

# THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC. MECHANICAL AND OTHER IMPROVEMENTS.

NEW YORK, FEBRUARY 19, 1859.

# VOL. XIV.

# COTTRELL'S PLANING MACHINE.

#### тнЕ SCIENTIFIC AMERICAN, PUBLISHED WEEKLY At No. 37 Park-row (Park Building), New York,

BY MUNN & CO.

O. D. MUNN, S. H. WALES, A. E. BEACH.

Responsible Agents may also be found in all the principal cities and towns of the United States. Single copies of the paper are on sale at the office of publication, and at all the periodical stores in this city Brooklyn and Jersey City.

Sampson Low, Son & Co., the American Bookselle 47 Ludgate Hill, London, Eng., are the British Age to receive subscriptions for the SCIENTIFIC AMERICAN

TERMS-Two Dollars per annum.-One Dollar in advance, and the remainder in six months. Agents employed.

#### Circulation of Water in Boilers.

A correspondent of the London Engineer-John Player, C. E .- gives some excellent advice regarding the construction of boilers and the prevention of priming. He states he was convinced that the danger of explosions would be greatly diminished, and a greater evaporation of steam effected with the same quantity of fuel, were he able to maintain a constant circulation of the water in the boiler. Twenty years ago he commenced to make experiments for effecting this object. In one of his first experiments with a small boiler he could not keep the water in it, on account of priming, so that the fire-box soon became very leaky. He removed this evil by placing a perpendicular funnel-shaped tube in the water, its top being set about one inch below the water surface, while its lower end reached nearly to the bottom of the boiler. In the boiler thus arranged, when the fire was raised, the surface of the water streamed towards the funnel, and descended to the bottom; the heated water then ascended, threw off its steam, and again descended through the tube. He urged the fire with a powerful three-foot fan blast, but was not able to make the boiler prime or raise its water level. Of later years he has used this plan in large steam boilers, and with good effect. He says :- "I feel satisfied that if tubes were placed in the side water spaces of locomotive boilers, they would cause an uninterrupted descending current, and the real level of the water would be more correctly indicated by the trial cocks."

How Coffee came to be Used. At the time Columbus discovered America. coffee had never been known or used. It only grew in Arabia and Upper Ethiopia. The discovery of its use as a drink is ascribed to the superior of a monastery in Arabia, who, desirous of preventing the monks from sleeping at their nocturnal services, made them drink the infusion of coffee, upon the report of some shepherds, who observed that their flocks were more lively after browsing on the fruit of that plant. Its reputation rapidly spread through the adjacent countries, and in about two hundred years it reached Paris. A single plant, brought there in 1614, became the parent stock of all the coffee plantations in the West Indies. The extent of consumption can now hardly be realized. The United States alone annually consume at the cost of its landing from fourteento fifteen millions of dollars. You may know the Arabia or Mocha, the best coffee, by its small bean and dark color. The Java and East India, the next in quality, is a larger bean and of a pale yellow color. The West India Rio has a blue, greenish grey tint.



with which these machines work, is bringing them into very general use, in small machine and carpenters' shops especially, and they fully answer the expectations formed of them. The inventor is C. B. Cottrell, of Westerly, R. I., and he has assigned the invention to Cottrell & Babcock, of the same place. The following description and accompanying drawings will fully explain the invention :-

Fig. 1 is a perspective view, and Fig. 2 a section through the working parts.



The portability, simplicity and trueness | A collar, f, keeps the spindle in its bearings. The feed motion is obtained by a cone pulley, c, being placed on the spindle, and a belt from it rotates another cone pulley c'. on a shaft, d, which rotates, by a bevel gear, a horizontal serrated feed roller in a case, G. This always keeps the stuff moving, while the slide keeps it to the cutters. We have seen some excellent specimens of planing done by this machine, which is one of the best and simplest that that has come under our notice, and a dressing slide (not shown in the illustration) is furnished with each, so that stuff can be planed out of wind, or on any angle desired, and with a beautiful surface.

> It was patented Oct. 5, 1858, and one may be seen at J. B. Schenck's, No. 62 Cortlandt street, this city. The assignees may be addressed for further information as above.

### The Odoriferous Products of Flowers.

We love to see the flowers growing, and to inhale their fragrance floating on the evening breeze; and often, when we have for hours enjoyed the southing influence that their varied colors and richly delicate odors have upon the senses, we have felt a deep regret that we could not preserve the perfume, and have it near us to refresh our weariness or to stimulate our brains, through the medium of the olfactory nerves. We are unable to do this privately; but our good friend and esteemed correspondent, Septimus Piessewhose pleasant writing has often enlivened our columns-with the gardens at Nice, in Sardinia, and extensive plots in England, (which the firm of Piesse & Lubin, of 2 New Bond st., London, own,) can supply them to the whole world. In those gardens they grow the tuberose, jasimin, acacia, violet, be secured in this position by the screws, e. orange bergamot, lemon violet, rose, laven-

der, peppermint, and all the rarer varieties of plants, whose odors are extracted at the "Laboratory of Flowers." The scents of their production are perfect, and would well pass for the realflowers. The manufactures are gradually becoming better known, and more highly appreciated in this country—the agent being J. Phillips, of 87 Pearl st., this city. We hope that those who use scent will prefer the extract of the pure and simple flower to the mixtures which modern want of taste has caused to be so largely manufactured.

NO. 24.

## Primitive Modes of Working Iron.

The early productions of the Malagasy smiths were necessarily rude, but since the instructions given to a large number of youths by the thoroughly qualified English smith sent out with the missionaries, their work has been improved, and is creditable to their intelligence and skill, especially when the simple apparatus by which it is produced is considered. The smiths who work for the government sometimes form almost entire villages, and work together in sheds; but the native smith, who on his own account plics. his craft, works at the south end of his dwelling. His forge is a simple affair ; the earthern floor of his house forms the hearth for his fire, which is kept together by three or four stones. The bellows consist of two wooden cylinders with pistons, similar to those which supply the draft for the smelting furnace. The anvil, which is about 6 inches square, 6 inches high, is let into a thick piece of wood fixed in the ground, with the water-trough, tongs, hammers, and other tools near it. The smith squats on a piece of plank or board on the floor, and his assistants sit or stand opposite him with sledge-hammers in their hands to strike when required ; and by this simple process the articles of iron in general use among all classes of the people are produced. -Ellis's Three Visits to Madagascar .

### Stopping Locomotives.

A cotemporary describes the following method of stopping locomotives by an invention which he ascribes to a Frenchman. He says :-

"In effecting this object, the steam is converted from a propelling to a resisting medium, and presents an elastic obstruction to the advancing piston in the steam cylinder. Over the steam ports of the cylinder a slide valve is applied, composed of iron and steel plates attached together, the steel face being to receive the ordinary cut-off and supply valve, and the iron face lying close to the planed face of the steam ports. This intermediate valve is so arranged that when the break is required to be put into action, it shal slide on its seat, and intercept the passage of the steam to the exhausted side of the piston, and permit the steam to be supplied to the opposite side. A cushion of steam will thas be opposed to the advancing piston, and if displaced by the impetus of the engine acting on the piston, a similar obstruction will then be offered to the otherside of the piston as it advances, and so on until the action of the engine is suspended." This invention may be called a steam-buffer brake, but we do not like it, because it throws the braking strain on the piston rod, connecting rods, and crank pin, in resisting the momentum of the engine. This is an objection which we have to urge against it; on the other hand it appears to be a very simple brake arrangement.

6

rests, B is a pulley that receives power from any convenient motor, and causes the cutter ring, C, which carries the cutters. b. to revolve. On the bed-plate, A, there is also a plate, E, carrying an adjustable disk, D, that fits into the cutter ring, and so forming an adjustable gage. It is connected with the spindle of C and B by a small screw, a, and this by being tightened or slackened alters the depth of the cut, or, in other words, gages the cutters. F is a slide rest, which can be worked up to keep stuff of any thickness close to the cutters, by a rack on the projecting arms, H, and two pinions on the shaft, I, that is turned by the hand-wheel, J; and F can 190

G



Issued from the United States Patent Office FOR THE WEEK ENDING FEBRUARY 8, 1859.

Reported officially for the Scientific American.]

• .\* Circulars giving full particulars of the mode of ap-plying 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.

MACHINE FOR MAKING RIVETS, BULLETS, &C. -C. B. Allen, of Philadelphia, Pa.: I claim the revolving shaft. C C C, with their inclined planes, e.e. e.e. e.e., and f. rmer, as described, and the mold wheels or formers. D D D, stached thereto, in combination with the yoke, F, and wheel, G, whereby the extremi-ties of the shafts to which the mold wheels or formers are attached, are made to approximate and separate. I also claim the bar, N, and the inclined plane, n, in combination with the rod, i, and cutter wheel, g con-structed and operated substantially as described, whereby the portion of metal which has been molded or formed may, when so desired, be severed or de-tached.

RALEMAND SAFETY SWITCH-Giles S. Appleton, of Burlington, Vt.: I claim, first, The combination of the broad and even switch rails, E E', with the broad and even traverso rails, F F', long gui 'e rails, H H', and short lift and g.ide rails, a b cand a' b' c', when the same are arranged in relation to each other substan-tially as shown and described. Second, Allowing the wheels to play upon the wide traverse and switch rails after leaving the short lift ways and guide rails, before they reach the main track, substantially in the manner and for the purposes as de-scribed.

METHOD OF OFENING AND CLOSING GATES-J. A. Ayers, of Hartford, Conn.: I claim the counterpoised or loaded platform, E, formed of two parts, dd, con-nected by joints or hinges g, and placed in the carriage way, A, beneath the gate, and extending a requisite distance at either side of it, when said platform is con-nected by suitable mechanism with the gate substan-tially as described, to operate said gate, as and for the purpose set forth.

purpose sciotta. I further claim in connection with the platform, E, the locking device formed of the drop bars, L L, the jointed levers, M M, connected with the bars, NN, which are provided with the upright arms, r, extend-ing upward through the platform, the whole being ar-ranged to operate conjointly, as and for the purpose to cont eet forth.

[This is an improvement in that class of sutomatic gates in which a movable or vibrating platform is employed and actuated in the first instance by the gravity of the vehicle or team approaching the gate-the platform being connected with the gate by mechanism so as to open and close it as the platform riscs or falls The object of this invention is to prevent the opening of the gate by animals passing over the platform, (an objection which has made these gates almost useless); and further, without any extraneous fastening, preventing the gate, after being opened, from closing until the vehicle or team has passed entirely through it. J

SAWING MACHINE-Benjamin Barker, of Ellsworth, Maine: I claim first, the sawdust spout, H, arranged relatively with the edging saw, D, and feed table, C, substantially as and for the purpose set forth. Second, The trimming saw, K, when used in connec-tion and arranged relatively with the edging saw, D, to operate conjointly therewith, as described.

[The object of this invention is to enable the circular sa w to cut lumber while moving in either direction; so that the time hitherto expended in "gigging back" will be usefully employed. The invention also has for its object the trimming of the ends of the lumber, so that the edging or slitting and trimming may be performed at one operation. These ends are attained by the employment of a sawdust spout, arranged relatively with the saw in such a manner as to receive the dust therefrom, and carry it to the back side of the feed table, also by the use of a trimming saw, arranged to cut the ends of the lumber.]

EARTH EXCAVATORS—Joseph P. Barker, of Wayne, Ohio: I claim the manner of arranging and adjusting the apron, and operating the same by means of the bent levers, J, for the purpose of conveniently dis-charging the earth taken up at any desired point, as set forth, and used in connection with the adjustable wheels, as described.

STEAM PLOWS-Samuel K. Bassett, of Galesburgh, II.: I claim having the wheels, B, of the truck, A, at-tached to separate axles, C, with pivoted or swiveled inne chearings, b. the outer bearings of the axles being fittad in guides, D, and the outer ends of the axles being fittad in guides, D, and the outer ends of the axles be-ing connected by rod-, E, with racks, F, into which pinions, c, of shaft, G, gear, the shatts being connected by the endless chains, J, passing around cone pulleys, I, placed in reverse positions on the shafts, the whole being arranged to operate substantially as shown and described, to facilitate the guiding and turning of the machine, as set forth.

# Scientific American.

APPLICATION OF ELECTRICITY IN DENTAL OFERA-TIONS\_WM. G. A. BONWIR Of DOVER, Del.: I do not claim the application of electricity to dental purposes, as this is shown in the patent of J. B. Francis. But I claim in the application of electricity to dental purposes, the mode described of extracting or extir-pating the dental pulp or internal nerve of teeth, to wit, by the application of a current of electricity through the instruments made use of in the perform-ance of said operation, directly and constantly to the dental pulp, or internal nerve, during the operation of cutting out or extracting the same, as set forth, and for the purposes described.

for the purposes described. PROTOGRAPHY ON WOOD\_(harles B. Boyle, of Al-bany, N. Y. Patented in England January 7, 1859; I claim first, The described or substantially equivalent method of applying albuminous matter, and afterwards coagulating it by heat, so as to form an insoluble base within the pores of the wood, for the purpose set forth. Second, Taking photographic pictures upon wood, the pores of which have been filled with gelatine, or its equivalent, and subsequently removing the gelatine from the block without injury to the picture by the ap-plication of a warm solvent.

MACHINE FOR RIVING LATHS FROM THE BLOCK-J. L. Brown, of Indianapolia, Ind.: I claim the combina-tion aud arrangement of the yoke, D, kuife plate, C, guides, F and G, with the pitmans, N and M, elbow levers, K and L, rests, I and I, when constructed and operated substantially as and for the purposes set forth.

forth. MANUFACTURE OF RUMMER HOSE PIPES-John H. Cheever, of Boston, Mass.: I do not claim the vulcaniz-ing process, or any compounds of rubber referred to, because, with the exception of the cross fiber com-pound, they are old; nor heating the hose or pipes on rods or tubes of iron; nor any peculiarity in the con-struction of the machine. Neither do I intend, in this application, to claim forming a cross-fibered fabric, as these will constitute the subject of other patents. But I claim the new article of manufacture, consist-ing of hose or pipe made of fibrour rubber by powerful pressure, and without seams or joints, substantially as described.

HARVESTERS-George E. Chenoweth, of Baltimore, Md. I do not claim making the shells of the cam cyl-inder adjustable, to compensate for wear, as that has been secured to me in a former patent. But I claim the combination of the cam cylinder with the cross arm, alde bar, and slotted or jaw lever, constructed, arranged, and operating substantially in the manner and applied to the purpose specified. I also claim a slide bar having two cross arms pro-vided with friction rollers, and working in the slotted box, L, as described.

VALVE BUNG-Florian Dahis, of Williamsburgh, N. X.: I do not claim, broadly, a bung provided with a valve, irrespective of the construction and arrange-ment of the same, for such device has been previously word.

used. But I claim a bung. A, provided with au air passage, a terminating in a recess or chamher, b, in which a disk valve, c, of rubber, or other suitable material, is placed, and secured therein by a plate. c, provided w.th a hole, f, specifically as and for the purpose set forth.

[This invention consists in having a valve fitted in wooden bung, and arranged in a peculiar way, where by a very simple, cheap, and efficient self-acting valve bung is obtained, the valve readily yielding to atmospheric pressure, and opening when the faucet is opened, so that the beer may escape from the faucet and closing by the pressure of the gas within the keg, and excluding external air when the faucet is closed.]

WASHING MACHINE-Berish Douglas, of Appleton, Vis.: My claim is not for the tub or rocker described. Wi

which are novel only in part. But I claim the washing seat and the foot box as combined with the washing rocker and the hand sup-porters, and the clothes holder or wringer as combined with the washing tub, all for the purposes assigned to them.

CULTIVATORS—James Dundas, of Little Rock, Ill.: I claim the arrangement of the half shovels, w w, in con-nection with the bar, h h and i, to be moved to the right or left at pleasure of the operator.

CULTIVATORS-George Edsington, of Plainfield, Ill. : I claim the arrangement of the mold-boards, T T, cen-ter-piece, P, in combination with the coulter or stand-ard, H, point, I, and shares, J z, the whole being com-structed substantially as described for the purpose set forth

FURNACE FOR SMELTING IRON—Squire M. Fales, of Baltimore, Md. : I claim the combination with the or-dinary furnace of the arched chambers or recesses at the sides of the furnace, as described, the opening in the crown of the arched recess or chamber, as set forth, and the movable tymp at the external openings of the arched chambers or recesses, as specified.

CATTLE PUMPS—Daniel P. Farnham, of Johnstown Center, Wia: I do not claim raising water by the weight of an animal upon a platform. But I claim first. The combination of the lever and rod, or their equivalents, with the gate and inclined platform, arranged and operating substantially as de-scribed for the purpose set forth. Second. The strips of metal, e, secured on the inside of the barrel of the pump, to prevent the valves from coming in contact with the plunger as it works up and down, in combination with the barrel, as set forth. Third, The packing ring, I, constructed as described, and kept up to the plunger by weights on the back side as set forth.

MORTISING CHISEL—J. B. Fisher, of Beaver Dam Wis: I claim constructing the tool with two cutting edges or portions, a b, of different lengths, substan tially as shown and described, for the purpose set forth

[The tool is formed with two cutting edges, the cutting portion at one end being considerably shorter than the other; and they are so arranged that mortises may be cut without the necessity of reversing the tool, and

MAIL BAG FASTENING-John C. Garland, of Chicago, Ill.: I claim the employment of a slotted sliding strap, F, when made of a single steel spring, and used in combination with a series of narrow stationary iron guides, E, attached to the perforated fing of the bag, and with a steel spring, R, having headed stop pins, C, fitted between the front portion of the binding and the upper edge of the mail bag, substantially as and for the purposes set forth.

[This is designed to facilitate the opening and closing of mail bags by the officers at the Post-office, and at the same time render the same perfectly safe against mail robbers. The invention consists in a sliding steel strap, having oblong slots working in connection with stationary pins. By simply sliding the strap so that round portions of the slots come in line with the pins, then closing down the fiap of the bag, sliding the strap until the pins overlap the straight portions of the slots and locking the hasp on a staple, the bag will be se curely locked; and by reversing these operations, the bag can as quickly be opened. The invention has, to our knowledge, been submitted to the heads of the Post-office Department, and is highly approved of on account of its cheapness, the facility with which it can be opened and closed, and the great security against mail robbers.]

ROTARY SPADING MACHINES—George W. B. Gedney of New York City : I claim a series of spades which are operated substantially as set forth, so as to descen edgewise into the soil, successively in each others track, and then to move laterally to detach the slice o soil upon which they operate from the undisturbed land.

soil upon which they operate from the undisturbed land. I also claim combining an endless series of spades, operating substantially as set forth, with a cam, or its equivalent, that controls their positions by means of spade handles or their equivalents, that are connected with the blades of the spades. I also claim adapting the machine to be moved either end forward, by constructing the device that imparts lateral movement to the spades in such manner that its position may be changed, and that it may be made fast in either position.

SKIRT HOOPS—James C. Gilbert, of Winthrop, Md. : I claim in connection with the movable spools and springs placed or strung on the cord, a series of sta-tionary abutment blocks, a a a, fastened at intervals to the cord, and operating in manner sud for the purpose as specified.

PADLOOKS-John A. Goewey, of Albany, N. Y.: I am aware that spring padlocks have been constructed to throw out their shackles, therefore I do not claim them broadly. But I claim the combination of the tumbler, E, hav-ing attached to it the spring, F, with the tumbler, D, having attached to it the stump, G, when arranged and operated in the manner set forth.

ARMS OF BROADCAST SEEDING MACHTNES-Henry J. Hale, of Indianapolis, Ind.: I claim the combination and arrangement of the segments, E E, and hinge, D, when constructed and arranged as and for the purposes set forth.

REFRIGERATOR—Samuel Hickok, of Buffalo, N. Y.: I claim the combination of the tube, B, arranged as shown, with the tank, A, whene combined with the case G G G, for the purposes and substantially as described.

Door Lock-Joseph S. Hoard and Valorus O. Spen-cer, of Mansfield, Pa. : We do not claim to be the first to introduce a sliding plate to close the outer key-hole, as this has already been done in several instances. Neither do we claim placing the outer and inner key-holes in different transverse planes through the lock.

key-holes in dimercut transverse p-----lock. Neither do we claum, simply and broadly, preventing the bolt or the plate, H, by some sort of detent, from being slid back, as detents have been before used for

being sub back, as a sec-this purpose. But we claim, first, The combination of the key with the flange, h, and plate, H, by which the key is made to operate as a detent to prevent the return of the plate, H, which covers the outer key-hole, as set

forth. Second, The combination of the stop, j, upon the bolt with the key in such a manner that when the key is in the position represented in Figs. 3 and 5, the stop, j, will strike against the key and prevent the return of the bolt. Third, The stop, i, en the flange, h, when combined with the key in the manner described, to prevent said key from being turned too far, as stated.

with the key in the manner described, to prevent said key from being turned too far. as stated. SOLE-CUTTING MACHINES-A. P. Howard and Allen Rowe, Jr. of Stoneham, Mass.: We are aware that two knives applied to a horizontal abaft, so as to pro-jectfrom opposite sides of it, and that to such shaft vertical reciprocating motions, as well as intermittent rotary motions have been given, so as to carry each hife in succession against a bed or piece of leather thereon. We do not claim such, as it differs material by from our invention. But what we claim is arranging the sole-cutter on the lower end of and at right angles to a vertical shaft, and combining with such mechanism, not only for elevating and depressing such shaft in line of its axis, but mechanism for producing successive semi-rota-tions of such shaft and cutter, the same operating so as to carry the sole cutter toward and away from the bed, and to give to such cutter an intermittent rotary mo-tion, in manner and for the purpose specified. And in combination with the mechanism for relevat-ing and depressing the cutter, and that for rotating it under an arrangement of the said cutter, with respect to its shaft, as specified, we claim the guide tooth, y, and the clutch recesses, x, arranged to operate in manner and for the purpose as set forth. We do not claim the combination of a sole-bender with a sole-cutter, unprovided with a sole discharger, as such is found in the United States Patent No. 11,147. But we claim the combination and arrangement of the concave sole-discharger and the convex sole former or bender with the unter, and so as to operate logether, in manner and for the purpose specified.

DOOR SPRINGS-G. L. Hudson, of Conneaut, Ohio :

particular scale, but to adopt a decimal scale, or any

particular scale, but to adopt a decimal scale, or any othor that I may see fit. I also claim, especially, a horizontal target, having marked upon it a scale corresponding to that of the ac-companying instrument, which target is to be used in connection therewith, as described, the same forming a part of my invention. I further claim the scale of altitude, in combination with the scale of distance to be used, in the manner and for the purpose specified.

C Carlo

Q

DEEP SEA SOUNDING APPARATUS-Augustus Jonan, of San Francisco, Cal. : I do not claim the external of San Francisco. Cal: 1 do not claim the external form of the instrument; peither the mode of calculat-ing the depth by the time of submersion; neither that as set forth, for testing the highest pressure. I claim the combination and arrangement of the several essential devices described, operating in the manner and for the purposes set forth.

METHOD OF VARNISHING AND PROTECTING SURFACES —Frederic Kuhlmann, of Paris, France: I claim, first, The process described of fixing the surfaces of fabrics (fibrous or textile) or solid surfaces, as walls or masonery, by the application of a weak solution of an alkaline allicate, as the silicate of potash and soda, to said paint basis. Second, I also claim for a similar purpose the method described of laying a coating of artificial leather, produced as set forth, over the surface of the basis pig-ment.

produced as set forth, over the surface of the ment. Third, I also claim the within described method of fixing and rendering printed papers and fabrics water-proof, and fixing the same by hot calendering. Fourth, I also claim the described method of ren-dering the surface of plaster of Faris waterproof, and of preserving the same by forming a coating of artificial sulphate of baryta upon said surface.

[Professor Kuhlmann is one of the most distinguished French chemists, and his name has often appeared in our columns in connection with valuable discoveries and investigations.]

CHURN-Rufus Lapham and R. P. Wilson, of New York City: We claim the use of an exhausting or con-densing pump, in connection with the cream reservoir as set forth, for the purpose of forcing air upon the up-per surface of the cream, or withdrawing it from it, in the manner described and for the purpose set forth. it, in

[This is a very novel mode of churning butter, to wit, by means of the combined action of compressed and expanded atmosphere and agitation in an air-tight vessel. The pressure when the air is compressed is exerted externally, and when it is expanded is exerted internally upon the globules or sacks containing fatty matter. By compressing the air in the air-tight yes sel, the sacks are compacted together, and consequently, when agitated, are broken very readily, owing to their acting with friction against each other, and by exhausting the air from the air-tight yessel, the sacks are expanded by the air within them, and consequently can be very easily broken when agitated.]

WATEE WHEEL-C. V. Littlepage. of Austin, Texas: I do not claim, separately, the curved buckets, f. But I claim the wheel, G, provided with curved buckets, f, and attached to the shaft, E, stepped in the block, D, and otherwise arranged as shown, in connec-tion with the spiral water passage, C. in the block or bed, D, the whole being arranged to operate as and for the purpose set forth.

[This is an im rovement in horizontal wate which are provided with curved buckets, and placed over a spiral water passage into which the water passes from the penstock, and acts upon the buckets as it passes through these buckets, the water being dis-charged at the outer ends of the buckets above the spiral water passage. The object of the invention is to relieve the stop or lower bearing of the wheel of the weight of the wheel and shaft, and the consequent friction attending its working, and also to obtain a large amount of power from the water supply.]

MACHINE FOR RIVING STAVES SROW THE BLOCK-L. Lyman, James P. Hodgkins, and E. Rawson, of Car-thage, N. Y: We do not claim, broadly, the employ-ment or use of movable or vibrating gages, for such de-vice has been previously used. But we claim, first, Having the tubes, j j, of the rods or gages, o o, fitted in blocks, k k, which ere adjusted by the screws, 1 m, or their equivalent, for the purpose specified.

by the sectors, ..., specified specified. Second, Placing the rods or gages, o o, in tubes, j, in the lower end of which, spring:, p, are placed, and on which springs, the rods, o o, rest, for the purpose set

The object of this invention is to obtain gages that willrise and fall simultaneously with the knife in order to perform their proper function without interfering with the operation of the knife, and at the same time admit of being set with facility for the purpose of cutting "stuff" of various thicknesses, and also to obtain gages that cannot be injured by the casual falling of the bolt upon them.]

ALARM CLOCKS-J. F. Mascher, of Philadelphia, Pa.-I do not claim either the rack, pinion, or snail separ-

But I claim the application of the rack, pinion and snall, in the manner set forth, to the going part of a clock or watch, for the use and purpose described.

PADDLE-WHEST-John May, of Columbus, Ga.: I claim so applying and arranging a frame, I, outside of the wheel, and in combination with the axle, or center H, on which the floats rotate, or its equivalent, that the said frame may be turned about the wheel, and by being so turned will change the position of the said axle, or center, H, or its equivalent, relatively to the center of the drum, and thereby cause the floats to be projected from the drum, in such positions relatively projected from the drum, in such positions relatively to the axis thereof, as may be desired, substantially as and for the purpose set forth.

		the chips enectually discharged from the mortises by	I do not claim any of the described parts separately of	
(	[For more information about this invention see an-	the action of the tool 1	in detail.	[This invention was noticed on page 283 of the pre-
1	-		But I claim the use of the standard, A, coil spring,	sent volume of the Sol. AM. ]
1	other page.]	MANUFACTURE OF CAST STEEL-Perry G. Gardiner,	B, stirrup, C, crotch lever, D, connected with rod, F,	
		of New York City : What I claim is not simply the	link. F, as operating vice versa, to gate or door, G, the	HARVESTERS-Wm. K. Miller, of Canton, Ohio: I
	BILLIARD REGISTER-Henry J. Behrens, of New York	gradual and prolonged cooling of the metal after melt-	whole arranged or connected, and operating substan-	claim, first, The combination of the braces and rocking
1	City : I claim the use of numbers instead of balls-		tialy in the manner and for the purpose set forth.	bar, substantially as and for the purpose set forth.
	technically called "points"-so arranged and worked		Trend Here Grand Budah Hall of D. I	I also claim the adjustable hinge plate, K, for the
	L, mechanism that any number of points made by the		LADIES' HOOP SKIRTS-Frederick Hull, of Derby,	purpose described.
10	player may be readily marked on the number itself.	placing them, thus filled, immediately into the heated	Conn. : I claim the combination of the sloping bustle	And finally, I claim the combination of the shoe
1	and the amount of the thus successively marked points		springs, with the waist band, adjustable at the back	hingeplate, braces and rocking bar, substantially in
1.	is made to be shown by the register, the whole ar-	external atmosphere, down to a cherry red heat, and	and front, the whole arranged substantially as de-	the manner and for the purposes described.
1	ranged and operated by mechanism substantially the	then immediately plunging the ingots or bars into the	scribed, whereby the adjustment of the bustle is effect- ed by the waistband alone.	STOVES-N. W. Northup, of Greene, N.Y. : I claim,
1	same as described.	highly heated oil, and retaining them immersed in it	eu by the waistballu alone.	in a stove constructed as described, the combination
H	MONUMENTAL DAGUERREOTYPE CASES-Jacob Berg-	for a considerable time, as described.	SURVEYING INSTRUMENT FOR DETERMINING INACCES-	and arrangement of the partition, K, with the flues,
1.	stresser, of Berrigsburgh, Pa : I claim the combination	MANUFACTURING TOOLS FROM CAST STEEL-Perry	SIBLE HIGHTS AND DISTANCES-Marshall Angersoll, of	H H. and dampers. I I. in manner and for the purpose
1	of the central frame encased by a central raised bead,	G. Gardiner, of New York City : I claim the process	Grafton, Ohio: I claim the construction of a surveying	specified.
		of treatment of the cast steel, by pouring it, in a mol-	instrument for taking distances and altitudes upon the	•
1	encased by an outer raised bead, a, the central frame	ten state, into molds of the shape and size required for	general principle set forth in the description and spe-	SOOT AND SPARE ARRESTER-Washington Abram
11	and outer frame being cast together on the same glass	tools, instruments, axes, &c., previously heated to a	cification,	Peaslee, of Indiana lis, Ind. : I claim the combina-
11	plate, and the outer one being deeper than the inner or	high degree of heat, the steel being melted in a closed	I claim, especially, the arrangement of the three	tion and arrangement of the cap L. rod, H. walls, GF
÷.	central frame, substantially as and for the purposes set		sights, E F G, or their telescopic equivalents, one of	and Q, with the case or outer wall, C, files B and E,
51	forth.	in an oven or furnace, away from the external air, and	which is adjustable upon a scale, by which means and	and wall, D, when constructed, arranged and operated,
3		keeping them there until they have been cooled down	the adjustment of a target having the same horizontal	substantially in the manner and for the purposes set
0	COFFEE POTS-E. H. Covell, of New York City : 1	to a cherry red heat, and then immersing the tools,	scale, the distance of any object within the range of	forth.
	ciaim, frat, The complication of the champer, C. with	axes, dec., into the fluid mixture, of a temperature of	vision can be determined.	
a.	the condensing champer, D. and condensing pipes. K	from 100° to 150° Fah., as described.	In this claim I do not intend to confine myself to the	DEVICE FOR PREVENTING TERMULOUS VIBRATION OF
54	E', as and for the purpose set forth.	Constant TATION COLORADO	precise arrangement set forth, but to use a telescope in	SAW GATES-David Reynolds, of Ogden, Ind.: I claim
G	Second, The combination of the condensing pipes, E		which a similar adjustment of hair sights (or filaments	combining the guide bar. D, and boxing, E, with the
12	) E', with the steam pipe, F, and trap, G, as described, and for the purposes set forth.	the rule joint, or its equivalent, in the link, substan-	of silk) are provided for upon a definite scale, as set	sash saw and fender posts, for the purposes set forth,
2	and for the purposes set torth.	tially as described and for the purpose set forth.	forth; neither do I intend to confine myself to any	and substantially as described.

# Scientific American.

THE PROCESS OF MANUFACTURING CAUSTIC ALKALIES -Henry Pemberton, of East Tarentum. Pa. : Having -Henry Pemberton, of East Tarcntum, Pa. : Having thus described my improvement in the manufacture of caustic soda and other caustic alkalies, what I claim is the mode described of separating the solution of caustic soda, or other caustic alkaline liquid, from an insolu-ble predigitate, by the use of a filter, constructed sub-stantially in the manner described.

Contraction of the second

HEEL AND SPOKE SHAVES-Joseph A. Perley, of Lynn, Mass: I claim the combination and arrange-ment of the adjustable gage, C, and beveled shanks, A , substantially as described, so that the gage may be moved in a plane but slightly inclined to the convex side of the knife toward the edge or from it, for the ob-jects specified.

CARPET-SWEEPER-N. B. Pratt, of Deep River, Conn.: I claim the arrangement of the bearings of the friction driving rollers, e. i oblong slots, g. c. of the box, A. and the rollers, d' d', in the specified relation to the ends of the revolving broom or brush, substantially as and for the purposes set forth.

[This invention consists in the use of a rotating brush cylinder, formed in two parts, and placed loosely on a stationary rod within a suitable box or case, the bottom of which is formed of yielding or elastic fiapsor aprons, the edges of the aprons bearing upon the floor or carpet at either side of the point of contact of the brush cylinder with the floor or carpet. There is a roller at each end of the box, the axes of which are fitted in vertical slots in the ends of the box or case, so that the upper ends of the rollers will bear against the cylinders and rotate them as the device is moved over the floor or carpet.]

MANUFACTURE OF CHEESE-T. A. Redington and G. McCluer, of Fredonia, N. Y. : We claim the combination of the water box, A, milk vat, B, the reserve water box, G, boller, E, pipes, g h j k, and the six-way cocks F, arranged to operate substantially as and for the purpose set forth.

FBy a proper arrangement of hot water boxes, a boiler and hot water pipes, and a vat for containing milk, this inventor heats the milk to the proper temperature with great facility, and checks the heat at the proper point for the better production of cheese with a small amount of fuel.]

MACHINES FOR STRETCHING LEATHER—Albert W. Roberts, of Hartford, Conn.: I claim the constructing of the jaws of leather-stretchers with ways for the wedges to slide on, that the wedges may be so relieved from the leather when drawn back that the leather can be put in without removing the wedge from the jaw. I also claim making the frames of hollow tubes on which the jaws slide, and also the application of steam to said frame. fordruing the moses. Also the shaft and to said frame, fordrying purposes. Also the shaft and gears for throwing back the wedge, all of which is set forth and described.

CORN-HUSKERS-William N. Rowe, of Sharpsburgh, Md: I claim the combination of the adjustable plate, K. armed with spikces, i, with the endless spron, I, and knives, D and E, when these several parts are con-structed, arranged and operated in the manner de-scribed for the purposes specified.

SKATES-N. C. Sanford, of Meriden, Conn.: I claim attaching the runner, B, of the skate to its stock, A, by means of the springs, C C, substantially as and for the purpose set forth.

The runner of the skate is, in this invention, attached to the stock by means of elliptic or other shaped springs, whereby a certain degree of elasticity is given to the stock. and a durable connection obtained be tween the runner and the stock.]

CAST IRON PAVEMENT-S. T. Savage, of Albany, N. .: I do not claim, broadly, the connection of the locks by means of dovetails, nor by the detached

uncess by means or dovetails, nor by the detached looking pieces. But I chaim combining the blocks by the peculiarly arranged dovetails cast on the blocks, and the looking pieces composed of heads and feet fitting between the blocks and into their dovetails, substantially as de-scribed. [This invention consists in a certain method of con

necting or combining polygonal blocks to form a continuous cast-iron pavement by means of dovetails on the blocks, and locking pieces of peeuliar construction fitting between the blocks and into the dovetail on it.]

**REFRIGERATOR**—Wm. Sims, of Dayton, Ohio : I claim the described arrangement of the ventilating passages, E and F, communicating with the upper part of a receptacle, C, in the lower part of which are placed ice and articles to be cooled or preserved, and in whose lower part circulation of air is avoided, in the manner and for the purpose set forth.

manner and for the purpose set forth. COEN SHELERS-J. P. Smith, of Hummelstown, Pa.: I claim the arrangement of the groups of short teeth, f f, alternating with the smooth spaces, d d, which are provided with the raised ribs, g, in combination with the sharp-edged teeth, h h h (with curved or straight edgee), when arranged circularly in lines parallel with the the axis of the wheel, and operating in connection with the ear-holder, D, so as to act on the ears of corn nearly lengthwise thereof, substantially in the manner and for the purposes specified.

**REGULATING THE TWIST IN THROSTLE FRAMES**—Joel Smith, of Northbridge, Mass. : I claim the expanding pulley, D, arranged to operate as described, for the purposes set forth in the specification.

GRAN-WEIGHERS ... John B. Stoner, of Bennington, Ill.: I claim, first, The rotary hopper, constructed and operating substantially as described. Second, I claim subsending the rotary hopper upon the lever or scale arms, as set forth. Third, I claim the arrangement of means described for operating and controlling the valve or door to the objects of the transformation.

shute of the stationary hopper. Fourth, I claim operating the indicators by means deriving their motions from the weighted end of the scale arms, in combination with the springs or their equivalence, as described.

LASTS-Daniel M. True, of Rockland, Maine : I do not claim the use of the bolt and spring to be used for a fastening, as new. But I claim as a fastening for last blocks, the bolt a, when formed with the notches, f and g, and com bined and arranged with the spring, b, the pin, c, and last hook hole, e.

UNDERGROUND GRAIN PLOWS—Augustus Watson, of Wahut Run, Ohio: I claim so hanging a coulter to which a mole is attached as that by revolving a key, or its equivalent, that restrains said coulter, and by ad-vancingthe plow, said coulter and mole will run out of the ground, substantially as described and represented.

APPARATUS FOR SUPPLYING HYDRO-CARBONS WITH OXYGEN-A. H. Webster, of Hudson, N. Y.: I do not elaim, broadly and irrespective of the means employed, supplying hydro-carbons with oxygen by mechanical means

But Provide Job and a start oxygen by mechanican means. But I claim the bellows, B B, actuated by the tappit wheels, DD, and attached to the chest, c', provided with a cover or weight, d, and an eduction opening, e, combined and arranged to operate as and for the pur-pose set forth.

[Coal tar, naphtha, benzole, and other hydro-carbons, require a certain amount of oxygen over and above common fluids and oils, for their consumption, and this invention supplies it to them by mechanical means, to support proper combustion in such a regular manner that a steady fiame will be produced without the least flicker.]

BEE HIVES-William L. West, of Elmira, N. Y.: I claim the use of the opposing springs, d d, for the pur-pose of insuring a contact of the parts contiguous to the passage-way, c, substantially as described.

APPARATUS FOR DRAWING WATER-Sylvanus A. Wheat, of Franklin, N. Y.: I claim giving the barrel a longitudinal motion on the shaft, also connecting the valve to the rope by the rod, substantially for the purpose described.

ELIPSOGEAPH—Thomas Williams and William C. Joslin, of Fisherville, Conn.: We claim the slotted bar, A, provided with the slide, B, the arbor, o, passing through the slide, B, with the disk, C, and solved bar, A, and connected eccentrically with the disk, C, the bar, D, having the pencil stock, E, attached, and the whole arranged substantially as and for the purpose set forth.

[This invention consists in having a slotted bar sup ported by legs, and a slide fitted into the slot, the slide having the axis of a circular disk passing through it, to the lower end of which axis a bar is attached carrying an adjustable pencil stock. The disk is perforated with holes, in any of which the pin of an arm which is vivoted to the slotted bar may be fitted, the whole being arranged to draw ovals with great facility.]

arranged to draw ovais with great facility.] BURGLAR'S ALARM—John P. Wilson, of Frankfort, and John F. Thomas, of Ilion, N. Y.: We do not claim securing the alarm by means of a screw to the casing of the door, or the use of firearms, a, as a means of alarm and defense in cases of attempted robbery. But we claim first, The employment in connection with the described gun alarm, of an adjustable gimblet screw, D. which is secured in a dovetailed groove in the body while in use, and which is secured in the barrel or bore by a screw when not in use, substantially as is set forth. Second, The employment of the two sides, A' A', be-tween which the hammerfalls, which serve to prevent particles of the cap from flying off, and at the same time forming a snag protection for the hammer, and causing a louder report of the cap, as is fully set forth.

ODOMETER-Thomas K. Work, of Hartford, Conn.: I claim the curved or segment weight, m, pivotet to the arm, l, which is attached to the pinion, e', and fitted between the annular Nedges, n o, substantially as and for the purpose set forth.

[This improvement in the odometer is intended to revent any inaccuracy in the registration of the distance, by the jolting of the weight, when the vehicle passes over uneven roads.]

Insert ways of the very frame, L, by means of the Sum-Frederick Yeiser, of Lexington, Ky: I claim the ar-rangement of the spirally slotted eylinder, L, on a ro-tary frame, E, in such relation to a pin, G, and to a strongly defined line, 3 4, that it operates substantially as and for the Purposets specified of And in combination with the rotary frame, E, I also claim operating the cylinder, L, by means of a toothed sector, I, which gears into cogs, J, which are attached to the stationary disk, C, in the manner and for the purpose substantially as described.

[By this instrument, the plane of the meridian can be determined at any time in the forenoon or afternoon so that observations can be taken with it at any time in the day when the sun shines, and not at noon only, as is the plan now adopted.]

MECHANISM FOR STOPPING WATCHES-John K. Bige-low (assignor to Appleton, Tracy & Co.), of Waltham, Mass.: I claim the peculiar mode of making the ratch-et, viz., with trapezoidal teeth, and with a notch in each of them. as described and represented. I also claim the arrangement or application of the stop lever, E, with respect to the stopping stud and the ratchet, or so as to serve not only as a carrier and actuator of the former, but as a stop to the latter under circumstances as specified.

SEED DRILLS-Michael Boyer (assignor to Charles S. Rohner and William Gunckel), of Germantown, Ohio: I claim arranging the spring, C, ratchet wheel, b, ratchet, a, link, D, drag bar, A, arm, E, and discharge spout, B, substantially in the manner and for the pur-pose specified.

STEAM CONDENSEES-John N. Dennison, (assignor to himself, Joseph Dennison and David Baker), of Newark, N. J. I claim a feed-pump with fits attach-ments and connections, substantially as described, in combination with a condenser, constructed and ar-rounder as et forth

cutting edges were more or less stparated at the upper ends.) I therefore do not claim ak nife sharpener made of two pieces of steel, with the edges fitted to abrade the sides of the edge of the knife, as such as my invention. But I claim the use of the two cutters (B and C) when made susceptible of being adjusted to any de-sired angle, by means of a slot (as at a) while using any portion of the length of the cutting edges, and the whole is constructed and made to operate, sub-stantially, as described. Second, I also claim the rest, D, in combination with the adjustable cutters, B and C, when the whole is constructed and fitted for use, substantially as de-soribed.

scribed. SELF-AOTING CHEESE-PRESE-William Leach of Clarkson, N. Y., (assignor to himself and George P. Tisdale.) of Chili, N. Y.: I do not claim sinuly a self acting press, but I claim the pitman, D. D. ar-ranged substantially, as described, in combination with the pairs of cross levers, H. B, so as to keep said cross-levers at equal heights at opposite ends of the press, and consequently at the same relative angle to the table, A, in all positions, for the purpose of secur-ing uniformity of pressure upon all parts of the arti-cles pressed. I also claim the eombination of the rod, 1, handle, r. and pawls, m, m, mounted in one pair of cross-levers, B, S, with the noiches, o, o, or their equivalents, in the other pair of cross-levers, arranged and operating substantially, in the manner and for the purpose set torth. MOLDING PARAFFINE CANDLES-HORATIO LEONARD

MOLDING PARAFFINE CANDLES-Horatio Leonard, (assignor to himself and H. Ryder), of New Bedford, Mass: I do not claim manufacturing candles by means of molds; but I claim in molaing parafflue candles, the improved process, substantially, as de-scribed, the same involving the employment of a heated mold and water and air-baths at tempera-tures and in the manner substantially as mentioned,

METHOD OF COVERING WITH FIBROUS MATERIAL UMMERGED SPIRAL ELECTRODES FOR SHORT DISTANCES SUMMERGED SPIFAIL ELECTRODES FOR SHORT DISTANCES -Edward Maynard, (assignor to himself, N. K. Skughter and Thomas E. Furdy, of Brooklyn, N. Y.: I claim constructing submarine telegraph cables of metallic conductors, twisted in helical form, in combi-nation with layers of cords or strings, parallel, or nearly so, with the axis of the cable, that are confined together, by serving or winding, and are saturated with waterproof non-conducting material, as set forth.

BOOT-JACK-L. J. Wicks (assignor to himself and T. Burbeck), of Raciue, Wis. : I claim the described boot-jack, as a new article of manufacture, with the trols lormed on the rear or front of its arms, said arms being made to open or shut to together, substantially in the manner specified.

EE-188UF8. IMPROVED STEAM VALVE\_George Rieseck, of Pitts-burg, Pa. Patented Aug. 15, 1858 : I claim, first, The valve, D, with a projecting hollow stem, E, which is reduced so that its end presents an area only equal, or nearly so, to the receiving ports in the face of the valve in combination with the main steam chest, or chamber, J, and an auxiliary steam chest or casing. I, furnished with a stuffing-box, d, and constructed so as to cover the whole of the valve, excepting the end of the stem or a portion of the back equal or nearly equal to the re-ceiving ports in its face, substantially as and for the purposes set forth. Second, In combination with the above, the peculiar manner specified of making the face of the valve, with six ports, F F1 F2, G G1 G2, three for receiving and three for exhausting, said ports being arranged in such relation to each other, that when the valve is ap-plied to an oscillating engine. one receiving port al-ways stands in line with the cxhaust yort, and thatonly four of the ports shall be in use when the engine is working, the other two being kept in resorve, so that by shitting the valve the engine will be instantaneous-by reversed under a full pressure of steam, with-out shutting off the steam between the engine and the boiler, as described and set forth.

boiler, as described and set forth. MACHINE FOR THREADING BOLTS-WM. Sellers, of Philadelphia, Pa. Patented Dec. 1, 1857: I claim the use of rotating dies in combination with cams, or their equivalent, when both are so arranged as to be capable of revolving about a common center at different velo-cities, for the purpose of opening and closing the dies, substantially as described. I claim the arrangement of cams, with the open spaces between them, in combination with the die box and dies, substantially as described, to facilitate the changing of the dies. I also claim the mode of attaching the top-holder to the revolving die box, substantially as described. BOYSE FOR PERSEVING ALKALIES-George Thomp.

BOXES FOR PRESERVING ALKALIES-George Thomp-son of East Tarentum, Fa. Patented Sept. 15, 1857 : I claim the use of metallic boxes constructed as de-scribed, and united with ecement infusible at the degree of heat at which the caustic alkalies of sods and po-tassa remain fluid for the purpose of putting up those caustic alka lies in small quantities, as described.

SELF-DUMPING COAL BUCKET-John Wust, of Phila-delphia, Pa. Patented July 13, 1858: I claim the com-bination of a bucket supended by the handle at points below its center of gravity, in combination with a self-acting detachable latch operated by the bucket touch-ing the ground.

LANCE VTM. W. Batchelder, of New York City. Patented Dec. 28, 1858 : I claim the arrangement of small tapens or wick tubes below and on both sides of the main or illuminating burner, in combination with a suitable cap, for the purpose of producing a more complete combination, substantially as set forth.

MACHINE FOR FOLDING PAPER S. T. Bacon, of Bos-ton, Mass., assignee of E. N. Smith, of Springfield, Mass. Patented May 17, 1858 - Re-issued Feb. 8, 1859 : I claim, first, The employment of adjustable points or register pins, or their edivalants, for the pur pose of correctly presenting printed sheets to a parser folding machine, substantially in the manner and for the purpose set forth.

folding machine, substantially in the manner and for the purpose set forth. Second, The combination of a registering apparatus with a faper-folding machine, substantially in the manner described. Third, The combination of the register pins with the fingers, reciprocating car riage, and slotted bar, for the superson gradiend

purpose specified, Fourth, The combination of the slotted reciprocating carriage, with the knife, d. as described.

and link, P, substantially as described, and as the ihvention of said North. I also claim the device for raising and depressing the fingers, as fullyshown in Fig. 6, and as the inven-tion of said North. I also claim the combination of the folding and est.

tion of said North. I also claim the combination of the folding and car-rying nippers, with the stationary folding-kuife; sub-stantially, as described, and as the invention of said

stantially, as described, and as the invention of said North. I also claim releasing the sheet from the nippers by means substantially, as described, and as the inven-tion of the said North. I also claim the circular knives, c', c', for separating the sheets, when operated substantially, in the man-ner described, and as the invention of the levers. T and T, with double concentric rock-shafts, D and E, substan-tially, in the manner and for the purposes set forth, and as the invention of said North. I also claim the adjustable check, and the mode of releasing its hold by the advance of the nippers, as set forth.

MACHINE FOR FOLDING PAPER-Steuben T. Bacon. of MACHINE FOR FOLDING PAPER-Steuben T. Bacon, of Boston, Mass., (assignee through mesne assignment of Edward N. smith), for merly of West Brookfield, Mass. Patented Nov. 27, 1849-Re-issued, January 7, 1851: I claim, First, Forcing the paper required to be folded between the first set of folding rolls by the knife, while the sheet is on the run. Second. Forcing the paper from the first fold be-tween two converging and continuously moving, fiexi-ble, yielding surfaces. Dided, upwards, for the purpose specified. Fourth. The use of a cord, or curved edged knife, for the purpose of forcing the sheet between folding "Olle."

Fifth. The stop for determining the proper position of the sheet ror receiving its second and succeeding

roles.
Fifth. The stop for determining the proper position of the sheet ror receiving its second and succeeding folds.
Sixth. The combination of the carrying bau is with a stop for regulating the sheet in proper position to receive its second and succeeding folds.
Sixth. The combination of the carrying bau is with a stop for regulating the sheet in proper position to receive its second and succeeding folds.
Seventh. The combination of the rolls and endless or bands with the guides, substantially as described.
Eighth. So arranging the knives, aprons and rolls, in a paper-folding machine, as that the sheet may receive two or more parallel folds in succession.
Ninth So arranging the carrying and folding rolls in a paper-folding machine, as that the sheet.
Tenth. The lightening rulleys and cords or bands shull remain in contact with the sheet, to conduct it while it is receiving more than one fold.
Tenth. The lightening rulleys and cords or bands for the purpose of giving proper direction to the sheet receiving the next fold, after having received a parallel fold as described.
Eleventh. So conducting a machine for folding paper, as that one or more folds may be omitted at pleasure, and the tolded sheet delivered outside of the frame and working parts of the machine, by slupily detaching the knives and removing the stops as described.
Tweith. Supporting the folding rolls in adjustable boxes, bearings or trames, for the purpose of squaring the moveling that shales for the purpose of squaring the mixes to correspond with the print or resister of the sheet.
Touteenth, Conwying motion to any pair of folding rolls in adjustable to be folded, and providing for the construction and expansion of the endless aprons or bands.
Thirteenth, The movable guides for the purpose of squaring the knives to correspond with the print or resister of the sheet.
<l

Distillation of OILS FROM COAL-David Alter and Samuel A. Hill, of Freeport, Pa., assignors to them-selves, John T. Johnson, of said Freeport, William F. Johnson, George S. Steller, and John L. Russell, of Pittsburgh, Pa. Patented April 27th, 1858 : We claim the destructive distillation of coal, or other bituminous substances, for the obtaining the liquid products there-of, in the form of what is known as coal oils, by the process described, viz., combining the use of a low tem-perature not exceeding a low red heat, say about 5500 Fah., with the use of reforts so constructed as to base a retary, or other equivalent motion, for the purpose of agitating their contents, substantially in the man-ner and for the purposes set forth.

INVENTIONS EXAMINED at the Patent Office, and advice given as to the patentability of inventions, before the expense of an application is incurred. This service is carefully performed by Editors of this Journal. through their Branch Office at Washington, for the small fee of \$5. A sketch and description of the invention only are wanted to enable them to make the examination. Address MUNN & COMPANY,

No. 37 Park-row, New York.

#### -Agricultural Implements.

MESSRS. EDITORS-In answer to the communication of T. Waters, of Shopspring, Tenn., in the SCIENTIFIC AMERICAN for January 8th, I have to state that the invention of a harrow such as he described is as plain as the arithmetical axiom,  $2 \times 2 = 4$ . I do not think, however, that it can be made so as to last very long, for \$25. Twice that sum would insure an article out of which he could "get his money's worth."

In this connection let me state that farmers are altogether too close-fisted in bargaining for tools. Instead of considering the value of the improvement in their land which a

191

C CI

	Fifth, In combination with the suspending of the ro- tating hopper as described, I claim the suspending of	ranged as set form.	Fifth, The combination of the slotted reciprocating carriage with the first pair of folding rolls and knife, d,	good tool is sure to effect, they lose sight of
	the weight as described.	STUMP-EXTRACTORS-E. B. Hall, of Woodbury, N. J., (assignor to himself and Joseph C. Farley, of Pine	as specified.	
	SLUIDE FOR WATER WHEELS-John Temple (assignor	Grove, N. J.: I am a ware that in the stump extractor	Sixth. The combination of a folding knife, the edge of which is smooth, with one or more needle points	everything but the money they pay out, or
L	to Temple, Mills & Stout), of Middletown, Ohio: I claim the winged gates, B C, constructed, arranged and	for which letters patent were granted to Jason S. Wood, on the 3d February, 1857, cams, in conjunction	projecting beyond and in a line with the edge thereof,	are apt to look on the transaction of buying
	operating in combination with a series of scroll shutes,	with other appliances, are used. I, therefore, do not claim broadly, such a device, but I claim, as an im-	as shown. Seventh, Securing the needle point or points to the	an agricultural machine as paying forty or
	A, substantially in the manner and for the purpose set forth.	provement on the patent of J. S. Wood.	I folding knife in such a manner as that they shall have	fifty dollars for so many pounds of iron, steel,
	WATER WHEELS-John Temple (assignor to Temple,	The cam, J, when constructed in the peculiar man- ner herein described, in combination with the rods G	their main support back of the edge of said knife, as specified.	and wood. With this idea, they offer, in nine
	Mills & Stout), of Middletown, Ohio : I claim the con-	and G', their rejective rollers and hooks, K and K',	Fighth So constructing penerfolding mechines as	cases out of ten, a price which compels the
	struction and arrangement in o ntral discharge water wheels of buckets, E, which have the described com-	the whole of the above parts being arranged in respect to each other for joint action, substantially, as set	same time or nearly so, while passing from the position	· · ·
1	pound cyma-reversa and downward and outward curve,	forth,	for receiving its first folds to that of the next and suc-	manufacturer to offer an almost worthless
	whereby the water acts on the wheel by percussion, re- action and gravitation, and escapes freely without back	DIES FOR CUTTING SCREWS-Peter Hoffman, of Ris-	ceeding folds, as specified.	article, in order to get a fair living price.
1	action, as set forth.	ing Sun, Ind., (assignor to himself and Samuel F. Covington, of Indianapolis, Ind. : I claim the con-	MACHINE FOR FOLDING PAPER-Steuben T. Bacon, of Boston. Mass., (assignee through mesne assignment of	The fate of cobbled-up articles in the hands
L	MACHINE FOR TENONING SPOKES-Webster Thomas,	struction of a solid die, in which the bottom of the	John North, of Middleton. Conn. Patented, April 15,	
١.	of Oxford, Ohio: I claim the combination of the beds, I and B, constructed as described, with support piece,	groove is so thrown up in the rear of the cutting- point or edge of the same, as to avoid the friction oc-	1656—Re-issued, July 27, 1858: I claim theuse of a sta- tionary folding-knife in a machine for folding printed	usage till it breaks (generally not very long),
	T, wedge, V, and the double series of cutters, d e, in the	casioned by the rubbing upon the top of the thread,	sheets of paper, substantially, as described, and as the invention of the said North.	
10	) same cutter bearer, the construction and operation be- ing as described.	of the bolt cut or threaded.	I also claim the combination of the folding-knives,	and then an energetic denunciation, with a
ŀè.	REVOLVING FIREARMS-John Walch, of New York	KNIFE-SHARPENER-Geo. Himman, (assignor to him- self and Charles Monson, of New Haven, Conn. : I	k, k, with the reciprocating carriage, as set forth, and as the invention of said North.	shove into a corner.
G	City : I claim the revolving chambers or breeches fit-	am aware that the cutting edges set at different an-	I also claim giving the reciprocating carriage its	J. H. B. JENKINS.
G	bed with two ranges of nipples, and firing the respec-	gles have been used for knife-sharpeners, for many years, but in all such cases the angle varied as the	proper motion by means of the crank, k, and slotted connecting-rod, M, in combination with the lever, N,	Philadelphia, February, 1859.
Ľ		Jeans, but in an such cases are angle varied as the		,,,
	U Nor			
10	1 5 2 3 D 0 1			SL & Co
1				