public use at the top of the offices of the Liverpool and London and Globe In. surance Companies, at the junction of Cornhill and Lombard streets, where it forms one of the most conspicuns objects to be seen in the city. The Mechanic's Magazine contains the following description of it : "The object of the Electric Clock Company, by wh'm it was erected, was to make the 'globe,' do duty as a clock face; some of its convexity has, therefore, been sacrificed, but the result is a novel and beautiful object, the interest of which is only excereded by its utility. The globe is surrounded by gilt stars which indicate the hours, and by the shape of the dial so much light is thrown upon them that they are visible by night and ly day, while the pointers con tribute greatly to the general eff cet of the design. The clock requires no winding uo. The dial is illuminated by Schaeffer's patent double burners; and by an ingenious apparatus the gas is turned off every morning and evening two minutes earlier and two minutes later every day as the days are lengthening or'shortening, and it is adjustable as well for the toggy days of November as for the light nights of summer."

The Chinese Woman's Telegraph.
During the recent visit here of the Chinese Ambassadors, one of them stated in seply to the inquiries of a pbysician, that it was not customary in Cbina, except among the lower classes of the perple, for the doctor to see or tnuch female patients. In order to ascertain the pulse of the sick woman, a strinz is tied around her wrist and extended outside the window to the doctor, who holds the string between thumb and finger, and by this sort of telegraph is enabled to count the pulsations. Thie seems a ludicrous plan; but it is far less mıchievous than our cust m of admitring men doctor: to the private apartments of remales. The opportunities for the medical education of women in this country are yearly ivcreating; avd we hope the day is not far distant when the ladies will be able to rout the men from the sick room, and compel them to stand out in the cold, under the window sill. In China only women nurses attend during child-birth.

## Charcoal Crucibles.

Mr. Gore communicates th the Philosophical Magazine an excellent way of making charcoal crucibles, etc. He first shapes the articles out of wood, and he finds that lignum vitre, kingwood, ebony, and beech answer best. Atter the vessel has been formed, rhe wood is carefully dried in a warm place The articles are then enclosed in a copper tube retort having two exit tubea fur the escape of gas. This retort is heaved siowly at first, and finally tor some time to bright redn+ss, to conspletely carbonize the wooden vessel. It is necessary, Mr. Gore says, to turn the retort continually, and so distribute the beat, that none of the tarry matter evolved may condense upon the articles ; otherwise, he telle us, tbeir shap and dimensions may be curiouslo altered. The heating is to
be continued until no mare gas is evolved, and care must be be continued until no mare gas is evolved, and care must be
taken not to heat too ranidly, or the article will fall to pieces taken not to heat too rapidly, or the article will fall to pieces
Charcoal made in this way from lignum vitæ is remarkably hard, and the testure is so close as to make it apparently quire impervinus to liquids; even after immersion in the strongest hydrofuoric acid the surface aad no acid taste. Rods mate of this lignum vit $æ$ charcoal, conduct electricity admirably, and would probably, Mr. Gore says, answer well for pencils for the electric arc.
Forty Miles of Snow Sheds.-The Pacific Railrnad Com pany are now engaged in erecting sheds over the cutting and other exposed points. They are of heavy timber framework, with pointed gable roofs, and look as if they could withstand almost any pressure of snow. Nearly forty miles of the track will have to be thus covered, and the quantity of timher required will be enormous. Not less than twentytwo saw-mills, mist ot them worked by steam, are run night and day, employing nearly two thousand men; and yet they do not work up to the needs of the Cumpany. It is estimated that it will require no less than eight hundred thousand foet. of lumber to construct a mile of sheds So great is the
demand that the country on looth sides of the track is being demznd that the country on to
rapidly denuded of its forests.

## ©fdataial summary.

White Gonpowder. - A correspondent writes us upon the subject of wuite gunpowder. The drift of his communication seems to be that it is not suitable for blasting. We agree with him that it is too costly, and makes too much smoke, which is annoying to miners; but we can scarcely see
how our article, which was intended to be a genera! review of the subject, as discussed in scientific journals of this and other counties, could justify the opinion that we supposed it adapred to mining or quarrying. We even tonk ground against its use for heavy artillery, and only admitted the possibility of its adaption to small arms. The fact that it is apt to explode, during the operation of tampins, is to be interred trom the directions we gave for its use, and its cost should be compared only with that of fine gunpowder, and not with coarse and cheap blasting powder with which we had no intention of comparing it
Recipe for Tomato Ketchep.-Remove the skins by pouring scalding water over the tomatoes in a pan. Simmer the fruil at least one hour (a longor tine will $n$,t injure) using suffilient water to keep from scorching. When cool wring the mass through a piece of coarse cotton or linen cloth wet in coid water. To each gallon of liqu.r add 2 table spo nstul whole black pepper, one-third teawpoonful of pure cayenne pepper (ground), and 1 tablesponnful of cloves. B il the whole until reduced ooe-third. Add 2 tablespoonfuls fine salc to every gallon while hot, and whea cold strain out the spice and wottle. No vinegar is used. Will keepfor years; but if scum rises at any time re-bjil and add a little more easoning.

The British Patent Office.-[n 1867, 2,284 patents were passed, and 2253 specifications were filed. 2,528 a pplicati ins or Letters Patent lapsed or were forleited by neglect to pro ceed for patents within the six months of protection. The fees received in the year 1867 (by stampa) qmounted to $£ 112$, 843. The fees paid to the Attorney.General and Solicitor General, and their clerks amounted to $£ 11,115$; and the salaries and expenses of the office, compensation annuitie. printing, and other expendirure, with the payment of the revrnue stamp duty of $£ 30,820$, left a surplus income for the yeur ot $£ 42,840$. The Commissioners-the Lord Chancellor, Master of the Rolls, Attorney-General,,and Solici tor-Generalor the Patent Office

Life in the Sea.-Two well known naturalists, Dr. Car penter and Professor Thomson, of Belfast, are engaged in a redging ex vedition, to the westward of the Faroe Islands This aill decide the question whether there are living crea-
tures in the deepest parts of the eea. Eminent authorities tures in the deepest parts of the eea. Eminent authorities
(the late Professor Edward Forbes among others, ancording to Chamber's Journal) have maintained that the p-essure a the lower denths was too great to allow of existence being carried on-that there was not sufficient light-and that the water contained too little air.

The velocipede is suggested as a substitute for the horse or the rapid transportation of infantry. Celerity of move ment is the derideratum ; for it is a maxim that the strength of an army, like the power in mechanica, is estimated by multiplying the mase by the ra ididty. Now, as to comparaive speed. Recently, in France, there was a race between a velocipedist and a horseman for a distance of fortt-ive miles, when the, latter won by only twenty five minutes, a'ter a run of six hours. It is stated that but for a head wind that blew all the time the machine would have won. Imagine a bidy of troops moving on the enemy mounted on the velocipede. It would be a great sight.

The proposition bas been made to make a canal across Southern Michigan to c, nnect Lakes Michigan and Erie, and thus save the grain laden vessels eastward bound a voyage of about 400 miles which they are now obliged to make around the southern peninaula of the Wolverine State. An other propositim of a similar nature is a canal through Canada connect ing Lakes Huron and Ontario. Both are said to he feasible, and the latter can be accomplished, the engineers think, fer $\$ 40,000,000$. This, however, is not so important as the route from Lake Michigan to Lake Erie, as but a small proportion of the commerce of the lakes extends to Lake On tario.

It has long been contended that steel boilers never could be used, not being sufficiently tenacious. But this theory has been badly damagrd by some recent experiments at Pitts. burg when e steel boller has withstood the most pressure that could be brought to bear unon it. The b iler is made of two plares of No 3 steel,, 7 inch thick, 6 fret long, and 38 inches in diameter. It has been subjected to eeveral tests. the 10th trial giving it a pressure of 725 pounds to the square inch. Experiments on it continue, but up to this writing ressure has been able to burst the buil

Wounds by the Chassepot Rifle.-Experiments bave recently been made at the camp of Lvons on the bodies of dead horses, with the view of ascertaining the precise character of the wounds produced by co ical bullets diechargen rom the Chassepot mu-k-t?. It is said that the a aerture made by the prij-cile at the moment it penetrates the flesh is columonly no larger tban mdinary pea, but that the $r$ tay movement of the ball revolving on its axis gradually enarges its circles until it makes a hole into which a person could thrust both fists.

The foreign exports of petroleum, from the United States, rom January 1 to S ptember 12, bave been as follows, for he gears indicated: 186867921.290 gallons; 1857,41949 , 20 gallons ; 1866, 39.792,292 gallon8; 1865, 12.680,524 galnns. Received at New Y rk. f'om January 1 to September 12; 1868, 692,029 barrels ; : 867 , 792,507 barrels.
A new Ruseian invention is a letter-box, so contrived that when a letter is de oosited, it gives the depositor a ticket in exchange, sho "ing tiue date when the letter was put in the bos. We are not informed whether the $G$,veram $n t$ is es. prcted to assume any respossiblity not already assumed in regard to the sate de'ivery of letters. If not, what is the invention worth?

Cattle Plague in Russia.- The cattle plague is making great ravages in the governments of Patbof and Norgorod. The disense has also made its appearance in the environs of St. Petersburg and M scoow. One of the Russian papers remarks that the cattle plague will do more mischief in the empire than a thousand Polish insurrections.

Under the Ming dynasty, in China, paper money issued y the government is inscribed with the hint that it must be received as coin and that whoever refuses to so receive it shall have his head cut off. There is no premium on gold or discussion as to how the currency shall be redeemed, in China.
An Albany mechanic has invented a process of manuacturing paper boxes by pressing the pulp in m.lds. They come out fit for immediate use, and can be made quicker and cheaper than from the board.

Earthquake at Gibraltar.-There has lately been au arthquake at Gibraltar, the first which occurred for many years. Two distinct sbocks were felt, but it dues not appear that any seriois damage resulted.

A man in Lgnn, Mass., a few days ago made fifteen pairs of ladies' gaiters in less than ten hours, making seven dollars and fifty cents. This is the greatest feat known to be accomplished by any shoem tker.

Prof. Whittlesfy has di-covered evidences of the residence of man at the High Rock Spring, Suratoga, just 4,840 years ago, or about six centuries before the deluge.

## MANOFACTORING, MINING, AND RAILROAD ITEMS.

From January 19t to September 1st, this ye r , the receipts of lumber at ChiTbe Detroit Car Company have a contract for 200 platform cars for the nion Paclitc Ra: iroad.
The Society of Arts, Londnn, has oficred prizes forthe best improved modrand meat•vans, milk-vans, and milz-cans.
The earungs of western railroad
large increase in thear business.
Tbe cost rf the iron bridge to be erected by the Union Paeiffc Railroad ompany over the Missouririver will probably not fall below two millions f dollars.
The frst woolen mill built In Minneapolis, Minnesota, was the North Star Woolen M M
stories high.
Two bonded yaras for railroad iron have been established at Detroit for the iccommodation of the Grand Rapids and
who are receiving large quanticies from anro
Tre
There bas been a large falling off in the business of ship-bullding in Maine been the case at Bato, only seven ships of i, 200 tuas eachave been built this been the
year.
There
 448,000.
The Taunton Machine Company is to hulld a pulley for its own uee which,
will be 30 feet in diameter, and the pit lathe in which it ts to be construct d will be 30 reet in dilameter, an
it is said will cost over $\$ 5,000$.
Th re are ten factories in st. Louis engazed in the manufacture of hide. covered saddletrees which ar" princip uly sold in New Yurk, Newark and
Philadelphia. The wood used 28 mortly Hackourry and sycz, wore, which is viry soft when green and easily worked but which hardena very fast.
Mount Vista, about ten miles from saratoga, a bluff rising directly from Time tible land to a hight of 500 feet, isfoundto be composed of a pure white Blenite granite, equalor superior $t$, any E Estern grauite Yor manumantal or
 An iron mountain, tive miles long and two hundred feet aigh, has been
oound in Cobden, Inl. It is wirhin three miles of the Ilinois Cencral Ranlro ad and a large p at of the andbelongs to that corporation. Tue iron crops out llalong the ridge and is of ex ra purity.
The Sc. Louls oridge over the Mississippi is expected to be completed by
the summer of 1.71 and the St. Louis mer" hanats are anxiouily a waiting the the summer of 1.71 , and the St. Louis mer:bants are anxiunily awaiting the day. Now it coststhem twelve c $\leq$ nts a barrel to send flour 1,500 yards across
the river, wilie it cosss only twenty cents a barrel to send it to New Orleans, the river, wbile it
1,200 miles below.

## 200 miles below

The Government machine shop at Charlestown Mass., has just completed In the world It will plane a p ece of iron furty feet tono twink, the larg, st and tweity fret hizh. Oae of the of ir prec s weighs over torty tuns. Seth Whlmarth, the masier machunist of the yard, was the desigaer.
It is only fourteen y ars ago that a grand excursion was made to St. Anthony's Falls, on the rompletion of the Chicago and Rock Island Railroad, in celebration of the fnished rallroad conntction of the Atlantic and the Mississippl, and yet to-day, there areno less thantwent-live railroads that ive that great river betwenn St. Louls and St. Paul.
The grasshoppers were so thick on the Missouri Valley Raill road track as
to cause the wheals to slip and delay the morang train c⿴o hours on the 11 ch cause the wheals to slip and delay the morang train two hours on the 14 th trick to make the wheels bite.
The Reaning Railroad Company own 16.355 cars ot all kinds, and 268 locomotives. Were, these all placea in one line upoa th: track they would caske up a train forty miles in length. The gre itsse ista ice Vet rul by any engine
the comoany bas been accouplisited by the engine Atlas, which has tra the comoany bas been accouplistued by the engine Atlas, which

Lynn bas shlpped 35,800 cases of shoes during the past three months slishtly in excess of last year's shipment. The total number of pairs in
this immense pile would be about $2,148,000$, and the aggregate value $\$ 2$, this im
s64,000.

In the Illinois Penitentlary elght hundred con icts are employed in me-
char ical trades. Two bundred and fifty are in the ceoper shops, ninety make shoes, torty-four make cigars, and there are thirty harness makers. The Everett Mills, in Lawrence, Mass., run 30,000 spindles, employ 1.000 ruduce in the week 12.000 pnuncs of wool and 20000 pont ds, f cottor; and pruduce in the sam. time, 100,000 yan ds of goods, princ,pal.
cotton ana cot on wool fabrics, dress goods, and shawls.
Work upon the iron Mountain Railroad between St. Louis and the South is goine on rapilly. Track laying will be finished to a point four miles below Farmington witbin sixyty days, and the track has already been laid from Belmont to Charleston. Fifteen hunared menare employed upon the line in
and at the tunnel: ifisy milles from Bismarck; four sets of hands are constantly employed working night and day. This tunnel is twelve bundred feet in length.
Experiments have recently been made at the camp of Lyons ou the bodies or dead horses, with the Vlew of ascertaining the precise cbaracter or the
wounds produced by conical bullets discaarged by the Chassepor muskets. Il issad that the aperturemade by the projectile at the moment it pen- trates the flesh is commonly no larser than an ordinary paa, but that the ro cles uncil it makes a hole into which a person could thrust both fate
Chromatr of Iron.-This cineral, which is found so abundantly ta Maryland and Pennglvania, bas recently been used for alloging iron and steel to
considerable extent, and with highly satisfactory resuits, the steel made from the mixture being the barilest known. Works for its manufacture have recentis been erected, and a comp ny formed whose capital is $\$ 400.000$, whicn are in active operaticn. The extenion of the use of this minetal for barden ing various manuractures of iron is now under experiment; and if the results prove sutisfactory, the consump cion of chrome ore, or chromate of iron, as
it is tectnically termed, will be greatly increased.

## Becent Ametian aod forcigh eatents.

## Under thts heading we shall publish weekly notes of some of the mors prom

 inert home and foreign patentsLamp FEEDER-T. P. Gibbons, Baltimore, Md.-The object of this inveltion is to provide a rheap and conventent device by which lighted lamps can befled at any time with perfect sufet

Snow Plow for Rail roads.-Jenking Jones and T. G. Elswald, Provi-
dence, R. 1 -The object of chis invention is to construct a snow plow for dence, R. 1.-The object of this invention is to construct a snow plow for rallruads which shall operate more easily and effectusily than thore beretofore in use, and by which the snow may be thrown upon either oide of the rack, as may be desired.

STove.-Henry D. Snyder, Carbondale. Pa.-The object of this invention is
to so improve the culm or anthracte hurnug stuve, that better combustion to so improve the culm or anthracte hurnimg stuve, that better combustio of tue luel whll be effected, and the heat be better radiated than heretotore Whle the outer wall of the stove can be opened all around the fire boxso a lso, be readily changed and adapted to burning different kinds of coal and wood. invention is to furnisha simple and neat device by which, atter iaising a
bucket of water from the well, the bucket can be readily and conveniently bucket of water from the well, the bucket can be readily and convenienuly
lowered into the water agaln without reversing the motion of the crank by wich it was raised. This device is an improvement on one patenied by the which it was raised. Th
same party Feb. 4, 1868.
Clotigs Wringhr--Josiah Webb, Spartangburgh, Pa.-This invention consists in the pecular method of constructiug and arranging the compress
ing rolls, whereby the water is more completely expressed from the clothes and whereby, also, the rubber coating of therolls can be easily aajusted and tilatened when it worss loose.
Pr,orss for Preparing Sulphate of Barytrb.-Page and Kraubse, St. Louis, Mo.- [nis process is a simple aud affictive series , ff operations for
treat'ng the mineral known as su phate of barryta or heavy spar, so called Wheresy the miseral 18 refined aud reduced to a fine powder known in con-
ar
Guide for Soroll Sawing.-G.W. Staats. Newcastle, Pa.-The object of this invention is to enable irregular flyures and curves to be sawn from wood by a scroll eaw without the necessity of workins to a line, which latter operation is properly performed by a akilled workman,
flguie to ve maiked to the wood to guide the operaior
 eld, Obio. - the object of $t$ is invention is to provide a machine for boring post and adjutable to operate upon side hills. It consists of a binged auger shatt whereby the earth lifted by the auger may be couveniently deposited away from the hole, together with windlass and cord mechanism fur lifting the anger shaft verncally trom the nole. It further consists in the form of
the boring disk, and binged or pivoted uprightesupporting the boring and the boring disk, and binged or pivoted uprights supporting the boring and
liftiug mectanism, the said upilgats vibiating in contact with slotted semicircular plates allized to the bed frame or the machine which sirve in con function with clamp borers and screw studs in the uprights to adjust the up rignts and tue auger shaft in a vertical position when the hole is to be boied on a side bill and the bed frame is necessarily inclined from the borizontal.
Tbnoning Machine.-William McKnight, Clearfeld, Pa.-The object of this iuvention 18 to provide an apparatus by means of which tennous of any suitable angle and slope, both in the tennow and shoulder of the same, may
be cut in an expeditious and accurace manner. It consists of a fran e baving devices for adjusting and holding the wood to be cut in such a manner that the tennou when cut will be straight or taperad, or the shoulders of the ame will be straight or mitered as may be desired and baving, also suitable
guides for the plane. It urther consiss of a teanoang plane having a abear fron, in combination with the trame above mentioned.
Sawine Machine.-Stmuel Yarion, deceased, Corunna, Mich.-This intrees and for cutung the same up into dimensions suitable for portabilits for consumption as fuel, aud is peculiarls simpleand effective in accomplish ing the same.
Lifting Maceine.-Andrew Kriebel Hercford, Pa.-Thismachine has for Its objlct to furnisb a simple, cheap, and convenleat machine, designed es-
pecially to enabl" the end of an endless cham horse power to be essily and conveniently raisea by one man, to recelive the trestle, so as to give a pro inclination to the endless chain of the machine
WAGON JAOE.-E. R. Baldwin, Soutbfleld, Mass.-The object of this invention is to pr ovide a wakon jack that may be operated with great r ease than
those now in use, and which is more especially adapted for raislug heavy tracks and carts which stand low, but which may sloo be nsed with equal ta clility for high and light wagons.
Seyd coverer.-E. D. Cramer, Hackettstown, N. J.-This invention relates to new device for covering the seed behind a planting or seeding maand wh.ch is attached behind a planter or seeding mat more wheels follow its motion. On the two sides of the frame, which converge directly in front, are secured metal plates that are up and down adjustable these; plates cting as scrapers for covering the seed
 relaces to that class of carriage poles which can be adjusted to carriages,
sle,ghs, or other venicles, io which the cllps may be set at any suitable ais. $t$ ance apart and to any length of axle.
Corn Harvabtrr.-Nelson Newman, Spriogeteld, Ill.-This invention re lates $t$, a new aud improved deviee for picking the eara of indiad corn ircm he standing stalks.
Combinad Corn Planter and Cultivaton.-John S. Mason, Coal Run,
Obio.- This jnyontion relates to a combination of a corn planter and cal
tivato
same.
W rench. - Luke Cbapman, Collinsville, Conn-This invention bas for its object to furnisb an improved wrench. simple in construction, comparative y inexpersive in marufacture, strong, and convenient
angolar Shaft Coupling -Johit M. Cose, Woithington, obio.-This in vention tas for its object tonaprovethe construction of my angular shat coupling, patented March 10. 1868, and numbered 75..364, so as to
pler and cheaper in construction, and equally efflcacious in use.
Playing Cards.-J J. Levy, New York city.-i his invention relates to new manner ot forming the edges of playing cards, for the purpose of facilita
 gle, so that they are narrower at the edge than in the middle.
Beehive.-Orrin Field, Independence, lowa.- 1 his invention consists in pecullar constructionof the hive, the manner of arr inging the comb frawes, erc, whereby a very desirable hive is obtaned, all the comb rames rea

## when necessary

Pacring, Prissing, and Weighing Wool, eto-A. W. Fox, Columbla ville, Mich.- Chis invention relates to a michine for packing, pressing, an weighng wool and other similar tubstances, and it consists in a novel co Refriagrato - wior Brat
Refrigratator-Wilson Bray, Stockton, N. J.-Tbis invention relates to an improvement in refrigerators, and the improvement 18 applicable to ranl
way provision cars as well as to stationary refrieerarors, boch on a large and mall scale.
Heating Railway Carb by Stram.-W. b. Farwell, New Yorkcity.-Thid nvention re'ates to certan improvements in healing ralway cars oy
then trom the boller of the locumutive by whio the cars are drawn.
Wagon axie.-C. D. Bachelder, Camden, Me.-This invention conast providilg an oil recess in the bouy of the journal of the axle, and a sleeve
which is puc on over the axle oll tight, to cunfae the oil in the recess, hav ing a stot cómmunicating with the recess in the arle through which the ©il Constrict to the wearmg parts.
Congtrdotion of Ceair seats.-E.L. Buckingham, Jefferson, Wis -This hivention consists in a melbod of tasteuil the rod or splint to the frame of the seat by pr viding oblque slots through the ralls from about the center
of the inner edge, downward and outward, terminating in the bottum tact of the rails near the outer e ige, and in passing the strips of which the bottom is to be woven through the said slots, insead of through vertical boies, sheretofore; and it further consiols in providing tenons on the back ends Eitchen 1 mplemment.-Cbarles $S$. Westland John b. Allen, Pr dence, $R$ 1. - he object of this invention is to provide snimplement avail whe both as a stove-plate hifter and a bolder for kilves, forks, and spoons, which latter will, when bo held by the
ble to the person emploged in cooking.
blocina Chain.-Peter Kendick, Trenton, N. J.-This invention re
Blocking Chain.-Peter Kendick, Trenton, N. J.-Thls invention re-
ates to a device for faclluating the driving of wooden blocks in chains, such are used for mining purposes.
Solfy Plow.-J.R. McConnell, Marengo, Iowa--This invention relate a sulky plow, and it consists it a pecular cunstruction of the same, wurne. ver the machne by toe driver, is obtanned.
Device for Condtcting Grain to 1 hrasaing Machines.-A. W. Lock bart, sacramento, Cal.-Ti.is inventiun relates to a device for conducturg
grann from the stack or from wagous, to trabbing machines, thereny effict graun.from the stack or from wagous, to tries
a a great suving in laoor in thrashilug grain.
Steam Engine.-Thomas A. Nizer, Hamilton, Ohio.-Tbis invention re lates to tuat class ot steam engines which are kuown as rota
it conssist in a novel construction and arrangement ot parts.
Gas apparates.-John W. Brown, Wooster, ohio.-This invention re lates to improvemeats in apparatus for generatug and purifying coal gas,
or illumbating al d other purposes, whereby the appara us is atisped to household or dumestic use, and the flow of gas to the gas holder is tegulated automatically, and the surplus gas used as fuel.
Machine for Stoffine Collars.- Willam Fauntlerey, New Harmony, ad.- Th 18 invention consists of a collar board pivoted centrally on a suit
able hench, whereon the leather portion of the collar is stretched and se cured wilh both ends open, and a pulley made to operate by a foor lever over which a belt wurks, to whica a stufflog mandrel is connected, woich is Suldea by one hand, whle by the other the straw on the filling is fed int he mouths of the collar, and tue strap actuates the mandrel to pack the lilng. When the collar has bl en filled at one end to the center,
oard is swung around to present the other eud to the operator

Mortibing and Slotting aderr.-Peter Cunningbam, Eckley,Pa.object of tins inve tion to to provide an auger with which the operations
mortising and sloting may be peiformed rapidly. Patented Sept. 1,1868 .

## Ausuers to Correspondemts.


and
:
W. L. B., of N. Y.-There is nothing that will remove rust trom polished sieel and leave a smooth surface. Iron rust is dissolved by
acins, but they will attack the polished metal. The only remedy we cau recommend is repolishing
A. J. G., of Kansas. - The amount of water that can be raised itediven bieht by the hydraulic ram, working uvder a given bead, is ilm ited only by the size of the ram and tbe supply. Hydra
ufactured by w. and B. Douglass, MIddletown, Conn.
J. J., of Ill.-If wheat is not allowed to sweat before grind ing, the flour will sweat after grinding ; but this may take place without in jury or loss more toan is usual in the complete drying of the grain. We
belleve the bet flour is made from wheat which ras stage before arinding. The bolting cloths made in Holland are of silk, this stead of thastle fiber as you bave been informed.
M. H. R., of Mass., - All other things being equal. increased length of a water pipe diminishes the flow. In Your ease, if we nnderstanc ern depends upon the pressure of the water in the reservoir. Beyona length sumfc
advantage.
F. C. C., of Me .-There are different theories in regard to Why the ocean 18 salt. Some think there roay be large deposits of sal it sall. Some the in the act of subsiding from a caseousstate. We are better satisted to was leve that it results from the evaooradion of the water which is congtantis flowing into the sea, which, although it may appear fresh to the taste,
always or nuarly always contains more or less salt arsorbed from then Ways or nuarly always contains more or less salt absorbed from the
earth during its flow. in this view the ocean bed is a immense caldro in which nature has been boiling away water for ages; the salt $r$ tman ing in the kettie, precisely as it dioes in the salta orks, only very muc
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