

WEEKLY SUMMARY OF INVENTIONS.

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

FRENCH YOKE SHIRT.

This invention relates to a novel form of that portion of the shirt which is technically termed the yoke, whereby the shirt is made to fit the wearer far better than those made in the ordinary way, and the shirt also allowed to conform to the motion and position of the body far better than usual. By this mode of manufacture a good fit, so difficult hitherto to obtain, may be procured without difficulty. This is the invention of L. S. Ballou, Jr., shirt manufacturer, No. 409 Broadway, New York.

PLATFORM SCALES.

This invention relates, first, to an improvement in the scale beam; second, to a mode of hanging the platform and applying the same to the levers which form a connection between it and the beam. The object of the invention is to enable the platform to adjust itself properly to the levers on which it rests, also to make suitable provision against difficulties attending the winding or twisting of the platform timbers, and to facilitate the movement or adjustment of the weight on the beam and the noting of the weight of articles counterpoised on the platform. This is the invention of R. F. Wolcott, of Claremont, N. H.

FLOUR-PACKER.

The object of this invention is to obtain a device whereby flour, meal, or other similar substances that are packed in receptacles, may be packed therein in equal quantities, or very nearly so, so that each receptacle will be supplied with a certain requisite weight of the material packed. In the machines hitherto employed for this purpose, the only guide in packing the requisite amount of material in the receptacles has been the size of the latter, and as barrels will vary considerably in dimensions even when carefully made with a view to uniformity in that respect, and as sacks will stretch and expand considerably, a great deal of time is consumed in weighing and adjusting the proper quantity of material in each receptacle after it is packed. This difficulty is obviated by packing the material within a cylinder or measure attached to the machine, and forcing the material, when packed, from said cylinder or measure into the receptacle prepared to receive it, thereby insuring a uniform supply for each receptacle, or very nearly so; the difference being so trifling that the weight can be made correct after packing, with but very little trouble or delay. The inventor is Joseph Bartholomew, of Union, N. Y.

EMBOSSING AND FINISHING WOVEN FABRICS.

W. Ralston, of Manchester, England, has a plan for ornamenting woven fabrics, which is explained by the following extract from the specification:—"I employ a roller of metal, wood, or other suitable material, and groove, flute, engrave, mill, or otherwise indent upon it any desired design, and cause it to revolve with a bowl or bowls of paper, or other substance, and by means of gearing well known to mechanics, I give the circumference of the pattern roller a quicker motion than the circumference of one of the bowls, so as to obtain a frictional action upon the surface of the fabric as well as pressure, so that, if the fabric is moved transversely when fed to the machine, an indefinite number of watering patterns may be given to the fabric at one operation or passage; but if two operations be given, moiré antique or other varieties may be obtained, which can be still further varied, as desired, according to the number of times the fabric is allowed to pass through the machine."

SAW ADJUSTMENT.

This invention consists in interposing between the fixed collar of the saw shaft and the saw, a ring of copper or other suitable metal, and then locking the saw upon the shaft by a loose collar and nut in the usual manner of hanging saws of this description. The inventor is John Colville, of Wilmington, N. C.

MODE OF MANUFACTURING PULLEYS.

The object of this invention is to facilitate and expedite the manufacture of cast metal shieves or pulleys, such as are used for window sash ropes and similar purposes, by casting the pintle or axis of the wheel or roller simultaneously with the casting of the shell, so as to avoid the usual manipulation or labor attending the fitting of the wheel or roller within the shell after the latter

is cast. The invention consists in having the wheel or roller inclosed within the cone of the shell and having the eye of the wheel open, so that, in casting the shell, the melted metal will pass through the eye and form the pintle or axis of the wheel, which is allowed to turn freely thereon when the sand portion of the cone is removed. The inventor is John A. Evarts, of West Meriden, Conn.

DISTILLING APPARATUS FOR COAL, &C.

The object of this invention is to save the gas which is now wasted in the manufacture of coal oil, because the gas which is generated in the coal oil retorts (notwithstanding the much lower temperature necessary to convert the coal into oil than to convert it into gas) has not the pressure necessary to make the same useful for illuminating purposes, and if this pressure is given to it in the ordinary way, the quantity of oil obtained from the coal is diminished. This invention consists in drawing the gas from the oil retort by means of a pump, and in forcing the same through a gas retort in which it is exposed to the influence of better gas obtained by heating resin, pitch or some other bituminous substance in said gas retort, and at the same time the necessary pressure is imparted to the gas by said pump, which is of particular construction, so as to regulate the flow of the gas. This apparatus is the invention of H. K. Symmes, of Newton, Mass., and one half is assigned to R. W. Holman, of the same place.

MACHINE FOR POLISHING RICE.

Amongst the various machines for this purpose which have come to our notice, this seems to be the simplest and most effective. The grain is operated on by a series of adjustable scouring disks, and it is fed to the same by particularly arranged conductors in the interior of a wire-cloth cylinder, so that each grain is acted on thoroughly before it is allowed to escape from the wire cloth cylinder or bolt. By combining a series of these conductors and scouring disks with bolts of different fineness, the flour, the chips, the broken rice and the whole grains may be separated. This machine is the invention of Charles E. Rowan, of this city.

SEWING-MACHINE.

The object of this invention is to adapt the sewing-machine to quilting or other similar work, where the cloth or material to be sewed remains stationary. The machine is propelled on the surface of the cloth by means of the needle, which is made of such a form that the same in going down, and, as soon as the looper is withdrawn from the cloth, gives to the machine the required motion. Both the needle and the looper pass through the cloth in inclined directions, and they are operated by means of grooves and guide-pins in such a manner that the holes made by the same are not increased as they are withdrawn from the cloth. This sewing-machine is the invention of Henry Hudson, of Three Springs, Pa.

PROJECTILES FOR RIFLED ORDNANCE.

J. W. Cochran, of New York City, has an improvement which relates to the application to the exterior of a projectile (shot or shell) for rifled ordnance, of a shirt or case of soft metal, to be expanded by the admission to its interior of the gases eliminated by the explosion of the gunpowder when the gun is fired, and thereby caused to enter the rifle grooves of the gun and so to receive and give to the projectile a rotary motion. This improvement consists in so constructing the shirt or case and the projectile to which it is applied, and so combining them, that the passages for the gas to expand the shirt or case are formed between the projectile and the shirt or case, and with their entrances in the shirt or case itself, without perforating and thereby weakening the projectile, and that the shirt or case may be carried separate from the projectile, and thereby, in a great measure, prevented from being bruised or otherwise injured in transportation, but may be put on instantaneously by the gunner preparatory to the insertion of the projectile in the gun.

RAILROAD RAILS.

During the last half century, the subject of railroad improvements has much occupied the minds of inventors, and many decided benefits have resulted from the practical application of their ingenuity; but the improvement in the construction of rails just patented by G. W. R. Bayley, of Brashear, La., possesses marked advantages over all preceding inventions of the above class, inasmuch as it combines both lightness and strength in a greater degree, and at the same time is a reversible

rail. The invention consists in the combination of the double-head with the flat-footed rail; it being flat-footed one side and double-headed—so far as the wheel tread is concerned—on the other. The neck or stem of the rail is placed on one side of the center line of the tables, so that, when the rail is laid down upon the cross ties, the thin edge to the rail head at the rail base is inside, and outside at the rail tread, forming a Z-rail, which is reversible. Thus, the weight of the rolling load will be brought immediately over the rail stem—a desideratum never before attained with the same lightness and strength combined.

SLIDE VALVES.

This invention consists in the employment, for the induction, cutting-off and eduction of the steam in a steam-engine, of two slide valves, working one inside of the other and upon the same seat, in such a manner that the outer one constitutes an induction valve and variable cut-off, and the inner one, which is driven by the other one but makes a shorter stroke, constitutes the eduction valve, and provides for a free exhaust throughout nearly the whole stroke of the piston. The object of the invention is to obviate the difficulty heretofore experienced of providing for a free exhaust, when the main slide valve is used both as an induction valve and a cut-off. This is the invention of Nathan Cope, of Cincinnati, Ohio.

FOREIGN SUMMARY—NEWS AND MARKETS.

One of the new steam frigates, called the *Orlando*, belonging to the British navy, was built, it is stated, after the model of the *Niagara*—our largest American frigate. It seems, however, that there has been something decidedly wrong about the construction of her machinery and the operation of the screw, as she vibrates, while running, in a most awful manner. Her engines are very powerful, and on her first trial trip she attained an average speed of 13 knots per hour, which was much below what her engines warranted all in expecting. It was then suggested that the corners of her screw blades be cut off, as such a course had resulted in an increase of speed, and a more steady motion, in the case of the *Mersey*, another steam frigate. This was done, and two pieces, five feet four inches long were cut off, the pitch reduced, and another trial trip made. There was a slight change experienced in the steadiness of the vessel, but the vibration was still very great, and the rigging shook so violently that it was dangerous for seamen engaged on it. Instead, however, of increasing the speed, it had been decreased, to the surprise of every person on board, although the engines worked up to 4,200 horsepower. The *Orlando* was now trimmed in her load, bringing two heavy guns from her stern to the fore-castle, so as to have the draft 21 feet 2 inches, at the bow, and 22 feet 5 inches at the stern, and another trip was made. The vibration was now found to have slightly decreased, and the speed somewhat increased; still, as a whole, the frigate is held to be very defective in operation, without the engineers and builders being able to tell exactly why this should be so.

Sir John Bowring has made a tour of the English manufacturing districts and delivered several interesting addresses to the people. He stated that the recent census of China had shown that it contained a population of 412,000,000 inhabitants, and that the arts in that empire were in a very advanced state when England was in a state of barbarism. Why had not China kept in advance of England? One reason why the Chinese are stationary is their books, which are almost worthless in regard to teaching. The wisdom of one generation is not added to another, the people always walk in the old paths, they care nothing for the future, little for the present, but worship the past. They do not want to be wiser than their ancestors; hence they never progress, but remain in a fixed forlorn condition. They have one system, however, which, he thought, exhibited more wisdom than was to be found in England, namely, a decimal currency. He never knew a Chinese to make a mistake in an account, and they had more sense than to divide by 4, 12, and 20, as is done in English currency. One great and grand method of government examination of scholars took place every year at Canton. Thousands competed for prizes, from all parts of the country, and men of all ages, from 20 to 70 years, were candidates; neither age nor condition of life debarred competitors.

The city of Manchester, England, has reduced the price of its gas from 5s. 6d. to 4s. 6d. per 1,000 cubic feet. The profits of the company, last year, were 30 per cent. In several other towns there has been a reduction in the same ratio.

In a letter to the London Engineer, Mr. F. Braithwaite states that during experiments with two heavy freight engines, passing over a bridge, the deflection was 2 1/2 inches at the center, whether the engines were running fast or slow. The editor of the Engineer states that the amount of deflection by trains running fast and slow over a bridge depends upon its form. The deflection is greater with a passing than a stationary load, when the bridge is level; when it is cambered, the deflection is greater with a stationary than with a passing load.

We omit our usual table of metal prices this week, as there have been no changes in the prices worth noticing.

New York Markets.

COAL.—Anthracite, \$4.50; Liverpool orrel, \$9; cannel, \$1.50. COPPER.—Refined ingots, 23 1/2c. per lb.; sheathing, 26c.; Taunton yellow metal, 20. CORDAGE.—Manilla, American made, 8 3/4c. per lb.; Rope, Russia hemp, 11 to 11 1/2. COTTON.—Ordinary, 8 1/2c. a 9c.; good ordinary, 9 1/2c. a 10c.; middling, 11 1/2c. a 12 1/2c.; good middling, 12 1/2c. a 12 3/4c.; middling fair, 12 3/4c. a 13 1/2c. DOMESTIC GOODS.—Shirtings, bleached, 26 a 32 inch per yard 6c. a 8c.; shirtings, brown, 30 inch per yard, c. a 7 1/2c.; shirtings, bleached, 30 a 34 inch per yard, 7 a 8 1/2c.; sheetings, brown, 36 a 37 inch per yard 5 1/2c. a 8 1/2c.; sheetings bleached, 36 inch per yard, 7 1/2c. a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 30 inch per yard 8 1/2c. a 10c.; cloths, all wool, \$1.50 a \$2.50; cloths, cotton warp, 50c. a \$1.37; cassimeres, 85c. a \$1.37 1/2; satinets, 30c. a 60c.; flannels, 15c. a 30c.; Canton flannels, brown, 8 1/2c. a 13c. FLOUR.—State extra brands, \$4 1/2 a \$4.95; State, superfine brands, \$1.75 a \$1.80; Ohio fair extra, \$3.55 a \$5.60; Ohio common brands, \$4.90 a \$5; Michigan, Wisconsin, Indiana, &c., \$5 a \$5.40; Genesee, extra brands, \$5.50 a \$7; Missouri, \$4.90 a \$7; Canada, \$5.30 a \$6.30; Richmond, city \$5.50 a \$7.25; Richmond, country, \$5 a \$5.25; Rye, fine, \$3.60 a \$3.75; Corn meal, Jersey, \$4.06 a \$4.10. HEMP.—American undressed, \$1.40 a \$1.50; dressed, from \$1.90 a \$2.10. Jute, \$80 a \$85. Italian, \$275. Russian clean, \$200 per tun. Manilla, 6 1/2c. per lb.

INDIA-RUBBER.—Para, fine, 65c. per lb.; East India, 45c. a 52c. INDIGO.—Bengal, \$1 a \$1.50 per lb.; Madras, 75c. a 95c.; Manilla, 60c. a \$1.15; Guatemala, \$1 a \$1.15. IRON.—Pig, Scotch, per tun, \$32.50 a \$24; Bar, Swedes, ordinary sizes, \$37 \$30; Bar, English, common, \$43 a \$44; Sheet, Russia, first quality, per lb., 11 1/2c. a 11 3/4c.; Sheet, English, single, double and treble, 3 1/2-16c. a 3 3/4c.; Anthracite pig, \$24 per tun.

IVORY.—Per lb., \$1.25 a \$1.80. LATH.—Eastern, per M., \$1.95. LEAD.—Galena, \$5.70 per 100 lbs.; German and English refined, \$3.55 a \$5.60; bar, sheet and pipe, 6c. a 6 1/2c. per lb.

LEATHER.—Oak slaughter, light, 31c. a 32c. per lb.; Oak, medium, 31c. a 33c.; Oak, heavy, 30c. a 31c.; Oak, Ohio 29c. a 31c.; Hemlock, heavy, California, 20 1/2c. a 21 1/2c.; Hemlock, buff, 15c. a 18c.; Cordovan, 60c. a 60c.; Morocco, per dozen, \$18 to \$20; Patent enameled, 16c. a 17c. per foot, light Sheep, morocco finish, \$7.50 a \$4.50 per dozen; Calf-skins, oak, 57c. a 60c.; Hemlock, 56c. a 60c.; Belt-ing, oak, 32c. a 34c.; Hemlock, 29c. a 31c.

LUMBER.—Timber, white pine, per M feet, \$17.50; Timber, yellow pine, \$35 a \$36; Timber, oak, \$18 a \$28; Timber, eastern pine and spruce, 18 a \$15; White Pine, clear, \$35 a \$40; White Pine, select, \$35 a \$30; White Pine, box, \$14 a \$18; White Pine, flooring, 1 1/2 inch dressed, tongued and grooved, \$24.50 a \$25; Yellow Pine, flooring, 1 1/2 inch, dressed, tongued and grooved, \$29 a \$32; White Pine, Albany boards, dressed, tongued and grooved, \$30 a \$31; Black Walnut, good, \$45; Black Walnut, 2d quality, \$30; Cherry, good, \$45; White Wood, chair plank, \$45; White Wood, 1 inch, \$23 a \$25; Spruce Flooring, 1 1/2 inch, dressed, tongued and grooved, each, 22c. a 24c.; Spruce Boards, 1 1/2c. a 17c.; Hemlock Boards, 12 1/2c. a 14c.; Hemlock wall strips, 16c. a 11c.; Shingles, cedar, per M, \$38 a \$35; Shingles, cypress, \$12 a \$25; Staves, V. O. pipe, light, \$55 a \$58; Staves, white oak, pipe, heavy, \$75 a \$80; Staves, white oak, pipe, culls, \$30 a \$35; Staves, do. lhd., heavy, \$70; Staves, do. bbl. light, \$30 a \$35; Staves, do. bbl. c. lls, \$30; Mahogany—Duty, 8 per cent. ad. val.—St. Domingo, fine crotches, per foot, 55c. a 45c.; St. Domingo, ordinary do., 20c. a 25c.; Honduras, fine, 12 1/2c. a 15c.; Mexican, 13c. a 15c.

NAILS.—Cut at 3c. a 3 1/2c. per lb. American clinch sell in lots, as wanted, at 5c. a 6c.; wrought foreign, 3 1/2c. a 3 3/4c.; American horse-shoe, 14 1/2c.

OILS.—Linseed, city made, 57c. per gallon; linseed, English, 57c.; whale, bleached winter, 58c. a 60c.; whale, bleached Fall, 55c.; sperm, crude, \$1.35; sperm, unbleached winter, \$1.40; sperm, unbleached Fall, \$1.35; lard oil, No. 1 winter, 90c. a 95c.; refined rosin, 30c. a 40c.; camphine, 47c. a 49c.; fluid, 54c. a 56c.

PAINTS.—Litharge, American, 7c. per lb.; lead, red, American, 7c.; lead, white, American, pure, in oil, 8c.; lead, white, American, pure, dry, 7 1/2c.; zinc, white, American, dry, No. 1, 5c.; zinc, white, French, dry, 7 1/2c.; zinc, white, French, in oil, 9 1/2c.; ochre, ground in oil, 4c. a 6c.; Spanish brown, ground in oil, 4c.; Paris white, American, 7c. a 9c. per 100 lbs.; vermilion, Chinese, \$1.12 1/2 a \$1.22; Venetian red, N. C., \$1.75 a \$2.12 1/2 per cwt.; chalk, cash, \$4.75 per tun.

PLASTER-OF-PARIS.—Blue Nova Scotia, \$2.75 a \$2.87 1/2 per tun; white Nova Scotia, \$3; calcined, \$1.20 per bbl.

RESIN.—Common, \$1.55 per 310 lbs.; strained, No. 2, &c., \$1.60 a \$2; No. 1, per 280 lbs. \$2 a \$3.25; white, \$3.50 a \$4; pale, \$4.50 a \$5.50.

SPELTER plates, 5c. a 5 1/2c. per lb. STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5 1/2c.; American blister, 4 1/2c. a 5 1/2c.

TALLOW.—American prime, 11c. per lb. TIN.—Banca, 52 1/2c. a 52c.; Straits, 50 1/2c.; plates, \$7.25 a \$9.60 per box.

TURPENTINE.—Crude, \$3.82 1/2 per 250 lbs.; spirits, turpentine, 46c. per gallon.

Wool.—American, Saxony fleece, 50c. a 55c. per lb.; American full blood merino, 46c. a 48c.; extra, pulled, 45c. a 50c.; superfine, pulled, 37c. a 41c.; California, fine, unwashed, 24c. a 32c.; California, common, unwashed, 10c. a 18c.; Mexican, unwashed, 11c. a 14c.

ZINC.—Sheets, 7 1/2c. a 7 3/4c. per lb. The foregoing rates indicate the state of the New York markets up to November 3.

The demand for cotton has been more active last week. With the excellent crop of the present season it is expected that the cotton manufacturers will do a most thriving business. The dry goods market has also slightly improved, which is a good indication, yet there are many complaints in regard to the limited amount of business which was done during the month of October. A very large export of heavy domestic goods for China took place during the week, and drillings, for export to Cuba, Africa and other places, are in good request.

There has been a very good demand for flour; the stock on hand in this city, however, is heavy and increasing. This is caused by the expectation of northern navigation being stopped at an early date.

American hemp has slightly improved in price; and, were it as carefully selected and treated as the Italian and Russian, it would bring as good prices. At present, it sells for just about one-half the price of the foreign. This is a question for our hemp-growers.

Honey is an article of considerable importance in our market, and the whole supply might be raised at home; but we depend for at least one-half of the quantity used upon Cuba and St. Domingo.

India-rubber still ranges very high in price; the fine quality being from 65c. to 70c. per lb. As the manufacture of india-rubber goods is now carried on extensively in our country, a rise in prices must be the result of the high price of raw material.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING NOVEMBER 1, 1859. [Reported Officially for the SCIENTIFIC AMERICAN.]

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

25,936.—E. R. Arnold, of Providence, R. I., for an Improvement in Cut-off Valves of Steam-engines: I claim, first, Making the tappet, C, Fig. 4, and the ends of the jointed valve rods, D D', Fig. 3, inclined in a direction at right angles to their lines of motion, and combining and arranging them substantially as set forth.

25,937.—L. S. Ballou, Jr., of New York City, for an Improvement in Shirts: I claim a shirt, formed by having its yoke made of two pointed projections, c, c, extending down from the shoulders, or inclined front ends, a, of the yoke, on the shoulder blades of the wearer, in such a manner as to leave a recess, d, between the projections, which recess extends upward nearly to the neckband, substantially as and for the purpose set forth.

25,938.—H. A. Barnes, of Milwaukee, Wis., for an Improvement in Railroad Car Couplings: I claim the arrangement of the latch, in the draw-head, A, in combination with the cam, D, latch or hook connection, B, lever, or treadle, G, substantially in the manner and for the purpose described.

25,939.—E. F. Barnes, of Brooklyn, N. Y., for an Improved Method of Protecting Telegraphic Instruments against Atmospheric Electricity: I claim the application and use in a telegraphic line, or in connection with telegraphic instruments of a vessel, A, containing acidulated water, or fluid, as described, and having a platinum or other metallic wire, B, of better conductivity than the contents of such vessel passing through such vessel, and connecting by one end with the main wire, and by the other with the telegraphic machine, the whole arranged substantially as and for the purposes set forth.

25,940.—J. Bartholomew, of Union, N. Y., for an Improvement in Machines for Packing Flour in Barrels: I claim, first, The combination with the packing screw, or its equivalent, of a cylinder or its equivalent, so that the flour will be first packed within the said cylinder, or its equivalent, and then discharged therefrom, in a packed state into a bag, barrel, or other receptacle, as set forth.

25,941.—R. L. Bate and James Caulkins, of Adrian, Mich., for an Improved Coffee-roaster: We claim the combination of the stationary cylindrical chamber, revolving skeleton stirrer, and outer vertical cylindrical casing, all constructed in the manner and for the purposes set forth.

25,942.—G. W. R. Bayley, of Brashear, La., for an Improvement in Rails for Railroads: I claim the reversible Z rail for railways, that is to say, I claim the rail with its stem placed inside of the vertical center of its head outside of the vertical center of its base, with the inner and outer portions of its head and of its base of different thickness and form, with its head and its base similar in transverse section as to outline, though reversed as to relative position and connection to the rail stem; the stem being nearest to the inside thick lip of the rail head, and to the outside thick lip of the rail base, while the thin lip of the rail base is inside, and the thin lip of the rail head is outside, substantially as described and specified.

25,943.—Benjamin G. Beadle, of Memphis, Tenn., for an Improvement in Cotton Gins: I claim, first, Unting the knuckles, or projections, b, on the ribs, by a back or brace c, extending through the series, for the purpose of strength, and for keeping them in proper position, substantially as set forth.

25,944.—T. G. Beecher, of Beaver Dam, N. Y., for an Improved Farm Fence: I claim my improved method of construction, as shown, namely, combining with the posts, A, arranged as described, the rails, B, made removable and replaceable by means of the locking device, e f g, substantially as specified.

25,945.—W. H. Bitzer, of Muscatine, Iowa, for an Improved Arrangement of Devices in Shingle Machines: I claim the arrangement of the frame, Q, and planer, R, upon the self-adjusting swinging-bar, P, and the combination of the parts thus arranged with the pivoted lever, U, and reciprocating carriage, F, as and for the purpose shown and described.

[This coffee-roaster economizes heat in roasting, and condenses all the smoke arising from the coffee during the operation, while it prevents the disagreeable odor from escaping into the room.]

[This invention relates to an improvement in that class of shingle machines in which the shingles are cut in taper form from the bolt by a circular saw, and at the same time planed at one side. The invention consists in the employment or use of a reciprocating bolt carriage, rotary planer and circular saw, whereby the desired work may be performed by a very simple mechanism, one readily manipulated and kept in proper working order.]

25,946.—Wm. G. Budlong, of Hartford, Conn., for an Improvement in Sewing-machines: I claim the combination of the adjustable groove segment, with the looper bar, J, fitted loosely therein, feeder arrangement, P, Q, R, operating rod, X, having cams, 1, 2, 3, secured thereto, and connected by arms, c d e, the whole being arranged and operating substantially in the manner as and for the purpose described.

25,947.—S. F. Burdett, of Keokuk, Iowa, and Henry Still, of Leavenworth City, K. T., for an Improved Scale for Cutting Boots and Shoes: We claim, first, The lines of average ankle, heel, instep, and ball measures, running from the point "A" (in Fig. 1 "A") or any other given point that will produce the same result, with the lines of increase and decrease intersecting them at such an angle, and at such a distance from each other as will produce the purpose set forth.

Second, We claim the device of so arranging the heel and instep measures, as in the Figs. No. 1 B, and No. 2 B, that any required size of said heel and instep may be marked out one stroke with or without the combination of the crossed measures of the same.

Third, We claim the one-third of an inch increase and decrease of average heel measures upon the different lengths of lasts, or such portions of an inch as will produce the same effect, substantially as set forth.

25,948.—Levi Burnell, of Milwaukee, Wis., for an Improvement in Water-meters: I claim the arrangement of the hollow arbor, B, with a narrow slot, in combination with the lips, h, formed by the inner edges of the buckets, D, substantially as and for the purpose specified.

[This invention relates to that class of water-meters in which a bucket wheel is employed, which is caused to rotate by the gravity of the water as it enters one of the buckets after the other. The water enters the buckets through a narrow slot in the arbor around which the bucket wheel rotates, and the inner edges of the buckets form lips which cut off the water from each bucket as soon as the same is filled, and cause the stream to pass into the next succeeding bucket. Each bucket is caused to fill to the exact height by means of a counterpoise, whereby the water is measured correctly and also weighed at the same time.]

25,949.—Robt. H. Champlin, of East Greenwich, R. I., for an Improved Washing-machine: I claim the combination of the rounds or slats and springs with the cylinder, when constructed and operating substantially as described.

25,950.—Edw. C. Clay, of Malden, Mass., for an Improved Electro-magnetic Burglar's Alarm: I claim the combination in an electric burglar's alarm of a galvanometer, with a resistance coil and an automatic switch, for the purpose of indicating the point where a burglar is attempting to effect an entrance, substantially as described.

I claim, also, the combination in an electric burglar's alarm of a galvanometer and a bell, with suitable mechanism to ring it, for the purpose of simultaneously giving an alarm and of indicating the place of attack.

I claim, also, the use in a burglar alarm of a regulating coil, in combination with the resistance coils, substantially as described, for the purpose of maintaining a constant relation between the strength of the current, and the varying resistance of the circuit, when the respective resistance coils are included.

25,951.—J. W. Cochran, of New York City, for an Improvement in Projectiles for Ordnance: I claim constructing and combining the body of the projectile and its shirt or case of soft metal, substantially as described, to wit, so that the passages for the gases of the exploded powder are formed partly in the body of the projectile, and partly in the shirt or case with their entrances in the shirt or case, without perforating the body of the projectile, and that the shirt can be carried separately from the body, and slipped on when required for use in such manner as to remain secured thereon during the flight of the projectile, as set forth.

25,952.—Nathan Cope, of Cincinnati, Ohio, for an Improvement in Slide Valves of Steam-engines: I claim the combination with the valves, B, C, of the grooves, g g, and notches, h h, as and for the purposes set forth.

25,953.—Thomas Crossley, of Rockville, Conn., for an Improvement in Electrotype Printing-blocks: I claim an electrotype printing-block for printing fibrous and textile fabrics which is prepared from a mold formed of at least three different lengths of type, as represented at c d e, so as to have a highly-raised printing-face composed of metal margins surrounding a felt or other equivalent ductile or plastic substance, to lift and carry the color, substantially as represented.

25,954.—Bradford Dean, of Clayville, N. Y., for an Improved Meat-slicer: I claim the arrangement of the knives, I and I', knives, D and D', and the adjustable guide, B, as shown and described, substantially as and for the purpose specified.