in comparison with tallow or any of the animal oils. We have seen pure olive oil applied to good leather—almost new—and it soon became hard and brittle, and cracked very much like the harness leather described by our correspondent.

Another correspondent, writing to us from Philadelphia, casually alludes to this subject, and points out an advantage secured to him from allowing boots to stand for several months before he uses them for common wear. He says:—"By long practical experience I have learned that a pair of boots which cannot be put on when new without great discomfort to the feet, if left for a year in a dry place, may be readily put on and worn with the greatest comfort. I have frequently seen boots, when laid aside, become green as verdigris with mold. I suppose this was owing to the blacking on them, and as the dry-rot mentioned in the SCIENTIFIC AMERICAN commenced at the seam, I think it must be caused by some application applied to the leather at the seam, when the boots are being sewed. I always dread a newly made pair of boots, and prefer to lay them aside for six months or a year before I wear them, so as to insure comfort from the first moment."

WEEKLY SUMMARY OF INVENTIONS.

The following inventions are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:—

TUFTED OR PILED WORK.

The operation to make tufted or piled work by hand, and with the assistance of the worsted pattern alone, is very tedious. Even balls and other smaller articles usually produced in this line of work, if the same have to be made by hand or in the usual manner, take up a great amount of time and labor, as each single thread has to be brought to the proper position for each piece of work. The operation of producing a number of articles from the same pattern at once, and without requiring a fresh adjustment of the thread, has been attempted; but it has hitherto failed because no provision was made to properly separate the various articles after the threads were arranged. This difficulty is completely obviated by the present invention, and all sorts of tufted work can now be produced in any number from the same pattern at once and the same operation. E. Kellerman, of Moosop, Conn., is the patentee.

SHINGLE MACHINE.

The object of this invention is to obtain a machine by which shingles may be sawed from the bolt in proper taper form and the taper varied as may be required, the machine also admitting of "stuff" being sawed with parallel sides such as are used for the heading of casks and other similar purposes. The invention also has for its object an automatic feeding and gigging-back device, so arranged as to operate conjointly with the bolt-adjusting mechanism and form throughout a simple and efficient device. The invention has further for its object the presenting of the bolt to the saw in such a way as to insure an easy and smooth cut, without tearing the fiber or rendering the saw liable to work off from the bolt. The credit of this contrivance is due to David Nicholson, of Lockport, N. Y.

WATER METER.

This invention consists in constructing a mouth-piece or break-water with any suitable number of outlets through which the water is allowed to escape, excepting at one of the outlets, without being measured by the tilt-box, or effecting it in any way, so that where a large quantity of water is used, only a given amount of this will be registered, from which the entire amount can readily be computed. It further consists in enclosing the above-described mechanism within an air-tight casing furnished with a secondary receptacle, and an air-cock by which a regular current or flow of water may be kept up, however varying may be the pressure of the head or source, and by which the mechanism may be kept in good working order. This improvement was designed by E. P. and J. N. Farrar, of this city.

ACOUSTIC APPARATUS.

This invention consists in providing a funnel-shaped receiver within a church pulpit or reading desk or in a table placed in any building or room, and a pipe leading from the throat or bottom thereof either under or above the floor, with one or more branch pipes or tubes leading therefrom to any pew or pews or seat or seats or to any place in the church, building or room, for the purpose of conducting the voice of a minister, lecturer, reader, or speaker or other sound to the ears of any person or persons whose sense of hearing is imperfect or impared. The patentee of this invention is David D. Stelle, of New Brunswick, N. J.

BORING AND MORTISING MACHINE.

This invention relates to an improved machine designed for mortising large timber for framing and consequently wherever an auger is required, in connection with a chisel in order to form the mortising. The object of this invention is to combine the auger and chisel in such a way that either tool may be applied to its work when desired with great facility, and the machine readily secured to the timber. This device has been patented to J. M. Kendall, of South Hardwick, Vt.

SOLDERING-IRON.

This invention consists in constructing the soldering-iron in such a way that the gas introduced into the implement may be burnt at the exterior of the same, so that the implement may be heated more economically and with even greater facility than by the usual charcoal fires. The credit of this contrivance is due to A. Burbank, of Brooklyn, N. Y.

FOREIGN NEWS AND MARKETS.

M. Kuhlman, of Paris, a distinguished chemist, asserts that the use of iron as ship fastenings is one of the chief causes of early decay in the wood. He considers that iron nails and spikes act the part of carriers of oxygen into the timber to promote slow combustion.

Screw steamships, of the same size as paddle-wheel vessels, have generally been built with engines of much less power. It has long been held by many engineers that, if such steamers were furnished with engines of a proportional power, they would surpass paddle-wheels in speed. The question is about to have its proper solution. The Cunard company has lately purchased the *Australian*, which is a Clyde-built screw steamer of full power, and she is to take her place as one of their line. She is built of iron, is 331 feet long, 42 feet wide, and has two 90-inch cylinder engines.

The steel wire mills of Sheffield are very busy at present, and the American orders on hand are somewhat extensive. The most of the wire ordered is for making wire ropes; still there are also quite a number of orders for crinoline.

The iron manufactures in England, in all their branches, are now in a very prosperous condition; and so are all the cotton interests. The whole country appears to have completely recovered from the financial panic of 1857, and trade never was better.

NEW YORK MARKETS.

BEESWAX—American yellow, 36c. a 37c. per lb.

CANDLES.—Sperm, city, 38c. a 40c. per lb.; sperm, patent, 50c.; wax, paraffine, 50c.; adamantine, city, 18c. a 20c.; stearic, 27c. a 28c.

COAL.—Anthracite, $4.50 a $5; Liverpool orrel, per chaldron, $12; cannel, $13.

COPPER.—Refined ingots, 24c. per lb.; sheathing, 27c.; yellow metal, 20c.

CORDAGE.—Manilla, American made, 8c. a 8¼c. per lb.; Rope, Russia hemp, 12c.

COTTON.—Ordinary, 9c. a 9¼c.; good ordinary, 9⅞c. a 10¾c.; middling, 11⅛c. a 11⅞c.; good middling, 12c. a 12¾c.; middling fair, 12½c. a 13⅛c.

DOMESTIC GOODS.—Shirtings, brown, 30-inch, per yard, 6c. a 7½c.; shirtings, bleached, 26 a 32-inch, per yard, 6c. a 8c.; shirtings, bleached, 30 a 34-inch, per yard, 7c. a 8½c.; sheetings, brown, 36 a 37-inch, per yard, 5¾c. a 8¾c.; sheetings, bleached, 36-inch, per yard, 7½c. a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 30-inch, per yard, 8¾c. a 10c.; cloths, all wool, $1.50 a $2.50; cloths, cotton warp, 85c. a $1.37; cassimeres, 85c. a $1.37½; satinets, 30c. a 60c.; flannels, 15c. a 30c.; Canton flannels, brown, 8½c. a 13c.

DYEWOODS.—Barwood, per tun, $18 a $20; Camwood, $130; Fustic, Cuba, $35 a $36; Fustic, Tampico, $25; Fustic, Savanilla, $20 a $22; Fustic, Maracaibo, $18.50 a $19; Logwood, Laguana, $22 a $23; Logwood, Tabasco, $21; Logwood, St. Domingo, $14.50 a $15; Logwood, Honduras, $16 a $17; Logwood, Jamaica, $13.50 a $14; Lima wood, $65 a $75; Sapan wood $45.

FLOUR.—State, superfine brands, $5 a $5. State extra brands, $5.20 a $5.40; Michigan fancy bands, $5.25 a $5.35; Ohio, common brands, $5.20 a $5.30: Ohio, fancy brands, $5.35 a $5.40; Ohio, fair extra, $5.75 a $5.95; Ohio, good and choice extra brands, $6 a $6.75; Michigan, Indiana, Wisconsin, &c., $5.25 a $5.50; Genesee, fancy brands, $5.50 a $5.60; Genesee, extra brands, $5.70 a $7.25; Missouri, $5.50 a $7.50; Canada, $5.45 a$6.75; Rye flour, fine, $3.75 a $3.90; corn meal, $3.80 a $4.20.

HEMP.—American undressed, $120 a $150; dressed, from $160 a $200. Jute, $95 a $97.50. Italian, $275. Russian clean, $190 a $200 per tun. Manilla, 6½c. per lb. Sisal, 5½c.

INDIA-RUBBER.—Para, fine, 55c. a 60c. per lb.; East India, 52c.

INDIGO.—Bengal, $1 a $1.55 per lb.; Madras, 70c. a 95c.; Manilla 60 c. a $1.10; Guatemala, $1 a $1.25.

IRON.—Pig, Scotch, per tun, $25; bar, Swedes, ordinary sizes, $85 a $86; bar, English, common, $42.50 a $43.50; refined, $52 a $54; sheet, Russia, 1st quality, per lb., 11½c. a 11¾c.; sheet, English, single, double and treble 3½c. a 3⅞c.; anthracite, pig, $24 per tun.

IVORY—Per lb., $1.. ' 30.

LATHS.—Eastern, per M., $1.75 a $2.

LEAD.—Galena, $5.7[illegible] per 100 lbs.; German and English refined, $5.60 a $5.65; bar, sheet and pipe, 6¾c. a 7c. per lb.

LEATHER.—Oak slaughter, light, 29c. a 31c. per lb.; Oak, medium 30c. a 32c.; Oak, heavy, 28c. a 31c.; Oak, Ohio 29c. a 30c.; Hemlock, heavy, California, 20c. a 21½c.; Hemlock, buff, 15c. a 18c.; Cordovan, 50c. a 60c.; Morocco, per dozen, $18 a $20; Patent enameled, 16c. a 17c. per foot; light Sheep, morocco finish, $7.50 a $8.50 per dozen; Calf-skins, oak, 55c. a 60c. per lb.; Hemlock, 56c. a 60c.; Belting, oak, 32c. a 34c.; Hemlock, 28c. a 31c.

LIME.—Rockland, 75c. per bbl.

LUMBER.—Timber, white pine, per M feet, $17.75; yellow pine, $35 a $36; oak, $18 a $28; Eastern pine and spruce, $14 a $15; White Pine, clear, $35 a $40; White Pine, select, $25 a $30; White Pine, box, $14 a $18; White Pine, flooring, 1¼ inch dressed, tongued and grooved, $24.50 a $25; Yellow Pine, flooring, 1¼ inch, dressed, tongued and grooved, $29 a $32; Black Walnut, good, $45; Black Walnut, 2d quality, $30; Cherry, good, $45; White Wood, chair plank, $42; White Wood, 1 inch, $23 a $25; Spruce Flooring, 1¼ inch, dressed, tongued and grooved, each, 22c. a 24c.; Spruce Boards, 15c. a 17c.; Hemlock Boards, 12½c. a 14c.; Hemlock wall strips, 10c. a 11c.; Shingles, cedar, per M. $28 a $35; Shingles, cypress, $12 a $25; Staves, W. O. pipe, light, $55 a $58; Staves, white oak, pipe, heavy, $75 a $80; Staves, white oak, pipe, culls, $30 a $35; Staves, do. hhd., heavy, $70; Staves, do. bbl. light, $30 a $35; Staves, do. bbl. culls, $20; Mahogany—St. Domingo, fine crotches, per foot, 35c. a 45c.; St. Domingo, ordinary do., 20c. a 25c.; Honduras, fine, 12½c. a 15c.; Mexican, 13c. a 15c.

NAILS.—Cut, 3¼c. a 3⅜c. per lb.; American clinch, 5c. a 5½c.; American horse-shoe, 14½c

OILS.—Olive, Marseilles, baskets and boxes, $3.45 a $3.50; Olive, in casks, per gallon, $1.12 a $1.25; Palm, per pound, 9c. a 9¼c.; Linseed, city made, 57c. a 58c. per gallon; linseed, English, 57c. a 58c.; whale, fair to prime, 48c. a 52c.; whale, bleached 59c. a 60c.; sperm crude, $1.40 a $1.43; sperm, unbleached winter, $1.47; lard oil No. 1, winter, 90c. a $1; red oil, city distilled, 57c.; Wadsworth's, refined rosin, 25c. a 35c.; boiled oil for painting, 25c. a 35c.; tanner's improved and extra, 30c. a 40c.; camphene, 45c. a 47c.; fluid, 50c.

PAINTS.—Litharge, American, 7c. per lb.; lead, red, American, 7c.; lead, white, American, pure, in oil, 8c.; lead, white, American, pure, dry, 7¼c.; zinc, white, American, dry, No. 1, 5c.; zinc, white, French, dry, 7½c.; zinc, white, French, in oil, 9½c.; ochre, ground in oil, 4c a 6c.; Spanish brown, ground in oil, 4c.; Paris white, American, 75c. a 90c. per 100 lbs.; vermillion, Chinese, $1.12½ a $1.22; Venetian red, N. C., $1.75 a $2.25 per cwt.; chalk, $4 per tun.

PLASTER-OF-PARIS.—Blue Nova Scotia, $2.75 per tun; white, $3.50; calcined, $1.20 per bbl.

RESIN.—Turpentine, soft, N. C, per 280 lbs., $3.50 a $3.56; Wilmington, &c., $3.50 a $3.56; common, per 310 lbs., $1.62 a $1.65: strained and No. 2, $1.65 a $2.00; No. 1, per 280 lbs. $2 a $2.87; white, $3 a $4; pale, $4.50a $5.50.

SALTPETER.—Refined, 12c. per lb.

SOAP.—Brown, per pound, 5c. a 8c.; Castile, 9c. a 9¾c.; Olive, 7c. a 7¾c.

SPELTER plates, 5c. a 5¾c. per lb.

STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5½c.; American blister, 4½c. a 5½c.

SUGAR.—New Orleans, 7c. a 8¾c. per lb.; Porto Rico, 7c. a 8¾c.; Havana, brown and yellow, 7c. a 8¾c.; Havana, white, 9c. a 9¾c.; Brazil, white, 8c. a 8¼c.; Brazil, brown, 7¼c. a 7¾c.; Stuart's granulated, 10c.

SUMAC.—Sicily, $70 a $80 per tun.

TALLOW.—American prime, 10¾c. a 10½c. per lb.

TIN.—Banca, 32c.; Straits, 30c.; plates, $6.50 a $9.25½, per box.

WOOL.—American, Saxony fleece, per lb., 55c. a 60c.; American full blood merino, 48c. a 52c.: extra, pulled, 45c. a 50c.; superfine, pulled, 39c. a 43c.; California, fine, unwashed, 24c. a 32c.; California, common, unwashed, 10c. a 18c.; Mexican, unwashed, 11c. a 14c.

ZINC.—Sheets, 7¾c. a 7¾c. per lb.

The foregoing rates indicate the state of the New York markets up to February 16th.

Our markets have been very quiet during the past and present month, and there was scarcely any change in prices during the week just passed. The Spring business is growing apace from day to day without any fluctuation in prices. The western States do not seem to have recovered from their depressed commercial condition yet, and, as a consequence, their merchants are cautious in buying. The southern trade is becoming quite brisk. Manufacturers have little or no stock of made goods on hand; large buyers, on this account, are compelled to order what they want ahead. Winter silks have declined in price since the first of January.

The imports entered at the Custom House of New York, during the week ending Feb. 11th, amounted in value to $1,639,618; and of this the two highest amounts were for tea and coffee, $515,803 for the former and $125,458 for the latter.

Our export trade of American manufactures is much greater than many persons suppose. Since January 1st, it has amounted to 11,492 packages, valued at $695,307.

An immense sale of American fleece and pulled wool took place on the 16th inst., by Messrs. Dike & Brothers, of this city. The catalogue comprised half a million of pounds, of all shades and qualities. The sale was well attended, and prices ruled at about the regular quotations. The prices were considered good, and this is a favorable sign in regard to the prosperity of our woolen manufactures. Ohio, Pennsylvania and New York fleeces brought the highest prices—54 cents.

THE RISE AND PROGRESS OF INVENTIONS.

ADVICE TO INVENTORS.

During the period of Fourteen Years which has elapsed since the business of procuring patents for inventors was commenced by MUNN & Co., in connection with the publication of this paper, the number of applications for patents in this country and abroad has yearly increased until the number of patents issued at the United States Patent Office last year (1859) amounted to 4,538; while the number granted in the year 1845—fourteen years ago—numbered 502—only about one-third as many as were granted to our own clients last year; there being patented, through the Scientific American Patent Agency, 1,440 during the year 1859. The increasing activity among inventors has largely augmented the number of agencies for transacting such business; and at this time there is scarcely a town of 4,000 inhabitants, but has its patent agent, patent lawyer, patent solicitor, or patent attorney, all of which terms are used to convey the same idea—viz., that their services are offered to the inventor or patentee for a pecuniary consideration.

In this profession, the publishers of this paper have become identified with the universal brotherhood of Inventors and Patentees at home and abroad, at the North and the South; and with the increased activity of these men of genius we have kept apace up to this time, when we find ourselves transacting a larger business in this profession than any other firm in the world. Year after year, we have increased our facilities for transacting patent business, by gathering around us a large corps of the most eminent engineers, draughtsmen and specification writers that can be procured. Among these gentlemen are those who have been connected with the United States and Foreign Patent Offices. The latest engagement we have made is the association with us of Hon. Charles Mason, formerly COMMISSIONER OF PATENTS, and favorably known to the Inventor as their friend and advocate. The memory of his acts while holding this high position will be cherished by many an honest inventor with gratitude as long as he lives.

The arrangement made with Judge MASON renders our facilities for prosecuting all kinds of patent business complete, however ample they were before; and without being accused of egotism, we may safely assert that no concern has the combined talent and facilities that we possess for preparing carefully and correctly applications for patents, and attending to all business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c.

FREE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be patentable are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of $5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh streets, Washington, by experienced and competent persons, under the direction of a gentleman who has spent a lifetime about the Patent Office. Over 1,500 of these examinations were made last year through this office, and as a measure of prudence and economy, we usually advise inventors to have a preliminary examination made. Address MUNN & CO., No. 37 Park-row, New York.

CAVEATS.

Persons desiring to file a caveat can have the papers prepared on reasonable terms, by sending a sketch and description of the invention. The government fee for a caveat is $20. A pamphlet of advice regarding applications for patents and caveats furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention, if susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition is composed for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fee, by express. The express charges should be prepaid. Small models, from a distance, can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & CO., No. 37 Park-row, New York.

REJECTED APPLICATIONS.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of their case, enclosing the official letters, &c.

FOREIGN PATENTS.

We are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business we have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that three-fourths of all the European patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Any one can take out a patent there.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through our Agency, the requirements of the different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our branch offices.

INTERFERENCES.

We offer our services to examine witnesses in cases of interference, to prepare arguments, and appear before the Commissioner of Patents, or in the United States Court, as counsel in conducting interferences or appeals.

For further information, send for a copy of "Hints to Inventors." Furnished free. Address MUNN & CO., No. 37 Park-row, New York.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Many persons have been ruined from adopting the "penny-wise and pound-foolish" maxim, when an investment of a few dollars, to have been informed of their rights, would have saved them much anxiety and money. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance, after knowing the nature of the invention and being informed of the points on which an opinion is solicited. Judge MASON assists in all examinations of this kind.

For further particulars, address MUNN & CO., No. 37 Park-row, New York.

EXTENSIONS OF PATENTS.

Valuable patents are annually expiring, which might be extended, and bring fortunes to the households of many a poor inventor or his family. During the past fourteen years, we have had much experience in procuring the extension of patents; and, as an evidence of our success in this department, we would state that, in all our immense practice, we never lost but two cases—and those were unsuccessful from causes entirely beyond our control.

It is important that extension cases should be managed by attorneys of the utmost skill to ensure success. All documents connected with extensions require to be carefully drawn up, as any discrepancy or untruth exhibited in the papers is very liable to defeat the application.

Of all business connected with patents, it is most important that extensions should be intrusted only to those who have had long experience, and understand the kind of evidence to be furnished the Patent Office, and the manner of presenting it. The heirs of a deceased patentee may apply for an extension. Parties should arrange for application for an extension at least six months before the expiration of the patent.

For further information, as to terms and mode of proceedure in obtaining an extension, address MUNN & CO., No. 37 Park-row New York.

ASSIGNMENT OF PATENTS.

The assignment of patents and agreements, between patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the inventor or patentee may be served at our offices. We cordially invite all who have anything to do with patent property or inventions to call at our extensive offices, 37 Park-row, New York, where any questions regarding the rights of patentees will be cheerfully answered. Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING FEBRUARY 14, 1860.

[Reported Officially for the SCIENTIFIC AMERICAN.]

. Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

26,091.—L. Acree, of Taliaferro county, Ga., for an Improvement in Cotton Seed Planters:

I claim the combination of the hopper, H, shaking box, G, and revolving feed roller, F, arranged, combined and operating together in the manner and for the purpose stated.

I also claim hinging the coverers to the main frame through the slotted hinges, v, so that said coverers may follow the ground, without being influenced by the frame, as set forth.

27,092.—Geo. C. Aiken, of Nashua, N. H., for an Improvement in Cultivator Teeth:

I claim the combination and arrangement of the fixed plate, B, vertical coulter, A, flanges or moldboards, C C, and cutters, D D, substantially as set forth.

27,093.—Wm. L. Aldrich, of Atlanta, Ga., for an Improved Press for Attaching Leathers to Billiard Cues:

I claim the combination and arrangement of the thumb screw, A and B, frame, D, lever, E, and socket, C, substantially as and for the purpose specified.

27,094—Ethan Allen, of Worcester, Mass., for an Improvement in Machines for Making Percussion Cartridge Cases:

I claim, first, The trimming mechanism composed of the sliding loose mandrel, C, the revolving chuck mandrel, S, and automatic tool, when constructed and operating substantially as described.

Second, I claim striking or forming the hollow rim at one stroke or operation, as above set forth, and described.

27,095.—Henrietta G. Batty, of Springfield, Mass., for an Improved Spring Egg Cup:

I claim the construction and arrangement of the elastic springs, B B, attached to the metallic standard, A A, the movable pin or slide C C, passing through the standard, A A, in the manner and for the purposes substantially as set forth.

27,096.—Joseph Berry, of New York City, for an Improved Cut Nail Machine:

I claim, first, The arrangement of the cutters, a, upon the face of the cutter head, F, near the center thereof, substantially as and for the purpose shown and described.

Second, The arrangement of the vibrating anvil, J, cam-shaped groove, G, anvil shaft, K, arm, P, rod, M, lever, ℓ, as and for the purpose shown and described.

[This invention consists in the combination of a rotating cutter-head, provided with a series of cutters set obliquely in reverse directions alternately, and an anvil and die oscillating on an axis perpendicular to the axis of the rotating cutter-head,]

27,097.—Harris Boardman, of Lancaster, Pa., for an Improvement in Metallic Carriage Hubs:

I claim the arrangement and combination of the clamp plates, E, and wedge, D, as attached to the chambered metallic hub, substantially as described and for the purposes set forth.

27,098.—Edmund Brickett, of Minot, Maine, for Improved Braces for Harness Breeching and Breast-plates:

I claim the application to harnesses of metallic breeching and breast plate braces, with the rings and shanks, connecting with the braces, as described, using for that purpose the aforesaid metallic substance, or any other metallic substance suitable for that purpo e.

27,099.—R. H. Brooks, of Greenville, Ga., for an Improvement in Plows:

I claim the arrangement of braces, D D C, holes, H O, V I, screw bolt, T, pieces, P P, opening, B, beam, A, standard, B, heel screw, W, notch, X, and opening, g, constructed as described for the purposes set forth.

27,100.—R. F. Brower, of New York City, for an Improved Rotary Steam Engine:

I claim the methods or devices substantially as described, which serve as steady and regular points of counter-resistance to the direct action of steam, when employed in a series of diverging cylinders, which revolve eccentrically to the center of motion of the driving-wheel, without the aid of any other separate movable parts, such as valves or springs.

27,101.—T. W. Brown, of Boston, Mass., for an Improved Twine-holder:

I claim the improved twine-holder as made substantially in manner and so as to operate as described.

27,102.—Joel Bryant, of Brooklyn, N. Y., for an Improvement in Grinding Mills:

I claim, first, In the construction of portable grinding mills, the cog wheel, C 1 C 2 and C 3, when constructed, set, and operating in connection with each other, and the cylinders, A and B, of the said mills, substantially as described and for the purposes set forth.

Second, And in connection with the above, I claim the making, setting and gearing of the body, M, of portable grinding mills, so as that the said mills (Fig. 1) may be set to run and grind at any desirable plane of the horizon, either vertical or horizontal, or oblique, substantially as described and for the purposes set forth.

27,103.—R. B. Burchell, of Brooklyn, N. Y., for Improved Musquito Nets and Shades for Windows:

I claim attaching a window shade or musquito net, C, to a roller, B, and rods, a' a', which are fitted in tubes, c c; said shade or net having its lower end attached to a bar, D, provided at its ends with double guides or gibs, E, which are fitted on rods, a' a', the whole being applied to the window frame, and arranged to operate as and for the purpose set forth.

27,104.—John F. Burgin and Augustus Koch, of Williamsport, Pa., for an Improved Hydraulic Engine:

We claim the arrangement for converting the rectilinear alternate motion into a rotating one, by means of water or any other non-elastic fluid whose force, derived from an artificial pressure, causes a wheel to turn around its axis, as described.

27,105.—Samuel Buser and J. H. Buser, of Warner, Ill., for an Improvement in Harvesters:

We claim the combination of the frames, A E, hinged at c c, with the elevating devices, viz., the rack bar, I, shaft, o, chain, M n, and sliding caster wheel, O, arranged to operate in the manner and for the purpose shown and described.

[This invention relates to a novel cutting device, and an improved arrangement of means for regulating the position of the same to determine the hight of the cut, and to facilitate the raising and lowering of the cutting device, so that it may pass over any obstructions that may be in its path.]

27,106.—Abner Carey, of Rome, Ga., for an Improvement in Cultivators:

I claim the described arrangement of the plows, H, beams, G and perforated rails, D, the whole being constructed and combined in the manner and for the purposes set forth.

27,107.—Abner Carey, of Rome, Ga., for an Improvement in Cotton Seed Planters:

I claim the combination the horizontal conical hopper, E, and duplex, saw-shaped feeder, K, constructed, arranged and operating substantially as and for the purposes set forth.

27,108.—J. B. Charles, of Ashland, Ohio, for an Improvement in Fan-blowers:

I claim giving a concave or recessed shape to the faces of the fanning wings, f, at the same time that the oblique eduction apertures, i i, are formed opposite said wings, in the sides of the fanning chamber, substantially in the manner and for the purpose set forth.

27,109.—E. B. Clark, of Tallahassee, Fla., for an Improvement in Plows:

I claim the arrangement of the longitudinal bar, D, shovel, E, double brace, C', double brace, C, bolt, c, projection, d, beam, A, and handles, B, as and for the purpose set forth and described.

[This invention consists in a combination of diagonal crossbars with a longitudinal brace; the whole being bolted together and secured rigidly to a plow beam in such a manner as to form a braced standard for the shovel, admitting of its being readily attached and detached.]

27,110.—Henry E. Clinton, of Woodbridge, Conn., for an Improvement in Carriage Thill Attachments:

I claim the application of the spring key, B, substantially and for the purposes as is herein set forth.

27,111.—John W. Colcmant of Medway, Mass., for an Improvement in Stoves:

I claim the arrangement of the sliding doors, B and B, with the stove, A, and oven, G, so that the heat from around the cylinder of the stove may be confined within or entirely cut off from the oven, by closing or opening said doors in the front or back of the stove; the whole being constructed and operated substantially in the manner and for the purpose set forth.

27,112.—Thomas Daniels, of Toledo, Ohio, for an Improvement in Stop-cocks:

I claim the arrangement of the several sirup and water tubes provided with valves, as shown, in combination with the common discharge chamber, L, and tube, C, substantially as set forth for the purposes described.

27,113.—John Davis and Sturgis Chaddock, of Boston, Mass., for an Improvement in Gas Retorts:

We claim, first, The movable flues, B, constructed and applied as described, in connection with the door, C, and its flue or projection, D, and the collar of the retort, substantially in manner and for the purpose as described.

Second, We claim the peculiar construction of the door, C, with its projection or flue, D, in connection with the collar of the retort and the movable flues, B; the whole being applied to the interior of the retort, and operating together substantially in manner and for the purpose as set forth.

Third, We claim the combination of the safety valve with the flue, D, of the door, C, in manner and for the purpose as specified.

27,114.—Louis De Masure, of New York City, for an Improvement in Safety Studs:

I claim, first, The movable plate, h, which, after the stud is placed within the button hole, is capable of advancing towards or receding from the front or top plate, c, guided by the circular rods, f f, by means of a turning or revolving plate, C.

Second, I claim the plate, g, provided with circular rods, f f, and fitting loosely upon the screw stem, e.

Third, I claim securing the pointed pins, i i, into the plate, g (a plate separate from the front or top plate, c), so as to cause them to enter the cloth in the operation of securing the stud to the same.

27,115.—B. Wells Dunklee, of Boston, Mass., for an Improvement in Cooking Utensils:

I claim the cover as constructed with an outer casing, A, and with an inner casing, B, attached thereto, substantially and for the purpose as specified.

27,116.—Leopold Eidlitz, or New York City, for an Improvement in Photographic Bank Notes:

I claim the use of the photographic process, as a substitute, either wholly or in part, for engraving or printing bank notes, or other instruments requiring security against counterfeiting, in combination with the employment of paper bearing either a pressed mark or a water-mark, produced as described, or by any similar means.

26,117.—Josiah S. Elliott, of West Needham, Mass., for an Improvement in Brick Presses:

I claim, first, The carrier, O, operated substantially as described.

Second, I claim clutching the cam, D, to the wheel, G, in the manner substantially as shown, for the purpose specified.

27,118.—E. P. Farrar, of New York City, and J. N. Farrar, of Pepperell, Mass., for an Improvement in Water Meters:

We claim, first, In combination with a mouthpiece constructed as described, the arrangement of any suitable number of radial and inclined tubes applied to said tubes in such a way that each will eject its equal share of water; this we claim in combination with the box, H, deflecting plates, r, one over each tube and secondary box, M, all arranged substantially in the manner and for the purposes set forth.

Second, We claim, in combination with the air-tight casing and tilting or measuring vessel, or its equivalent, the secondary receptacle, M, communicating with the top of case, N', and arranged in connection with the inlet pipe, G, substantially in the manner and for the purposes described.

27,119.—Lucius N. Fay and Wm. Mason, of Warren, Mass., for an Improvement in Blind Operators:

We claim, first, The combination of the screw shaft, b, rack, c, pinion, g, and slotted arm, h, applied to the window casing and blind, substantially as and for the purpose set forth.

Second, The shaft, k, having the spiral spring, l, placed on it, and provided with the bent arm, O, and projection, j, the latter being fitted in the slotted arm, h, in connection with the hooked plate, q, the above parts being used with or without the slide bolt, t, substantially as and for the purpose specified.

[This invention relates to an improvement in the devices hitherto employed for opening and closing window blinds at the inner side, or within the apartment in the side of which the window is placed, without raising the window. The object of the invention is to obtain a more compact device than the ones formerly used for the purpose, so that the mechanism may be applied without materially changing or altering the proper proportion or relation of the parts of the window and its casing. The invention further relates to an improved lock attachment in connection with the blind-operating mechanism above specified, the parts being so arranged that the blind will be locked automatically as it closes.]

27,120.—Peter Flickinger, of Hanover, Pa., for an Improvement in Harvesters:

I claim the tongue, T, constructed with the shoulders, c c, and ball-washer, B, on the rear extremity, in combination with the front and rear cross beams of the frame, having the openings, O, in the one, and the slot, S, in the other, substantially as and for the purpose set forth.

27,121.—James M. Freeman, of Belleville, N. Y., for an Improvement in Carriage Tops:

I claim the arm, A, with its button, D, or its equivalent, which will allow the carriage top to be raised and lowered without buttoning and unbuttoning or injuring the curtains to the top, and allow at the same time the top to be extended forward so as more completely to protect the person from storms and inclement weather.

27,122.—Aaron W. Geaheart, of Beallsville, Ohio, for an Improvement in Beehives:

I claim the arrangement of the strips, a b and c, so as to produce a galvanic current between the hive and its platform, or other support, in the manner and for the purpose specified.

27,123.—W. G. Greeley, of Hingham, Mass., for an Improved Machine for Cutting-out the Uppers and Soles of Boots and Shoes:

I claim the reversible block or cutter-holder, n, attached to an adjustable handle, F, and used in connection with a movable bed-piece, B, operated by the toggles, C C, and treadle, E, or their equivalents, substantially as and for the purpose set forth.

[This invention consists in the employment or use of a reversible block or cutter-holder, in connection with a movable bed-piece fitted within a suitable framing, whereby the uppers and soles of boots and shoes may be cut from the leather or stock very expeditiously and with great facility.]

27,124.—Sheldon Guthrie, of New Orleans, La., for an Improvement in Lamps:

I claim this new and improved arrangement of tubes or burners, and wicks for burning all kinds of common oil, grease, fluids, &c., for the purpose of producing artificial light, as substantially set forth and described, the same being applicable to tubes of any size in proportion to the degree of light desired.

27,125.—J. O. Harris and W. F. Slewder, of Ottawa, Ill., for an Improvement in Cultivators:

We claim, in combination with a V-shaped adjustable and reversible frame, the adjustable and hinged plow stocks, B, when constructed and arranged substantially in the manner and for the purpose described.

27,126.—Frank J. Henkel, of New York City, for an Improved Secretary Table:

I claim, first, The arrangement of the hinged flaps, C, in combination with the frame, A, of a table, and with the swivel head, D, or its equivalent, constructed and operating substantially as and for the purpose described.

Second, The combination of the hinged table-top, E, looking glass, G, and writing desk, H, with the frame, A, and flaps, C, substantially in the manner and for the purpose specified.

[This invention consists in arranging on the sides of a table hinged flaps, which are so connected to a common swivel head that they allow of being turned to a vertical or to a horizontal position. The object of these flaps, when the same are in a vertical position, is to conceal the real nature of the table, which may be constructed into a writing desk and with a looking glass and with a number of more or less secret drawers, so as to serve as a secretary and also as a dressing table. When the flaps are in a horizontal position, they are very convenient when the table is used whilst playing &c.]

27,127.—Gustav Heydrich, of Philadelphia, Pa., for an Improved Fire-escape:

I claim the described apparatus for saving lives and property in cases of fire, when the same is permanently attached to the cornice of the building, and constructed and operating substantially in the manner and for the purpose set forth.

27,128.—Birdsill Holly, of Lockport, N. Y., for an Improvement in Pumps:

I claim connecting the valve, H, to the piston, D, by means of the rod, g, or its equivalent, hollow piston stem, E, and regulating nut, a, arranged and operating substantially in the manner and for the purpose shown and described.

27,129.—Wm. H. Howard, of Philadelphia, Pa., for an Improved Machine for Serrating the Edge of a Screw Thread on Rollers:

I claim serrating the surfaces of metal bars or roller by means of a screw-cutting die, J, and a milling roller, K, arranged in respect to and operating simultaneously on the said bar, substantially as set forth.

27,130.—Charles S. Irwin, of Madison, Ind., for an Improvement in the Manufacture of Starch:

First, In the manufacture of starch from maize or Indian corn, I claim my improved method of treating the corn preparatory to its being crushed and ground, by steeping the same in water heated an average temperature of 160° Fah., or to any other temperature, ranging between 145° and 180° Fah., said water being, as usual, changed from time to time so as to maintain the requisite temperature, and to remove the water acidulated by previous fermentation of the corn, substantially in the manner and for the purposes set forth.

Second, In the manufacture of starch from maize or Indian corn by steeping the whole and uncrushed corn in water heated to a temperature of from 70° to 80° Fah., and by then grinding it with water heated to a temperature of from 70° to 140° Fah., I claim the method described of effecting the separation of the starch from the gluten in a more perfect manner than this has been done heretofore, by maintaining the temperature of the starch water, while in the runs, at or heating the same previous or during the separation of the starch from the gluten to an average temperature of 60° Fah., or to any other temperature ranging between 55° to 70° Fah., substantially in the manner and for the purposes set forth.

27,131.—Geo. W. Jennings, of Boston, Mass., for an Improved Laundry and Tailor's Press:

I claim the combination and arrangement of the movable table or arm and the levers or toggle joint for operating the same, to bring the work up to the movable or revolving iron, when constructed and operating in the manner and for the purposes as set forth and described.

27,132.—Geo. Juengst, of New York City, for an Improvement in Sewing Machines:

I claim, first, The combination of the rotating shafts, F K, one of them carrying a revolving arm, J, and the other two revolving cranks, G H, when the said shafts, arm and cranks are arranged and operated as shown and described.

Second, The shuttle-driver with its jointed horn, j, ear, r, and spring, p, applied and operating in combination with the guide, m n' o, on one side of the shuttle race, and operating substantially as described.

[This invention consists in a novel method of driving the needle by a crank motion, which causes its movement to be accelerated and retarded at different stages in the manner best adopted for the formation of the loops in its thread and for the production of perfect sewing. It also consists in a certain construction of the shuttle-driver, and in certain contrivances, in combination with which it operates, whereby, although the necessary openings are permitted between the horns of the driver and the shuttle at the times of the entry of the shuttle into the loops of the needle thread and the passage of the loops over the heel of the shuttle, the horns are both brought close to the shuttle at the times of the change of direction of its movement, and hence the unpleasant ratting noise so common to shuttle sewing machines is prevented.]

27,133.—Emil Kellerman, of Moosop, Conn., for an Improvement in the Manufacture of Tufted Work:

I claim the employment of a series of metallic plates, A, when arranged, combined and operating in the production of tufted work, as shown and described.

27,134.—J. M. Kendall, of South Hardwick, Vt., for an Improved Feed Motion for Boring or Mortising Machines:

I claim the pawl, Q, attached to the frame, A, engaging with the rack, e, and operated by the cross-bar, f, of the sash or gate, I, for the purpose specified.

27,135.—Charles Kinzler and Wilhelm Rosebuck, of New York City, for an Improved Sugar-cutter:

We claim the arrangement of two plates provided with knives forming square openings, and capable of moving towards and from each other, for the purpose of cutting or cracking the slabs of sugar into regular morsels, in combination with fixed frames provided with points which enter the openings in said plates when the latter are receding for the purpose of pushing the morsels or pieces which may adhere to the knives out of the holes, and operating together in the manner and for the purpose substantially as described and specified.

27,136.—Thos. Lovelidge, of Philadelphia, Pa., for an Improvement in Looms:

I claim the escapement or pallet wheel, H, on the end of the warp beam, the weighted pallet lever, I, the arm, J, and catch, f, in combination with the rollers, n and n', and the weighted bar, m, or its equivalents, the whole of the parts being arranged for joint action, as and for the purpose set forth,

27,137.—Daniel Lovejoy, of Lowell, Mass., for an Improvement in Spring Skates:

I claim the combination of the runner, C, the joints, D and D', at the heel and toe thereof, and the springs, E and E', which connect said joints and runner with the stock of the skate, for the purpose and substantially as described.

27,138.—John W. Mackenzie, of San Francisco, Cal., for an Improved Apparatus for Freeing Ship's Holds from Water:

I claim the arrangement of compartments, a a1 a2 a3 a4 a5, and valves, f f' &c., in relation to and in communication with a ship's hold, A, and discharge passages, c, constructed as and for the purposes described.

[This invention consists in constructing the ship with a series of valved chambers at her stern, bow or sides, and in communication with a ship's hold and certain discharge passages, so that when the ship pitches fore-and-aft or rolls heavily any water which flows into her hold, by reason of leaks being sprung, shall be automatically raised therefrom and discharged into the sea, and thus loss of life, ship and cargo prevented. We regard this as an almost invaluable invention if it will operate well in practice.]

27,139.—J. P. Manton and H. A. Billings, of Providence, R. I., for an Improvement in Hanging Rudders:

We claim the combination with the rudder head, C, and hull, A, of the plates, D E, when the latter are flanged, as shown, to prevent surging, and provided with grooves, f g, with friction balls, h, interposed, as and for the purposes set forth and described.

[The object of this invention is to hang the rudder in such a manner that it will work with but little friction, and still be properly supported and firmly secured to the vessel.]

27,140.—H. Maranville, of Clinton, Ohio, for an Improvement in Coin Detectors:

I claim the arrangement of the plate, A, with diameter scale, c, and incisions, d d', and with knife edges, 6, in combination with the slide, B, marked on one side for gold, and on the other side for silver coins, as described, and operating in the manner and for the purpose specified.

[This is a very neat and compact device, calculated to enable every person to judge at a glance about the value and genuineness of any coin whatever.]

27,141.—Charles McCammon, of Albany, N. Y., for an Improvement in Constructing Bars of Cast or Wrought Iron:

I claim the combining of wrought iron with cast iron in the formation of bars, by the process and for the purposes set forth and described in the specification.

27,142.—Isaac M. Milbank, of Greenfield Hill, Conn., for an Improvement in the Apparatus for Manufacturing Oxyd of Zinc:

I claim the combination and arrangement of the furnace, A, with metal top, accessible openings, d and e e, and the flues, b b, in connection with the perforated pipes, c c, the shoot, f, the receptacle, j, the duct, B B, with its reticulated surface, K, the collecting or saving apparatus with the apartment, c, to be managed and used as described in the specifications.

27,143.—Wm. Mosher, Isaac H. Mosher and John J. Harris, of Green, N. Y., for an Improvement in Machines for Bending Tire:

We claim the scroll-shaped stationary former, the mode of holding the end of the bar to be bent, the manner of adjusting the friction roller by the wedge-shaped key through the lever bearing against the center bolt, all in combination as specified, and for the purposes set forth.

27,144.—Thos. Murphy, of Cincinnati, Ohio, for an Improvement in Cultivators:

I claim the described arrangement of the plow frame, AC D E F, detachable moldboards, K, and detachable cultivator franics, N O, the whole being constructed and operating in the manner and for the several purposes set forth.

27,145.—Walter Nangel, of Philadelphia, Pa., for an Improved Mortising Machine:

I claim the employment of rotary reciprocating cutters in mortising machines, substantially in the manner and for the purpose set forth.

27,146.—Charles Neames, of New Orleans, La., for an Improvement in Bagasse Furnaces:

I claim the use of chambers in wet fuel furnaces which have their receiving openings exclusively in and from the interior of the furnace, to receive the vapors arising from the fuel, and which will convey and distribute the same at points to meet the carbonaceous gases, to allow the oxygen from the vapor to be brought in contact with highly heated carbon, to support combustion.

I also claim the hollow pillars mounted on wall, A, in combination with flue, c, when arranged and operated as and for the purpose set forth.

27,147.—Edward O. C. Ord, of the United States Army, for an Application of Gunpowder to Flat Projectiles, giving them Rotation:

I claim the use and control of the projectiles discharged from fire-arms or not by hand, and rotating in their flight, substantially as described.

27,148.—Josephus Parsons, of Carthage, Ohio, for an Improved Rotary Steam Engine:

I claim the construction and arrangement of the wheel, B, provided with radial shuttle valves, D, and the steam chambers; the said valves and the wheel itself being operated by steam, in combination with the cams which also serve as stationary pistons, substantially as set forth, for the purposes described.

27,149.—W. A. Patrick, of Ludlow, Vt., for an Improved Method of Operating Feed Nuts in Lathes:

I claim the yoke, C, connected with the hand lever, E, and spring, F, and also connected with the sliding plates, b b, of the sections, c c, of the nut by means of the pins and slots, e e d d; the whole being arranged to operate as and for the purpose set forth and described.

[This invention relates to an improved means for operating or adjusting the two parts of a divided nut, so that the same may be made to engage with or be disengaged from the feed screw, which, when the nut is engaged with it, gives the feed movement to the carriage containing the knife. The object of this invention is to obtain a simple and efficient mechanism for the intended purpose, one that may be readily operated, not liable to be deranged or rendered inoperative by use, and one that can be retained in the two positions necessary to keep the nut in an open or a closed state, and also due provision made for wear.]

27,150.—N. A. Patterson, of Kingston, Tenn., for an Improvement in Harrows:

I claim the arrangement of the shafts or side rails, D, with the mechanism for vibrating them, substantially as and for the purposes set forth and described.

[This invention consists in attaching the teeth of the implement to shafts which have a vibratory movement imparted to them as the implement is drawn along, whereby the teeth are relieved from all trash, weeds, &c., which are liable to adhere to them; the seed, if the implement is drawn over seeded ground, more effectually covered and better distributed in the earth than formerly; the earth more thoroughly pulverized; and the implement rendered of lighter draft than those of usual construction.]

27,151.—Edmond Peck, of San Jose, Cal., for an Improvement in Harvesters:

I claim the arrangement of the vertical rod, j', racks, m' m' lever, N, spring plates, n' n', rods, o o', perch, J, apron box, F, axle, I, and clutches, j p, as and for the purpose shown and described.

27,152.—C. M. Plumb, of North Orange, N. J., for an Improved Time Table for Railroads, &c.:

I claim the within-described construction of frame and movable slides with the separate movable plates with letters or numerals denoted thereon; the whole being combined, arranged and operating for the purposes and in the manner described.

[The object of this invention is to obtain a cheap and ready reference time table for railroad stations, for giving information to persons traveling over certain routes, and to serve as a perpetual railroad directory, showing the time of departure of the trains leaving the station during the day or night. The table is to be made so that

malicious persons cannot injure or deface it by tampering with it, and so that the numerals or letters used upon it may be taken out with very little trouble and others inserted in their places. The whole device is made light, neat and portable, and may be hung up out of reach, or nailed up on the inside of the cars, in the house or out of doors]

27,153.—Charles Pope, of Syracuse, N. Y., for an Improvement in Apparatus for Evaporating Saline Liquors:

I claim the hollow angle pieces constructed and arranged substantially as described and for the purpose set forth.

I also claim making the arms of the kettles hollow, as set forth and for the purpose stated.

I also claim combining the hollow angle pieces with the air spaces, D, upon the sides of the arch, when so arranged that heated air may pass from the spaces upward through the angle pieces, and be discharged over the boiling liquid in the kettles, as set forth.

27,154.—D. J. Powers, of Madison, Wis., for an Improvement in Straw-cutters:

I claim, first, The arrangement of the adjustable ledger blade, I J, in combination with the upward-cutting knives, G, of the cylinder, D, curved slot, R, compensating pinions, Q1 Q2 Q3 Q4, weighted lever, S, and feed roller, M, substantially as and for the purposes set forth.

Second, The arrangement of the cone or gear wheels, L, on the feed roller shaft, with the compound pinion, C, of the knife cylinder, substantially as and for the purposes set forth.

[This straw-cutter has its knives arranged on a revolving cylinder so as to cut upward against a stationary adjustable blade. The lower feed roller, which is fluted and made of metal, is adjustable in a curved slot, and is so arranged with four gear wheels, that no matter what be the adjustment it always is in gear with the driving mechanism. A weighted lever holds the feed roller with a yielding pressure against the upper fluted metal feed roller on the straw passing between the two rollers. The speed of the feed roller is regulated by a cone of gear wheels on it, and a sliding pinion on the cutter shaft. The arrangement, as a whole, seems well adapted for cutting straw, corn stalks, and other feed.]

27,155.—Thomas E. Purchase, of Danville, Pa., for an Improvement in Grates for Furnaces:

I claim the combination of a series of comb-like bars each interlocking the other and capable of being oscillated independently of the other, substantially as specified, for the purposes set forth.

27,156.—Joseph Reynolds, of Providence, R. I., for an Improvement in Marine Propellers. Patented in England May 26, 1859:

I claim the double cranks supported by outside bearings with the propeller frames supported by stay rods and guided at the top with two radius rods to each frame hung to the vessel, or suitable frames attached to the vessel abaft the main shaft to which the propeller frame is connected. The radius rods to be of a suitable length and hung in a proper position to hold or guide the top of the frame forward, or beyond the shaft to which it is attached; the whole constructed and arranged substantially as and for the purposes specified.

27,157.—Aaron Ring, of Westbrook, Maine, for an Improvement in Seeding Machines:

I claim the combination of the wheel, A, which is open at both ends, with wheel, B, both wheels placed upon the same axis and rotating in opposite directions in combination with two shafts, C and D, one within the other, substantially as and for the purpose set forth.

27,158.—Wm. Robotham, of Newark, N. J., for an Improved Gag-runner:

I claim constructing the two loops in one piece and arranging them substantially as described.

37,159.—Fisk Russell, of Manchester, N. H., for an Improvement in Mowing Machine Cutters:

I claim the combination of the wings or projections, C, with the blades, A, when the latter are pivoted and when the said projections are arranged to operate in connection with the guards as and for the purpose set forth.

27,160.—Thomas Sault, of Seymour, Conn., for an Improvement in Rollers for Working Caoutchouc and Allied Gums:

I claim the breaking down, comminuting and cleaning of crude commercial vulcanizable gums, separating them from foreign bodies by toothed rollers, substantially as set forth, whether the rollers be in pairs or in threes or any other number.

27,161.—Wm. H. Sloan, of Buffalo, N. Y., for an Improved Machine for Dressing Staves:

I claim, first, The feed roller, N, having the gage, n, in combination with the cutters, J J, when the said feed roller is so placed and arranged with reference to the cutters and other parts of the machine as that the stave will be fed to the cutters, in such relative time and motion, as to cause the middle of the stave to be dressed while the cutters are in their lowest position, substantially as herein described.

Second, I claim the combination and arrangement of the gage, n, with a pressure or feed roller, N, whose circumference is equal to or greater than the length of the longest stave to be dressed; the said gage being adjustable on the face of the roller so as to cause the middle of a long or short stave to be dressed by the cutters while in their lowest position, substantially as set forth.

Third, I claim the relative arrangement of the annular rim or feed bed, B, friction rollers, E E1 and E2, and pressure rollers, T and T1, for the purpose set forth.

Fourth, I claim the combination of the rotating bed, having a roughened surface, with the pressure rollers, T and T1, for the purposes and substantially as described.

27,162.—Jonathan Smith, of Tiffin, Ohio, for an Improvement in Seed Drills:

I claim the thin metal corrugated wheels, D, and ratchet washers, E, conforming therewith in lateral surface, in combination with shaft, A, collars, F, and concave hopper bottom, B; the operation being as set forth.

27,163.—Wm. W. Spafford, of Peterborough, N. H., for an Improvement in Railroad Car Wheels:

I claim the construction of a car wheel formed with curved or corrugated shell side surfaces, c c d d, and internal diaphragms or partitions, f f f f, forming one or more internal cells, cavities, chambers, or spaces, g g h h, when said surfaces and diaphragms are so arranged as that the incumbent downward weight or pressure acting thereon shall be in a direction vertically throughout said parts of the wheel, substantially as set forth and described.

27,164.—Otis W. Stanford, of Cincinnati, Ohio, for an Improvement in Grinding Mills:

I claim the combination of grinding surfaces composed of spiral ridges, separated by cavities which shoal or feather diagonally as set forth.

27,165.—Daniel D. Stelle, of New Brunswick, N. J., for an Improved Acoustic Apparatus:

I claim the combination with a pulpit or reading table, of the sound receiver, a a, and conducting tube, c, substantially as and for the purpose shown and described.

27,166.—George K. Snow, of Watertown, Mass., for an Improvement in Folding Paper for Bookbinders:

I claim folding each sheet with back folds and into two connected signatures having their connection along or adjacent to and between the front edges to be trimmed, and so that the said connection may be trimmed or separated with such front edges from the rest of the paper while they are being trimmed; my process involving the back folding of the sheet one or more times in making the first folding, and the back folding of it twice or other suitable greater number of times in making the second folding, or that which is at rightangles to the first folding.

27,167.—Joseph Storm, of Woonsocket, R. I., for an Improvement in Paper Rag Engines:

I claim the employment of the conductor, H, in combination with the rotary drum, B, the rotary cutter cylinder, D, and the stationary knives, E, arranged substantially as and for the purpose specified.

[A description and engraving of this invention will appear in the SCIENTIFIC AMERICAN in a few weeks.]

26,168.—Noah Sutton, of New York City, for an Improvement in Slide Valves:

I claim the arrangement of the two pistons, E E', and cylinders, C C', between the two heads of the double D-valve, or what is equivalent, between two short connected D-valves, with a single steam passage in each of said cylinders, and an exhaust passage common to both of said cylinders communicating through the partition between the said cylinders with the main exhaust passage, substantially as described.

[This invention relates to the operation of the slide valves of steam engines by the direct pressure of steam upon pistons attached to the valves themselves; and it consists in a novel manner of applying such pistons and the cylinders in which they operate, and of arranging the ports and passages of such cylinders, whereby great simplicity of construction is obtained.]

28,169.—Wm. Swift, of Brooklyn, N. Y., for an Improved Invalid's Bedstead:

I claim, first, The combination of movable frame, D, with mattress frame, B, jointed pieces, G, and weights, F, all arranged and operating in the manner and for the purposes set forth.

Second, The frame, B, when the same is pivoted to the head and foot rails, as and for the purposes described.

27,170.—H. K. Symmes, of Newton, Mass., for an Improvement in Mode of Extinguishing Gas-lights:

I claim the extinguishing of gas-lights by means of an inverted cup, B, or its equivalent expanding chamber provided with an inlet valve, a b, so applied, substantially as herein described, in combination with the burner or supply pipe that though it will be caused to effect the shutting off of the gas, by a temporary increase or diminution of pressure, it will not permit the renewal of the supply to the burners to be effected by a subsequent diminution or increase of the pressure.

[This invention consists in certain means whereby all the street lights or out-door public lights of a city, town, village or district may be extinguished by simply effecting such a temporary increase or reduction of the pressure on the main as will not materially interfere with the lights in dwellings and other places, by the agency of a cock or valve at the gas works, such means serving also to extinguish the lights of any series of burners by a temporary increase or diminution of pressure that will not materially affect the lights of other burners supplied by the same main or service pipe.]

27,171.—B. F. Trimmer, of Rochester, N. Y., for an Improvement in Grain Separators:

I claim inducting the grain to the screens, f m, through the concentrated currents of two blasts by the small throats, a c, of division, G, and d, of division, H, the blast through A having an upward or convex, and that through c, a concave direction to the falling grain, substantially in the manner and for the purposes described

I also claim the combination and arrangement of the perforated sheet metal screens having a section of larger orifices, f, in communication with division, G, and of smaller orifices, m, with divisions, H, of the chamber of separation above, substantially as and for the purposes described.

I further claim the arrangement and combination of the opposing segmental arms, L, crank, o, and spindles, S S, with the screen box, E, for giving the desired direction to the vibrations of the screens, and regulating the same, substantially as set forth.

27,172.—Francis Van Doren, of Adrian, Mich., for an Improvement in Hand Seed Planters:

I claim, first, The arrangement of a secondary hopper, A, at the front side and near the bottom of the planter for the seed which is brought from the main hopper by a roller connected to the plunger to fall into and thus be in sight of the operator until it is forced in the ground, substantially as and for the purposes set forth.

Second, The arrangement, H i j, for operating the device, G, which scrapes the dirt off the discharge end of the planter, substantially as and for the purposes set forth.

[This is a good hand planter. The secondary hopper at the back of the seed box enables the operator who carries the planter in his hand to see whether seed is brought down from the seed box every time the planter is operated at a new hill. The scraping device always keeps the end of the planter free from an accumulation of dirt, and thus prevents clogging.]

27,173.—E. L. Vertrees, of Howe's Valley, Ky., for an Improved Mode of Cutting Boot Vamps:

I claim in combination with cutting a boot vamp without crimping, removing the pointed portion of the material, M X N Y, in the side of the ankle, and joining the edges so as to contract the back at ●, and incline the leg forward, substantially as and so as to obtain the advantages set forth.

27,174.—Joseph Vowles, of New Hudson, Mich., for an Improvement in Cultivators:

I claim, in combination with the series of hoes or plows, L L, the pair of front hoes or plows, N N, constructed, arranged and made adjustable in the manner and for the purposes herein described and represented.

I also claim the peculiar construction, combination and arrangement of the frame, the pulleys and the locking of the standards to the frame, substantially as described and for the purposes set forth.

27,175.—Edwin Ward, of New York City, for an Improved Churn:

I claim the churn made up of a horizontal cylinder having ribs, as described, and an interior shaft armed with dashers; the cylinder being made to rotate in the one direction, and the shaft and dashers in the opposite direction, as set forth.

27,176.—Edward Webster, of Hartford, Conn., for an Improvement in Gridirons:

I claim the folding and revolving broiler, in the manner as described, in combination with the frame and cover, substantially as described and for the purpose set forth.

27,177.—W. R. Webster, of Gowanda, N. Y., for an Improvement in Tanning:

I claim the use of chloride of lime, in combination with the materials specified, or with any materials used in the ordinary process of tanning.

27,178.—Decatur Werst and Aaron Puderbaugh, of Waltz township, Ind., for an Improvement in Lathes for Turning Irregular Forms:

We claim the combination of the vertically-reciprocating cutters, c, with the longitudinally-traveling carriage, B, and laterally-sliding gage, E, by the means and in the manner substantially as described, for the purpose set forth.

[This machine differs from all others which have preceded it, in employing a reciprocating cutter instead of a revolving one. The reciprocating cutters possess an advantage over rotating cutters in being capable of cutting spokes and other articles which require to be broad and flat at one end. The cutter is guided by a pattern, which, with the article being operated upon, revolves. We regard this as a very useful machine.]

27,179.—Calvin D. Wheeler, of New York City, for an Improvement in Marking Gages for Sewing Machines:

I claim combining with a sliding rule, arranged as described, the spring point for the purpose of measuring and marking material for folding to facilitate the operation of guiding said folds through a sewing machine for the successive stitches, as set forth and specified.

27,180.—Stephen Wilcox, Jr., of Westerly, R. I., for an Improvement in Hot-air Engines:

I claim, first, The dividing of the changing piston into two parts, 12, and conducting the air through the space between them in its transfer from the cold to the hot end of the cylinder, substantially as and for the purpose set forth.

Second, Dividing the bearing, X, or its equivalent, from the heated portion of the working piston by the space, Q, which space is in free communication with the external atmosphere, so that the heat is conveyed away by connection, substantially in the manner set forth.

Third, The arrangement of the exhaust valve, T, hollow piston rod, 3 and 4, and guide case, 6, or their respective equivalents, for the purposes set forth.

Fourth, The combination and arrrangement of the crank, C Z, adjustable eccentric, Y, and eccentric rod and connections, or their respective equivalents, for the purpose of working a valve, the seat of which is carried in or with the piston, substantially as set forth.

27,181.—Abner Willson, of Colden, N. Y., for an Improved Churn:

I claim the bow, F, with springs, a, when constructed as described, in combination with screw whirl, D, operating as set forth and for the purposes described.

27,182.—August Wulze, of St. Louis, Mo., for an Improvement in Smut Mills:

I claim arranging and operating the cylinder, D, and beater, B, with respect to each other as and in the manner described, not per se, but when the said cylinder is made with the opening, S, in one end (as at Fig. 5), and with its surface perforated with a flat punch upon diagonal lines, and when the said beater is made with the blades set diagonally across its axis in the manner described for the purpose specified.

27,183.—Charles J. Appleton, of Philadelphia, Pa. (assignor to B. H. Howell, of New York City, and John Cotton, of Philadelphia aforesaid), for an Improvement in Knitting Machines:

I claim the system of hinged needles and "sinkers," in combination with the thread guide, J, and the cam, K, and serrated wheel, I, or their equivalents; the whole being arranged and operating substantially as set forth.

27,184.—Gotleib M. Barth, of Philadelphia, Pa. (assignor to himself and D. D. Jones, of same place), for an Improvement in Weighing Carts:

I claim, first, Connecting the frame, D, with its bars, H and H', to the axle, A, so as to be confined laterally and longitudinally to the said axle, and so that it may be elevated above the same, either perpendicularly or on one side more than the other, as and for the purpose set forth.

Second, The shaft, E, with its projections or cams, i i, and the projections, j j, on the axle, A, in combination with the frame, D, the bars, H and H', with sharp-edged projections, n n, and the body, X, of the cart; the whole being so arranged that, on turning the said shaft in one direction; the body of the cart will be supported solely by and on the said sharp-edged projections, and on turning the shaft in a contrary direction, the body of the cart shall be supported on the axles and the bars, H and H', on the shaft, E, as specified.

Third, The graduated lever, M, connected to the bars, H and H', by the arms, J and K, and link, q, in combination with the plate, N; the latter being jointed to, and rendered adjustable on, one of the shafts, C, and the whole being arranged substantially in the manner set forth.

Fourth, The shaft, E, with its projections, w w, in combination with the plates, u u, on the underside of the body, X; the whole being arranged as set forth for the purpose of retaining and releasing the said body.

27,185.—Abner Burbank, of Brooklyn, N. Y. (assignor to George W. Burbank, of Rochester, N. Y.), for an Improvement in Soldering Irons:

I claim, first, The combination of the soldering tool or iron with any suitable gas supply, when the arrangement is such that the soldering tool may be constantly supplied with gas, and the "copper" maintained in a heated state while the tool is being used by the workman, substantially as shown and described.

Second, I claim the combination of a gas light with a soldering tool or iron to illuminate the interior and other parts of the work to which the tool may be applied, substantially as shown and described.

Third, The employment of a chamber, a, in the base of the copper, A, as and for the purposes shown and described.

Fourth, The employment of a tubular screw, B, in combination with the copper, A, and cylinder, C, as and for the purposes shown and described.

27,186.—Thomas B. DeForest, of New York City (assignor to himself and Wallace & Sons, of Ansonia, Conn.), for an Improvement in Lanterns:

I claim forming, out of a vertical piece of wire, two of the vertical guard wires, substantially as set forth.

I also claim bending the double guard piece of wire, a, into such shapes as to form the connecting link for the attachment of the handle as specified.

I also claim forming the support for the protector, C, out of one of the double guard wires, as shown and described, in combination with the retaining portion of the other extended wire, as set forth.

I also claim the peculiar construction of the handle, D, as specified for the purpose set forth.

27,187.—John R. Henshaw, of Middletown, Conn. (assignor to himself and Samuel Babcock, of same place), for an Improvement in Skates:

I claim the plate, k, made so as to be adjusted on the bar, f, or its equivalent, and the thumb screw, h, as means for securing the heel of the boot or shoe to the skate as set forth.

27,188.—Wm. H. Johnson, of Richmond, Ark. (assignor to himself and J. D. Bellah, of same place), for an Improvement in Plows:

I claim constructing the beam of the draught block, a, and bent strip of iron, b, arranged and combined as specified.

I also claim the ring, D, in combination with the beam, A, and share standard, E, constructed, arranged and operating substantially as specified.

27,189.—Joseph Lamb, of New York City (assignor to himself and Richard Lamb, of same place), for an Improvement in Portable Sleds:

I claim, first, A folding sled as a new article of manufacture, the parts being hinged together and capable of being instantly expanded into a rigid sled, or folded in a small compass, as set forth.

Second, I claim, in a folding sled, the described combination and arrangement of the grooved braces, B, cross braces, C, and runners, R, whereby the sled, when folded, occupies a thickness equal only to that of the braces, B or C, themselves.

Third, I claim, in connection with the last, the described arrangement of the back frame, A, by which it is folded into the plane of the braces, B C, and runners, R.

Fourth, I claim, in a folding sled constructed substantially as described, the employment of the flexible or hinged foot rest, E, so arranged and suspended as to secure the advantages set forth.

27,190.—Wm. H. Lauback, of Philadelphia, Pa. (assignor to himself and D. C. Enos, of same place), for an Improvement in the use of Hydro-carbon Vapor for Illumination:

I claim forcing into and through the distributing pipes hydro-carbon vapor, at such a high temperature that no condensation of the vapor can take place in the said pipes, when the latter are so arranged that no closing of the burners can obstruct the free circulation of the heated vapor throughout every portion of the said distributing pipes as and for the purpose set forth.

27,191.—Isaac P. Lykens, of Pottsville, Pa. (assignor to himself and Wm. Bickel, of same place), for an Improvement in Machinery for Breaking Coal:

I claim, first, The reciprocating spiked plates, I, and the spiked bars, N, in combination with the chutes, Q, and their movable doors, q; the whole being arranged and operating substantially as set forth.

Second, Attaching both the upper and lower spikes, independently of each other, to the bars in such a manner that the position of the said spikes may be altered at pleasure, the bars themselves being likewise so secured as to admit of ready adjustment, in the manner and for the purpose specified.

Third, The spring, M, arranged in respect to the spiked plate, I, and the spiked bars, N, as and for the purpose set forth.

27,192.—David Nicholson, of Lockport, N. Y. (assignor to himself and Charles R. Fox, of same place), for an Improved Method of Feeding the Bolt to the Knife in Shingle Machines:

I claim, first, Constructing the racks, R R, of two toothed longitudinal parts, v w, so arranged as to be capable of adjustment one with the other, for the purpose of varying the taper of the shingles and sawing "stuff" of equal thickness throughout when desired.

Second, The arrangement of the racks, R R, slides, S T, connected by the lever, U, and the slotted slides, M N, operated by the lever, O, and crank, g', and fitted in the bar, L, substantially as shown, for the purpose of actuating the racks, R R.

27,193.—Enos B. Phillips, of Cambridgeport, Mass. (assignor to himself and Charles W. Phillips, of same place), for an Improvement in the Manufacture of Skates:

I claim, as a new article of manufature, a skate cast from the described composition metal, substantially as set forth.

27,194.—James Spear, of Philadelphia, Pa. (assignor to himself and D. C. Enos, of same place), for a Post-office Stamp:

I claim, first, Constructing a stamp or die with letters, the outline of which is composed of fine points, constructed in the manner and for the purpose described.

Second, I claim stamping letters so that the letter, as well as the envelope, will bear the post-office mark in a distinct manner, as described.

RE-ISSUE.

George Westinghouse, of Schenectady, N. Y., for an Improvement in Endless Chain Horse-powers. Patented June 13, 1854; re-issued July 10, 1855; again re-issued Feb. 14, 1860:

I claim, first, The combination of the straight links, c, and odd links, i, when constructed, arranged and operating as described.

Second, The combination and arrangement of the hubs or pinions, m m', with the band and driving wheels, as described, for the purposes.

DESIGNS.

Elemer J. Ney, of Lowell, Mass. (assignor to the Lowell Manufacturing Company, of Lowell, Mass.), for a Design for Carpet Patterns.

William W. Stevens, of Portland, Maine (assignor to N. P. Richardson & Co., of same place), for a Design for a Cooking Stove.

N. S. Vedder, of Troy, N. Y., for a Design for a Parlor and Cook Stove.

N. S. Vedder, of Troy, N. Y., for a Design for a Parlor Stove.

Leonard W. Volk, of Chicago, Ill., for a Design for Statuette of Stephen A. Douglas.

Notes & Queries

W. M. M., of Ill.—We published a series of illustrated articles on artesian wells in Vol. VIII (old series) of the SCIENTIFIC AMERICAN.

F. N. C., of Mich.—We gave the information about soaps on page 3, present volume of the SCIENTIFIC AMERICAN, just as it was in the patent.

H. G., of Ohio.—The specimen of ore which you have sent us appears to be alumina, and may contain sufficient metal to render the smelting of it profitable; this, however, can only be determined by experiment.

W. B., Jr., of N. Y.—No mirror can form an image in the atmosphere. Some person must have given you wrong information on the subject.

W. J., of Ky.—Measure the amount of water that flows from your spring by the rule which we gave in our last number, and you will be able to form a very good opinion whether it will be an object for you to get one of Tyler's wheels, or not.

F. K., of Pa.—The ink powder which you have sent us is composed of extract of logwood and the bi-carbonate of potash.

E. H. R., of Mass.—Steam has been applied as a motive power by injecting it into a box containing a wheel, which was thus made to revolve. An engine of this character was exhibited in this city about ten years ago.

J. W. P., of Mass.—Percussion powder for caps is made with both fulminating quicksilver and chlorate of potassa; the former is the better. It is ground to fine powder with water on a marble slab by a wooden roller; then mixed with equal parts of saltpeter and a little resin varnish, and is thus dropped into a cap. It is a dangerous agent to operate with. You must be very cautious in using it.

C. W. C., of N. Y.—In making telescopes the glasses are adjusted to each other by practical experiment. They are placed temporarily in a tube, and when the proper positions are found, the places are marked and then the glasses are permanently secured. J. Prentice, No. 66 Nassau-street, will give you practical directions in this matter. He is an old established and respectable optician.

R. C., of Ill.—You propose to store up power by a windmill by raising weights to a certain elevation, to be afterwards employed when there is not a sufficient amount of wind to operate the wheel. A more simple plan has oftentimes been proposed to us, namely, to pump up water into a reservoir, by a windmill, when there was plenty of wind, then use the water to drive a wheel when there was no wind to drive the mill. In some situations, we might use this plan, and we advise you to adopt it in place of using such a clumsy substitute in the form of elevated weights.

E. J., of Ohio.—Your directions for cutting elbows for stove pipes would be valuable if we had not already given one that answers the purpose.

J. R. W., of Iowa.—By a communication in another column you will see that the parallelism of the cracks which you observed in the frozen mud, was owing to some local cause. It is curious that they should be thus parallel over even a very small district.

D. W. B., of Conn.—We think the objections to galvanized iron for conveying water to a house are less powerful than the objections to lead. But we have seen such dreadful effects from metallic poison, and have found the cement pipes so perfect, that we recommend them in all cases where they can be used.

J. N. V. L., of Va.—We have received your theory in regard to the aurora borealis and examined it, but we do not believe that it would be as interesting to our readers generally as it is to you. We suppose men's theories are very much like their children, or their indigestions, matters of interest to themselves, but decided bores to other people. Your theory is as likely to be correct as that of some of the learned savans, and this probability we should estimate, in the present state of human knowledge, at about one in 10,000,000,000.

R. C. M., of C. W.—There are steam gages for measuring the pressure in pounds per square inch in the boiler, but no gage can give the horse-power of the engine.

F. P., of Iowa.—A bill has been introduced into our legislature with a provision similar to the one which you recommend for preventing persons being burnt in the buildings. This plan of iron stairs in the rear, outside, seems to be very judicious.

D. H. C., of Mass.—We suppose you refer to Shepard's motor. The fall must be sufficient for the water to rise in the pipe by its momentum from the velocity of the current.

E. B., of N. Y.—The Atlantic cable was very imperfectly constructed, and it was too small for practical purposes. Several patents have been obtained in the United States for submarine cables. We believe that a cable may be constructed and laid in the ocean to operate satisfactorily, but the messages would necessarily be slow in passing.

C. W. D., of S. C.—Any turbine, set upon a horizontal shaft and revolving with a high velocity, may give out as much power as a common tub wheel, but such an arrangement cannot affect the question of economizing the water, which is the important item with you. We advise you to get the best turbine wheel possible for your fall, irrespective of the conditions of being hung either on a vertical or horizontal shaft.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Feb. 18, 1860:—

T. D. C., of N. Y., $55; L. C. R., of N. J., $30; D. M. S., of Vt., $30; J. B., of Del., $30; H. G., of La., $35; L. R. S., of Mich., $10; S. D., Jr., of S. C., $30; M. & M., of N. Y., $30; J. S., of Mass., $31; G. K. B., of N. Y., $30; J. C., of N. Y., $30; I. N. R., of Iowa, $25; W. & P., of N. Y., $30; B. W. T., of N. Y., $25; S. M. W., of Mich., $25; D. L. M., of N. J., $55; D. H., of Ill., $30; A. H., of N. Y., $30; C. P., of N. Y., $25; G. W. G., of N. Y., $25; C. P., of N. J., $25; F. H., of N. Y., $40; J. P., of Pa., $25; H. W., of N. Y., $57; E. B., of Conn., $55; B. E. O., of Ill., $35; T. H. G., of Wis., $30; B. & F., of Pa., $25; F. F., of N. Y., $60; J. O. G., of Conn., $30; W. B., of N. Y., $30; A. H., of Md., $25; R. H. F., of Pa., $25; J. C. C., of Conn., $30; J. W. C., of Maine, $25; M. M., of Md., $30; D. E., of Ill., $35; A. H., of Ohio, $30; M. & M., of N. Y., $30; J. L. H., of N. Y., $25; J. T. L., of L. I., $10; J. B. T., of Ill., $20; A. & L., of Conn., $250; J. B. L., of Tenn., $30; E. C. S., of Md., $55; G. W., of N. Y., $55; J. A. C., of Conn., $15; N. H. H., of Wis., $20; N. & H., of N. J., $25; O. S., Jr., of Iowa, $25; E. & D., of Mass., $20; S. & L., of N. Y., $30; C. W. R., of Ga., $30; C. & B., of N. Y., $30; A. E. D., of Ill., $25; W. S., of N. Y., $30; W. G., of Ohio, $30; G. M., of Conn., $30; W. H. S., of Conn., $35; C. P. B. and others, of Conn., $25; F. W., of N. Y., $25; W. B. & R. B., of N. Y., $12; A. B. S., of La., $55; J. C., of Conn., $10; F. T., of Ill., $30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Feb. 18, 1860:—

F. W., of N. Y.; J. L. H., of N. Y.; W. J. B., of Pa.; G. W. G., of N. Y.; J. P., of N. J.; N. H. H., of Wis.; H. G., of La.; J. N. R., of Iowa; F. H., of N. Y.; B. W. T., of N. Y.; C. & W., of N. Y.; C. P., of N. Y.; G. W. G., of Conn.; J. A. C., of Conn.; J. S., of Mass. (2 cases); B. E. O., of Ill.; H. W., of N. Y.; E. B., of Conn.; J. T. L., of L. I.; S. M. W., of Mich.; G. W. R., of N. Y.; C. B. M., of N. Y.; S. B. D., of N. Y.; M. S. S., of N. Y.; W. B. & R. B., of N. Y.; N. & H., of N. J.; R. A. S., of N. Y.; E. C. S., of Md.; C. P. B. and others, of Conn.; W. H. S., of Conn.; R. H. F., of N. J.; J. W. C., of Maine; A. E. D., of Ill.

Literary Notices.

CENTENNIAL BIRTHDAY OF ROBERT BURNS. Edited by J. Cunningham; published by Lang & Laing, 170 Fulton-street, this city.

This is the title of a neat little volume containing the oration of Rev. Henry Ward Beecher and all the eloquent speeches delivered at the Astor House, by the Burns Club, on the 25th of January, 1859. It also contains several beautiful poems on the genius of Burns. Whittaker's tribute is a gem; but towering above them all is the Baltimore prize poem of Thomas Frazer, a mechanic of Newark, N. J. It is written in the Scottish doric, with the swing and pathos of a true poet.

NEW HAMPSHIRE JOURNAL OF EDUCATION. Published by the State Teachers' Association, Concord, N. H.

We have received the second number of Vol. IV. of this neat publication, and are pleased to see that it is sustained. The mechanical and commercial prosperity of the country, as well as the maintenance of our free institutions, depends upon the education of the people. It is altogether the most important interest we have.