able and otherwise, having mechanical devices for applying a disinfectant to the feeal substances deposited therein. By the arrangement of parts shown in Figs. 6 and 7, the deodorizing compound in the form of a powder is placed in a hopper, and from this it is taken in determinate quantities, as needed, and thrown into the receptacle provided below for holding the excreta. Different devices are shown for effecting the discharge of the disinfectants from the hopper into the general receptacle, but the location of them all is between the two. The reference is so complete an answer to the second claim of the pending application that the wonder is that the claim should ever have been carried beyond the first rejection by the primary examiner.

should ever have been carried beyond the first rejection by the primary examiner.

As to the first claim, it is to be considered that commodes were not new at the time when the invention of the present parties was made, as is to be seen by reference to the Legras patent; that it was a part of the plan of prior inventors to employ in their commodes any disinfectants which might be suited to the piritose, as is also to be seen by reference to the same patent; and that the disinfectant properties of earth were previously well known, as is abundantly shown in "Tre's Dictionary," vol. 2, p. 29, cited by the examiner, as also in the twenty-third chapter of betteronomy, to which reference is made by the examiners in chief. Under such circumstances there certainly can be no foundation for the claim which applicates now assect. To apply this well known disinfectant to an old purpose, and in seed the carth into a dry and pseudered condition prior to its use, of the advantage of which they claim that they were the first discoverers. In this, toe, they mistake. The whole inference from the passage referred to in the stryness and its perosity, or, which is the same thing, its fineness. From the note upon page 154 of the "Bulletin de la Société d'Encouragement pour l'industrie Nationale, 1818," it appears alse that earth has been artificially dried in furnaces in order to perfect its action as a disinfectant. The claim must be rejected.

The thort delaim relates to a stirrer or mixer, placed in the receiving cham-

dried in furnaces in order to perfect its action as a disinfectant. The claim must be relected.

The third claim relates to a stirrer or mixer, placed in the receiving chamber of the commode, and moved by any appropriate means, for the purpose of thoroughly mixing the earth with the other contents of the chamber. There is no evidence to show that the applicants were not the first to conceive of the advantage of thus mixing the contents of the general received, and the first to invent a mechanism therefor. The idea once recluded to practice, it is plain that various forms of mechanism mixin the found useful for this purpose. It would seem, therefore, that the protection afforded to the laventors should not be confined to the specific device shown, since their real invention consists, not so much in this particular device, as in the discovery that any device mechanically capable of performing the work can be advantageously applied in the direction indicated. With proper amendments of the body of the specification, and the abandonment of the first and second chains, no good reason appears why the last claim should not be allowed.

As the case now stands, however, the decision of the examiners in chief is confirmed, and the abandonment.

As the ease now stands, however, the decision of the examiners-in-chief is confirmed, and the application refused.

DUNCAN, Acting Commissioner.

#### The Largest Newspaper Mail

Which goes to any firm in this country, is received by Geo. P. Rowell & Co. the New York Advertising Agents. Their place of business is at No.40 Park Row, New York.

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

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The best Anti-Friction Metal is made by the Tubal Smelting Works, Philadelphia, Ps. Bny it and prove it.

The undersigned, patentee of a valuable improvement in Window Sash Attachments, is desirous of making arrangements for the manufacture thereof, by parties who have good facilities. Freeman Brady, Jr., Washington, Pa.

John A. Sears, Rockford, Corsa County, Ala., has for sale 80 Beaver Hides. He wishes a receipt for baiting Beavers.

Railroad Companies reach all trustworthy contractors by advertising in the RAILROAD GAZETTE.

Machinists' Grindstones. J. E. Mitchell, Philadelphia.

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Soap Stone Packing, in large or small quantities. Grenee, Tweed & Co., 18 Park Place.

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Best Cement Water and Drain Pipe Machinery. Works by hand, horse, water, or steam power! State and Connty Rights for sale J. W. Stockwell & Co., Nos. 28 and 163 Danforth st., Portland, Me.

Railroad Bonds.-Whether you wish to buy or sell, write to Charles W. Hassler, 7 Wall street. New York.

Cotton Machinery for sale. See advertisement. Also, a three story Brick Mill. R. H. Norris, Paterson. N.J.

Manufacturers of Fire Engines (hand or steam) and Hose, please send circulars, with prices, etc., to J. P. Hale, Mayor, Charleston, Kanawha C. H., West Va.

Engine Lathe wanted, about 30 inch swing, 12 feet bed, in good order. Pratt & Co., 87 Chambers st., and Buffalo, N. Y.

The Philadelphia Scientific Mechanics' Circle will answer any mechanical question for 25 cts. Address as above, 125 N. 7th st., Philadelphia.

Electrical Instruments, Models, etc., made to order, and Gear

Wheels and Pinions cut, by W. Hockhausen, 113 Naesau st., Room 10, N. Y.

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Millstone Dressing Diamond Machine-Simple, effective, durable. For description of the above see Scientific American, Nov. 27tb, 1869. Also, Glazier's Diamonds. John Dickinson. 64 Nassau st., N. Y.

Experimental Machinery and Models, all sizes of Turned Shafting, Paper Box, Paper Collar, and Bosom Plaiting Machines, Self-operating Spinning Jack Attachments. W.H. Tolhurst, Mackine Shop, Troy, N.Y.

Best Scales.—Fair Prices. Jones, Binghamton, N. Y.

Steam Watch Case Manufactory, J. C. Dueber, Cincinnati, Ohio. Every style of case on hand, and made to special order.

Agents Wanted-on a new plan-to sell a patent Collar Stud. Send for Chrcular. S. E. Williams, Hartford, Conn. L. & J. W. Feuchtwanger, Chemists, 55 Cedar st., New York,

manufacturers of Silicates of Soda and Potash, and Soloble Glass.

For Hydraulic Jacks, Punches, or Presses, write for circular to E. Lyon, 470 Grand st., New York.

A. G. Bissell & Co. manufacture packing boxes in shooks at

For mining, wrecking, pumping, drainage, and irrigating ma

chinery, see advertisement of Andrews' Patents in another column,

Wanted.—A responsible dealer in every town in the United States, to sell "The Tanlte Co.'s" Emery Wheels and Emery Grinders. Extra inducements from May 1st. Send for terms to "The Tanlte Co.," Stroudsburg, Pa.

The new Stem Winding (and Stem Setting) Movements of E. Howard & Co., Boston, are acknowledged to be, in all respects, the most desirable Stem Winding Watch yet offered, either of European or American manufacture. Office, 15 Maiden Lane, New York.

Belting that is Belting -Always send for the Best PhiladelphiaOak-Tauned, to C. W. Arny, Manufacturer, 301 Cherry st., Phil'a.

Send your address to Howard & Co., No. 865 Broadway, New York, and by retarn mail you will receive their Descriptive Price List of Waltham Watches. All prices reduced since February 1st.

Ashcroft's Low Water Detector, \$15; thousands in use; can be applied for less than \$1. Names of corporations having thirty in use can be given. Send or circular. E. H. Ashcroft, Boston, Mass.

To Cotton Pressers, Storage Men, and Freighters.-35-horse Engine and Boller, with two Hydraulic Cotton Presses, capable of pressing 15 bales anhour. Machinery first class. Price extremely low. Wm. D. Andrews & Bro. 414 Water st. New York.

Tin Presses & Hardware Drills. Ferracute Works, Bridgton, N.J. Brown's Coalyard Quarry & Contractors' Apparatus for hoisting and conveylog material by iron cable. W.D. Aodrews & Bro,414 Water st., N.Y

American Boiler Powder Co., P. O. Box 315, Pittsburgh, Pa. Carpenters wanted—\$10 per day—to sell the Burglar Proof Sash Lock. Address G. S. Lacey, 27 Park Row, New York.

Improved Foot Lathes, Hand Planers, etc. Many a reader of this paper has one of them. Selliog in all parts of the country, Canada, Europe, etc. Catalogue free. N. H. Baldwin, Laconia, N. H.

Twelve-horse Engine and Boiler, Paint Grinding Machinery FeedPumps, two Martin Boilers, suitable for Fish Factory. Wm. D. Andrews & Bro., 414 Water st., New York.

Cold Rolled-Shafting, piston rods, pump rods, Collins pat.double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa For Solid Wrought-iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

The Merriman Bolt Cutter-the best made. Send for circu lars. H. B. Brown & Co., 25 Whitney ave., New Haven, Conn.

Glynn's Anti-Incrustator for Steam Boilers-The only reliable preventive. No foaming, and does not attack metals of botlers. Price 2 cents per lb. C. D. Fredricks, 587 Broadway, New York.

For Fruit-Can Tools, Presses, Dies for all Metals, apply to Bliss & Williams, successor to May & Bliss, 118, 120, and 122 Plymouth st., Brook iyn, N.Y. Send for catalogne

Presses, Dies, and Tinners' Tools. Conor & Mays, late Mays & Bliss,4 to 8 Water st., opposite Fulton Ferry, Brooklyn, N.Y.

Taft's Portable Hot Air, Vapor and Shower Bathing Apparatus.

Address Portable Bath Co., Sag Harbor, N.Y. (Send for Circular.)

Winans' Boiler Powder.—15 years' practical use proves this a cheap, efficient, safe prevention of Incrustations. 11 Wall st., New York.

To Ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's Manufacturers ing News of the United States. Terms \$4.00 ayear.

## Queries.

[We present herewith a series of inquiries embracing a variety of topics of greater or less general interest. The questions are simple, it is true, but we prefer to elicit practical answers from our readers.

EXPLANATION WANTED.—I am running an engine athe, twenty-fourinch swing; and a shorttimeago, I tried to hore a pair of slateen inch cylinders, and could not do it, as the gearing gave way at every trial. I first used wood (as "steadles" in my boring head, using a 4% boring bar of wrought iron); and thinking the wood created too much friction, I took them out and took a single cut (not over one sixteenth cut), and still the lathe would not drive it, and I finally had to give it up. I substituted : brase pinion for one gear, and lost a tooth out of it. The lathe is all right again, and today I am turning off a twenty-four inch pulley (using the same gears on the lathe). Now, it seems to me that the lathe should have more to do (the cuts being equal) in turning off a twenty-fourinch pulley than in boring a sixteen inch hole. Will some one explain why it requires more power for the bore than the pulley?-K.

2. — ELECTROPLATING. — How can I prepare Britannia metal, tin, and ordinary soft solder, so that they can be electroplated or gilt in a cyanide solution? I cannot get the information from Smee or Naplet, but have no doubt that some of your readers can readlly describe the desired process .- J. F.

3.—ICE BOAT.—Will some one tell me the dimensions of an ice boat which would carry two medium sized persons?—C. S. M. K.

4,-FIXING LEAD PENCIL MARKS.-I would like a ready way offixing leadpenell marks to paper .- J. H. R.

5.—JAPANNING.—I wish a recipe for making and using the quickest baking and best Japan .- B. B. C.

6.-MALLEABLE IRON.-Will some one give me practical information how to make malleable cast iron? Or, are there any works ex plaining the theory?-E. D. P.

7.—Spectroscope.—I have a hollow glass prism, filled with bisulphide of carbon, two inches on each face. I would like to know what the width and depth of the silt should be, through which the light first passes, what should be the diameter and focal length of the lens in the first tnbe, and what distance should it be placed from the prism? Also, what power should the telescope be for viewing the spectrum formed, and of what lenses should it be made?—M. T.

8.-MUCILAGE AND INK.-Will some of your readers give me a formula or makingmucliage, such as sold by stationers, and also a for mula for a good, cheap, black copying ink?-A. S.

9.—CHEAP LATHE.—I would like practical directions for constructing, at the least possible expense, alight latheof about eight inches swing; as great accuracy is not essential, metal need be employed only where absolutely necessary, as for spindles, bearings, centers, etc. Precise directions, giving dimensions and all other details, would no doubt be wel come to many an amateur mechanic who cannot afford to buy even a cheap lathe, but would at once go in for one if he could only make it himself.

10 .- NICKEL PLATING .- I wish plain practical directions and formula for nickel plating?-T. D. T.

11.—Dyeing Cotton Black.—I want to dye soft cotton black, and have no steam. Can I do it and get a good color without steam, and would it be better to use aniline black, or the usual dye stuffs?-H. W.

12.—GILDING ON GLASS.—What is the size used for gild ing on glass?-M.

13.—Telescope and Horoscope.—I wish to know, if. with the addition of one more convex lens of one inch diameter 1 cannot make a terrestrial telescope from the directions given in No. 18. by A. W. G., of Mich.; and will it change the power? I also wish to know the meaning of tracing the horoscope, and how it is done. -E. T.

14.—EMERY WHEEL.—Can any reader of the Scientific AMERICAN tell me how tomake solid emery wheels that will not gum nor ehln?\_T. W. B.

15.—Overshor Wheel.—I wish a rule, simple and practical, for calculating the power of overshot water wheels, and the means of determining with accuracy the power of water in a flowing stream .-- T.

16.—Speed of Circular Saw.—I want a rule for determining the number of revolutions a circular alltting saw of any given size should make per minute.-T. W. B.

17.—REFINING GOLD.—Can some one give me any information on refining gold? I melted over some scrap gold leaf, which appeared to be very free from dirt, but after melting, it looked like a lump of tininstead of gold. When we sell it to the gold beater, he melts it over into fine gold.—F. E. H.

18.—Belt.—Can you tell me why a belt runs to the largest part of a pulley? I have asked a number of mechanics for a year past, but they cannot tell why.—F. E. H.

## Answers to Correspondents.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratic bourseries to questions of a purely business or personal nature. We will publish such injuries, however, when paid for as advertisements at 1:00 a line, under the head of "Business and Personat."

ALL reference to back numbers must be by volume and Page

TURNBULL'S BLUE.—With much deference to the undoubted erudition of your correspondent, E. C., of N. J., I must noint him to an errorinto which he has certainly fallen, and into which he islikely to lead B., who wants to know how to make "Turnbull's blue." given a good formula for the preparation of ordinary Prussian blue  $\binom{F_7}{G_1}$ . But to make Turnbuil's blue,  $\binom{F_6}{S_{12}}$ , the ferricyanide (red prasslate), and not the ferrocyanide (yellow prasslate) must be used. Also, instead of using the tersulphate of iron, which is a sesqui-salt, the proto-snlphate, or some other proto-salt of iron is absolutely necessary to the production of Turnbull's blue, which differs from common Prns. sian only by being of a brighter tint. Fownes, or any other chemical authority will furnish further information ... C. L. R. S., of D. C.

POUNDING OF PISTON.—Let E. S. take out the trap and put in a half inch globe valve at each end of the cylinder, and keep them open while the engine is in motion. The trap, while good in theory, is Hable to fallin exhausting the water whenever the spring, which lifts the valve, loses its strength or is held down by weight of water. The advan tage of the globe valve is, that white but a little steam will escape, it effectually exhausts the water. - H. A. G.

To Kill Bedbugs.—Any woman ought to be ashamed to ask for an article to kill bedbugs. No one will be troubled with these pests if they will take the trouble to thoroughly cleanse the bed and room once s month. Bedbugs can stand anything better than cleanliness. The March cleansing is the most fatal to them; it destroys them root and branch. Any one troubled with this "peculiar heathen" who will take the trouble to observe the foregoing method for three or six months, will be entirely relieved of them without fall. If the cleaning be continued at intervals of three months, bedbugs will never appear.—C.A.H., of Mass

TO KILL BEDBUGS.-If "Housekeeper," No. 11, page 346 Vol. XXII., will use benzine or gasoline, she can kill bedbugs as fast as she can find them; and by using a spring bottom oller, the finld can be forced into cracks and crevices which can he reached only by this or similar means. I cleaned them ont of a room lined and celled with matched boards, by it. Housekeeper will have to be careful about fire, and the room should be well ventilated till the gas passes away .- J.M.A.

HONING RAZOR .- P. R. says that in honing his razor, he always gets a rough wire edge. So he ought to bave. Always hone until you turn the edge, or you might as well not hone at all. Now to get a smooth cutting edge is what you want. Moisten your thnmb nail and draw the edge of the razor back and forth a time or two across the nail. Put it on the coarse side of your strap first. Keep trying it across the nail until you get a smooth edge. You can tell this by its feel; for when smooth, it will seem to cutright in the nail, and no roughness will be felt. Then bring up the edge on the fine side of the strap, with a few strokes on the palm of the hand to finish it. If you once get a smooth edge, and it shaves well, never use any strap but the palm of your hand; and I will guarantee it to keep its edge for months. It is very easy to strap the edge off of a razor by strapping too much. Never wipe your razor on dry paper, or cloth of any kind; it will take the edge off. -H. D. W., of D. C.

MAGIC LANTERN.—Your querist, No. 11, page 282, can construct a magic lantern to meet his requirements, as follows: Use a plain convex lens, 4 lnches in diameter, and 8 inches focus; put one double convex lens, 2 inches in diameter, in the focus of the first. The light should be placed three inches from the large lens .- H. W. G., of Mich.

OILING FURNITURE.—In answer to query No. 1, in your issue of May 20, I would state for the information of A. H. that pure linsced oil (raw oil) is used for walnut furniture, applied with a brush. Some prefer, however, the red furniture oil, as it gives the wood a darker appearance. If it is to be finished with copal varnish, the oil should be allowed to dry perfectly; then two or three coats of varnish should be applied for the purpose of filling the pores or grain of the wood. After which the article must be rubbed with fine or worn out sand paper to get a smooth surface. Then apply two or three coats of varnish, and rub down and polish or flow as necessary. Care should be taken to let each coatof varnish set perfectly dry and hard before putting on another .- H. L., of

POUNDING OF PISTON,-Your correspondent "S. E." in issue of May 2 that was troubled with the same difficulty, and afterwards spent a large amount of time and some money in trying to remedy the trouble. The company that made the engine, made the cylinders a little longer, giving more clearance, and consequently more steam room at each end, and we never had any more trouble from that source. Our company was striving to be too economical in cast iron, and also trying to waste as little steam aspossiblein "cushioning," as it is called, but always afterward gave plenty of clearance to the pistons .- C. H.C.

Pounding in Steam Cylinder.—S. E. asks "what is the cause of the knocking in the cylinder?" I have known valves in steam closets to knock, and sound as though the trouble were in the cylinder. I suspect, however, that the trouble of which S. E. complains, is that the crank is ahead of the steam pressure at the beginning of the stroke, when the governor valve is hard down, so as not to admit sufficient steam to start the piston in time for the crank. This can be obviated by setting the ahead. If his engine be of short stroke and large cylinder, and sethigh from the bed plate, and pounds when the governor valve is np. giving full steam, S. E. may depend ou it that the bed plate is too weak .--

M. E. Y.—Some medicines appear to operate in a peculiar way noon the retina of the eye. For example: Dr. Rose, of Berlin, has described a sort of color blindness, in respect to blue colors only, produced by taking a dose of santonine. After the effect of the medicine has subsided, the natural power of the eye to distinguish blue returns.

MILLSTONE.-J. A. P. asks "why his new run of millstones The fact is that the way his stones are dressed brings the grinding circle similar to that of a thirty inch run of stone. A run of 30 inch stones, revolving at the same speed at which he runs his four foot stones, will give the same results. The best way for him to get ont of his trouble, is to take the dress entirely out of both stones, and put in the dress used by the best mills in the United States, namely: Begin every land, at the skirt of the stone, from two to three inches wide, and run every land to a point at the pitch or draft line, being sure to give the lands a true wedge taper from skirt to draft line. This, he will notice, gives the furrows about an equal width from skirt to draft line. Crack the stone on line with the back of the land, which will let the cracking run out on a feather edge.-S.G.D., of Pa.

Drilling Glass.—If R. A. P., who asks how the holes in large electrical machine plates are drilled, wishes to drlll them for himself, he can do so by making an instrument like a fiddle, or bow drill, and using in place of the drill, a piece of brass tube of the required size, then fastening a thin board tightly over the glass, with a hole in it directly over the spot to be drilled, and large enough to let the tube turn freely in it. Then by putting emery and water in the hole, and after working the drill a little while, a hole will be ground through the glass, leaving a round piece in the center, the size of the bore of the tube. A drill can be made of a piece of wood, an inch in diameter or smaller, turned smallest in the center, with another piece fastened to the top, with a screw, for a handle, and the tube driven into the bottom. A bow can be made of wood. -A.

DRILLING GLASS.—I have had occasion for several years to drill holes in glass from the thickness of common plate to that of an inch, and of various sizes, and have always found satisfactory success with a common machinist's drill, lubricated during the process with oil of turpentine. With the drill properly tempered and run at suitable speed, the cutting is done as rapidly as in drilling steel.—J. E. B.

PRESERVING FLOWERS.—Seeing in No. 21, of current volume, that a correspondent wishes to know how to preserve flowers, so as to keep their natural colors, I send the desired information. Take of white x, paraffin, or any other waxy substance, any desired quantity; place it on the fire, and bring it almost to a boil. Then take the flowers singly, or in bouquets, and plunge them into the melted wax for a moment ake out and drain. I have also seen flowers preserved with their natural color, by immersing in a thin solution of gum arabic. A lady friend of mine has flowers which were preserved by the wax method three years ago, and they have the same natural appearance they had when they were gathered. H.W. B., of N. J.

MILLSTONE.—The trouble with J. A. P.'s millstone is too much draft, which keeps the face of the stones scant of wheat, and they be come smooth in a short time. Let him put in 18 quarters in the stone and 8 furrows to each quarter. This will equalize the draft, and his burrs will griud well.-J.F., of Mass.

MILL STONES.—To make a stone grind fast, make the furrows at least % of an inch wider at the eye than at the skirt of the stone, with the inclined plane uniform the entire length. The furrows should have, as nearly as possible, the same draft, which can be done by increasingthe number of quarters with a less number of furrows. Then crack the face very finely, and keep it sharp. After this, increase the motion of the stone.—H. T. S., of Pa.

H. W. G., of Mich.-We know of no American journal specially devoted to astronomy. The Journal of the Franklin Institute publishes much interesting astronomical matter.

LEATHERS FOR VISE JAWS .- In your issue of May 27th, C. A. W asks what to use for securing leather to vise jaws. If he will use beeswax, he will have no difficulty whatever .- T. A., of N.Y.

DISSOLVING MICA.—"M." wishes to know how to dissolve, and hold in solution, mica. Mica, which is essentially a silicate of time, is, like most other native silicates, entirely insoluble in any menstruum whatever, excepting by decomposition, when of course it is no longer mica, and is not held in solution as such.—C. L. R. S., of D. C.

To KILL BEDBUGS.—Use a strong alcoholic solution of corresive sublimate, carefully .- C.L.R.S., of D.C.

T. D. T., of ——.—By consulting catalogues of industrial books, you will find many excellent works on electroplating, which will give you a part of the information you desire. We insert your other question in our query column.

S. W. S. of Ohio.-There is no accepted standard for the threads of bolts in this country. There ought to be, and we have often urged the adoption of such a standard, but our machine shops are each a law unto themselves in this matter as yet. The standard for gas pipes

18 48 10110 W 8.			
Diameter inside.	Threads to   the inch.	Diameter inside.	Threads to the inch.
X X X	27 18 18	1 1), 1),	1136 1136 1136
X	14	4	1175

For all diameters above this, 8 threads per inch is the standard.

C., of Ala.—We do not believe copper was ever tempered to be as hard as good steel, although there are historical traditions of a lost art of this kind. To be able to harden copper like steel, might perhaps be of service to modern industry, but we do not see how copper could be advantageously substituted for steel in any of the purposes for which the lat-

B. H. B., of Miss.—Glass water pipes have been tried, but there are many practical difficulties in their use, for domestic service. Your article on the subject is declined with thanks.

S. G. S., of N. Y.—The thing for you to do, if your eyes are giving out, is to apply to a competent oculist for advice, and, if need be remedies.

Boils.-I have recently got rid of eleven or twelve troublesome boils by taking a teaspoonful, in water, of the following mixture, tassium, 2 ounces sirup of sarsaparilla, 2 ounces water. The boils were gonc before I had taken half the medleine .- D.B., of N.Y.

## Recent American and Loreign Latents.

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

HAY AND COTTON PRESS .- This improvement consists in a combination of T-shaped pawl plates, double racks, levers, etc., designed to inform an improved mechanism for actuating the followers of hay and cotton presses. It can be applied to all presses in which the follower bar works in slots. Invented by Engene Rock, of Greenvale, N.Y.

CULTIVATOR.-This invention presents a novelty in this class of agricultural implements, namely, that it makes the two outside plows or teeth adustable as to their distance from each other, the adjustment being made by the operator as desired for varying width of rows of plant, while the cultivator is in motion and use. This is done in the following manner: The two inside plows are attached to the front ends of beams, which are pivoted to the central and principal beam of the cultivator in such a way that they extend obliquely forward. A chain extends from the front eud of cach of these branch pivoted beams, at nearly a right angle to, and under, a pulley fixed to the central plow beam and thence to the front end of the plow

handle on the side next the beam. The plow handles are pivoted to upright supports near their middle. When the end of either of the plow handles i depressed by the hand, the other end is raised, pulling the chain and draw ingthe plow attached to the chain inward toward the central and principal beams; or by depressing both handles at once, the operator may draw both these plows inward, narrowing the width of land cultivated whenever the plants on one or both sides of the cultivator are endangered. As soon as the handles are relieved of pressure, the position of the pivoted beams branching forward and outward obliquely, causes the resistance of the earth to push them outward and take up the chains as fast as the latter are stackened. This ingenious device is the invention of Leauder Walker, of lctoria, Texas.

MEAT SAFE .- August Knoche, St. Louis, Mo. - This invention provides for constant circulation of air through meat safes, the ventilation secured enabling the meat to be longer kept in good condition. The safe is made preferably square in its horizontal section, and of any suitable hight. The air enters a perforated side of a lower chamber, protected from flies by gauze, and, passing out through a perforated side opposite the first, ascends a flue to the perforated side of an upper chamber, thence through this side, and across the upper chamber; and through another perforated side into a flue which extends up to, and over the top of the upper chamber, and opens into a chimney or funnel communicating withthe external atmosphere. The flues are made the entire width of the safe.

FOLDING SETTEE .- This is made with cross-legs, pivoted together, like the folding seats and chairs nowin use; but the inventors have added an improvement, consisting in hinging the back to the back rail, upon which the canvas, leather, or other flexible seat is nalled. Strap braces extend from the ends of the front seat fail to the tops of the side posts of the back, and when attached, hold the back at the proper angle with the scat for comfort; but when released, the back may be folded down, and the whole settee so folded together as to occupy, very little space, a great desideratum in settees used in public halls, churches, etc. Invented by William C. Adams and William B. Mahew, of West Tisbury, Mass.

SPRING BED BOTTOM. - A rectangular frame supports a long spring bar on each side of the bed: to the middle of each of these bars is bolted a plate. under which the ends of two inclined spring bars are inserted, their inclination being adjusted by wedge-shaped blocks placed under them, near the lower ends, and resting on the first named bars. Cross bars connect these inclined bars at each end of the bod, and on them longitudinal spring slate are placed, to support the mattress. A slat frame is pivoted to the supporting upper frame thus formed, the frame extending from the pivots toward the head of the bed, and occupying a space somewhat more than one third that of the principal frame. This is inclined and held at any desired angle by braces, so as to raise the upper end of the bed higher than the foot. Invented by Manasseh W. Farber, of Mount Pleasant, Iowa.

WASHING MACHINE. - This is the invention of William C. Marr and Joseph S. Maughlin, of Onawa City, Iowa. It consists in a hollow drum, made by joining two disks with cross bars, with spaces between them. Everyalternate bar projects inwardly. The drum has a door in the side for putting in and taking out the clothes, and on one of the disks is formed a rubbing surface to be used for hand rubbing when requisite. The drum is made for attachment to common washtubs, by means of suitable devices. It is turned by a crank, and the agitation of the water through the openings and through the clothing cleanses without rubbing the goods to be washed.

APPARATUS FOR UNLOADING HAY .- Alexander Smith, Hoosick Four Corners, N.Y.—This invention consists essentially of a sling, of canvas or other material, which is to be spread over the wagon rack before the hay is loaded, to be hoisted by derricks. The sling is made of two triangular the material used, the lower bases of which triangles are joined to wood bars, so arranged that they can be hinged together, and unhinged when the load is raised so as to dump it on the mow or stack. The sling is patented by itself, and also in combination with other devices for carrying the load to the desired point where it is desired to dump it, etc.

FLAX THRASHING AND SEPARATING MACHINE.—This is the invention of James Boyce, of Muncie, Ind. Two or more pairs of rollers. with spiral grooves, are employed to crush the bolls of the flax, one roller in each pair beingmade to travel faster than the other, by suitable gearing, so that a rubbing as well as crushing action is obtained; and each succeeding pair runs at higher speed than the preceding pair, so that the flax is drawn out and spread, in order to subject all the bolls to crushing and rubbing. The reersed spiral flutes also give a sortof shearing motion, which assists to crush and break the bolls to pieces. A supplementary roller for crushing such bolls as escape the action of the other rollers, and an attachment of shaking riddles and a fan blower, complete the combination.

HYDROCARBON VAPOR BURNER.—This burner is designed for the consumption of naphtha. From a suitable cap, to attach the same to a lamp or a gas burner, rise metal tubes for wicks (the inventor prefers three of these tubes). The wicks lead to a cap at the top, provided with an apparatus for conducting the heat downward to the wicks, and generating the vapor. A eculiar arrangement of orifices is also claimed in the patent, by which, the iuventor states, a better illuminating effect is obtained. Invented by William E. Bartlett, of Newburg, N.Y.

HAY RAKE.—This improvements consists in a new method of raising the rake bead and rake frame, by a new combination of well known devices. J. George Lockwood, West Davenport, N.Y.

SHARPENING HORSESHOE CALES.—A heavy pedestal supports a jointed frame, with a system of gesring belts and pulleys which, by the turning of a winch, drives a small emery wheel. The machine is set near a horse, whose foot being raised, the calks are held on the wheel and sharpened, while an assistant turns the winch. Patented by Geo. W. Lane, of Chichester, N. H.

RIDING PLOW.-Bensish C. Hoyt, Fort Atkinson, Wis.-This invention consists of improvements upon a former invention, patented by the same inventor, September 2, 1856. The plow is one upon which the operator rides. The action of the mold board is supplemented by a complementary concave disk, which formerly turned on a fixed pivot, but in this instance is attached to a shaft which revolves. The machine is easily adjusted for running on level ground, or when a wheel runs in the furrow, maintaining the plow in either case in its proper vertical position. Other improvements provide for ncreased durability in parts, which have hitherto been subjected to great

FOLDER AND THEKER.-Thomas Manchester Farrand, Skowhegan, Me. This is aneat, and apparently very efficient device for folding tucks in shirt bosoms and the like, which cannot be explained without diagrams. It is attached to the table of sewing machines by a clamp screw, in the ordinary way; it occupies but little space, and its design is very neat.

CLOTHES CLAMP .-- This is a clasp of non-corrosive wire, bent something in the form of a twisted W, which, when sprung upon a clotbes line, gripes it with considerable force. It is a cheap substitute for other devices hitherto used for the same purpose. Invented by Christian L. Poorman, Bellaire,

MACHINE OYSTER SHUCKER.-GeorgeHoltzman, Baltimore, Md.-This invention relates to a machine that is provided with a socket and jaw for crusbing the points or jaws of oyster shells while still closed; and with a rest and spring holder to support the oyster after the point of theshell has been thus crushed, and a sliding knife for opening the shell while thus supported; and with a blade connected with a standard by a universal joint for cutting the oyster out of the shell after it has been thus opened.

SPINNING HEAD -John W. Channell Berlin Mich -The object of this in vention is to dispense entirely with condensers and jacks, which is accomplished by combining the spinning head, carding cylinder and winding spool in a novel and peculiar manner.

SEWING MACHINE MOTOR .- D. A. Constable, and John F. Riggs, St. Joseph, Mo.—This invention has for its object to either accelerate or retard the speed of a sewing machine motor, by means of blades hinged to radial arms, which projectfrom a hubthat is driven by the motor, the retardation of the speed of the latter being effected by opening the blades so as to cause them to present more of their surface to the air, and thus produce a greater resistance, and the acceleration of speed being effected by closing the blades so as to diminish that part of their surface against which the air acts.

# Official List of Latents.

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,	On each Caveat On each Trade Mark	810 825
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	On appeal to Examiners-in-Chlef	\$10
	On appeal to Commissioner of Patents	\$20
	On application for Release	. BUU
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•	On an application for Design (three and a balf years)	\$10
7	On an application for Design (seven years). On an application for Design (fourteen years)	. 115
ı	On an application for Design (fourteen years)	<b>. 7</b> 3U
,	For Copy of Claim of any Patent issued within SU years	81
3	A sketch from the model or drawing, relating to such portion of a machine as the Claim covers, from	Ī.
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9	The full Specification of any patent issue since Nov. 20,1866 at which time	е

involved and the number of views.
a a reasonable out, he price aspending upon the amount of labor involved and the number of views. Full information, as to price of drawings, in each case, may be had by addressing
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Patent Solicitors, 37 Park Row, New York.
115 Oca Donnyyo I Adama IV A Malman Diahmand Ind
115,264.—Bobbins.—J. Adams, W. A. Tolman, Richmond, Ind. 115,265.—Fireplace Fender.—C. C. Algeo, Pittsburgh, Pa.
115 Occ. Can Smanner Asthur Amory Now York sity
115,266.—CAR STARTER.—Arthur Amory, New York city. 115,267.—NAIL MACHINE.—Daniel Armstrong, Chicago, Ill.
115,201.—NAIL MACHINE.—Daniel Armstrong, Chicago, III.
115,268.—SCALE.—S.C.Baker, Altoona, J. Root, J. Case, York, Pa. 115,269.—HAND STEREOSCOPE.—A. Beckers, New York city. 115,270.—HOT AIR FURNACE.—J.M. Blackman, Decorah, Iowa.
115 970 HOLL ATH ENDNACE IM Blockman Decorate Joseph
115 271 —Spinning Muje — Vm Rond Windsorville Conn
115,271.—SPINNING MULE.—Wm. Bond, Windsorville, Conn. 115,272.—Washing Machine.—Nathan Booth, Cheshire, Ct.
115,273.—CLAMP FOR THILL COUPLING.—W.Boyd, Hartford, Ct.
115.274.—Pulp Machine.—James Bridge, Augusta, Me.
115.275.—VISE.—H. V. Brown, Warren, Ill.
115.276.—Washing Machine.—J. Brown, W. Manchester, O.
115,277.—GLOVE.—R. D. Burr, Kingsborough, N. Y.
115,278.—ENAMELEDMETAL,—G.A.Burrough, Providence, R.I.
115,279.—Converter.—Henry Chisholm, Cleveland, Ohio.
115,280.—'l'RACTION ENGINE.—J.H.Clapham, New York city.
115,281.—Bending Metal.—VV. and H. Cooley, Toronto, Can.
115,282.—HEMMER.—D. H. Darby, Mendon, 111.
115,273.—CLAMP FOR THILL COUPLING.—W.Boyd, Hartford, Ct. 115,274.—PULP MACHINE.—James Bridge, Augusta, Me. 115,275.—VISE.—H. V. Brown, Warren, Ill. 115,276.—WASHING MACHINE.—J. Brown, W. Manchester, O. 115,277.—GLOVE.—R. D. Burr, Kingsborough, N. Y. 115,278.—ENAMELEDMETAL.—G.A. Burrough, Providence, R. I. 115,279.—CONVERTER.—Henry Chisholm, Cleveland, Ohio. 115,280.—Traction Engine.—J.H. Clapham, New York city. 115,281.—BENDING METAL.—V. and H. Cooley, Toronto, Can. 115,282.—HEMMER.—D. H. Darby, Mendon, Ill. 115,283.—FLASE.—H. W. Dee, London, England. 115,284.—GRAIN BINDER.—C.G. Dickinson, Poughkeepsie, N. Y. 115,285.—SURGICAL INSTRUMENT.—E. Dithridge. Pittsburgh.
115,284.—GRAIN BINDER.—C.G.Dickinson, Poughkeepsie, N. Y
115,285.—Surgical Instrument.—E. Dithridge, Pittsburgh.
115,286.—KEYED INSTRUMENT.—H. Downes, New York City.
115,207.—MATRICE.—R. E. Draper, Sacramento, Car.
115,200.— WORK HOLDER.—H. Eddy, N. Bridgewater, Mass.
115,285.—SURGICAL INSTRUMENT.—E. Dithridge, Pittsburgh. 115,286.—KEYED INSTRUMENT.—H. Downes, New York city. 115,287.—MATRICE.—R. E. Draper, Sacramento, Cal. 115,288.—WORK HOLDER.—H. Eddy, N. Bridgewater, Mass. 115,289.—URN STAND.—W. J. Evans, New York city. 115,290.—LATHE SPINDLE.—L. R. Faught, Philadelphia, Pa. 115,291.—DIE STOCK.—L. R. Faught, Philadelphia, Pa. 115,291.—DIE STOCK.—L. R. Faught, Philadelphia, Pa. 115,293.—POLISHING ORE.—I. W. Forbes, La Porte, Ind. 115,294.—PULVERIZED ORE.—I. W. Forbes, La Porte, Ind. 115,295.—STAMP BATTERY.—I. W. Forbes, La Porte, Ind. 115,296.—VALVE.—I. W. Forbes, La Porte, Ind. 115,298.—VALVE.—I. W. Forbes, La Porte, Ind. 115,399.—VALVE.—I. W. Forbes, La Porte, Ind. 115,300.—VALVE.—I. W. Forbes, La Porte, Ind. 115,301.—STEAM ENGINE.—I. W. Forbes, La Porte, Ind. 115,303.—STEAM TRAP.—I. E. Giddings, Springfield, Mass. 115,304.—STANCHION.—W. C. Gifford, Jamestown, N. Y. 115,205.—BLASTING FURNACE.—L. S. Goodrich, Waverly, Ten.
115 201 — Dre Stock — L. R. Faucht Philadelphia Do
115.292 — HOISTING APPARATUS —R. L. Fitch Sing Sing N. Y.
115 293 POLISHING ORE L. W. Forbes La Porte Ind
115.294.—PULVERIZED ONE.—I. W. Forbes, La Porte, Ind.
115,295.—STAMP BATTERY.—I, W. Forbes, La Porte, Ind.
115,296.—VALVE.—I, W. Forbes, La Porte, Ind.
115,297.—VALVE.—I. W. Forbes, La Porte, Ind.
115,298.—VALVE.—I. W. Forbes, La Porte, Ind.
115,299.—VALVE.—I. W. Forbes, La Porte, Ind.
115,300.—VALVE GEAR.—I. W. Forbes, La Porte, Ind.
115,301.—STEAM ENGINE.—I. VV. Forbes, La Porte, Ind.
115,302.—COFFEE ROASTER.—J. Galloway, Webster, III.
115,303.—STEAM TRAP.—I. E. GIGGINGS, Springheid, Mass.
115,504.—STANCHION.— W. C. GHIOIG, Jamestown, N. I.
115,305.—BLASTING FURNACE.—L. S. Goodrich, Waverly, Ten 115,306.—PACKING BOX.—A. Gregg, Watertown, Mich. 115,307.—WHIFFLETREE.—A. J. Griggs, Pittsburgh, Pa. 115,308.—SOLDERING APPARATUS.—J. Gulden, Keyport, N.J. 115,309.—WIRE ROPE.—A. S. Hallidie, San Francisco, Cal. 115,310.—WIRE ROPE.—A. S. Hallidie, San Francisco, Cal. 115,311.—HORSESHOE.—W. H. Halsey, Philadelphia, Pa. 115,312.—CREASING LEATHER.—B. R. Hamilton, South Deerfield, and S. Swan, Conway, Mass.
115 307 —WHERLETREE — A. J. Griggs Pittsburgh Pa
115 308 — SOLDERING APPARATUS — J. Gulden Keyport N. J.
115.309 — Wire Rope.—A. S. Hallidie. San Francisco. Cal.
115.310.—Wire Rope.—A. S. Hallidie, San Francisco, Cal.
115.311.—Horseshoe.—W. H. Halsey, Philadelphia, Pa.
115,312.—CREASING LEATHER.—B. R. Hamilton, South Deer-
field, and S. Swan, Conway, Mass.
115,313.—TURPENTINE BOX.—VV. B. Hamilton, N. Urleans, La.
115,314.—TELEGRAPH REPEATER.—U.H.Haskins,Unleago, III.
115,510.—LAMP DURNER.—R. W. Rayden, Waterbury, Conn.
115 217 WAGON AND L. Hend D. Hermann Tell City Ind.
115,312.—CREATING LEATHER.—B. R. Hamilton, South Deerfield, and S. Swan, Conway, Mass. 115,313.—TURPENTINE BOX.—VV. B. Hamilton, N. Orleans, La. 115,314.—TELEGRAPH REPEATER.—C.H. Haskins, Chieago, Ill. 115,315.—LAMP BURNER.—H. W. Hayden, Waterbury, Conn. 115,316.—HUB.—P. Heoter, R. Vietor, Grand Rapids, Mich. 115,317.—WAGON AXLE.—J.H. and P. Hermann, Tell City, Ind. 115,318.—TRIGONOMETRICAL APPARATUS.—E. A. Hickman,
Independence, Mo.
115,319.—Animal Poke.—James Hopkins, Akron, Ohio.
115,319.—ANIMAL POKE.—James Hopkins, Akron, Ohio. 115,320.—Wash Boiler.—M. L. Horton, Windsor, Vt.
115 201 Dynapryo Capp I P Hulbort Hormon N V

115,321.—DUMPING CART.—J. B. Hulbert, Hermon, N. Y. 115,322.—STOVE LEG.—H. A. Humphrey, Milwaukee, Wis, 115,323.—CHURN DASHER.—W. F. Jones, Easton, Kansas.

115,324.—CHUCK.—Wm. Kerr, Jr., Boston, Mass. 115,325.—Washing Machine.—B. Kinne, Syracuse, N. Y. 115,326.—Glass Jar.—W. M. Kirchner, Pittsburgh, Pa. 115,327.—Digester.—W. F. Ladd, New York city. 115,328.—Hand Saw.—O. H. Langdon, Homer, N. Y. 115,329.—LAMP.—H. H. Laughlin, Philadelphia Pa

115,330.—CATCH.—G. C. Lawton, Algona, Iowa. 115,331.—FLOUR BOLT.—F. B. Lewis, Tiffin, Ohio. 115,332.—MUSIC STOOL.—J. R. Lomas, New Haven, Conn. 115,333.—SLIDING DOOR.—T. M. Lyons, New York city. 115,334.—EXHAUST.—P. W. Mackenzie, Blauveltville, N. Y.

115,335.—ELEVATOR.—John Macomb, Chicago, Ill. 115,336.—BAG TIE.—C.P.and W.H.Markham,Rogersville,N.Y 115,337.—CENTERING MACHINE.—E. McNiel, Groton, N. Y. 115,338.—BOILER.—F. Meyer, New York city. 115,339.—VENTILATOR.—B. F. Miller, New York city. 115,340.—Eaves Trough.—R. B. Miller, Utica, N. Y.

115,341.—Lock for Sashes.—W. Miller, Boston, Mass. 115,342.—Lubricator.—A. Millochau, New York city. 115,343.—Gar Truck.—G. F. Morse, Portland, Me. 115.344.—Drainer.—P. W. Neefus, New York city

115,345.—Door Mat.—P. W. Neefus, New York city. 115,346.—HORSE COLLAR.—James Nellis, Ypsilanti, Mich. 115,347.—Tassel.—James Norman, Brooklyn, N. Y. 115,348.—GROOVING MACHINE.—H. J. Noyes, Ashtabula, O 115,349.—LETTER BOARD.—J. H. Palm, Mansfield, Ohio.

115,350.—VAPOR BURNER.—G. T. Parry, Philadelphia, Pa. 115,351.—WATCH.—E. H. Perry, Boston, Mass. 115,352.—GARDEN IMPLEMENT.—A. A. Porter, Griffin, Ga. 115,353.—WASH BOILER.—C. W. Powell, Yalesville, Conn.

115,354.—WireFastening.—H. W. Putnam, Bennington, Vt. 115,355.—WASHING MACHINE.—L. Putnam, Worcester, Mass. 115,356.—'I'ELEGRAPH RELAY.—C. Rathbone, Albany, N. Sy. 115,357.—BAGATELLE.—M. Redgrave, Cincinnati, ●hio. 115,358.—PINCH BAR.—Abram Reese, Pittsburgh, Pa. 115,359.—STOVE.—H. R. Remsen, Newtonville, N. Y.

115,360.—BOAT DETACHING.—I. A. Richards, Middletown, Ct. 115,361.—Freezer.—Moritz Rosenstein, Boston, Mass. 115,362.—WATER WHEEL.—R. R. Royer, Ephratah, Pa. 115,363.—TOBACCO PIPE.—W. G. Ruge, Holstein, Mo.

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