Adtomatio Car Covpling.-Willard E. Busb, Damacus, Pa.-This inven.
tlon con ists in attachiog soring catcees to the coupling pint to prevent its tlon con ists in attaching spring catcaes to the coupling pili, to prevent its
displacement oy the motion of the cars, and in the form of the ends of the displacemant by the motion of the cars, and in the form of the ends of
escaping link, and in the provision made for holding the link in place.
apparates for boiling Eges. -Ita Dimock. Florence, Mass.-This in vention cons ists, in general terms, of a chamber forming part of a stand or Jasket for boldıng eggs, to be immersed in bolling water. The chamber
contains water, whicu becomıng $\rho$ xpanded by heat, actuates a rod commuconrains water, whice becomıng $\rho$ xpanded by heat, actuates a rod commu-
nicating with bell mechanisin, whereby the bell is sounded wnen the water has acquired a certain pre letermined temperaiure. Tn $:$ cham ler is inclosed by anocher, and the separating space between the two chambers contailis by anocher, and the separating space bet ween the two chambers contalins
alr or otrer media to rerard the transmission of heat to the water within the innerchamber, and thus allow sufflient time for the boiling proces.
Werding and Scupfling Hoe.-Lewls King, Oriskany Falls, N. Y.-This invention consists in torming the hoe and stank in one continuous plece, the
sbank being bent and figttened to form a blade which, from its position at right angles to the handle and parallel with the ground, as ordinarily held, ner as a scuffling ho
Horse RaEE-Nic bolas Selby, Flora, Ill.-This invention is designed as an improvement upon a rake patented byJ.C. and E.D. Furaer, ot Bridgeport.
111,, in August of 1887. The improvement consists in providing a balanced 111., in August of 1887. The improvement consists in providing a balanced
or sulky frame, which is pivoted on two draft wheels and provided wich a or sulky frame, which is pivoted on two draft wh
hinged trame which supports the revolving rake.
Washing Maching.-G.A. Dabney, $\mathrm{S}_{\mathrm{n}} \mathrm{n}$ Jocé, Cal-This invention has for its objec. to furnish an improved mactune for washing clothes, which shall
be simple in construction and effective in operation, doingits work radidty and thoroughly.
Weather board Gagr.-Worden E. Stoddard, Fort Edward, n Y.-This invention has for its object to imorove the construction of the weather bo
gage patented by the sare inventor May $\approx \bar{\tau}, 18,9$, and numbere $\lrcorner 24,066$.
Bat TIR -J. W. Bates, Glencoe, Minn.-This invention hasfor 1 ts object to furnish an improved device for tying bags, sacks, sheaves of grain, laths,
pickets, and other such aricles put up in bundles, which shall oe simple in pickets, and other such arlicles put up in oundles, which shall oe simple in
construction, inexpensive. easily ana quiosly attached aud detachea, and which will nold the bag or bundlesccurely tied.
Book for ookirering.-John H. Gleim, St. Louis, Mo.-This invention has tor its object to diminish the number of books required in conducting a business, whether wholes ale, retail, or commission, and at the same time so combining and arranging toe columns of the journal as to $r$. quire less la bor
in making the entries, and generally simplifying the record of the business.
Machine for Wrighing and Tallyine Grain.-F. S. McWhorter. St. teorge's. Del.-This invention relates to ths weighing and taliying of grain
automatically. It consists in general terms of a belt of elevating buckecs op automatically. It consists in general terms ot a belc of elevating buckets op
erating within a box or casing, wh reby the grain is elevated and passed erating within a box or casing, whereby the grain is elevated and passed
over into a vertical chute in which is arranged a oleeve which is provided with a device for choking the same to discontinue the flour or grain through it. The device discharges the granininto a rack held on a sack bolder, which betng conntcted with a fteeiyard properly weighted, the movement of the
steplyard causes the chocking of the sleeve by being connected wita the chuchirg devic.. Other devices pertect the operation of the whole, render grain from or into box cars, canal boats, vessels, and grain lofts.
Cbair.- H. Buchter, Louisville, Ey.-This invention bas for its ohject to rurnish an improvement in the mode of securing the ends of the canes in
forming the seats of cane seated chairs, by means of which the canes may be placed close tozether, so as to form a close sent, while at the same timo the seats will last much longer and inay be much more quickly formed than when made is the ordinary ma, ner
Wrovget Iron amd Steel Columns.-George Walters and Thomas Shaf fer, Plicenxwile, Pa.- This invention has tor its object to fuunish an 1 m proved iron or steel column or shar for use in the construction or buildings, in constraction, strong, and solid, and which may be manutactured at a less expense tnan columns or shatts coustructed in the usual manner.
Corn Shelling Machink.-Joshua S. Rackham, Waterport, N. Y.-This divid into segments hinged at one end, the other being allowed to swing outwardly against springs, which constantly tend to mantan them in a con centric position. A vertic.ll cylinder is provided within the said shell, on an
axis, and provided with teeth which act in conjunction with corresponding axis, and provided with teeth which act in conjunction with corresponding teeth upon the interior of the shell. The swineing seg.nental sections are
designed to yield to the differeat sizes of the ears to be shelled. A screen and fan blower are also provided for cleaning the corn as it passes chrough the mactine.
Collarand Cravat Fastenir.- Emanuel Rau, New York city.-Tbisin vention relates to a new instrument for connecting a cravat, and the ends of a paper or other collar with the nerkband of a shirt. The tnvention con-
sists in tbe use of a pin, with a nead on one en 1 , and a projecting oreastpin. sists in the use of a pin, with a nead on one en 1 , and a projeccing oreastpin. all combin
band d
Mowing and Reaping Machine.-H.Howe, Oneota, N. Y.-This invention consists in hanging on each end orthe councer shaft a loose pinioa, each pin-
tou being connected with the counter shaft by means of a ratchet spring clurch. The pinion on the left band side is smaller than the other, and it will as it meshes huto internal gear ot the left hand driving wheel carry the coun tershaftround whilet he other pinion will remainidle, not being able to re volve with the counter shaft. The strain of the whole machine is thus
thrown upon the left hand siue and consequently taken away from the cut thrown upon the left hand
ting sie of the machine.
Method for degtroying Carterpillars.-H. A. Graef, Brooklyd, N. y -The object of this invention is to devive a means for destroying and exter mos subs gnaria). oy which a great number of trees and other plants are injurea. The inventoan consists in the application of diluted onloride of lime, which, when appliea to tuese insects, will instantly kill them by mere coming in contact with their skins.
Lamp Burner.-W. W. Jacobs, Hagerstown, Md.-This invention relates
to an improvement on a lamp burner, for which letters patent were granted and dated Nov. 5, 186T. This barneris intended for burning oil with out a cbimney. by generating gas by tne heat ot the tube
Method of Grafratina Steam.-Frank M. Horning, East Pike, N. Y.The object of th 8 invention is to utilize all, or nearly all, the heat produced producis of combustion, separated from the ashes, into and ihrougn the water in the brier.
Sofa bedstead.-B. L. Southack, New York city.-This invention relates to a new sofa bedstead, which is provided wich a folding back, hinged to a
 arm rests or he:sa buards of the same, so as to be in a proper position. The
invention consists in euch an arrangement of all parts, that the fodding sofa invention consists in euch an arrangement of all parts, that the folding sofa
back, which is hinged to the sliding seat, and which forms, together with the back, which is hinged to the sliding seat, and which forms, together win the of the arm supportsor headboards, to which it may be secured.
Pick Axes.-Morgan Gale, San Antonio, Mexico.-This invention bas for its more durable, and less likely to become loose upon the handle toan when constructed in the ordinary manner.
F. Sawing Maching.-F.m.Schaeffer, Blooming Grove. Kansas.-This inventi on consistapor an improved arransement of guides for the saw ; also, an
improved means for acjusting the saw to work either in a horizuntal or vertical plane; also, an improvea nieans for holding a log while being sawed to prevent the sam 1 fi om rolling, and also, in an improved ineans for support-
ing the block which is being pawed of. Hilat Radiator.-Gporge M. Wuodward, New. York city.-The object of this invention is to provide a bea' radiator of that class in which steam is in-
troduced at the bottom, said steam rising to the top of the heater and de-
scending, so as to escape agan irom the lower part of the apparatus. Tbe
steam, ouring its passage through the ap, aratus, heats the merallic or other steam, during its passuge through the ap,aratus, heats the metallic or othe
sides of the same, wrich heat is radiated into the room or apartment. in Cine device is set up.
Corn Planter.-D. F. Taft, New Bedford, Mass.-This invention relates to a new seed pla, ter, which is provlded with a flexible or jonted spout, 8 o
that themarking and covering shovels attacbed to the lower end ot the spout, ca: be easily raised out of theground, whenever obstructions are in it ir way, or when the machine is not to de put in operation. The invention also consists in the use of a new device for operating the slide in the seed
box, and for throwing the same out of gear.
Safety Valive for Steam boilers.-Wm. R. Malone, Mason city. W. Va -The object of chis invention is to provide a means for automatically check ng the has been raised, and it consists in providing means for conveying the steam or water which escapes through the safetry valve, and the fire for checkng it, whereby tine increass of steam is checked. It also consists in an improved method of connecting the satety valve to the boiler.
Countrr Sings.-P. A. Whitney, Woodstock, Vt.-This invention relates to an iuprovement in counter sinks or reamers for metal, and consists in the arrangement within a bollow stock of the cutters, which is made of a piece
of flat steel between two clamping nose pieces, through which it flat steel between two clamping nose pie
downward by a feeding screw as it wears away.
Bit Stock-Benjamin Darling, Bridgewater, Mass.-The object of this inauger may be flrmly held wihhout the use of spriags or screw nuts, and so that the bits or augers may be used witnout cutting tueir shanks or fling them in any manner.
BRE Hovse.--Charles Decker. New Michigan, Ill.-This invention relates suspending toe comb frames in the bouse
maohine for bending or folding Sheet Metal-A. W. Whitney and P. A. Whitney, Woodstock, Vt.- Cris inveation relates to a new and im proved machine for bendi.g or folding sheet metal designs for the use nsmiths and ober arling suree metal.
Wherls forV rhioles.-R. J. Bowman, Mansfeld, La.-This invention re
ates to a new and usfful impor-meat in
 requisite amount of elastrcity to avoid the transmission of jars and concus slousto the
the same.
Sukfy colutivator and Seeding Machine.-Ftank A. Hill, Marysville Cal.-Thisinvention relates to a new and improved sulky caltivator and seedlag mac.ine, and it consistsin a novel constructionand arrangement of part
wherebv the riner and driver has perfect control over the implement both as regards the sowingof theseedan the adjustment of the shares of eeth.
Rotary Coltivatorand Sifiding Machine.-Stephen Mahurín, Clayton, 2arth and sowing seed, and is consists of one or more sharis provided the teeth and having a rotary motion communicated to them by the forwar movement of the machine.
Button Hole Cuttrr.-A. J. Lytle, West Union, Ohio.-This invention
relates to a new and improved method of constructing button hole cuiters, whereby the same are more simple in their construction and more effective in their operation
Saw Filing madines.-D. H. Iseminger, McLean, Ill.-The object of this invention is to provide a simple and eff ctive and coaveniently operated ma-
chinefor filing the teeth of straigh $\operatorname{saws}$. It consists or the cumbination o. chinefor filing the teeth of straigh saws. It consists of the cumbination o.
saw clamps with a guide rod and file stock, the flle stock being provided with saw clamps with a guide rod and file stock, the flle stock being provided wi
certains wivel appliances to euable the flle to be pointed and held parallel to itself at each successive tooth of the same. The machine is provided with nther devices perfecting its operation.
Attachment for Soda Fountains.-J. C. Wharton, Nabhville, Tenn. The ob.iect of this inventoon is to provide a a attachment for soda water foun-
tains whereay a jet of water will be made to play upon each of tne nozzles the sirup foot cecks (which form a part of the fountann apparatus as generally constructed) and cleanse the said nozzles from any adherent drops of
sirup thus preventing the oostruction of the same by the saccharine matter of the sirups collecting thereon.
Hand splint Knifa.-Samuel Friend, and John McCollom, Decatar, ill. splints or splits from timber for making baskets and other purposes, and con sists in a tool resembling a spoke shave in form and is worked by one man drawing it towards him witnout a carriage, instead of by pushing with sev-號
Hosi and Madinnery for Making it.-Geo.Coles, London, and James
archibald Jacques, and Joo. Americus Fanshaw,Tootenham, England.- bis invention consques, and Jao. Americus Fanshaw, Tootenh am, Enla the same around a core formed of rope or otber suitable material and ar a anged so as ments in macounery for braiding the same.
Brake for Railway Cars.-Martin H. Rumpf, Paris, France.-This brake onsists in a lever with a bloc $s$ adhereat thereto, suspended from an axis ec bear on the face of the wheels together with other parts accessiole thereto The principle of the system lies in the blucks being arranged in their drodping against the circumference of the wheels, to describe an arc of a circle
which intersects more or less obliquely the said crrcumfereace, so as to prouce, of themselves, the blockage by means of the rotation of the wheels.

## Auswers to Carrespondents.



J. C. N., of Minn.-" Will you inform me of the length of a rifle barrel baviug the greatest raoge, and also why a breech loaring gun
has a greater range than a muzzle loading one? "We cannot give you the absolute lengot of a ritte barrel that projects a ball the furtherest, a there must be taken into consideration the weight and form of bullet, the the amount of powier used, and the resstance offered to erratic move-
ment by the thickness of the walls of the tuve or barrel. On all and exch of these points experts disarree, not however, un general pric ciples, but on the diflerence of their experience. It is certain, however, that the bar rel and its rifling are intended to give direction to the bullet and to con fine the power imparted by the liberation of the gasses, until this direcis assured. When these are assured the beneat of the barrel's length ceases. In commoa use it is found that a barrel of twenty inches is as
gooo as one of thirty-two inches in length. We bave seen the ordinars good as one of thirty-two inches in length. We bave seen the ordinary
Colt's pistol, navy siae, barrel eight incbes in lengtn, project a ball accurately a distance of three hundred vards. Would a barrel of tnircy-two mehes do bitter ? In regard to your second auestion, the breech loading
gnan has a greater rauge merely because there is less " windage,", as the hall bas not deen loosened py being forced down the grooves it must again J. P. C., of Ohio.-No step or foot bearing of metal is equal to good oak or rock maple for a turbue wheel. These woods are used as
sceps for curtines which develope a power six hundred or seven huadred horses. Wood bearings are also used tor the stern supports of propeller
P. P. C., of R. I.-" What constitutes the difference in the quality of cast steel, the orignal materid ls or the after working ?" Both.
but largely the latter. We have three specimens of cast steel on our table but largely the latter. We have three specimess of cast steel on our table now, made by the American Tool Steel Company in Brooklyn, N. Y., each
broken from the same bar and from the same end of the bar, yet so differ ing in appearance of fracture that one would be impelled from the evi dence of bis eyesight, to declare they were three different grades of steel. These differences in texrure, not in appearance onlv, but in fact, were brought about simply by the degrees of heat to which the oieces were subjected, no hammering being attempted. Now if such marked varistionsin the quality of steel from the same bar may bs ootarned simply by
bexting and hardening in clean water, why should not still greater ences and qualities be produced by Judicious forgng? Br this means a coursegrained steel may be wrought into a delicate spring or a fine tool having a good cutting edge. Too muct, however, in this case is left to the skill of the forger, and it 18 safer to use tue best material if the best re sults are desired.
. A., of Mass.-Acids act not only upon the edge of steel blades, but upon their quality. We know the reason for the first but we cannol explain the other phenomenon. The actd of truits attacks vigor ously the steel, especially when preseated in a thin edge-almost all sur face-and rapidly oxidizes it. But why a blade of steel long exposed to the
action of acids refuses to receive the bardening atcempted oy the forger's action of acids refuses to receive the bardening atcempted by the forger
bammer and nath we cannot say. Fhe fact is one of the uncracked nuts in bammer and nath we cannot say. The fa
mechanics, tut it is, nevertheless a fact.
W. A. K., of Mass - Cast iron is capable of receiving a cutting edge. Theonly reason why it is not used instead of cast steel, muck blade made of cast iron and found it shaved as cle nly and perfectly as on of die made of cast iron and found it shaved as cle inly and perfectly as one
of C . Cast iron hatchets are now manafactured and work wellfor a time. We caunot, however, recommend cast Iron as a substitate for M. A. R., of R. 1.--The temper of tools used in cutting wood can easily be destroyed by neing driven too fast. The fact that the
wooa isgreen or wet does nor affect the result. Green wood will as soon deteriorate the quality of a cutter, whether bit, chisel, or gouge as the hardest quality of kiln dried timber.
J., of an anonymous correspondent, such as we seldom notice, asks if steam is inflammable. The question may be of some gener al value, and we ans wer that it has the power or infliming substances capable of being ignited by beat. It is
tbat produces flre or inflammability.
P. C. W., of Mass.-Carbonates of lime are acted upon by acids, thei efore ke $e$ pall acidulated liquids and fruits from yourmarole table Preserve the varnished surfues of your furniture from defacsment by not
allowing alcohol in any form to come in contact with them. The reason allowing al

## Gusittes and tergomat.

## The chargefor rnsertion under this head is one dollar a bine.

Wanted to know where to obtain a reliable liquid meter for A. H. Scott, Concord, N. C., has a valuable new patent for New pictures for the zoetrope. Series No 5, sold by bookBellers, or sent tor 81 , by Milton Bradley \& Co., Springteld, Mass. Paper mill wanted. Address T. S. V., Roslyn, L. I.
The best lathe for irregular forms, now exhibiting at Maryland Institute. Address, for particulurs, during fair. A. R. Stewart, Mar land Institute. Aadress. For pa
lana lnstitute, Baltimore, Md.
An interest in a valuable agricultural improvement is off ered to any or.e wbo will turnish means to sell the right. Address "R.." ${ }^{231}$ F st.,
Washington, D. C.
To manufacturers.-Fine machinery of every kind designed Parties about to buy steam boilers should examine Root's wrought iron seetional satety boiler at 95 and 97 Liberty st., New Xork. see advertisement.

Inventors and owners of small patents send circulars to postofllee box 111, Peekskill, N. Y.
The pew hat rack.-County rights for sale. Send for circuPeck's patent drop press. For circulars, address the sole manufacturers, Milo Peck \& Co., New Haven, Conn.
American Watchmaker and Jeweler. By J. Parish Stelle. Jesse Haney \& Co., 119 Nassau st., New York. Price 25 cents.
Millwrights can make favorable arrangements for sale of best water wheel in use. Address Peekskill Man'f't Co., Peekskill, N. Y
For sale-barrel machinery, nearly new, for whiskey and coal oll barrels. Address postoffice box 290. Cincinnati, Ohio.
For Blanchard's spoke lathes,address Exeter Machine Works, Exeter, N. H.
Portable pumping machinery to rent,of any capacity desired, and pass sand and grave
414 Waterst., New York.
Adams' air cylinder graining machines for painters and all marufacturers of painted ware. Machine guaranteed. Send stamp for cir-
cular to Heath, Smith $\&$ Co., 400 West 15th st.
For descriptive circular of the best grate bar in use, address Manufacturers wanted to build Ball's Ohio reapers and mowers. For terms and territory apply to J. A. Saxton, Canton, Ohio. N. C. Stiles' pat. punching and drop presses, Middletown, Ct. For sale-the patent right, in Great Britain, for perforated saws. The manufacture of these saws is now frmly estanlisbed in the
Unted States, mna they are rapidy taking the placeot allothersolid saws Apply to J. E. Emerson, Trentos, N. J.
Prang's American chromos for sale at all respectable art stores. Catalogues malled free by L. Prang \& C Co.,Boston.
For breech-loading shot guns, address C. Parker, Meriden, Ct. Winans' anti.incrustation powder, 11 Wall st., N. Y. 20,000

Improvement in Power Punching Presses.
Twenty years ago the punching press existed only in a very crude form, and was used but seldom, and then only for a special class of work. Now it is an elaborate and workmanlike machine, one of the most valuable tools the machinist uses, and is applied to many purposes. Small forgings ist uses, and is applied to many purposes. Smand orgings
are finished by it, and their substance condensed and surfaces smoothed, while its power of rapidly cutting out and fashioning blanks of almost all forms, has scarcely a limit.
Fig. 1 is a perspective view of a powerful back geared
stroke of the pitman, D , and the consequent throw of the punch stock. E is the worm meshing with the teeth on the eccentric.
Fig. 5 is a perspective view of the parts of the machine containing the stop or lock motion, and Fig 6 is a vertical longitudinal section of the same. In both figures the same letters of reference are used. A is the hub of the driving wheel, turning free on the shaft, $B$, and locked or keyed to the shaft by the spring bolt, C, which is held by means of the shartical catch, D, the top or head of which is crescent



The London Herald tells the following singular and touch. ing story :
Not many years since, certain miners, working far underground, came upon the body of a poor fellow who had perhed in the suffocating pit forty years before.
Some chemical agent to which the body had been subject-ed-an agent prepared in the laboratory of nature-had ef fectually arrested the progress of decay. They brought it up. to the surface, and for a while, till it crumbled away through exposure to the atmosphere, it lay there the image of a fine sturdy young man. No convulsion had passed over the face in death-the features were tranquil ; the hair was black as jet. No one recognised the face-a generation had grown us since the day on which the miner went down his shaft for the last time. But a tottering old woman, who had hurried from her cottage at hearing the news, came up, and she knew again the face which through allithese years she had never quite forgoten. The poor miner was to have been her husband on the day after that on which he died. They were rough people, of course, who were looking on ; a liberal education and refined feelings are not deemed essential to the man whose work is to get up coals or even tin; but there were no dry eyes there when the gray-headed old pilgrim cast herself upon the youthful corpse, and poured into its deaf ear many words of endearment unused for forty years. It was a touching contrast ; the one so old, the other


STILES' PATENT IMPROVED PUNCHING PRESS.
machine. The pitman on the front connects at one end with the sliding block, or punch stock, and at the other end with a toothed eccentric on the main shaft, the teeth being cut around a portion of its periphery. These teeth engage with a worm turned by a hand lever, the device being seen in section in Fig. 2. By this means the stroke of the punch may be graduated, and governed to the minutest fraction of an inch.


Figs. 3 and 4 represent the Stiles' patented device for graduating the stroke of ordinary crank presses, by which means the stroke may be graduated to the sixty-fourth part of an inch. The eccentric marked $G$. has a series of semicircular holes on its periphery, engaging, when in position with similar holes in the block, $H$, the eccentric being moved on the shaft by means of a pronged wrench fitting the holes seen on its face, and being held in connection with the block by a pin fitting the two semicircular engaging apertures. In Fig. 3 the eccentric is seen seated in the block, and in Fig. 4 both the eccentric and blook are seen removed. The face plate, or cover, I, in either case is raised.
This device is the principle, and one of its adaptations to the adjustment of the stroke of the punch, the toothed eccentric, however, in Fig. 2 is an improvement on the original design, which was described and illustrated on page 305, Vol. X., current series of Scientific American.
In Fig. 2, A is a tightening nut on the end of the worm shaft, the shaft being worked by the handle, B, by which the eccentric, C , is turned on the shaft, F , thus governing the
shaped, its inner surface fitting the shaft, and its reduced end edge allowing the end of bolt, $C$, to pass between it and the shaft or outside, as the position of the catch, $D$, may determine, which position is governed by the action of the treadle seen in Fig. 1, and operated by the foot of the workman. Spiral springs on bolt, C, and catch, D, assist in the operation of the stop motion. So long as the workman presses upon the treadle, the bolt keeps the driving wheel

in connection with the shaft, and the punch is operated, but when he releases the pressure of his foot the catch, $D$, is forced upward by its spring, and the bolt or key, C, engages with the other surface of the head of D , and releases the key bolt, leaving the driving wheel to revolve freely on its shaft without imparting motion to the punch. The relation of the punch and the ${ }^{3}$ key bolt is arranged so that the punch must stop always at the highest point of its stroke, so there can be no chance of cutting off fingers by the continued action of the press after the treadle and its connections have been put in operation.
This machine and its parts are the subject of several patents, procured through the Scientific American Patent Agency, dated January 26, 1864 ; January 30, 1866 ; re-issued December 26, 1865, and April 2, 1867. Manufactured by N. C. Stiles, who may be addressed at Middletown, Conn.

Alaskan and British Columbian birds are said to be numer ous in variety and most beautiful in plumage. Two thousand specimens are on their way to this country for museums.
so young. They had both been young those long years ago ; but time had gone on with the living, and'stood still with the dead.

Workingmen as Students.
Professor Tyndall, who occupies the chair of natural philosophy at the Royal School of Mines in London, reports some striking results from the delivery of evening lectures, a plan which was set on foot a few years ago, partly with a view to meet, in some degree, the wants of schoolmasters. On alternate evenings the lectures are to workingmen, and these he says are far more attentive than the others. "I have pur posely," he observes, "looked round the filled benches in search of a yawn. I never once saw it among these workingmen." The professor further states: "I often receive letters which are perfectly touching, in the name of twenty workmen or are perfectly touching, in the name of twenty workmen or
thirty workmen, in such and such a factory, expressing their thirty workmen, in such and such a factory, expressing their
intense disappointment at not being able to get tickets for the lectures." As soon as an advertisement appears, stating that 600 tickets will be disposed of at a certain time, the demand is such that tickets are sold as fast as they can be given out. Those who thus attend are described as being "for the most part, bona fide workingmen ; hard-handed, ear nest people, who have no time to devote to study save the time which they take at night."

## The West Side Elevated Railway.

The recent meeting of the directors of the West Side Ele vated Railway Co., resulted in a very favorable exhibit of the future prospects of the road. Proposals for the iron necessary or further construction were received, and some large con racts completed. The reports of surveys for the fixing of the emainder of the line were submitted, and referred to the chief engineer with power. The section already completed will be put in operation about the first of November ; and all legal difficulties having been removed, the company will proceed to raise money as rapidly as possible for the completion of the road.

Electrical Freaks.-A tinsmith in Reno, Cal., during a recent thunder storm noticed that a lad in bis employ seemed to be afraid of histools. Upon questioning the boy, he complained that something strange was the matter with them The tinsmith upon attempting to take up the large scissors which the youngster had dropped, received a shock that nearly prostrated him. Immediately after little balls of fire began hopping about over bits of iron, and making finally a united assault upon the coal furnace, whereupon the "boss" and his apprentice wisely and speedily vacated the premises until the subsidence of the storm.

