A Visit to Robinson Crusoe's Island.

The following interesting information is derived from the San Francisco Times: - While the ship Golden Rocket was on her last passage from Boston to San Francisco, Capt. Pendleton determined to stop at the island of San Juan Fernandez, to take in water. On the 24th of March he arrived in the bay of St. Joseph and anchored on the opposite side from that on which Robinson Crusoe (Alexander Selkirk the exile Scotchman) lived. The casks were taken on shore, and while the crew were at work, the passengers, among whom were fifty ladies, rambled about in different directions. The island is twenty-five miles long by about four in breadth. The land is very high, rising in rugged, precipitous peaks; one of them called Tunkcue, 3,500 feet above the level of the sea. The peaks are generally overhung with clouds. The valleys are exceeding fertile, the grass growing to the hight of six or eight feet. Figs, strawberries, peaches and cherries abound in their season. The Golden Rocket was there in the season of peaches, and the valleys and hillsides were full of trees loaded down with delicious fruit. Strawberries flourish best in December and January. There are three remarkable caves in the sides of the hill facing the harbor, about thirty feet in length, twenty-five in width and about the same in hight. The inhabitants now number but fourteen, of whom Messrs. Day and Kirkaldie, from Valparaiso, are the chief persons; they have been appointed overseers of the island by the Chilian Government. An immense number of goats are running wild over the island, and an abundance of fish are taken on the coast.

Sea Sickness.

A late number of Silliman's Journal contains a paper by R. M. Bache, of the United States Coast Survey, on the "Physiology of Sea Sickness." Prof. Bache asserts the theory that this distressing malady is not a disease of the stomach, but of the brain, and arises from the fact of the mind not being able to understand the varying motions of the ship as rapidly as the senses feel them, thus causing a conflict of impression and a consequent affection of the brain, which in turn deranges the nervous system and produces nausea. The smell of food, close air, and similar matters may aggravate the disease, but are not the primary cause of it. As soon as the mind is educated up to a point that enables it to conceive the idea of each motion as soon as it is felt, sea sickness ceases. Prof. Bache recommends persons going on board a vessel to eat an ordinary meal, and while there to conform as closely as possible to their habits while on land. The deck is the best place to remain during sea sickness, as the sight can there be best educated to the movements, and the fresh air has a good effect. A steady gaze at the horizon enables the sufferer to quickly estimate the movements of the ship. If possible, chose a position amidships, on deck, spread a mattress, lie down and look at the horizon, and then all has been done that can be done to prevent sea sickness. With all possible deference to Prof. Bache's opinion, we would like to ask how it is that old captains and sailors who have followed the sea for years get deadly sick at times in a storm?

Oil for Chronometers.

Professor Airy has recently made an interesting report to the British Government, involving the results of his examination of various chronometers. Professor Airy says that the material and workmanship of all the chronometers are very good, there being amongst nearly all of them but very little differ ence in this respect; and, in uniform circumstances of temperature, every one of the chronometers would go almost as well as an astronomical clock. The great cause of failure is the want of compensation or the too great compensation for the effects of temperature. Another very serious cause of error has its source in the oil, which is injured by heat. This is very different in different cases. Thus the oil employed by one chronometer maker was not at all injured by heat; while some of that used by another chronometer maker was found to be so bad that, after going through the same heating as that of the first-mentioned maker, the rates of the chronometers were changed, on returning to ordinary temperature, by eighty seconds per week.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING NOVEMBER 4, 1862. Reported Officially for the Scientific America

** Pamphlets giving full particulars of the mode of applying for patents, under the new law which wentinto force March 2, 1861, specifying size of model required, and much other information useful to niventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific American. New York.

36,827.-Lambert Andrews, of Plantsville, Conn., for Im-

36,827.—Lambert Andrews, of Plantsville, Colli, for improvement in Mole Traps:

I claim an improved mode of constructing and using mole traps, viz.: The combination of the plate, e. pins, f. (arranged at each end of saidplate, e.) and the box, a, (with proper spring device), when placed in the ground as described, and the parts arranged and operating substantially in the manner and for the purpose described.

328.—S. G. Barker, of Carbondale, Pa., for Improvement in Scale Beams:

Henr In State Deams:

I claim making the suspension point, c, adjustable upon the beam, by means of the slide, B, in combination with the threaded stem, jam nuts, ii, boss, k, and thumb screw, m, the same being aranged to operate substantially in the manner described, for the puroses specified.

36,829.—R. Boeklen, of Brooklyn, N. Y., and G. W. Schramm, of New York City, for Improvement in Hammers:
We claim the construction of a hammer head, with a face at each end and a claw on one side, substantially as and for the purpose herein specified.

in specified.

36,830.—J. L. Booth, of Rochester, N. Y., for Improvement in Grain Separators:

I claim the above-described apparatus, composed of the frame, A, provided with hopper, E, screens, C, the standards, B B B, and spurs, 111, so arranged that it may be secured to the floor at any place, in the manner shown, and operating by vibrations, substantially as begging at forth

nerem set forth.

36,831.—William Bourn, of Geneva, N. Y., for Improved Boot-jack:

I claim the combination of the side pieces, A.A., double-acting wedge, B, and bolt, C, arranged in such a manner that the wedge forms a bearing the whole length between the said side pieces, and operates the jaws automatically by the weight of the operator, substantially as herein set forth.

36,832.—Adolph Brown and Felix Brown, of New York
City, for Improvement in Friction Couplings:
We claim the herein-described friction coupling, constructed and operating in the manner and for the purpose substantially asspecified and set forth. operating in and set forth

360,833.—A. B. Corey, of Sprague, Conn., for Improvement in Machinery in Dressing and Sizing Warps:

I claim the arrangement and combination of the evener with other warp-dressing machinery, substantially as described.

warp-dressing machinery, substantially as described.

36,834.—Joseph Evans, of Newark, N. J., for Improvement in Fruit Gatherers:

I claim attaching and detaching the conveyer, K, to and from the jaw levers, by means of the curved spring wiresor rods, I I, and lateral eyes, ii, the whole arranged combined and operating, substantially as and for the purpose herein set forth. Jays can drotted by the particular arrangement of the whole instrument, consisting essentially of the cross levers, B B, connecting bars, D, sliding rod, E, guide collar, G, pole, A, with the cylindrical end, H, and detachable conveyer, K, substantially as herein described.

I also claim the vertical separating wires, d d, of the jaws, for properly guiding the twigs to the knives in pruning, in combination with the knives, L L, at the top of the jaws, arranged and operating substantiallyas herein described.

36,835.—Francis Gardner, of Roxbury, Mass., for Im-

stantially as herein described.
36,835.—Francis Gardner, of Roxbury, Mass., for Improved Canteen:
I claim the within-described canteen, with its various compartments, removable drinking tube and filter, constructed and arranged as described.

as described.

36,836.—R. J. Gatling, of Indianapolis, Ind., for Improvement in Revolving Battery Guns:

Iclaim, first, The combination of the lock cylinder or breech, D, with the growed carrier, C, circular plate, F, and barrels, E, &c. The lock-cylinder or breech carrier; and circular plate, being farnay fastened upon the main shaft, N, and the locks, grooves in the carrier, and barrels, being arranged on a line parallel with the axis of revolution. The whole revolving together when the gun is in operation, substantially as described.

Second, I claim the use of as many locks as there are barrels, said locks revolving simultaneously with the breech and barrels, and being arranged and operated substantially as set forth.

Third, I claim the stationary ring, P, provided with inclined planes on its rear edge, in combination with lock-cylinder, D, and locks, when constructed and operated for the purposes substantially as set forth.

Fourth I claim the tubes as & &c. furnished with the flanged of the proposed substantially as set forth.

forth.

Fourth, I claim the tubes, a a, &c., furnished with the flanged breech pins, c c &c., and springs, e e, &c., and which contain the lock hammers, b b, &c., and mainsprings, d d, &c., in combination with the revolving breech, D, disc, I, and swell, O, when constructed, ar ranged and operated, for the purposes substantially as set forth. Fifth, I claim the disc, I, in combination with the external breech piece or casing, A, which forms a shield or covering for the lock cylinder, and which protects the locks and cog wheels from injury.

ier, and which process the locks and tog wheels from injury.

36,837.—H. C. Hunt and G. W. Devin, of Ottumwa, Iowa, for Improvement in Pumps:

The stationary semi-cylindrical case, B, provided with the slide ralve, D, abutment or partition, a, and induction openings, c c, with he eduction pipe, C, placed between them, in combination with the scillating plate, F, having the pistons, E E', attached and vlaced repectively in the compartments, b b', and provided with the arms, g g, which are connected to a cuitable lever, G, all arranged to operate as and for the purpose herein set forth.

[The object of this invention is to obtain a force pump which will be simple in construction, capable of being operated with but a small ex-penditure of power, and of being manufactured at a reasonable cost, and not liable to get out of repair and become deranged by use.]

36,838,-L. F. Hall, of Fonda, N. Y., for Improvement in

Shawl Pins:
I claim a shawl pin constructed of a single piece of wire, bent so as o form two parallel prongs, a a, provided with hooks, b b, at one end, nd a hook, c, at the opposite end, as herein shown and described.

The object of this invention is to obtain a shawl pin of simple contane onect of this invention is to octain a snawly find of simple construction which may be constructed at a small cost, be readily applied to the shawl for securing it on the person, and when thus applied not capable of being casually detached.]

papable of being casually detached.]
36,839.—James Gordon, of Caledonia, N. Y., for Improved Printing Press:
I claim, first, A partially-rotating cylinder, B, provided with a type orm, F, and operating in connection with a reciprocating bed, G', which holds or retains the sheets, while they are receiving the impression from the form, F, on cylinder, B, in combination with the eciprocating formbed, S, and pressure rollers, Q Q, all arranged as shown, and in connection with conveying tapes, to operate as and for he purpose herein set forth.

Second, The manner of adjusting, or raising and lowering the roll-

ers, Q. Q., as shown and described, to wit, by means of the pitmen, c*, attached to the bearings, R, and to cranks, b*, on shafts, a* a*, which are connected by a bar, d*, secured to the ends of arms, e*, which project from said shafts, and one of the latter having a forked arm, g*, attached to it, in which an eccentric, f*, on shaft, P, works.

piect from said shafts, and one of the latter having a forked arm, g, natached to it, in which an eccentric, f, on shaft, P, works.

36,840.—G. P, Gordon, of Brooklyn, N. Y., for Improvement in Printing Presses:

First, I claim a platen which shall be stationary for the reception of the sheet and for the reception of the impression, a, when such platen shall be vibrated for the purpose set forth; b, when such platen shall be placed at an angle from the horizontal orvertical position, in order that the printed sheet may be readily delivered by the reilling tympan sheet and sheet-taking nippers, as shown; c, when such platen shall be combined with the sheet-taking nippers, held and carried, substantially as described; d, when such platen shall be combined with the sheet-taking nippers, held and carried, substantially as described, for the purposes fully described.

Second, I claim the sheet-taking nippers, a, when held and carried by the rocking arms in combination with a stationary feed-table, as shown, for the purposes set forth; b, when such sheet-taking nippers shall be swiveled and hung upon a rod, so that they must move in any direction in which the rod may be turned, and yet, at the same time, allow the jaws of such nippers to have an independent movement to and from each other, to take and deliver a sheet; c, when said sheet-taking nippers shall be operated as shown, for the purpose specified; d, when said sheet-taking nippers, holding the sheet and resting upon the platen, shall vibrate with the platen for the purpose shown.

Third, I claim the sheet-guide or shield, a, when such sheet-guide or shield shall be used in combination with the rocking nipper and the rolling tympan, operating substantially as shown; b, when such sheet-guide or shield shall be used in combination with the protein and for supplying ink to the inking rollers, a revolving cylindrical distribution surface upon one side of the form, and a revolving-cylindrical distribution surface upon one side of the form, as herein fully shown.

drical distribution surface upon the other side of the form, as nevenfully shown.

Fifth, Detaching, and thereby suspending the operation of the nippers, nipper arms and rolling tympan, for the purpose specified.

Sixth, I claim the sheet catches or holders, K K; a, when such sheet catches or holders shall be combined with the pile table, for the purpose described; b, when such sheet catches or holders shall be combined with the sheet-guide or shield, for the purpose shown.

Seventh, I claim projecting the stationary feed table over and beyond the face line of the platen, for the purpose specified. Eighth, I claim the sheet gages, constructed substantially as described, in combination with a stationary feed table, for the purpose set forth.

36,841.—J. H. Irwin, of Chicago, Ill., for Improvement in

Lanterns:

I claim the corobination of the two flanges, bc, and plates, d, with the tamp, E, jacket, G, and lantern, A, in the manner herein shown and described.

t described. also claim having the cap, H, arranged below the upper extremi-s of the wick tubes, as herein shown and described.

its of the wick tubes, as herein shown and described.

[The object of this invention is to obtain a burner for lanterns which will admit of coal oil and other similar hydro-carbons being used as a burning material without the usual draught-chimney, and without the liability of the flame being extinguished by the swin of the lantern or an up-and-down movement of the same, and al without the liability of the oil being unduly heated and vaporized so as to cause an explosion of the lamp.]

36,842.—Gamaliel Jackson, of Cincinnati, Ohio, for Improved Watchmakers' Lathe:
I claim, first, The arrangement of grasping apparatus on parallel adjustable rods, 11, in such a manner that the piece to be turned may be grasped at any part, one end of it resting in a stationary center.
Second, The application of ball-and-socket motion to the head of a lathe, in such a manner that one end of a piece of work may be adjusted, while the other end rests in a stationary center, constructed and operating as herein set forth.

justed, while the other end rests in a stationary center, constructed and operating as herein set forth.

36,843.—Samuel Johnston, of Buffalo, N. Y., for Improvement in Harvesters:
I claim, first, The arrangement and combination in a reaper and mower of the hanger, I, curved guide, O, hinge joints, M and g, and shield, P' of shoe, P, or their equivalents, constructed and operating substantially in the manner and for the purpose described.

Second, Constructing and arranging the bearing, n m, substantially in the manner described, in combination with the pitman shaft, J, shield, P', and hinge joints, M and G, for the purpose set forth.

Third, The hanger, Il Y 1 2 13 h h', constructed as described.

Fourth, Arranging the automatic rake attachment upon the inner end of the finger beam, by means and in the manner substantially as described and for the purpose set forth.

Fifth, The combination of the cam track, partly inclosed by rails, t.', and a yielding gate, t.2, with the guiding eye, R2, lever, Z, cranelike arm, U V, pivoted rake head, X, and stale, Y, substantially as and for the purpose set forth.

Seventh, The construction of the part, V, of the arm with journals, and with points of attachment for the lever, Z, and part, U, of the arm, substantially in the manner endescribed.

Eighth, The combination of the yielding gate, t2, and the rails, t.t', of the growed or cam track, W, substantially as and for the purpose described.

Ninth, The bearing, W, with a groove and rails, t.t' t2, constructed

If the grooved or cam water, it is a groove and rails, the less ribed. Ninth, The bearing, W, with a groove and rails, the less ribed, and operating as described, in combination with the extension, S S', of the part, U, of the crane-like arm, for the purpose set forth. Tenth, The construction and arrangement of the pivoted spring gate at the end of the horizontal groove or cam track, substantially as $\frac{1}{16}$ and $\frac{1}{16}$ are the construction and arrangement of the pivoted spring gate at the end of the horizontal groove or cam track, substantially as

ale at the end of the horizontal groove of the state of the horizontal groove of the state of the horizontal groove of the state of the horizontal groups and the stale, Y, for the purpose set forth.

Twelfth, The construction and arrangement of the open-slotted adustable pole plate, N p, as described and for the purpose set forth.

36,844.—T. J. McGowan, of Cincinnati, Ohio, for Improvement in Pumps:
I claim providing the pump bucket, D, or any suitable part connected therewith, and the lewer valve guard, I, or any part attached to it, with screws, or their equivalents, arranged in such a manner that all the working parts of the pump may, by a simple manipulation, be connected together, and simultaneously withdrawn from the pump cylinder, A, and also adjusted therein, substantially as and for the purpose herein specified.

This invention relates to an improvement in the ordinary reciprocating pump, and consists in constructing and arranging the working parts thereof, namely, the bucket, valves and lower valve seat, in such a manner that they may all, when necessary, be readily withdrawn from the pump cylinder at one operation or simultaneously, without listurbing or moving the pump cylinder, thereby rendering the labor of repairing comparatively light and inexpensive.]

36,845.—Isaac A. Ketcham, of Brooklyn, N. Y., for Improved Mode of Operating Submarine or Floating Batteries:

I claim the combination of a battery or connected series of explosive shells, D, and endless cable, B, for confining and adjusting them in position, and a buoyant attachment, F G, for effecting their explosion by the action of a passing vessel with the bnoyant indicator, H, the whole being constructed and arranged to operate in the manner and for the purposes specified.

[The subject of this invention is a device by means of which are in the manner of the subject of this invention is a device by means of which are in the manner of the subject of this invention is a device by means of which are interested and subject of this invention is a device by means of which are interested and subject of this invention is a device by means of which are interested and subject of this invention is a device by means of which are interested and subject of the subject of the

[The subject of this invention is a device by means of which a suberged battery or any number of explosive shells may be advanced from a vessel or fortification and adjusted to a suitable position to be exploded at the time of the passage of an enemy's ship, either by the notion of the said ship or by means of a connection with the vessel or fortification from which the battery is thrown out.]

36,846.—T. J. Kindleberger, of Springfield, Ohio, for Improvement in Water Wheels:

I claim, first, The wheel, B, placed within the cylinder, A, and composed of a plurality of parts, a a' a'', three, more or less, provided with buckets, D, formed of an inner tangential and inclined portion, c, and a horizontal and radial outer portion, d, in connection with the chutes, F, andcylindrical gate, G, all arranged substantially as and for the purpose specified.

Second, The arms g, connected to the gate by rods, f, said arms

resting or bearing on the curved inclined ways, j, on the top of the cylinder, A, and the arms, g, turned upon the inclined ways, j, by means of the arm, m, attached to the shait, n, and link, l, substantially as described.

[This invention relates to an improved horizontal water wheel of

that class in which the water is discharged at the center, generally termed center-vent wheels. The invention consists in the employment of a plurality of wheels placed one over the other on the same sheft and provided with buckets, the outer portions of which have a radial position in the wheel, and the other portion an oblique or tangential and inclined position. The wheels are placed within a cylinder provided with chutes, and a cylindrical gate is placed between the chutes and the wheels, all being arranged in such a manner that a large percentage of the power of the water is obtained when the wheel is working at its maximum, and less power obtained than the maximum, when required, without extending any more than a cor responding decrease of water 1

36,847.—S. J. Maddock, of Cincinnati, Ohio, for Improve ment in Braiding Guides for Sewing Machines:

I claim a braid guide for sewing machines, composed of an adjustable double gage. F, and a plate, A, a, having an atlached arm, B; al constructed and operating together as herein shown and described fo the purpose set forth.

[This invention consists in a guide adapted to the sewing on of braid or other fabric of similar character, its principal feature being a flat double gage, through which the braid or other material passes, and which is adjustable for different widths of braid.]

and which is adjustable for different widths of braid.]

36,848.—Samuel Johnston, of Buffalo, N. Y., for Improvement in Corn Harvesters:
I claim, first, The combination of the two gatherers, constructed as described, with the cutting apparatus and the receiver, with inclined sides, substantially as and for the purpose set forth.

Second, The construction and arrangement of the two inclined oblique wings of a corn harvester, as herein described.

Third, Imparting a swinging outward and upward movement to the movable section of the receiver as it opens to discharge the corn, and a swinging upward and inward motion thereto as it closes, substantially as set forth.

Fourth, The special means set forth for producing said motions of the movable section of the receiver.

Fifth, In the organization of a corn harvester, substantially as described, to be operated by the gearing of a grain harvester machine, I claim extending the finger beam and knife rod, without guard fingers or knives on the extended poptrion, beyond the inner wing of the corn harvester, so that it may be practically attached to the supporting and driving mechanism of the grain harvester frame, and when thus attached its finger beam and knife rod shall be sustained by the inner shoe of the grain harvester, and its mechanism for operating the movable section of the corn receiver shall be in position to be operated by the driver, substantially as herein described.

36,849.—J. C. McKee, of Urbana, Ill., for Improved Evap-

erated by the driver, substantially as herein described.

36,849.—J. C. McKee, of Urbana, Ill., for Improved Evaporator for Saccharine Liquids:

I claim, first, The evaporator, F. constructed with a helical inclined channel in combination with the furnace, A. constructed and operating substantially in the manner and for the purpose herein set forth. Second, The arrangement and combination of the heater, E, smoke pipe, D, regulating faucet, d', helical inclined channel, d, and furnace, A, all constructed and operating substantially as and for the purpose described.

described.

36,850.—S. M. Moore, of Beloit, Wis., for Improvement in Mowing Machines:

I claim the combination of the main frame driving wheel, driver's seat finger beam, drag shoes and lifting lever, when arranged for joint operation, substantially as described and for the purposes set forth. I also claim the combination of the finger beam with the shoes or runners, E F and G, having great rear projection, when arranged and operating as and for the purpose described.

operating as and for the purpose described.

36,851.—James Newnam, of London, England, for Improved Evaporator for Saccharine Juices:

I claim so applying a perforated steam pipe, E, or its equivalent within the space between the vessels, A B, and in combination with the cold water injection, H, and overtiow, I, that the steam is delivered into the said space without entering the water, and is tempered by the circulation of water, substantially as and for the purpose herein specified.

in Specimen.

36,852.—J. C. Nye, of Cincinnati, Ohio, for Improvement in Breech-loading Fire-arms:

I claim the key or gate, C, and the mode of applying the same to fire-arms, substantially as described.

arms, substantially as described.

853.—T. G. Otterson, of Millville, N. J., for Improved Fruit Jar:
a combination with a glass jar, having a rabbet around the top or the outside, I claim a glass cover shutting over on to the bet or the packing on the rabbet, substantially as described.

36.854.

36,854.—Joseph Reckendorfer, of New York City, for Improvement in Pencils:

I claim the wooden case, A, of tapering form, in combination with the rubber, C, of larger section, and the black-lead, B, of smaller section, arranged therein, substantially as and for the purpose herein described.

36,855.-W. M. Phelps, of Marshall, Mich., for Improve-

ment, in Connecting Sheet-metal for Eaves Troughs.
Ante-dated June 13, 1862:
I claim the mode of uniting the separate sheets of metal, of which combination with the lapped seam, e, of a stiffening bead, B, substantially as and for the purposes specified.

36,856.—Sarah E. Payson, of Peterborough, N. H., for Improvement in Vapor Baths:
I claim, first, The combination of a boiler, a lamp, a surrounding and supporting casing, a suitable base, and standards, D. D. for the support of the upper bed-clothes or covering, substantially as and for

support of the apper beactiones of covering, substantiarly as and for the purpose herein specified.

Second, The combination with the boiler, lamp, casing and stand-ards, of bars, H H, attached to the sides of the casing, substantially as and for the purpose herein set forth.

36,857.—George Richardson, of Springfield, Mass., for Improvement in Balance Slide Valves:

I raken, first, The combination of the valve, H, wedges, F and G, and steam chest cover, E, when severally constructed and operating substantially in the manner and for the purpose herein set forth.

Second, The combination of the sliding valve, H, having the ports, Im, situated as herein described, with the recesses, i and k, in an adjustable piece, G, when operating substantially in the manner and for the purpose herein set forth.

the purpose herein set forth.

36,858.—W. F. Rippon, of Providence, R. I., for Improvement in Explosive Projectiles for Ordnance:
I claim the combination of the mortar tube, B, central tube, F, plute. D, and plug, E, with the shell, A, and the openings therein, a a, to the manner and for the purpose herein shown and described.

Having the tube, F, provided with a spiral fuse groove, d, so arranged as to conduct the fire from chamber, s, between the tubes, B, successively across the vents, b b b, of the mortars to the powder chamber, G, and the interior of tube, F, as and for the purpose herein shown and described.

The combination of the partition, I, with the mortar tube, B, and the shell, A, thereby forming a ballast chamber, H, all as herein shown and described.

This invention relates to elongated projectiles in which are provided radial chambers or mortars from which smaller projectiles are to be discharged either during the flight of or after the striking of the first one, and it consists in a certain construction of the internal parts of such projectiles, whereby greater destructiveness is obtained. An illustration of this invention appeared on page 334, Vol. VI., of the SCIENTIFIC AMERICAN.

-Cyrus Roberts, of Three Rivers, Mich., for Im

provement in Cultivators: I claim, first, Mounting the front feet in a frame having both a lat-

eral and a vertical movement when arranged and operating substantially in the manner and for the purpose described.

Second, The combination of the front and rear lifting frames, to which the respective rows of teeth are attached, with a hand lever, substantially in the manner described for the purpose set forth.

Third, The combination of the stay-chains with the frame and feet, when arranged in relation to the joints of the lifting frames, in the manner and for the purpose specified.

Fourth, The combination of the tongue, driver's seat, and front and rear lifting frames, when arranged in relation to the wheels, substantially as herein described, for the purpose of balancing the machine, as set forth.

as set torm.

36,860.—I. D. Robinson, of Waterbury, Vt., for Improved Clothes-wringing Machine:
I claim the combination and arrangement of the lever. A, the spring, B, the screw, C, the rod, E, the leg, N, the semi-circular projection, k, and the rubber spring, H, constructed substantially as and for the purpose specified.

36,861.—H. S. Rogers, of Willow Vale, N. Y., for Improvement in Revolving Fire-arms:

I claim combining the trigger with the lever, A, by means of a togle, E' F', applied and arranged to operate substantially as herein pecified.

36,862.—William Sewell, of New York City, for Improve-

ment in Steam Pumps:
I claim the combined arrangement of the crank shaft, crank or ranks, cross-head and connecting rod or rods, substantially as and for he purpose herein specified.

The object of this invention is to combine a crank and a fig. wheel with a direct-connection steam pump in a very simple manner without materially increasing the room occupied; and it consists in a novel arrangement of the crank shaft, crank or cranks, cross ead and connecting rod or rods, whereby those results are obtained. We shall publish an illustration and description of this invention in a

36,863,—William Sewell, of New York City, for Improvement in Valves for Steam Pumps:

I claim, first, So constructing and applying the valve that its flexible portion or hinge is held at a point or in a line outside of the chamber which contains the valve, substantially as and for the purpose herein specified.

Second, The combination of the block, D, provided with dowels, dd, or their equivalents, the flange, c, and the cap, E, the whole applied in combination with the valve, C, and the opening, b, in the valve chamber, substantially as and for the purpose herein set forth.

aive cnamoer, suosianually as and for the purpose nerein set form. [This invention relates to valves composed wholly or in part of india ubber or other flexible material; it consists in a novel construction and mode of applying and securing such valves, which afford great facility for taking them out and replacing them, and which per them to open to a nearly equal width all around their seats. The vention will soon be illustrated in our paper by suitable engravings.]

36,864.—A. W. Smith, of Manchester, N. H., for Improvement in Fliers for Spinning:
I claim, first, The construction of a presser for head bobbins, by combining the spiral spring, a, the arm, b, and the hook, c, of one and the same piece of steel wire formed and arranged, substantially as described, for the purposes herein set forth.
Second, I also claim the combination of the arm, spring and hook, whether a new group pieces, when so arranged as to give the book

whether in one or more pieces, when so arranged as to give the hook, relievering finger, the vertical play necessary to lay the yarn close to the nipper and lower heads of the bobbin, as set forth.

30,865.—Joel Smith, Jr., of Allegheny City, Pa., for Improvement in Hinges for Shutters:

I claim the arrangement of the cam, g, and eccentric lever, f, when used in combination with the hinge arranged, constructed and operated substantially as herein described and for the purpose set forth.

-J. J. Starr, of Cincinnati, Ohio, for Improved Ice

Clog: claim, as an improved article of manufacture, the ice clog comed of the roughened plate, A, having oblique lips, B B', adapted to brace the shoe solejust behind its widest part, and to receive straps, V', which fasten over the instep, the whole being constructed and rating as described.

operating as described.

36,867.—J. M. H. A. Taurines, of Paris, France, for Improvement in Spring Balances:
I claim, first, The arrangement and method of constructing balance und weigh-bridges with elastic or spring-like connections, substanially in manner hereinbefore described and illustrated in the accompanying drawings.

and weigh-bridges with elastic or spring-like connections, substantially in manner hereinbefore described and illustrated in the accompanying drawings.

Second, The employment of suspension springs in pairs, in manner and for the purposes hereinbefore described and illustrated in the accompanying drawings.

Third, The employment of central springs, H, for the purpose of enabling the platform to be loaded at any part for increasing the strength and acting as a regulator, all as hereinbefore described and illustrated in the accompanying drawings.

Fourth, The employment of a lever, P, the end of which is free to move in a vertical direction, substantially in manner and for the purposes hereinbefore decribed and illustrated in the accompanying drawings.

wings.

,868.—E. A. Stevens, of Hoboken, N. J., for Improved Means of Protecting War Vessels:
claim the use of a sheathing of gum-elastic or equivalent material, plied internally or externally to the side, top or bottom of a chamor vessel containing water to be used for immersing ships, or as rotection against projectiles.

a protection against projectiles.

36,869.—E. A. Stevens, of Hoboken, N. J., for Improvement in Constructing and Arming Vessels of War: I claim, first, In combination with the means substantially as described of depressing and elevating a vessel for the purposes specified, inclined metallic armor, so applied as to be rendered more fully effective by such depression of the vessel.

Second, I claim inclined metallic armor, in combination with the air vessels or compartments, For F', substantially in the manner and for the purpose herein before described.

Third, I claim the constructing and arranging, substantially as herein described of air compartments, for the purpose of giving buoyancy and stability to a war vessel, in combination with the wessel.

Fourth, I claim the additional structure Constructed and the structure of construction of the structure of the

vessel.

Fourth, I claim the additional structure, G, constructed substantially as described, placed outside the sides of the vessels, at or near the water line, for the purpose of protecting the vessel.

Fith, I claim shotproof loading-houses on war vessels, so arranged and employed substantially as herein described, that cannon outside of them may be loaded from within them.

-Joel Stone, of Cleveland, Ohio, for Improved

30,50.—Joel Stone, of Cleveland, Ohio, for Impl Windlass: I claim the use of the two horizontal screws, G. G., constructing actuating the windlass, B., substantially as described, the whaving at its extremities a succession of pulleys or grooves, C, forth.

forth.

36,871.—T. R. Timby, of Worcester, Mass., for Improvement in Portable Warming Apparatus:

I claim the combination of the inner and outer cylindrical cases, A C, and flange, bb', with the openings, e c, and partition, D, when arranged and operating in the manner substantially as described.

The object of this invention is to obtain a light and portable warm ing apparatus for the use of persons traveling, for warming bed and for like purposes, and it consists in arranging one cylinder to be filled with hot water within another, in such a manner as to have a spac between them, which when a mild and gentle heat is desired, is filled with air; and when a greater heat or a temperature of nearly 210° is desired, is filled with boiling water.]

36,872.—T. R. Timby, of Worcester, Mass., for Improvement in Mercurial Barometers:
I claim the tube, G, arranged in line with and below the tube, F, containing the column of mercury, and combined therewith by means of the interposed elastic bottom of the cistern, in such manner as to constitute an expansion chamber in which a portion of the said bottom of the said bottom.

tom is capable of expanding, substantially as and for the purpose

em specified.

If also claim making the cistern with a cover of india-rubber, ther elastic material combined with the tube, F, and fitted with a e, d, of glass or other hard material, substantially as and for the pose herein specified.

[This invention consists in a certain construction of the mercurial barometer, which provides for the shutting up of the mercury within the tube to render it portable, and permits the expansion of the mercury so shut up and guards against the breaking of the tube. It also consists in a certain construction of and mode of applying the cover of the cistern, whereby the danger of the tube being broken at its connection with the cistern is obviated.

73.—W. H. Trissler, of Burr Oak, Mich., for Improved Stove Blacking or Polish :

I claim the combination of plumbago, or plumbago and German black-lead, with calcined plaster of Paris and alum, substantially in the manner and for the purposes herein set forth.

36,874.—Asahel Wheeler, of Newton, Mass., for Improved

Copal Varnish:

I claim as a new or improved varnish, the composition of copal, alcohol and fusel oil, combined substantially in the proportions and manner as hereinbefore set forth.

manner as hereinbefore set forth.

36,875.—James Whitaker, of Philadelphia, Pa., for Improvement in the Take-up Motion for Power Looms:

I claim in combination with the ratchet wheel and pawls of a take-up motion for power looms, any convenient number of detachable pins, x, or their equivalents, acted upon by an additional pawl or its equivalent, substantially as set forth for the purpose specified.

36,876.—William Yapp, of Cléveland, Ohio, for Improved Mode of Sustaining Gutters to Buildings:

I claim the bracket bolt, B, and tube, A, the latter passing through the gutter and closed at its outer end; in combination with the within described fastening for attaching the gutter to the house by the bolt alone, substantially as specified.

[This invention consists in a simple device for attaching gutters to the cornice or walls of a building, whereby the gutter is more easily put up and with less expense, besides being more secure and defacing the building less than when attached in the usual manner.]

36,877.—T. B. De Forest (assignor to The Shelton and Osborn Skirt Company and L. and C. H. De Forest), of Birmingham, Conn., for Improvement in Apparatus for Attaching Clasps to Hooped Skirts:

I claim the employment of a hopper or shaking table, in combination with a guide plate, K, or its equivalent, for guiding the clasps on their backs to the feeder or conductor, substantially as hereinbefore described.

on their backs to the feeder or conductor, substantiany as neremorphore described.

I also claim the employment of a feeder, I, or conductor, so constructed as to receive the clasps on their backs, and reverse their possition as they pass down or through it, substantially as and for the purpose set forth.

I also claim the moving punch, D, in combination with the finger, d, or its equivalent and the feeder, the whole so arranged that the punch cut off one clasp at a time and forms a stop to the feed, substantially as hereinbefore explained.

I also claim the combination of the moving punch or set, D, and its clasp retaining device, d, with the work-supporting die, a, substantially as described, whereby the clasps are carried to the work and inserted and secured therein, as herein before set forth.

36,878.—J. H. Butterworth (assignor to himself and Henry McFarlan), of Dover, N. J., for Improvement in Machines for Making Brace Jaws for Steam Boilers: I claim, first, The combination of the two plungers, D and E, and their respective rollers, a a and ff, arranged and operating as described, to bring the bar from the condition shown in figures 6, to that shown in figures 8 and 9.

Second, The combination of the dies, G GH and I, and the mandrels, m and n, the whole arranged and operating substantially as and for the purpose herein specified.

Third, Constructing the mandrel, n, in a forked form to allow the passage of the mandrel, m, through it substantially as herein described.

scribed. Fourth, The combination of the plungers, D E, rollers, a a f f, dies, G G H I, and mandrels, m n, the whole arranged to operate substantially as herein specified.

This machine is composed of bending mechanism, pressing and forming dies and mandrels, so combined and arranged as to take a straight bar of square iron, double it, then by a second doubling, bring it to a form from which, by the action of pressing dies and mandrels, it is brought to the form of the jaw.]

36,879.—J. N. Bird, of Trenton, N. J., assignor to H. H. Day, of New York City, for Improvement in Indiarubber Wads for Projectiles:
I claim a vulcanized india-rubber wad for ordnance and small arms, applied and operating substantially in the manner and for the purpose described.

36,880.—James Dillon (assignor to himself and J. B. Nichols), of Lynn, Mass., for Improved Channeling Tool for Soles:

I claim the channeling tool as made with the tubular and angular cutters, B C, arranged substantially in manner and so as to operate as specified.

as specimed.

36,881.—P. W. Gates (assignor to himself, Thomas Chalmers and D. R. Fraser), of Chicago, Ill., for Improvement in Evaporating Pans for Saccharine Liquids:

1 claim the steam coil evaporator with the defecating apartment, C, substantially in the manner and for the purpose described.

36,882.—'I. D. Lakin, of Hancock, N. H., assignor to himself and Charles Wilder, of Peterborough, N. H., for Improvement in Ox Yokes:
I claim, first, The arrangement of the hollow thimbles, C, made to receive the bows, and provided with flanged heads, c, in combination with the slides, B B', and slotted bar, A, substantially as and for the purpose specified.
Second, The stirrups, E F, arranged at right angles to each other, and applied in combination with the semi-circular seat, h, staple, G, and recesses, j, as and for the purposes set forth.
[This invention consists in the arrangement of an endless belt,

which is stretched on pulleys rotating on suitable pins in the middle of the yoke, in combination with slides connecting with said endless belt on opposite sides by means of suitable rods, in such a manner that the headsof the animals fastened to the yoke are free to move in alateral direction, without, however, permitting them to come in such a position that one animal has the advantage over the other in regard to the leverage.]

36,883.—J. F. Townsend, of Westfield, N. Y., assignor to himself and P. P. Pratt, of Buffalo, N. Y., for Improvement in Butt Hinges:

I claim, as a new article of manufacture, a hinge composed of the two parts, A and B, arranged and operating substantially as specified.

REISSUES.

REISSUES.

1,351.—H. S. Bartholomew, of Bristol, Conn., for Improved Ball Brace. Patented May 21, 1861:

I claim, first, A breast brace, A, the main portion of which is made from a rod of metal, substantially as set forth and for the purpose described.

Second, A breast brace, A, the main portion of which is made from a rod of metal, substantially as described, in combination with a bit holder made separate from the rod and suitably attached to it, substantially as and for the purpose set forth.

Third, A breast brace, A, with its ball made in one piece and secured upon it so as to maintain its proper position and to revolve, substantially as set forth.

1,352.—D. H. Dotterer, of Chicago, Ill. (formerly of Memphis, Tenn.), for Improvement in Journal Boxes. Patented May 7, 1861:

I claim, first, Providing in Journal boxes an endless revolving band or ring, M, substantially as and/or the purposes decribed.

Second. I claim the sheave, J, and axad pin, j, far supporting the upward thrust on the endless revolving band or ring, M, within the journal box, substantially as described.

Third, I claim the auxiliary end bearing, I, for the axle journal, substantially as described.

ustanually as described.

353.—J. C. Lefferts, of New York City, assignee of J. F. Martin and H. C. Nicholson, of Mount Washington, Ohio, for Improvement in Preserve Cans. Patented Feb. 15, 1859:

1 claim, first, A fruit or provision can, to be hermetically sealed or ghtly closed, constructed of metal, lined on the inside will a virreous day to resist the action of acids contained in the substances to be reserved.

preserved.
Second. A vitreously enameled iron provision can or jar, substantially as herein set forth.
Third, The combination of a vitreously lined metallic cover with a preserve jar, substantially as set forth.

PATENTS FOR SEVENTEEN YEARS.



The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and proveto be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to

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On filing each Caveat
On filing each application for a Patent, except for a design\$15
Onissuingeachoriginal Patent
On appeal to Commissioner of Patents\$20
On application for Re-issue
On application for Extension of Patent
On granting the Extension\$50
On filing Disclaimer
On filing application for Design, three and a half years\$10
On filing application for Design, seven years
On filing application for Design, fourteen Years\$30

The law abolishes discrimination in fees required of foreigners, ex pting reference to such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners except the Canadians, te enjoy all the privileges of our patent system (except in cases of designs

During the last sixteen years, the business of procuring Ps.tents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventor and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

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The vice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the Inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examination are made through or Branch Office, corner of F and Seventh-streets Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention is susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the nventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co-Persons who live in remote parts of the country can usually purchas draftsfrom their merchants on their New York correspondents; but, if onvenient to do so, there is but little risk in sending bank bills mail, having the letter registered by the postmaster. Address MUNN & Co., No. 37 Park-row, New York.

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mination and comparison of references, models, drawings, docu ments, dr. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left de pendentupon the final result.

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It would require many columns to detail ail the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call our extensive offices, No. 37 Park-row, New York, where any ques-ons regarding the rights of Patentees, will be cheerfully answered.

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A. B., of Conn.-Your plan of a Broadway railroad is not new. If you will turn to the back files of the Scientific American you will find the same thing illustrated. Such a plan will never be carried out; it would destroy the street.

D. E. R., of Mich. & J. H. D., of Mass.-We do not now remember the address of the parties to whom you wish to communicate. We often answer inquiries through our columns to correspondents whose letters being of no further importance, are not preserved. You could doubtless, reach the parties by inserting a short advertisement in our columns

F. A. St. P., of N. Y .- If you are convinced that your invention is capable of being successfully applied to destroy the rebel iron-clads, you should explain it to those who are in authority and who can assist you to apply it, before making it public. We have had a great number of plaus proposed to us for destroying enemy's ships some of which were plausible, others quite impracticable.

A. S., of Conn.—The sulphate of lime is employed to keep cidersweet. One quarter of an ounce of it is used for each gallon of cider. You will find the method of applying it described on page 260, Vol. V. (new series) SCIENTIFIC AMERICAN, and the reaction occur in its use are explained on page 281, same volume

W. W. D., of Mass.—There is much room for speculation respecting the forces of nature and the cause of light, but such speculations, apart from experiments and long-continued observa tions, are very unsatisfactory. It is believed that the sun has a luminous atmosphere, and that it is an incandescent body. Its lu-minous atmosphere is due to its incandescence, just as the flame of a candle is the result of burning.

H. W., of Canada.-Wood when subjected to a high heat in a vacuum becomes charred, because tit contains oxygen and hy

A. D. S., of Pa .- Experiments have been made with fall-A bullet dropped from the top of St. Paul's in London has struck one inch east of the point described by a plumb line. It occupied $4\frac{1}{4}$ seconds in its descent. This is due to the axial motion of the earth.

H. M. J., of Ohio .- Pencil marks on paper are simply portions of the black lead left by abrasion in writing, and india rubber removes these by mechanical action. You will find the cause of the falling of the mercury in a barometer before a storm described in ood book on natural philosophy.

C., of New Orleans .- The cheapest and best material for street side-walks known to us, is good Kingston stone flagging. We have seen composition pavements laid down in this city, all of which proved failures. Tin is the next bestroofing material to slate. As you desire a fire and water-proof roofing material, suit able for your climate, of course we cannot recommend an infla ble composition made of asphalt and tar.

R. C., of C. W.-You say you sent us a slip in March last cut from a British paper in reference to the cost of the Russian wan and desire us to return it, that you may paste it into your scrap-book. We should be most happy to comply with your request, but we have no such paper in our possession. You will readily see that we cannot take to preserve and return such contributions.

E. L., of N. J .- It is scarcely possible to become a good chemist at the present day, without going through a regular course of instruction, combined with study and personal experimenting. "Well's Chemistry" and "Miller's Elements of Chemistry" are good works for you to study.

Money Received

At the Scientific American Office on account of Patent Office business, from Wednesday, November 5, to November 12, 1862 :-

 J. M. R., of N. J., \$20; E. B., of Cuba, \$20; J. L. B., of R. I., \$20,
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Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or ex-

Specifications and drawings and models belonging to

Specimentons and trawings and models belonging to parties with the following initials have been forwarded to the Patent • Mice from November 5, to Wednesday, November 2, 1862:— G. G., of N. Y.; C. H. M., of N. Y.; J. R. A., of Pa.; I. C., Jr. of Ill.; J. E. S., of Maine; F. S., of N. Y.; G. C., of N. Y.; H. S. B. of La. (2 cases); M. L. G., of Wis.; G. G., of N. J.; A. L., of N. Y.; R. H. W., of N. Y.; J. A. De B., of N. Y.; M. H. F., of N. Y.; N. & D., of N. Y.; S. L., Jr., of N. Y.; D. D. F., of N. Y.

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