CUTTING GLASS.-Take an old three-cornered file, heat it red hot and suddenly plunge it into a previously prepared mixture of salt and ice, stirring it about so as to cool as rapidly as possibly. Now grind the point on a stone preserving the three sides as much as possible, when it is ready for use. The glass to be cut is nicked on the edges, then laid on a perfectly smooth surface, and the point of the file is, with a moderate pressure, drawn over its surface, the direction being guided by a rule. Such an instrument will be found serviceable for cutting glass for windows and all ordinary purposes. So says an exchange.

CHLOROCARBON, the new anaesthetic of Dr. Protheroe Smith, is a tetrachloride, or as it used to be called, bichloride of carbon. Although powerful and rapid in its effects, consciousness is rapidly restored after its use. Its vapor is very agreeable, having a delicate perfume not unlike that of a quince, and when inhaled imparts at first a sensation of coolness to the throat similar to that experienced in drawing in one's breath after taking peppermint, followed by a feeling of warmth on the surface of the body generally. Drowsiness and other sensations similar, but in a less degree, to those experienced from chloroform follow.

IS SWEEDEN A RISING NATION ?-Sir Charles Lyell, thirtytwo years ago, from an examination of some ancient sea marks on the Sweedish coast, concluded that the peninsular was rising at the rate of three feet a century. The Earl of Selkirk, from a recent examination of the same marks, comes to an opposite conclusion, which he has communicated to the Royal Geographical Society. The change in the position of the marks he attributes to fluctuations in the level of the water, and not to any upward movement of the land.

CARRIER PIGEONS lately traveled the distance between Brussels and Cologne, one hundred and ton miles, in from three to five hours. One bird flow thirty-seven miles, another twenty-two, and others twenty miles per hour. A pigeon race between birds owned in the former city, and others bolonging in Hamburg, is soon to take place. The birds are to be thrown up in the Zoological gardens in Cologne and to fly thence to Hamburg, two hundred and thirty miles distant.

BEER VERSUS BREAD.—The amount of nutriment contained in beer is generally greatly over estimated. Liebig asserts that in 1,460 quarts of the best Bavarian beer, there is exactly the nourishment of an ordinary two and a half pound loaf of bread. This beer is about on a par with our best American beer. Instead of being a condensation of the nutriment contained in the grain, in just so far as the liquid has undergone fermentation, the nourishment has disappeared.

THE NIAGARA SUSPENSION BRIDGE.-Ever since the middle of March, 1855, from thirty to forty railway trains have passed over the Niagara Bridge daily. With the exception of the removal of the timber girders, and some other wooden parts which showed signs of decay, no part of the suspended system has ever been disturbed. The work is considered just as strong this day as it was at the time when the first train of cars passed over.

ANOTHER NEW FIBER-By a late patent, a species of nettle, which grows luxuriantly and spontaneously throughout the Mississippi valley, is employed in the manufacture of cord, rope, cloth, bagging and paper. The stalks, which grow from four to eight feet high, are gathered in the winter, and are ready for the brake without any rotting process. The fiber is said to be exceedingly fine, strong, and susceptible of a high finish by dressing.

FISH BISCUIT .-- Professor Rosing, of Asa, France, has invented a process of making flour from a species of sca fish, which he forms into buiscuit, thereby providing a very nutritious and compact article of food. These biscuit are four times as rich in albuminoid substances as beef, four and a half times as fresh codfish, and sixteen times as fresh milk.

LECTURES AT THE PARIS EXHIBITION .- The Imperial Conmissioners have made arrangements for the delivery of a course of lectures, at various places within the buildings and grounds, on various subjects, such as caoutchouc, artificial icc, iron smelting, brass founding, and other kindred themes, connected with the mechanical and art displays in the Exposition.

AN INEXHAUSTIBLE ICE HOUSE .- A company has been formed in France for supplying towns in the southern provinof Savon Alma The alasian iss is rith ico fro m the sid

Patent Report for 1867.

We are glad to learn that the contract for engraving the diagrams for the Patent Report for 1867 has been awarded to Messrs. E. R. Jewett & Co., Buffalo, N. Y., whose excellent the road there is an uniform gradient of 1 in 12, This latter section of the work has for many years adorned these important volumes. road was expected to be open for travel by the 1st ult. The French section It appears that in the present case Messrs. Jewett had no competitors; at least none who were willing to engage to produce work equal in quality to theirs at the same price. The engravings for the volumes for 1867 are to be finished by July 1868, and then the work for the latter year will be begun, this is quite again in time. Heretofore the publication of the reports has required about two years. The report for 1865 is not yet out.

Distances from San Francisco to New York, THE CENTRAL PACIFIC RAILROAD ROUTE.

The following complete table of distances and elevations of points on the Central Pacific Railroad of California, and other roads connecting therewith, between San Francisco and New York, is useful for reference.

Names of	Distance	Fotal dis	Elevat la fei	Nam es of	Distance	F e tal dis	Elsynt in fog
Places.	from point.	fance	10 H	Places.	from point.	tance	inn
an Francisco	.112	** • • •	tide.	Twelve mile Calor.	5	545	4,925
akland	10	6	510C. 99	South Fork	28	577	4,990
an Leandro	8	14	45	North Fork	24	601	5.220
avward's	5	19	75	Bishop's Creek	ĩŝ	620	5,418
allejo's Mills	8	27	121	Humboldt Wells	15	€35	5.850
ottinger's	10	37	885	Nevada State Line.	65	700	4,830
ivermore Pass	12	49	734	Point on Salt Lake.	75	775	4,290
an Joaquin Kir	20	69	22	Bear River	40	820	4,820
lockton	19	79 63	22	Febo Canon	20	040 976	4,004 5 VCE
Ogymnes River	14	106	106	Echo Pam	28	902	6 870
ostimuento	18	124	56	Bear River	ĩã	920	6.045
"Cide	Ĩž	131	76	Reed's Summit	30	950	7.567
ntelope	Ś	139	180	Green River	75	1.025	6,092
unction	3	142	188	Bitter Creek Sum'lt	20	1,045	7,175
ocklin	4	146	269	Bitter Creek	13	1,058	6,315
ino	3	149	420	Bridger's Pass	97	1,155	7.584
ewcastle	5	155	900	North Platte	28	1,178	6,695
uburn	2	160	1,385	fattlesnake Pass	54	1,232	7,560
alfor	1	1779	1,180	Europeia Page	80 81	1,207	7,175
old Pup	10	199	2,440	Foot Black Uilla	3 <i>1</i> 91	1,291	8,242
utah Flat	10	191	8 495	Juleshurg	140	1,000	9 51
lta	2	193	8 6 25	North Platte J'nc'n	78	1 555	2,200
hady Run.	ã	197	4,125	Brady Island	22	1 577	2 640
lue Cañon	5	202	4,700	Willow Island	18	1.595	2,514
migrant Gap	G	20S	5,3D0	Plum Creek	٠ 0	1,615	
ISCO	8	216	-6,9it	Elm Creek	19	1,654	••••
rest	13	229	7.042	Fort Kearney	21	1,655	2,128
ruckee River	14	243	5,866	Wood River	19	1,674	•••••
ittle Truckee	8.6	2511	5,56J	Grand Island	18	1,693	•••••
agle Gap	13%	200	5,000	Lone Tree	22	1,714	•••••
	9	2029	4,040	Columbre	18	1,750	1 400
Bond Truckow		\$11	4 910	Shell Creek	10	1 001	1,498
nmholds Lake	Ãĩ .	852	4.047	North Bend	14	1.785	•••••
reans	S Ö	332	4.160	Fremont	15	1.800	
ill City	35	417	4,250	Elkorn	18	1.818	
ig Bend Humboldt	31	454	4,392	Papillon	16	1,834	
on Point	19	478	4,460	Omaha	12	1,845	968
eese River	33	506	4,550	Unicago	494	2.340	625
kull Ranch	10	313	4 590	Toledo	344	2,5:4	585
	10	029	5,690	Dievolanu	119	4,097	585
revelly Ford	4	6.11	4,180	Mow Vonly	140	2,0.0	585
LAYCHY FOLU		01L	4.100	TICM TOLESSON	100	0.000	une.

MANUFACTURING, MINING, AND RAILROAD ITEMS.

The oldest mills in Pennsylvania are in the quaint old town of Bethlehem Pa., built by the Moravians in 1793, and are now in good running order.

A stationary engine of 500 horse power is being built in Newburgh, Cuya hoga Co, Ohio, This, the largest stationary engine in the Western States, is the property of the Cleveland Rolling Mill company who are erecting immense Bessemer steel works in the former place, The engine is horizontal non-condensing, 36 inches bore, and 60 inch stroke. Two blowing cylinders of 50 inches bore and 60 inch strokefurnish an air blast of from 20 to 24 pounds per square inch, a pressure far beyond anything heretofore used in the pro duction of iron. The full capacity of the works when comple.ed, will be from 50 to 60 tuns of steelingots daily, or 12,000 tuns per annum.

Large importations from Belgium are annually made of rough plate glass there being hitherto, a lack of suitable apparatus for manufacturing the article in this country A practical glass blower in Birmingham, Pa., has in vented an apparatus for making the rough plate and furnishes an article which is pronounced equal to the best imported.

The salt springs of New York produce nearly 7,000,000 bushels of salt per year. The wells are owned and worked by the State, the water being purchased for evaporation by private parties, at a fixed rate per bushel of salt varying from one to twelve and a half cents per bushel. The net revenue to the State, from this source during twenty years, has been \$421,582.

The work of changing the North Missouri rallroad from a broad to a nar row gage, for a distance of one hundred and seventy miles, to Macon, was lurnished in four adys. Quick work.

The Viceroy of Egypt is said to be the owner of more than one hundred steam plows, We would like to get drawings of them for publication.

Ransome's concrete stone, is to be manufactured in this country by a joint stock company of Baltimore. The process of making this artificial stone is simple enough. The sand or chalk is intimately mixed with its proper pro-portion of asolution of silicate of soda; the plastic material is then pressed intomolds or rolled into slabs, and afterwards immersed in a solution of chlor ide of calcium, when the silica combines with the calcium forming insolubl silicate of lime, firmly comenting the sand particles together, while at the same time chloride of sodium, or common salt is produced, which is subsc quently removed by washings.

The Montana people are congratulating themselves over the discovery of genuine sapphires in that territory. The precious stones found on El Dorado The Mount Cenis railway is to be forty-eight miles long. The initial point

on the French side is 2,493 feet, and the summit of the pass, 6,322 feet above sea level. For six miles before reaching the summit the ascent must be on an average gradient of 1 in 14. From this point to the Italian terminus of of the road having suffered severely from inundations last year will not be ready before September, by which time the entire road will be completed. The existing travel across Mount Cenis averages 220 passengers and 120 tune of goods, daily. The time required is from nine to fourteen hours, but by the railroad the journey will be completed in less than five hours.

The largest iron works in the country are located at Johnstown, Pa. The works are run day and night and give employment to 3,000 hands.

Steel boilers, it is said, are coming into use on French locomotives. Twelve express engines, with steel boilers, are employed on one railway leading out of Paris, fifteen on another, and several on other roads.

The entire tankage capacity of Oil City, nearly 200,000 barrels of oil, is awaiting a rise in the river for transportation to Pi.tsburg.

The new bridge at Louisville, Ky., is to bc 5,220 feet, or nearly one mile in length. The longest span will be 360 feet, thirty-six feet longerthan the longest span of the Montreal "Victoria bridge." The lowest projecting point of the long span is ninety feet above low water, while the highest rise ever known in the river was forty four feet, leaving a clear space of fifty two feet.

The Anglo-Indian Telegraph company propose to build a direct telegraph line, via. Egypt and Aden, with subsequent extensions to Singapore, China, Japan and Australia. The direct route from London to Sucz will, it is anticipated, be in actual work during the present year and the company have entered into a contract with responsible parties for laying a thoroughly efficient line from Suez to Bombay. The entire line will be completed next year, or at the latest, in the May following.

It is found necessary on some railways having numerous short curves, to have the flanges of the driving wheels of the ordinary 6 wheeled engines turned anew as often as everysix weeks.

For the past three years, \$4,000,000 worth of boots and shoes have been shipped annually from Worcester, Mass. This business gives employment to 2,000 hands in the city, and as many more in the neighboring villages.

Recent American and Loreign Patents.

Onder this heading we shall publish weekly notes of some of the more promi-nent home and foreign patents.

LATHES .- S. L. Hart, Milwaukie, Wis .- This invention has for its object to furnish an improved device for attachment to lathes for the purpose of cupping the ends of wagon hubs, turning the interior of hollow wooden ware, and for similar uses.

BOB SLEIGH.-G. O. Momeny, Locust Point, Ohio.-This invention has for its object to furnish a bob sleigh, or other sleigh or sled so constructed as to adapt it to all kinds of roads, and to enable the beams and raves of the sleigh to be readily removed from the knees and runners for convenience n storage, making the sleigh limber, strong, and durable.

Ox YOKE-W. A. Thompson, West Winsted, Conn.-This invention has for its object to so improve the construction of ox yokes as to diminish their weight and increase their strength and durability.

BEDSTEAD FASTENING .- L. L. Jackson, Paterson, N. J.-This invention as for its object to furnish an improved bedstead fastening, simple in construction, reliable in operation and which will enable the bedstead to be easily and quickly set up and taken down.

SNAP HOOK .- W.S. Furlow, Geneseo, Ill .- This invention has forits obect to furnish an improved snaphook simple in construction, not liable to get out of order, not liable to freeze up in cold weather, and which can be manufactured at a small expense.

AERIAL MACHINE.-J. F. Elston, Elston Station, Mo.-This invention has forits object to furnish an improved machine for navigating the air so constructed and arranged as to be completely under the centrol of the navigator.

FOUNTAIN PEN HOLDER.-J. S. Charles, Omaha, Nebraska.-This fountain pen holder is made in two parts, arranged to move the one within the other, and relatively so constructed that the ink can be drawn in at one end, and from the other discharged and expelled upon the pen, attached or inserted at such cnd.

WELL SEED BAGS.-A. D. Griffin, Meridith, Pa - This invention relates to a method for closing the bore of an oil, artesian, or other well, and thereby stopping off the surface or other water, during the process of boring or working the said wells.

OX YOKE .- C. H. Post, Guilford, Conn.-This invention consists in attaching a hinged metallic plate to the yoke, the end of which engages with the ow in such a manner that the bow is securely fastened thereby

OAE COLLARS .-- Jackson Robinson, Curwinsville, Pa.-This invention consists in supporting and moving the steering oar on metallic surfaces whereby the friction is greatly lessened, and the management of the steering or rudder oar is rendered much less difficult, and consequently the raft is much more easily managed than by the old method.

RADIATORS.-J. A. Marvin, Red Wing, Minn.-This invention consists in forming the flue through which the products of combustion pass, in such a manner that the heat from the stove is compelled to travel a long distance and be retarded in its course and radiated from the surface of the flues and the casing utilized.

WATCHES.-Thos. Baker, New York City.-This invention relates to that class of watches, which are provided with an arrangement of mechanism, for stopping and setting free the second hand, or the hand for indicating half, quarter, or any other fractional parts of a second.

COMDINED BUREAU AND BEDSTEAD .- John Stark, El Paso, Ill .- The present nvention consists in so constructing a bureau, in such a manner, and in parts hinged or hung together, that they can be opened from each other and broughtinto a horizontal position for use as an ordinary bedstead, while at the same time, if so desired, they can be brought into an upright position and shut the one upon the other, forming a bureau, to all appearances, with the

to Geneva and thence by rail to its destination. We are indebted to Mr. H. T. Anthony, 501 Broadway, N. X, for samples of Lithographic paper, from Paris, which we find excellent for printing photographic pictures. The keyer ing qualities of this paper render it convenient and valuable. J. H. HAIL, 102 Fourth Avenue New York, cured by his patent process, for one man in Cincinnati last year 11,000 dozen eggs. They were so well preserved that the dealer sold them in February as fresh eggs. MESSRS. NOTMAN & Co., of Boston, Mass, have sent some photographic cards which indicate excellent skill in portraiture. MESSRS. NOTMAN & Co., of Boston, Mass, have sent some photographic cards which indicate excellent skill in go the twe calles and to the large at the tange of the Sugo and to the Sugo and to the Sugo and to the Sugo and to the Sugo and the twe York Certral Rairoad safet darge apple on the Sudo and the sugo and the demand a day. The troit of the Augio-American Telegraph company for the eleven ing of the twe calles and the the some of the Sugo and to do sway with the wooden trans and the Sugo and to the sugo and the time some that the sugo and the time sole that the some of the sugo and the time sole that the sugo and the time sole that the sugo and the time sole that the dealer sole them in February as fresh eggs. MESSRS. NOTMAN & Co., of Boston, Mass, have sent some photographic cards which indicate excellent skill in go the twe calles and the Sugo Augio American Telegraph company for the eleven ing of the twe calles and the times of the Sugo and the times of the Sugo and the sugo and the suge and the times of the Sugo and the Sugo and the suge and the times of the Sugo and the suge and the times of the Sugo and the suge and the times of the suge and the times of the twe suge and the times of the Sugo and the times of the suge and the times of the suge and the times of the suge and the suge and the times of the suge and the times of the suge and the times of the suge and the suge and the th	loaded on vehicles at the foot of the mountains, transported	and are said to be quite plenty and easily procured,	mattrasses and other articles constituting the bedding, encased within the same.
	loaded on vehicles at the foot of the mountains, transported to Geneva and thence by rail to its destination. WE are indebted to Mr. H. T. Anthony, 501 Broadway, N. Y, for samples of Lithographic paper, from Paris, which we find excellent for printing photographic pictures. The keep- ing qualities of this paper render it convenient and valuable. J. H. HALL, 102 Fourth Avenue New York, cured by his patent process; for one man in Cincinnati last year 11,000 dozen eggs. They were so well preserved that the dealer sold them in February as fresh eggs. MESSUS. NOTMAN & Co., of Boston, Mass., have sent us some photographic cards which indicate excellent skill in portraiture. National Academy of Science. This association held its semi-annular session in Hartford, Conn., during the past week. A report of their proceedings, which we had prepared, is crowded out of this issue by other matter, but will appear next week.	The largest dye-house in America is about to commence operations in Paterson, N. J. Its appointments are on a very extensive scale and all its arrangements have been made under the direction of a French gentleman, for many years uparintendent of the largest dye-house in Lyons, Jt is believed that 1,000 or 1,200 pounds of silk can be turned outin one day. An exceedingly rich bed of oinabarhas been discovered about four miles south of San Jose, Cal. There is a solid ledge about twelve feetwide and eight feet thick, between walls of rock, which grows richer as the excavation proceeds. A sudden reduction has been made in the working force at the Springfield Armory, in consequence of an order to reduce the production of breechloaders to two hundred a day. A train on the New York Central Rallroad ranfrom Spencerport to Rochester, a distance of 10 miles, the other night, in 9 minutes. The net profits of the Anglo-American Telegraph company for the eleven months ending on the first ult., was more than sufficient to meet the sums of £125'000 and \$25,000 payable to the company as first charge upon the work ing of the two cables and the lines of the Xew York Newfoundland and Loodon Telegraph company. After paying a dividead of nearly 32 per cent for the year, the sum of £12,839 0s. 114. is carried forward to credit of nextyear's revenue. Natural soap, it is again announced, has been really found, is probably "fullers earth " a variety of olay which from its unctious touch might easily be mistaken for sosp.	 SARE. SNAP-HOOXM. F. Mitchell, Waukau, WisThis snap-hook is so constructed as to be most durable and substantial, and most convenient and service-able. LUBRICATORR. P. Underwood, Brooklyn, N. YThis Inbricator is for the spindles and shafts of machinery, and is more especially intended for cotton and spinning machinery. HOLDER FOR REINSPhineas Jones, Newark, N. JThe object of this invention is to provide a simple device, whereby harness reins may be securely held, and whereby they will effectually be prevented from slipping out of the hand. SPRING MATTERESERHenry H. Vere, New York CityThe object of this invention is to so arrange and hold spiral springs in mattresses that the durability of the mattress will be increased, and to do away with the wooden frames now generally used in spring mattresses, that the mattresses may be treasily handled, and may be reversed and used on both sides. CALCULATING MACHINEA. Mendenhall, Cerro Gordo, IndThe object of this invention consists in constructing a machine by which figures of any desired magnitude may be readily added, subtracted, multiplied and divided. STOP ATTACHMENT FOR REGULATING THE LENGTH OF STITOR IN SEWING MACHINESGeorge Robinson, Detroit, MickThis invention relates to a new and improved attachment for sewing machines, more especially desgned for the Wheeler and Wilson machine, whereby the length of stitch may be regulated or varied as desired, with far greater acouracy and facility than by the ordinary cam attachment now used for that purpose.