28,806.—Albert Broughton (assignor to himself and Alexander Lindsay), of Malone, N. Y., for an Improvement in Stump Extractors:

I claim, first, The mode of conve ing the hoisting gin into a cart or vehicle for the transportation of the machine and its apparatus, as shown in Fig. 6.

Second, The arrangement, connecting together, and combination of the hoisting gin and main lever, in the manner shown in Figs. 1 and 2, for the purposes stated.

Third, The method of stateching the main lever to the roots of the tree or stump, as shown in Figs. 1 and 2, and above described, together with the use of the main lever, as arranged, for the purpose

stated.
Fourth, The arrangement, connecting together, and the combination of all the several parts of the machine, substantially in the nannershown in the annexed drawings and above described, for the purposes and uses in this specification above stated and set forth.

28,807.—P. W. Gates and D. B. Frazer (assignors to themselves and Thomas Chalmers), of Chicago, Ill., for an Improvement in Machines for Stamping Metal Quartz:

METAL QUARTZ:

We claim, first, The combination of a toothed and collared rising
d falling power bar. D D, or its equivalent, with a combined plain
d toothed lifting device, H I, substantially as and for the purposes
t footh

set forth. The manner, substantially as specified, of arranging the Second, The manner, substantially as specified, of arranging the lifting device on its shaft, for the purposes set forth. Third, The combination of two eccentric gears, M, toothed and collared power bar, D G, and the combined lifting device, H I, substantially as and for the purposes set forth.

Fourth, The combination with the inclined acreens, P P, of the mortars of the overhanging shields or guards, N'N', substantially as and for the purposes set forth.

28,808.—John Green (assignor to Nathan Thompson, Jr.), of Brooklyn, N. Y., for an Improved Machine for Planing Warped Surfaces:

1 claim the combination of concave and convex rotating cutters, or either of them, mounted on a frame free to turn on an axis. with a stationary table or support for the plank to be reduced; the turning frame being provided with proper contrivances for rotating and holding it, and the combination constructed so as to produce warped surfaces, substantially in the manner described.

28,809.—Stephen Jackson, of Ossippee, N. H., assignor to D. L. Hodsdon, of Somersworth, N. H., for an Improved Blind Slat Machine:

Improved Blind Slat Machine:

I claim, in combination with the awls and cutters, or mechanism for piercing the edges of a blind slat, and forming it with tenons on its ends, as specified, the slat hopper or rests, X X. and platform, V. and the impeller, O, or mechanism for successively removing the slats therefrom and feeding them forwards between and away from the bournal cutters.

I claim the self-acting or spring cam stops, Z Z., in combination with the impeller, O, the platform, V, and the inclined rails, U U, the said cam stops being arranged and applied substantially in manner and to operate as specified.

I also claim the combination of inclined rails, U U, with the platform, V, and the awls or awl carrier; the object of such inclined rails while being expelled from the machine.

I also claim the combination of the end guides and slat-holders, T T, with the tenon-cutting mechanism, the platform and spring pressers or slat-supporting devices, as specified.

I also claim the combination of the reats, p p, with the impeller, O, in manner and for the purpose substantially as specified.

28.810.-E. A. Kimball (assignor to himself and A. Le Miller), of Boston, Mass., for an Improved Alarm Gage for Steam Boilers:

Gage for Steam Boilers:

I claim the arrangement and application of a slide valve, alarm whistle, valve seat, float lever and index pointer, in such manner that, by the movements of the slide valve, occasioned by the float lever, the indicator or index pointer shall be moved along its index or arc of divisions; and whenever the water of the boiler may have reached its lowest safety level, the valve port of the steam whistle or the alarm apparatus shall be opened so as to enable the steam to pass into the whistle and sound an alarm.

I also claim providing the float stem with a steam passage extending longitudinally through it and opening into the boiler and dry steam chamber, as and for the purpose specified.

1 also claim so applying to the index chamber the device for moving the indicator that any steam which may escape from the valve opening of such device may not enter the index chamber, so as to foul or condense on its glass.

28,811.—John Low, of Clinton, Mass., assignor to Nathan Bruce, of Southboro, Mass., for an Improvement in Dulcimers:

Hent in Duicimers: .

I claim the arrangement, as described, of the central bridge, 6, in relation to and in combination with the bridges, 4 and 5, in the manner described, by which one part of each string is made to give a single chromatic interval of pitch higher than the other part, substantially as and for the purposes set forth.

28,812.—G. W. Oliver (assignor to Henry Parker and C. W. Yale), of New York City, for an Improve-

ment in Preserving Meats:

I claim the application or employment of heat to the specific purpose of curing and preserving meats, as corned provisions, in such a way and to such an extent as will effectually or sufficiently coagulate the albumen of the tissues and fluids, in combination with the subsequent application of heated brine or preservative fluid.

28,813.—A. D. Rollins, of Green Point, N. Y., assignor to himself and H. J. Howland, of New York City, for an Improved Steering Apparatus:

City, for an improved Steering Apparatus:

I claim, first, The shaft and wheels, G M N, reverse segments, m n, guard, R, rider, T, and open jaws, E E, arranged to operate together substantially as and for the purpose set forth.

Second, In steering gear substantially as above described, the geared shafts, G and H, and socket, f, adapted to receive either G or H at pleasure, substantially as and for the purpose set forth.

Third, In steering gear substantially as above described, the stop, K, arranged to operate in the gear wheel, g, substantially as described.

28,814.—I. M. Rose, of New York City, assignor to J. R. Morrell, of Brooklyn, N. Y., for an Improvement in Sewing Machines:
I claim the revolving hook, I. carrying the bobbin, 3, and lower needle, o, in combination with the perforating eye-pointed needle, i, substantially as specified, whereby the threads are concatenated, as set forth.

315.—Rhoda Sowle, of Fall River, Mass., administratrix of the estate of David Sowle, deceased, late of Fall River, for an Improvement in Lozenge Ma-

chines:

chines:
I claim, first, The arrangement of a plain smooth roller, F, to operate in combination with the plunger, E, and cutters, c, substantially in the manner and for the purpose described.

Second, I claim combining with each row of cutters, C, on the rotary cylinder, B; a separate clearer, K, constructed and operating subs antially in the manner and for the purpose described.

Third, The arrangement of the two endless aprons, H and M, one at right angles to the other, to operate in combination with the cylinder of cutters, B, and with the drum, D, and with the clearers, K or their equivalents, substantially as and for the purpose set forth.

fWith this machine a very large quantity of lozenges can be cut out, marked with the desired inscriptions or characters and deposited

on an endless apron, from which they are removed to the drying oven; at the same time, the paste which may adhere to the outside of the cutters is cleanedoff, and the scraps are deposited on an endless apron and carried off over the side of the machine. 1

28,816.—J. H. Steiner, of Philadelphia, Pa., assignor to himself and J. E. Thomson, of Buffalo, N. Y., for an Improvement in Railroad Car Wheels:

I claim constructing the cast iron part of the wheel with chambers or tapering pockets, in combination with wedge-like blocks of wood, B, having shoulders, b', and the wroughtiron band. c, shrunk thereon, for the purposes and substantially as described.

28,817.—J. H. Steiner, of Philadelphia, Pa., assignor to himself and J. E. Thomson, of Buffalo, N. Y., for an Improvement in Railroad Brakes:
I claim, first, The spring, C. in combination with the shoe, A, and cam, D, substantially as set forth.
Second, The combination and arrangement of the hook, N. N., and fiance, N.R., with the csm, D2, cam shaft, E, spring, C, and shoe, A, for the purposes and substantially as described.

28,818.—George Stover (assignor to himself and the Stoney Rule and Level Company), of New Britain, Conn., for an Improved Machine for Finishing Works in Wood and Metal:

I claim the combination of the sliding plates, i, the milledor cutug plates, n, guide ways, m, with a proper holding jack, r, upon the
d, p, constructed and operating substantially in the manner as and

28,819.—D. H. Thorp, of Chelsea, Mass., assignor to the Boston Faucet Company, of Boston, Mass., for an Improvement in Faucets:

I claim, in the basin faucet having a conical tubular elastic packing, C, made and applied to its valve, the stem and case thereof, as described, the arrangement of the stop, x, and its shoulder, y, or chamber by which such shoulder is formed in the part, D, with operating screws, ik fm, and tubular elastic packing, C, applied to the valve stem, e, and its valve, B, substantially as specified.

28,820.—William Wright (assignor to himself and John Brady), of Philadelphia, Pa., for an Improved Animal Trap:

Annual ITAD:

I claim, first, The general arrangement of base, A, the upright, B, spiked board, C, spring, G, lever, D, and trigger plate, F.

Second, I claim the projection, m, on the spiked board, C, when the notches of the said projection are arranged in respect to the spring, as and for the purpose set forth.

### RE-ISSUES.

W. N. Whitely, Jr., of Springfield, Ohio, assignee of T. S. Steadman, of Murray, N. Y., for an Improvement in Clover and Grass Seed Harvesters. Pat-

ented May 23, 1854:

ented May 23, 1854:

I claim the main frame or box, A, which carries the pinion which drives the cutters, in combination with the arm or supplementary frame, J, provided with sxle, t, and the main wheel and gearing, substantially as described, for the purposes specified.

I also claim the arm or supplementary frame, in combination with the master wheel and gearing, when said arm or supplementary frame is so connected with the main frame as to vibrate from and around the pinion shaft, substantially as shownand described for the purpose set forth.

W. N. Whitely, Jr., of Springfield, Ohio, assignee of T. S. Steadman, of Murray, N. Y., for an Improve-ment in Clover and Grass Seed Harvesters. Pat-

ment in Clover and Grass Seed Harvesters. Patented May 23, 1854:

I claim, in combination with the main frame or box, A, and arm or supplementary frame, F, on which is formedor secured the master wheel axle, the employment of a retaining arc, H, or its equivalent, the whole constructed and arranged in such a manner that the min frame or box, and arm or supplementary frame, with its master wheel axle, will be held in parallel planes relatively to each other while they are moving up and down, substantially as and for the purposes set forth.

W. N. Whitely, Jr., of Springfield, Ohio, assignce of T. S. Steadman, of Murray, N. Y., for an Improvement in Clover and Grass Seed Harvesters. Pat-

ented May 23, 1854:
claim constructing the machine in such a manner that the endant can, while riding on the machine, raise and lower in the of a circle, and hold at different hights, either end of the cutting paratus, as described, for the purpose specified.

J. T. Trotter, of New York City, for an Improvement in Vulcanizing India-rubber. Patented Dec. 3, 1850:

100U:

I claim the process or method of curing india-rubber, gutt percha, or other vulcanizable gums or compounds thereof, by mea of a hyposulphite of zinc, or other artificial preparation of zinc as sulphur having like chemical constitution, properties and qualities a described, for vulcanizing india-rubber and other vulcanizal gums or compounds thereof, without the use of raw or free sulph for the purposes of curing the rubber.

# ADDITIONAL IMPROVEMENT.

T. S. Whitman, of New York City, for an Improvement in Attaching Skates to Boots. Patented Dec. 20, 1859

lisim the male and female vertical dovetail portions, substan-or a described and represented, whereby the heel portion of the iron will be secured against lateral or longitudinal movement pendent of the front attachment.

Birdsill Holly, of Lockport, N. Y., for a Design for a Pump.

Louis Meyer, of St. Louis, Mo., for a Design for a Parlor Stove.

William Pountney, of New York City, for a Design for Decanter Stoppers.

R. H. N. Bates, of Providence, R. I., assignor to J. Morrison, Jr., of Troy, N. Yr, for a Design for the Plates of a Cooking Stove.

Lemuel Morgan, of South Norwalk, Conn., assignor to himself and C. Adams, of New York City, for a Design for a Fire Shovel (4 cases).

H. G. Thompson, of New York City, assignor to the Hartford Carpet Company, for a Design for a Carpet Pattern (11 cases).

NOTE.—In the above list of claims, issued for the week ending June 19, we recognize THETY-SEVEN of the number which were solicited through this office.—Eds.

Correspondents sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and, when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

H. M., of N. J.—Your improvement in reapers is new to us, and we should think a patent might be obtained for it. If you desire your claims to be prosecuted vigorously, send us a model and the natent fee. \$30

F. G. D., of C. W.—Your idea of using lime in a slacking state as a fuel for cooking in summer is not new. In 1856, W. W. Albro, of Binghampton, N. Y., secured a patent through this office for a portable cooking stove in which the caloric is generated by the employment of water in small jets upon lime. On page 280
Vol. XI. (old series) of the SCHENTIFIC AMERICAN, an engraving of this ingenious apparatus may be found. Last summer, Mons. Blondin, the fool-hardy acrobat, used, if we recollect aright, a lime stove to cook a beefsteak while on his rope midway between the banks over the Niagara river, several hundred feet above the nahing waters

J. W. P., of Mass.—Boiled linseed oil containing about an ounce of the oxyd of manganese, or litharge, to the quart, will make an excellent waterproof coating for cotton or linen cloth. several coats with a brush, and allow each to dry perfectly.

L. & C., of Texas.—The account of the operations of the water-wheels at Philadelphia, as published in our columns, al-though correct, may be different in some particulars from that of the Chief Engineer, whose report is not yet published.
therefore retain your letter until we obtain a copy of th tain a copy of the report. We thank you for the statistics contained in your communication.

R. W. E., of Miss.-Your system of aerial navigation is novel at least, but you will find it difficult to get alens to suit your for heating the air.

A. W. H., of Conn. - A good alloy for small patterns is a composition of 77 parts copper and 23 parts of tin.

C. H., of Va. -Boil the cotton cloth for your awnings for one hour in a liquor into which has been dissolved one ounce of alumend the same amount of blue vitriol to every four gallons of water. Allow the cloth to dry thoroughly before it is put up. If the awning is up, brush its surface over with a hot liquor of alum and blue vitriol. This will tend to prevent mildew, and renderit more durable.

S. I. B., of Ga.—Tin is the best substance to use with mercury as an amalgam for silvering glass, so far as we know.

J. W. R., of Mass.—Boil white tallow in a very strong

ustic soda lye until it becomes saponaceous, then cool it, and you will have hard soap. Caustic lye is made by boiling equal quantities of slacked lime and soda ash for about fifteen minutes in water, and allowing the sediment to fall down. The clear liquor only is employed in soap-making.

C. C. D., of Mass.—Every coil in a water pipe increases the friction, and should, if possible, be avoided. A shortpipe for a water ram is certainly better than a long one, because the resistance increases with the length.

C. H. R., of N. Y.—A dry needle will float on water, if laid carefully upon it, owing to the repulsion or what scientists call e sphere of repulsion" between the surface of the steel and the

A. B. C., of Ill.—Please to send us your proper address, and we will forward you our circular of advice about foreign

C. R. of N. J.—Cows' horns may be softened by boiling them in water, and they may be pressed into almost any shape when hot, by placing them in suitable dies.

J. B., of N. B.—There is no uniform system of pitch used for the propellers of steamers. The best propellers, su Griffin's (English) is adjusted for a varied pitch. We believe that a windmill 10 feet in diameter, and with fans five feet wide, and a pitch of two feet would drive your threshing machine without difficulty in a moderate breeze.

G. S. P., of Wis.—Strong glue cannot be used cold, because it congeals at a moderate temperature. If you wish to use strong sticky glue, you must put it on hot.

W. B., of Md.—We gave the substance of Mr. Murray's

lecture as we found it in foreign periodicals. We shall have something more to say about superheated steam in a week or two.

A. B., of N. B.—The same difference in pressure, as indicated by valve and gage, has often puzzled engineers, and will be found even if the gage used is the common mercurial siphon which cannot be incorrect. The apparent difference arises from the mode of measuring the valve in common practice; that is to say, taking the area of the bottom or smaller end of the seat, which seems theoretically to be the correct way. Repeated and carefully conducted exporiments show that the valve measured in this way will neveragree with the gage; but if you take the area of the valve at the middle of the seat, you will find them alwaysagree. We suppose that in grinding the valve the bearing is brought to or above never perfectly tight, though it may appear to be so.

A. M., of Mass.—You state that friction increases with the increase of surface independent of the weight of the rubbing surface, because of the pressure of the atmosphere. We cannot see how atmospheric pressure has anything to do with the question. Upon your principle of reasoning, a man of 150 pounds weight with a foot of 46 square inches area will exert greater pressure upon the ground when he walks than a man of 200 pounds weight with a foot of 38 square inches area. The pressure of the former will be 840 pounds, that of the heavy man 770 pounds. We take the atmespheric pressure to be equal on all sides of the journals. L. C. T., of N. C .- If you will read the article on boiler explosions (Vol. II., page 345) carefully, you will see that we did not make the comparison between a boiler explosion and the popping of the corkfrom a soda water bottle. Your theory of exploping of the control a sods water pottle. Four theory of expo-sions is that the water is decomposed by red-hot plates, then atmo-spheric air gets in, and mixes with the hydrogen in the boiler which ignites, and the gases then go off like gunpowder. This which ignites, and the gases then go on the guilpower. I ma theory has been frequently advanced, and would be very plausi-ble only that it wants facts to sustain it, because air cannot get into s boiler in sufficient quantity to burst a pop-gun.

J. T. B., of Wis.—There is not a good work on millhtlng, according to present practice, in print.

W. R. L., of N. Y.—A long screw-driver, with as nar-rowan edge, and having a handle no thicker than a short driver, will not drive a screw any better, according to our view of the question. Long screw-drivers have thicker handles and longer dges, generally, which give them greater leverage.

E. A., of Conn.—To make black walnut resemble rosewood, in a measure, use a strong decoction of Brazil wood in lacwould in interesting detection of Blazin would in writing to make the red colored veins. To make perfectly black streaks, use a strong decoction of logwood, in which a few grains of copperas has been dissolved.

## MONEY RECEIVEL

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, June 23, 1860 :-

F. W., of N. Y., \$30; R. H., of Conn., \$30; D. A. D., of Fla., \$25; B. F. G., of Mass., \$30. B. & B., of Iowa, \$30; O. P. A., of M. ss., \$30; T. B., of Va., \$30; B. & F., of Wis., \$25; G. H. M., of N. Y., \$39; W. M., of Miun., \$30; A. R. P., of Texas, \$35; T. W. McD., of Ill., \$30; J. H., of Ind., \$30; A. & L., of Texas, \$35; T. W. McD., of Ohio, \$30; A. & C., of Mo., \$30; D. B., of Mo., \$35; L. L. A., of Mo., \$30; C. J. S., of N. Y., \$35; McC. & J., of N. J., \$25; H. C. F., of Va., \$25; G. & B., of C. W., \$25; A. W., of N. Y., \$30; D. F., of Mich., \$30; J. G., of Ky., \$200; E. E., of Ill., \$30; E. L. P., of Conn., \$25; L. D. L., of Ill., \$25; H. & N., of N. J., \$30; J. G., of N. Y., \$25; J. H. H., of Pa., \$25; J. K., of Ohio, \$30; H. W. N., of Als., \$25; J. T., of L. I., \$55; W. W. S., of Iowa, \$30; W. C., of Ill., \$30; D. T. S. W., of Md., \$25; G. B. P., of N. Y., \$100; J. H. B., of Ill., \$30; J. R., of Pa., \$30; W. M. G., of Ohio, \$30; J. H., of N. J., \$30; H. M., of Iowa, \$25; E. A. P., of Mass., \$30; S. F. Van C., of Cal., \$30; J. S., of N. Y., \$60; J. B. L., of N. J., \$25; M. A. B., of Fla., \$30; J. S., of N. Y., \$60; J. B. L., of N. J., \$25; M. A. B., of Fla., \$30; J. S., of N. Y., \$60; J. B. L., of N. J., \$30; H. Y. W., of N. J., \$25; W. B. A., of Ill., \$27; E. D. A., of Ala., \$30; F. & B., of Pa., \$30; J. S., of Ga., \$25; J. W., of N. Y., \$30; D. W. W., of Ohio, \$30; J. H. Y. W., of Pa., \$30; J. S., of Ga., \$25; J. W., of N. Y., \$30; D. W. W., of Ohio, \$30; J. T. W., of N. J., \$25; W. B. A., of Ill., \$27; E. D. A., of Ala., \$30; H. Y. W., of Pa., \$30; J. S., of Ga., \$25; J. W., of N. Y., \$30; T. W., of N. Y., \$30; G. W. Van D., of N. Y., \$30; W. H. G., of N. Y., \$30; T. W., of N. Y., \$30; G. W. Van D., of N. Y., \$30; W. H. G., of N. Y., \$30; D. R., of N. Y., \$30; J. R., of N. Y., \$30; J F. W., of N. Y., \$30; R. H., of Conn., \$30; D. A. D., of Fla 520; G. H., of Mass., \$25; B. & N., of Vt., \$35; D. R., of N. Y., \$30; G. H., of Mass., \$30; J. R. C., of Ind., \$12.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, June 23, 1860:—

J. T., of N. Y.; McC. & J., of N. J.; J. M., of N. Y.; C. J. S., of N. Y.; G. W. L., of N. Y.; J. K., of Ohio; J. H. H., of Pa.; E. R., N. Y.; G. W. L., of N. Y.; J. K., of Ohio; J. H. H., of Pa.; E. R., of N. H.; D. F., of Mise.; H. F., of Ind.; D. A. D., of Fla.; D. F. S. W., of Md.; T. S., of Pa.; S. E. T., of N. J.; H. W. N., of Ala.; A. A., of N. Y.; H. C. F., of Va.; E. L. P., of Conn.; H. A. R., of Ohio (two cases); Z. D., of Ga.; P. & F., of N. Y.; T. O. S., of Cal.; J. B. L., of N. J.; D. & H. W., of Pa.; H. M., of Iowa; B. & F., of Wis.; L. D. L., of Ill.; P. & B., of Pa.; L. D. B., of Mo.; S. P., of Canada (C. W. Van D., of N. V. J. B. C. of Ind.; W. H. C. of N. V. C. W. Van D., of N. V. J. B. C. of Ind.; W. H. C. of N. V. C. G. W. Van D., of N. Y .: J. R. C., of Ind .: W. H. G., of N. Y .: G W. R., of N. Y. (2 cases); J. S., of S. C.; J. R. L., of Mass

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Consultation may be had with the firm, between NINE and FOUR CONSULTATION, at their PRINCIPAL OFFICE, No. 37 PARK ROW, NEW YORK. We have also established a Blanked Office in the CITT of WASHINGTON, on the CONSURO F. This office is under the general superintendence of one of the firm, and is in daily communication with the Principal Office in New York, and personal attention will be given at the Patent Office to all such c sease may require it. Inventors and others who may vielt Washington, having business at the Patent Office, are cordially invited to call at their office.

They are very extensively engaged in the preparation and securing of Patents in the varieus European countries. For the transaction of this business they have Offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris, and 26 Rue des Eperonniers, European Patents secured to American citizene are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit that issue of vatents to inventors. Any one can take out a Interferences, Opinionsrelative to Infringements, &c., &c. The long

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

patent there.

A pamphlet of information concerning the proper course to be pursued in obtaining patents through their Agency, the requirements of the Patent Office, &c., may be had gratis upon application at the Principal Office or either of the Branches. They also furnish a Circular of Information about Foreign Patents.

The annexed letters, from the last three Commissioners of Patents, we commend to the perusal of all persons interested in obtaining Patents.

we commend to the perusal of an persons and the Patents.—

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