a belief that he was governed at any time by improper or corrupt motives in not making earlier or larger purchases of the Eureka projectiles. The court believes that the relative merits of the Eureka, the so-called Taylor-Dyer, the Absterdam of the latest pattern, and possibly others, have not yet been fully established. The Eureka, from the evidence, appears to have qualities which make it the equal of the best, and it is believed that further trials, such as were recommended by the Ordnance Board of 1868 for the Taylor-Dyer and Eureka, will determine which projectile or projectiles of those now most approved should be adopted hereafter for services in the field."

We shall give on another page some of the conclusions of the Joint Committee on Ordnance on experiments with heavy ordnance, of interest to inventors, as showing the views of the Committee upon the requirements of modern ordnance.

It is a fact of great significance that this Committee believes the Ordnance Department of the Army may be entirely abolished without detriment to the good of the service, and with great economy to the Government.

EXCITEMENT A DISEASE OF SOCIETY.

This country is greatly benefited by German immigration. The peculiarly philosophical tendency of German mind, the calm patience with which it investigates all questions of importance, the independence with which it rejects what it considers false, and asserts what it believes to be true, are elements of character and good citizenship anywhere, but are particularly valuable in a mixed population like the American.

In a recent conversation with a German friend upon the state of modern society, he made the following very forcible remark : " Excitement is disease. Man does not need it. He ought not to have it. What a healthy mind most craves is placidity; to do its work in perfect calm, without any stimulus except that afforded by perfect bodily health. Mind and body healthy, each will give all the stimulus the other needs without resort to artificial means."

There is so much meaning in this that it will bear considerable amplification. Mental dissipation and physical debauchery are alike disastrous in their effects ; alike breed a fierce appetite for more, an appetite that will not be appeased except by deeper and deeper drafts, which finally ruin body, mind, and soul.

The taste for mental excitement now prevalent through all classes of society, is strongly evinced in the theatrical performances, the prominent literature of the times, the morbid taste for sensational displays, involving danger to human life, the detailed accounts of crimes and executions demanded of the press by the public, and the general personal uneasiness to be observed when people have nothing in particular to do. Few Americans, comparatively, can sit down and content themselves in quiet thought. The sensational novel is one of the mildest stimulants resorted to by a large mass of our people to "kill time," as it is called. A philosophical work would reduce them to the last stages of mental exhaustion. A discussion upon any solid topic is ineffably wearying. Their mental motions are, so to speak, shaky and uncertain till they have had their intellectual grog. They look with wonder upon a man or woman who can do hard mental work, and stand it without recourse to any stimulus, without at all comprehending that it is not work, but worry and excitement which kill.

This state of things is so wide spread that we are justified in calling it a disease of modern society. Its symptoms are erotic suicides, speculative manias, gambling, embezzlement, and crimes of a more henious type.

What is the remedy? This is a question easily asked but terribly hard to answer. Religion, legislative enactments, social philosophy, all seem powerless to effect a cure. We are sometimes disposed to think that the only way is to let the disease run its course like smallpox, producing its unsightly and fœtid erruption, until the poison eliminates itself from the body politic. Society, as at present organized, may die of the disease, or peradventure it may survive to enjoy better health afterward.

The social science conventions do not seem to get at the root of the matter at all. They persist in isolating single symptoms and looking upon them as the disease itself. One member will tell you that the inordinate love of wealth is the matter, taking for a text the familiar but utterly false maxim, " The love of money is the root of all evil," and propose to enact laws that shall prohibit the accumulation of giant fortunes. Another will hold up to view what has been with an unjustifiable shrinking from plain speech, styled " the social evil," and attribute all the evils of society to the morbid influence of illicit desire. Another assigns the evils of society to drunkenness, and so on. These things are results—not causes.

We do not profess ability to prescribe a cure for the universal malady of the age. It will require the sober study of philosophers for years to come, but of one thing we feel very certain ; namely, that all systems of ethics which place faith in the emotional nature of mankind, only substitute one form of excitement for another without even approximating a cure.

The world has everything to hope from the men who believe religion and philosophy should go hand in hand, and much to fear from the misguided philanthropists who appeal only to feeling.

THE EFFECT OF SEWING MACHINES UPON FEMALE HEALTH.

There are fortunately some American women left whose constitutions have resisted the effects of wrong living and bad dressing, to such an extent that they can sit bolt upright for a considerable time without an excruciating pain in the small of the back, or walk a mile or two without being sick a day or two to pay for it. Women of this kind can operate a sewing machine at intervals without discomfort, or may follow it as a business without evil consequences. But precisely those who from enfeebled health most need the aid of this invaluable invention, are the ones who are debarred from its use. The effects produced on the latter class of females by the use of the sewing machine have been thoroughly studied, particularly in France, and have been found to comprise a variety of ills peculiar to the sex most employed in such labor, which it is unnecessary to enumerate here. It is estimated that over a million sewing machines are now at work in the United States alone, and it has become a fact recognized both in this country and abroad that the prevalence of pallor, lassitude, pain in the back, and leucorrhœa are more prevalent among those who work with sewing machines than among almost any other class of women.

Since our publication of an article, entitled "The Sewing Machine, its Origin, and Suggestions for its improvement," to be found on page 246, current volume, we notice the subject has been taken up and discussed at length by the press of this city, and a large number of improvements have been suggested to obviate the use of the feet in driving sewing machines ; but it should be remembered that it is not the amount but the kind of work performed, that results in injury. A small cheap motor would be very useful, but an application of the power of the body in a manner free from the objections of the treadle motion would be better. The slight swaying of the body from side to side, or a rocking motion might be utilized for this purpose, or the weight of the body raised at intervals might be called in, as a sufficient force for the purpose.

There is a demand for some improvement in the mode of applying power. If motor machines are relied upon for the purpose, they must be of the simplest character, durable and capable of being operated by any one ; and both constant and uniform in their action. The latter consideration will for the present exclude electro-motors from competition without taking into account the cost of running such machines by any form of battery now known.

Small portable steam engines, are the next most promising resource, but they cost money to make, and money to run them, take time to get up steam, and are otherwise ill adapted to the purpose. Spring motors are liable to get out of order, and the winding them up is one of many objections against either them or weights. It has been proposed that in large cities small hydraulic engines might be successfully introduced for this purpose, but the impracticability of this will be apparent from the following computation :

The power of the average human frame, is 4,166·6 foot-pounds per minute. Estimating the power required to drive a sewing machine as one-tenth of this, we shall have in round numbers, 466 foot-pounds, amounting per day of ten hours to 279,600 foot-pounds. Allowing the average head in upper and lower stories of buildings to be 30 feet, it will require for a single sewing machine the fall through that head of 9,320 pounds, or in round numbers 148 cubic feet of water per day. If all sewing machines in New York city were to make this extra demand upon the resources of the Croton Board, it would find itself seriously embarrassed to meet it with the present supply.

A small gas engine seems to offer more points of feasibility than anything we can think of, provided the necessity of using an electric discharge to ignite the gas, could be obviated by a cheap and efficient substitute.

The fact remains that a small and reliable motor is very much wanted for this purpose and inventors would do well to grapple at once and vigorously with the problem. " First come first served," is the rule in invention, and he who can bring out the first sewing machine motor, fully adapted to the requirements of the case, is a made man.

Any such machine would also find a wide application for a host of domestic purposes, as well as in the requirements of light manufacturing.

THE RESOURCES OF THE GREAT WEST.---WALLA WALLA VALLEY.

We have had the pleasure of a call from Mr. H. Parker, of Washington Territory, who has given us some interesting information in regard to the resources of the great West, and more especially in regard to Walla Walla Valley, a region of remarkable fertility and mildness of climate, combining advantages for manufacturing with its other attractive features.

This region is one of many of somewhat similar character to be found on the Pacific slope, but has as few drawbacks, perhaps, as can be met with in any region of like extent in the United States.

In the first place its climate is extremely temperate—a fact that may seem to those who have experienced the cold of the northern parts of Washington territory, as being paradoxical, but which is no more so than many other climatic peculiarities to be met with in localities no more widely separated than those in question. But little frost is experienced, and the rich bunch-grass, which abounds throughout the valley, enables farmers to winter their stock with very slender provision for the rare emergencies of cold weather, from which this valley is nearly exempt.

Second, the soil is unexcelled in fertility. Wheat, oats, and barley, are grown in large quantities and of excellent quality, and corn, also, does well. Vegetables and fruits thrive abundantly, and the small labor required to cultivate the soil is amply repaid. Communication with the seaboard is easy through the Columbia River, a distance of some three hundred miles. A branch road, running through the valley, will soon connect it with the Union Pacific road.

There are now a number of thriving flouring mills and saw mills located in the valley, and the water-power is ample to perform all the manufacturing needed for that section. As a future location for Woolen Mills it probably cannot be excelled by any other on this continent. The material is there, the water-power and building materials are there, and cheap Chinese labor, which has been found excellently adapted to such work, is to be had in abundance. The contour of the streams which water the Walla Walla Valley is somewhat peculiar. The tributaries of the Columbia River, which flows nearly parallel through the country like the fingers of a giant skeleton hand, unite, near their influx into the main stream, to form a stream of considerable size. They have not worn deep channels, as is the case with many streams, and gulleys and gorges do not interfere with the full utilization of the fall, which is great, though nowhere abrupt.

The advantages we have named, combined with the great salubrity of the climate, must, at no distant day, make this section one of the most thriving and populous of the fertile regions of the West. It has, at present, a thriving and intelligent white population of seven or eight thousand, with schools, churches, and all the other advantages of older settlements. No trouble is to be apprehended from Indians, they having been all removed to reservations, and peaceful relations firmly established.

Our information in regard to the Walla Walla Valley does not rest wholly upon the statements of Mr. Parker, although that gentleman gave us many new points in regard to it. It was stated to us, years ago, by a gentleman who had thoroughly explored that region, and who has since, for business reasons, settled lower down the river, that, for natural advantages of soil and climate, it would be hard to find, anywhere, a tract of country, of the same size, that could excel it.

The opening of the Union Pacific Railroad, with the projection of the Northern Pacific Road, must give an enormous stimulus to growth throughout the entire northwest, and the capital invested there now will surely be " seed sown in good ground.

METEOROLOGICAL SCIENCE.

The science of meteorology seems to make slower progress, and to have, at present, fewer practical applications than any of the other sciences. A few prominent facts have been discovered, such as the direction of storms, the average velocity with which they progress, the formation of clouds, the effect upon climate of felling large forests, etc.; but such facts scarcely constitute a science. The simple knowledge that certain phenomena of electrical or atmospherical character occur, without the knowledge of the manner of their occurrence, or their physical causes, is practically of small benefit. The causes assigned for most of these phenomena are yet chiefly based on hypothesis. It is true we are aware that winds are caused by heat, and rain is produced by the cooling of moist air ; that lightning is a form of electricity, and so forth ; but as yet, all researches have failed to detect invariable laws of succession, or relations of cause and effect.

The utmost that can be said by the most skillful meterologist, is, that when certain atmospheric conditions are indicated by his instruments, dry or wet weather is more likely to supervene than when the converse is indicated. He is still obliged to confess that " all signs fail in dry weather," with him as well as with the unlearned.

Our readers are aware that a series of observations are made from different stations in the United States under the direction of the Smithsonian Institute. These observations are confined, we believe, to barometric and thermometric observations, with some meager remarks as to the state of the atmosphere ; whether cloudy or otherwise, wet or dry; and if high winds are prevailing, the fact is also recorded, with the direction from which they blow. These observations are, we believe, generally performed in a very imperfect manner, and really amount to almost nothing. In fact, we believe the money invested in instruments and the time expended are nearly or quite thrown away.

The reports are, to our knowledge, in some cases, made complete by interpolation to cover neglect in the observer, and as there is no check upon their accuracy their tendency would be to mislead rather than otherwise.

The Institute is not to blame for these deficiencies, which attend any system of general meteorological observation requiring personal attention of a large number of assistants, who have no reputation to lose by neglect and nothing to gain by accuracy. It requires considerable inducement to make a man confine himself to hours in a gratuitous service.

Science needs improved self-registering meteorological instruments acting automatically, and recording results ; requiring attention at wide intervals only. The possibility of constructing such instruments has already been fully demonstrated. It remains only to simplify and cheapen their construction.

The telegraph is an important adjunct to meteorological researches, and its aid should be called in as often as possible. In case the proposed postal telegraph is put into successful operation, central reports at Washington of meteorological conditions at quite frequent intervals, both at day and night, might easily be made from prominent points of the country. These reports, transferred by symbols to a general map, would be the most complete record of the kind ever attempted, and would be likely to throw light upon the subject, if, indeed, anything is to be expected from such observations. It is quite doubtful if any periodical law or laws exist which control atmospheric conditions. We are inclined to look upon them as results of a multiplicity of causes, in their nature variable, and, therefore, indeterminate. However, neither their determinateness, or the contrary, can ever be demonstrated

except by more constant and systematic observation than has ever yet been attempted.

The Smithsonian observers make only three observations per day: viz, at 7 A. M., 2 P. M., and 9 P. M., and even these meager observations are not entirely reliable. Observations ought to be made at least hourly, and at once transmitted to headquarters. The postal telegraph will, upon its establishment, afford facilities for this observation, and with a system of symbols specially adapted to the purpose, it might apparently be done with little trouble.

Editorial Summary.

A BUSINESS FACT.—The mechanical engravings that embellish the weekly issues of the SCIENTIFIC AMERICAN are generally superior to those of any similar publication, either in this country or in Europe. They are prepared by our own artists, who have had long experience in this branch of art, and who work exclusively for us. There is one pertinent fact in connection with the preparation and publication of an illustration in our columns that needs to be better understood by many inventors and manufacturers who pursue a short-sighted policy in bringing their improvements to public notice. They often go to a large expense in printing and circulating handbills, which few care either to read or preserve. Now, we undertake to say that the cost of a first-class engraving, done by our own artists, and printed in one issue of the SCIENTIFIC AMERICAN, will amount to less than one half the sum that would have to be expended on a poorer illustration printed in the same number of circulars, and on a sheet of paper in size equal to one page of our journal. A printed handbill has no permanent value. Thousands of volumes of the SCIENTIFIC AMERICAN are bound and preserved for future reference—beside, we estimate that every issue of our paper is read by no fewer than one hundred thousand persons. Considered, therefore, as a mere advertisement, an illustration in the SCIENTIFIC AMERICAN is a paragon of cheapness.

ACCORDING to the *Tribune*, everything at the approaching Boston Musical Peace Jubilee, promises to be upon a lovely scale of largeness. The big drum to be used upon the occasion has been finished, and O'Baldwin, the Irish giant, has also been engaged to beat it. This mastodonian drum is three feet through from head to head; the heads are about eight feet in diameter; for the skins, two mammoth oxen yielded up their hides, it being found impossible to procure the hide of an elephant, and upon each head is ironically painted "Let Us Have Peace!" Whether this drum will make any more noise than six smaller ones beaten in unison we do not know, but we are sure that it will cut a much larger figure in the advertisements.

A COMFORTABLE CHAIR.—Mr. F. A. Sinclair, of Mottville, N.Y., has sent to this office a specimen of the chairs made at his manufactory, which, he says—and we believe him—meets the requirements of a recent inquirer in the *American Builder* for a good chair. The specimens received are of the same primitive style as those of the days of our grandmother. The seats are of split ash, very capacious in size, and the chair, with its high arms and easy-fitting back, is a perfect embodiment of comfort.

NEW PUBLICATIONS.

STEAM VADE MECUM. A Compendium of Simple Rules and Formulæ, based on Original Investigation for the Solution of all Problems in the Application of Steam, with Examples. By Julien Deby, Civil and Mechanical Engineer. Late Professor at the *Ecole Centrale*, Brussels, and at the Georgia Scientific Institute. New York: Julien Deby, 37 Park Row.

We have been favored by the author with the advance sheets of this publication, which is now in press, and shortly to be issued. We have not yet found time to review the numerous formulæ, based upon the law of steam, which the author claims to have discovered, and an enunciation of which was published on page 246, current volume, of the SCIENTIFIC AMERICAN. The formulæ, of course, stand or fall with this law. If it prove in future to be a fallacy, its truth has not yet been disputed, so far as we have learned. The formulæ seem concise, and are in each case interpreted and expressed in plain language, so as to meet the wants of the practical man as well as the mathematician. A supplement is also added containing useful tables and a short essay on boiler explosions.

THE MISSISSIPPI VALLEY: its Physical Geography, including Sketches of the Typography, Botany, Climate, Geology, and Mineral Resources; and of the Progress of Development in Population and Material Wealth. By J. W. Foster, LL.D. Illustrated by Maps and Sections. Octavo, cloth. Price, $3·50. Chicago: S. C. Grigg & Co. London: Trubner & Co. Sold in New York city by D. Van Nostrand.

This work is the production of an earnest worker in the field of science, and is deserving of a cordial welcome as a valuable addition to our treatises on natural history. Every topic in a range of subjects singularly wide is discussed with such a mastery of its essential features that the reader is always presented with a clear, sharp, and well-defined mental conception of the author's arguments. Possessing, as it does now, so important a bearing, and destined to exercise a still greater influence on the industries, commercial and material, not only of the United States, but of the civilized world, the region of the Mississippi is eminently deserving of careful study. The student, the agriculturist, and the engineer will find in Mr. Foster's book facts and phenomena, as observed by a disciplined mind, of great practical utility; while the physicist and the political economist will discover therein food for much profitable thought, and a key to the solution of not a few problems in their respective spheres of investigation. In order that the work might be adapted to all clases of readers, the learned author dispensed with technicalities so far as was consistent with perspicuity. The typography and binding do credit to the publishers.

HAND-BOOK OF CHEMISTRY FOR SCHOOL AND HOME USE. By W. J. Rolfe and J. A. Gillet. Boston: Woolworth, Ainsworth & Co. New York: A. S. Barnes & Co.

The attempt to reduce the science of chemistry to so elementary a form as to make the science generally available to youth is worthy of praise. This book seems to be as successful an effort to accomplish that desirable object as we have met with. We have always been doubtful, however, whether such facts as may be given in the form adopted by books of this character could not be better taught by familiar lectures, illustrated by such simple experiments as may be necessary, without the employment of text-books at all. Certainly there is no science to which the principles of object teaching can be more successfully applied than this, or one which is more difficult to acquire by the use of books alone.

HAND-BOOK OF NATURAL PHILOSOPHY FOR SCHOOL AND HOME USE. By W. J. Rolfe and J. A. Gillet, Teachers in the High School, Cambridge, Mass. Published by Woolworth, Ainsworth & Co., 117 Washington street, Boston, and 111 State street, Chicago.

A small elementary treatise like the one before us, fully brought up to the latest discoveries in physics, is very much needed in the public schools of the United States. So far as we have found time to examine it, this book seems well calculated to supply this need.

THE ELEMENTS OF THEORETICAL AND DESCRIPTIVE ASTRONOMY FOR THE USE OF COLLEGES AND ACADEMIES. By Charles J. White, A.M., Assistant Professor of Astronomy and Navigation in the United States Naval Academy. Philadelphia: Claxton, Remsen & Haffelfinger, 819 and 821 Market street.

We have carefully examined this work, and regard it as one of the very best elementary text-books we have seen. It is an octavo of moderate thickness, bound and printed in an excellent manner.

GUIDE TO THE STUDY OF INSECTS. By A. S. Packard. Price, 50 cents. Published by the Essex Institute, Salem, Mass.

We have received part of this truly valuable work. It is full of interesting and useful information pertaining to the propagation and habits of all kinds of insects. The number before us contains nearly one hundred illustrations.

MANUFACTURING, MINING, AND RAILROAD ITEMS.

The Commissioners have reported upon the Central Pacific and Union Pacific Railroads. They compute that, at the date of their examination, in February last, an expenditure of $2,800,000 would be required to bring the Central Road up to a first-class road and equip it for through business with rolling stock, depots, machine shops, engine houses, etc. Two of the Commissioners, Messrs. Warren and Blickersdefer, also think an expenditure of $1,600,000 is required to improve its location. Upon the Union Pacific road they report that at the time of their examination, the sum of $6,700,000 was necessary to complete and equip the 1,035 miles, according to the first-class standard, since which time the Company has been constantly at work completing the road and placing upon it the material necessary fully to equip the same according to the requirements of the Commission and the law. The report states that the haste in which the roads have been constructed has resulted in defects of location and construction, which must be remedied to bring the roads to the standard of efficiency required by law.

An English paper says that much light is thrown on the interesting question, whether railway traveling is injurious to health, by the statistical investigations of Dr. Wiegand, of Halle. His inquiries are based on the reports of thirty-eight companies, and the results for 1868 are as follows: Of 11,125 engine drivers, stokers, and other officials traveling with the train, 119 or 1·072 per cent died; while of the 43,853 other officials employed, only 408 or 0·931 per cent died in the same period. It will be seen that the rate of mortality is somewhat higher in the first than in the second class, but the difference is not great enough to lead us to suppose that the occupation is more than usually dangerous or unhealthy.

The *Omaha Republican* says that moss-agate jewelry is becoming quite fashionable in the West. The delicate moss-like tracery observed in them is exquisitely beautiful, and when properly set in a ring or pin is an ornament that can hardly be surpassed for looks. The opening of the Pacific Railroad has brought these stones from the mountains into the market.

The President of the St. Louis Iron Mountain Company, has received a dispatch from the President of the Memphis Commercial Convention, informing him that the people will subscribe the 1,000,000 acres asked for the extension of the Iron Mountain Railroad to Memphis.

The Commissioner of Mining Statistics estimates, in his report, the bullion product of the whole country at $57,000,000. This is a decrease of $3 000,000 from the total returns of 1867, which showed a falling off of about the same amount as compared with the product of the year before.

The people of the Neosho valley have organized a company to build a railroad from Emporia, Kansas, to Holden, Missouri. This will put Southern Kansas in connection with St. Louis by a route 150 miles shorter than the railroad connection of the same region with Chicago.

The Navy Department continues the reduction of the number of its vessels. It is expected that all the supernumerary war vessels and transports owned by the Government will be disposed of before the end of summer.

The Northern Pacific Railroad Company are making preparations for sending out an exploring party to pass over the entire route from Lake Superior to Puget Sound. The general agent of the company has called on General Sherman to arrange for a military escort for a portion of the distance.

The fastest time between California and Massachusetts has been made by a gentleman who arrived in Boston on Saturday from San Francisco, having accomplished the journey in seven days and eleven hours, including seventeen hours detention on the way.

An effort is to be made to employ capital on the immense water power in the eastern part of Maine, in other manufacturing than that of lumber. Several wealthy companies have recently purchased water powers with the intention of erecting manufacturing establishments.

The feasibility of lighting tunnels by electricity is to be tested. One hundred Bunsen elements, with Serrin's automatic regulator, are about to be used to give light to the workmen employed in the Ste. Catharine tunnel, near Rouen, France.

M. Coudier has been commissioned to construct a bridge over the Nile, at Cairo. The length of this structure will be about 2,690 feet, and the cost will be about $400,000. It is to be completed in two years.

The Hartford and New Haven Railroad Company have been authorized by the legislature to increase its capital stock $3,000,000 by a new issue, one half of which will be expended in repairs.

The miners of Scranton, Pa., held a formal meeting on May 22, on the question of question of suspension. The vote stood—for suspension, 369; against suspension, 403. This is decisive; there will be no suspension there.

A bill has been adopted in the Canadian Parliament for the establishment of a telegraph line from Montreal to England by way of Greenland and Iceland.

A firm in Dalton, Mass., have made three thousand reams of bank-note paper for the Italian government. They have another large order from the Brazilian government.

The Newfoundland seal fishery has been very successful during the past season. The number of seals landed at St. John is nearly 150,000.

There are 50,000 tuns of brimstone used annually in England, and the total amount exported from Sicily is 300,000 tuns a year.

On May 18, Brigham Young broke the first ground for the Utah Central Railroad near Weber river, immediately below Ogden City.

American silver cannot be taken into the Dominion of Canada in larger sums than five dollars without the payment of duty.

Last year, in Madison, Wis., one firm sold $630,000 worth of reapers, and it has orders for six thousand machines for the coming season.

APPLICATIONS FOR EXTENSION OF PATENTS.

DESIGN FOR AN INKSTAND.—Barnet L. Solomon, of New York city, executor of the estate of Myer Phineas, deceased, has applied for an extension of the above patent. Day of hearing August 2, 1869.

MACHINE FOR ELECTROTYPING.—Joseph Alexander Adams, of Brooklyn, N. Y, has petitioned for the extension of the above patent. Day of hearing, August 16, 1869.

REFRIGERATORS.—D. W. C. Sandford, of New Orleans, La., has applied for an extension of the above patent. Day of hearing October 18, 1869.

REAPING AND MOWING MACHINE.—Henry Waterman, of Brooklyn, N. Y., has petitioned for an extension of the above patent. Day of hearing, Aug 9, 1869.

WASHBOARD.—Joseph Keech, of Waterloo, N. Y., has petitioned for the extension of the above patent. Day of hearing, Sept. 27, 1869.

MACHINE FOR TRIMMING BOOKS.—M. Riehl, of Philadelphia, Pa., has petitioned for the extension of the above patent. Day of hearing August 9 1869.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per line will be charged.