RECENT AMERICAN 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:—

KALEIDOSCOPE.

Since the invention of the kaleidoscope, manifold experiments have been made to turn these neat and entertaining instruments to a useful purpose, and not without success, for it has recently been found that by the aid of a kaleidoscope, beautiful patterns for embroidery or for painting or for engraving, &c., can be produced. The manner in which this is effected is as follows: a small picture of a flower or a piece of lace, or anything which may be found to serve the purpose, is placed under the keleidoscope, and the picture produced by the same is copied by the aid of a photograpic camera. The success of tbis operation depends in a great measure upon the angle of the kaleidoscopic mirrors, and it sometimes happens, that by placing the mirrors at a certain angle, the picture which is produced, gives no satisfaction at all, whereas, if the angle can be changed, and made either larger or smaller, the most satisfactory result is obtained. For this reason, the kaleidoscope which forms the object of this invention, is arranged in such a manner that the same contains a number of mirrors placed at different angles, or that the angle of the mirrors can be changed at the will of the operator, so that the angle of the mirrors can be adapted to the picture to be produced, or that several different pictures can be produced with the same iustrument. The credit of this invention is due to Messrs. A. C. McNulty and D. Lyman, Jr., both of this city.

BALANCE SPRINGS OF WATCHES, &C.

The object of this invention is to provide in a better manner than has heretofore been done, for the adjustment of the balance spring to obtain for it the isochronal condition or property upon which the correct performance of a watch or chronometer is so much dependent. The isochronism of the balance spring is that condition or property which causes all the vibrations of the balance, whether they be long or short, to be produced in the same length of time. This property of the spring is usually obtained by making the spring of some particular length, which cannot be known at first, but is found by repeated trials of different lengths with every spring, which mode of operation is extremely tedious, vexatious and uncertain. It is sometimes obtained by compressing or enlarging the several coils which compose the springs; but this method is objectionable inasmuch as it has a tendency to destroy the regularity and uniformity of the volume of the spring, and is apt to leave it in a cramped and unnatural form. This invention consists in forming at that end of the balance spring which is secured to the fixed stud a coil making at least one full turn around the axis of the balance but not forming a regular continuation of the coil of the volume of the spring, by which construction the spring is made to present a definite adjustable portion where alterations may be made to obtain the isochronal condition without altering its length or disturbing the regularity of the main volume of the spring. This improvement was designed by G. P. Reed, of Roxbury, Mass.

TYPE-SETTING.

The object of this invention is, first, to facilitate the handling of composed matter without danger of knocking it into *pi*. This is obtained by the employment for the purpose of setting up the type of a permanent column-galley, where it shall remain until distributed; and in order to more perfectly obtain this object, movable end rules and justifying rules are added, whereby greater facility in taking proofs and correcting matter is effected. The second main object of this invention is to save the time and trouble spent in justifying lines, which is accomplished by the employment of spring spaces made of steel, brass, gutta-percha, india-rubber or any other elastic material, and used in place of the ordinary solid spaces. The importance of this invention will be duly appreciated by every practical printer. This invention was patented this week by D. B. Dorsey and E. Matthers, of Fairmount, Va.

FORCE PUMP.

This invention consists in the application of a loaded truck or a weight to a pump, arranged in such a way that a great saving is effected as regards the application of power and other advantages obtained in cases where water is to be elevated a considerable hight; the usual heavy timbers, rollers, straps, bolts, under plates, &c., being dispensed with, and the pump admitting of being driven or operated with greater speed than those arranged in the ordinary way. The patentee of this invention is John Holmes, of Schuylkill, Pa.

SPORTSMAN'S SADDLE.

This invention consists in attaching to the front part of the saddle, a bar which extends outward from the saddle at either side, in such a manner that a fowling piece or rifle may be suspended thereto, the bar admitting of being turned so that it, as well as the rifle or other fire-arm, cannot serve as an obstruction in passing through underbrush. The bar may also serve as a means of supporting an umbrella when necessary. This improvement was designed by J. Commins, of Charleston, S. C.

TOOL SHARPNING MACHINE.

This inventfon consists in a machine whose principal elements are a hone carriage and a tool holder, said carriage having a reciprocating rectilinear motion in a direction parallel, or nearly so, with the edge of the tool, and a gradual or step by step movement in a transverse direction, and the tool holder being applied in a peculiar manner relatively to the said bed, so that the tool may rest upon the hone at any required inclination to the face thereof, according to the degree of bevel desired. J. C. Cooke, of Middletown, Conn., is the patentee.

The following inventions were unavoidably crowded out in our last number:—

HOT AIR FURNACE.

The object of this invention is to produce a furnace, which will take up but little room, and which with a small expenditure of fuel will heat a large quantity of air. The heat is conducted from the fire-place through pipes of a serpentine shape and put together out of several parts, each of which can be cast. These serpentine pipes when put up, form radiators of a very extended area, so that a large quantity of air is brought into contact with the heated surface of said radiators, and that a furnace is obtained which takes up little room, and which will produce a good effect with a comparatively small quantity of fuel. Each leg of the radiator can be cleaned out by a separate door. The credit of this invention is due to A. H. Bartlett, of Spuyten Duyvil, N. Y.

CALENDAR CLOCK.

The object of this invention is to produce a calendar clock, which by a simple arrangement of parts shows the number of the current year, the name of the current month, the days of the month, and the day of the week, and also the leap year, and the years between leap years by figures 1 2 3, for a period of 9,999 years, or for any desired number of years, by an addition of wheels for showing the date of the year. All the changes from long months to short ones, and *vice versa*, and long years to short ones, and *vice versa*, are produced by a double series of grooves of varying depths in the circumference of the year wheel, said grooves being so arranged that the same governs the position of the levers and pawls, which latter serve to impart an intermittent rotary motion to the year wheel and to the month wheel. The credit of this invention is due to T. F. Strode, of Nortonville, Pa.

FEEDING PAPER TO PRINTING PRESSES, &C.

With this invention the sheets of paper are carried from an adjustable table and delivered upon a paper-ruling machine, printing-press, or any machine requiring the feed of a single sheet at a time. The invention consists in combining one or more friction feed rollers with an adjustable stop, or stationary piece of rubber, and in arranging these in such a relation to the table on which the paper is held, that the rollers will carry the sheets one at a time, between the feed roller and rubber stop. The patent as now re-issued, covers broadly one or more feed rollers arranged by the side of a friction stop, as it has been found by a series of practical experiments, that one feed roller will serve the double purpose of drawing the sheets from the *pile*, and passing them to the printing press or ruling machine, with great rapidity. The patentees of this invention are G. H. and S. Ferguson, of Malden Bridge, N. Y.

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING OCTOBER 2, 1860.

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*** 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.

30,189.—J. D. Alvord, of Bridgeport, Conn., for an Improvement in Making Emery Wheels:

I claim the method described of making emery wheels, and which consists in pressing or casting the wheel upon a flanged tube, so that when the wheel contracts in drying, the central part thereof will have lateral support, and thus be prevented from cracking, and so that the wheel will become firmly attached to the tube and flanges, all as represented and described.

[This invention consists in so arranging the flanges which hold the wheel that the space between the same, when they are secured to the eye, decreases nearly all the way down to the eye, and that when they are attached to the wheel, while the substance constituting the same is yet in a plastic state, the peculiar form of the space between the flanges, allows the substance to contract without causing it to crack as it hardens.]

30,190.—John Andrews, of Elmira, N. Y., for an Improvement in Grinding Circular Saws:

I claim, first, The anti-friction rollers, E, when arranged in the manner set forth for the purpose specified.

Second, The manner of presenting the saw to the stone by means of a separate frame resting on a slide and moved by the set screw C.

30,191.—H. G. Armstrong, of Philadelphia, Pa., for an Improvement in Paper Bag Machines:

I claim, first, The employment, for severing the folded paper, of the upper and lower knives with their edges, X and Y, arranged in respect to each other, substantially as set forth, in combination with the revolving striker, k, or its equivalent.

Second, In combination with the said knives and striker, I claim the rollers U and V, for retaining the end of the folded paper during the operation of the striker.

Third, The roller, Q Q′, in combination with the blade, N, the upper roller having one or more collars, n n, so arranged in respect to openings in the blade that the action of the rollers on the folded paper cannot interfere with the said blade, as set forth.

Fourth, The horizontal rollers, K K′, and the guide blocks, J J′, arranged in respect to each other and to the blade, N, substantially as and for the purpose set forth.

Fifth, The plate, L, with its projections, l and l′, or their equivalents, arranged and operating as set forth for the purpose specified.

Sixth, Causing one edge of the paper to traverse in contact with a ratchet or notched wheel, b, arranged to revolve in a trough containing the paste as set forth, for the purpose specified.

30,192.—S. W. Barr, of Mansfield, Ohio, for an Improvement in Velocipede Vehicles:

I claim in three-wheel wagons the peculiar arrangement of the spring clutch, o, hand levers, c c, and break arms, e, in combination with the devices for applying the motive power and guiding the wagon, as described and for the purpose set forth.

30,193.—Henry Behn, of New York City, for an Improved Alarm for Doors:

I claim the arrangement of a hinged plate, B, acting on arms or levers fast on a shaft and placed in the opening of a door, when combined with a bell or alarm, and operated in the manner and for the purpose substantially as specified.

30,194.—W. B. Billings, of New York City, for an Improvement in Vapor Lamps:

I claim, first, The use of the hollow heater, B, when constructed substantially as described and provided with the broad flange, D, for the purposes set forth.

Second, I claim the use of the removable flange, F, in combination with the heater, B, and broad flange D, when constructed substantially as described, for the purpose of regulating the heat and the illuminating power of the lamp, thus adapting the same to burning different materials.

30,195.—J. F. Blondin, of Niagara Falls, N. Y., assignor to himself; Frank Douglas, of Norwich, Ct.; N. H. Spofford, of Boston, Mass., and J. B. Hernshoof, of Seekonk, Mass., for an Improvement in Skates:

I claim the supports, E E, hinged or jointed to the heel, in combination with a skate, for the purposes substantially as described.

I also claim the arrangement of the adjustable bars, I, screws, K, swivel block, n, plate, s, and strap, L, for the purposes described.

30,196.—E. I. Bodrio, of St. Louis, Mo., for an Improvement in Machine for Drying Grain:

I claim the combination of the cylinders, B, the pipes, r and v and y, the diaphragm plate, o, and the furnace, K, the whole being arranged and operated substantially as described.

30,197.—C. K. Bradford, of Lynn., Mass., for an Improvement in Gaiter Boots:

I claim in a gaiter boot having a front and flap divided by a side opening, as shown, the holding up and fastening of said front and flap to each other and to the ankle of the wearer by means of the strap, B, fastened to said fore part and passing through a slot, f, thence around the ankle and buckled to the flap, C, as described and represented.

30,198.—Jehu Brainerd of Cleveland, Ohio, for an Improvement in Rotary Harrows:

I claim in rotary harrows feathering the teeth thereof, substantially as described.

30,199.—W. C. Bridges and D. P. Dietrerh, of Philadelphia, for a Hose Protector:

We claim the described hose protector, composed of two sheets of gum elastic or other suitable flexible material connected together at one end, the lower sheet being furnished with transverse ribs, a a, and the whole being constructed and applied substantially in the manner set forth for the purpose specified.

30,200.—R. M. Brooks, of Greenville, Ga., for an Improved Cotton Press:

I claim the arrangement of the box, B, the trunnions, x, projecting pieces, a a, working in grooves or openings in the frame pieces A A, the head, D, arms, d d, block, c, and screw, F, with the frame pieces A′ and A″, and gear wheels, F G, when the same are constructed and used as and for the purpose specified.