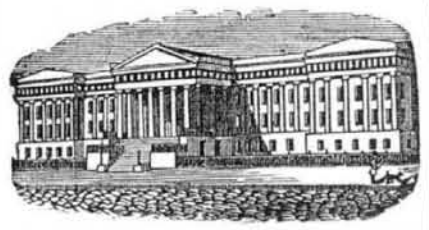

Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING AUG. 2, 1853

REED MUSICAL INSTRUMENTS—By J. A Bazin, of Canton, Mass : I claim, in the construction of organs, reed, and other similar instruments of music, first, flatting the thirds, sixths, and sevenths of the scale by means of the regulating cylinder, constructed as described, or by any other analogous contrivance, as set forth.

Second, the valve, constructed, as described, of the two parts, with the two springs or their equivalents, in combination with the perforated plate, for the purpose of sounding the note flat or sharp, as set forth

Third, the combination and arrangement of the sliding bar, the buttons, the bent wires, by which means the key board may be unlocked and moved in either direction by one hand, as set forth.

Fourth, I claim the use of two or more wind-chests in the same instruments, for the purpose of providing a separate supply of air for the bass and treble notes, as set forth.

Fifth, the peculiar arrangement of the bellows and wind-chests, the latter being placed below the former, and communicating with the reed box by means of flexible passages passing up through the bellows, as described. which arrangement of parts enables me to make use of two wind chests, as set forth.

Sixth, hanging the pedal with a movable fulcrum to prevent friction upon the foot, and to enable it to be operated with more ease and convenience, as set forth.

Seventh, the construction and arrangement of the air passages above and below the reed as described, for the purpose of admitting the air, and permitting it to escape at the butt end of the reed, as set forth

Eighth, the presser bar, so constructed and arranged, as to keep down the rear portion of all the valves, while their frontportion is left free to be operated by the keys, thereby modifying the tone of all the notes of the instrument, as set forth.

SEED PLANTERS—By G. W. Brown, of Tylerville Ill Ante-dated Feb. 2, 1853 : I claim, first, the oscillating horizontal wheels, or distributors, in the bottom of the hoppers, having slots and holes of various sizes, in combination with the stationary caps and pins for the discharge of different kinds and quantities of seeds, as set forth.

Second, I also claim the arrangement of the covering rollers, mounted as described, and performing the purpose of covering the seed, elevating the cutters, in turning around, and also in adjusting them to different depths, as set forth.

SEED PLANTERS—By Lebbens Caswell, of Harrison, Me. : I claim placing the axle of the gauge wheels on a fulcrum, in an adjustable slide, as described, so as to plant at any desired, and at the same time a uniform depth, as set forth.

WATER REGULATOR FOR STEAM BOILERS—By S. R. Clime, of Philadelphia, Pa. : I claim the water chambers described, and the contrivance and machinery, by which their action is aided and facilitated.

ABDOMINAL SUPPORTERS—By H. B. Conant, of Geneva, Wis. : I claim constructing the supporter with two encompassing springs, attached respectively at their centers to the front and hind pads (the hind spring being slightly curved upwards in the middle, and the front spring correspondingly curved downward, and both springs straight on their flat sides, as described, and uniting said springs at their adjacent ends, with straps of adjustable lengths, whereby its pressure may be varied at pleasure, and the same supporter worn by persons of different sizes, as set forth.

RAILROAD CAR WHEELS—By T. J. Eddy, of Waterford, N. Y. : I claim a cast-iron car wheel made in one piece, in which one end of the hub is united to the rim by means of a disc, and the other by means of a series of spokes, as set forth.

PAPER RULING MACHINE—By C. S. Boynton, of New York City : I claim, first, the employment or use of the guides, by which the paper may be properly adjusted upon the apron, and fed underneath the pens.

Second, I claim the guides or stops attached to the selvedge of the endless apron, for the purpose of elevating the pens from the paper, at required distances, according as the guides or stops are adjusted upon the apron, and thereby causing the paper to be ruled in lines of the desired length, and having the requisite spaces between them, as described.

[This is an excellent improvement on such machines, and has been in successful operation, in this city, for some time.—ED.

SUBMARINE TUNNELS—By J. R. Miller, of Jersey City, N. J. : I claim constructing submarine avenues by casting them in short managable sections, sinking each successively to its place, and uniting their ends successively, by means of flanches, bolts and packing, as described, when these are combined with a lip or lips, at the end of each section to ensure the bolt holes, and other corresponding parts to come and rest opposite to each other, as each succeeding section is sunk to its place; and when the structure is made to rest upon a graded bottom, as the work progresses, and is held thereto by superincumbent weight, when completed. I do not claim any one, or any number of the elements specified, except in combination with all the others, nor when used for any other purpose than that specified

TEMPLES FOR LOOMS—By J. A. Scholfield, of Westerly, R I : I claim the application of a stationary spur plate, to the temple, with the pins in said plate inclined at an angle to the breast beam, so as to allow the cloth to be drawn down over the tops of said pins, as the lay beats up, and from their inclination, preventing the cloth from receding, during the backward motion of the lay, as described.

STEAM BOILERS—by John M. Reeder, of Memphis, Tenn : I claim the application to steam boilers of a stem and the two valves, and the mode of their operation, which will, at any given pressure, allow the water in the boilers, to pass freely on the fire underneath them, thereby retaining the steam and prevent explosion. as described.

MACHINES FOR MAKING SPIKES—By J. R. Richardson, Jas. Waterman, & Ebenezer Wilder, of New Castle, Pa. : We claim, first, the manner of forming the point of the spike, as described, viz , by means of the combination of the wide dies, resting on the discs of the rollers, and the pointing rollers, arranged as set forth.

Second, we claim slightly withdrawing the header, after the head is completed, for the purpose of relieving the jaws from its pressure, before they begin to open, and holding it in that position, with the spike head therein, until the jaws are opened, and the movable jaw and die are nearly or quite withdrawn from the spike, then withdrawing the header to its farthest position from the dies, allowing the spike to fall, thus causing the header to perform the duty of a clearer, as described.

Third, we claim the combination of the cutting guide loop, the cutter and the holder, as constructed and operating with the movable jaw and movable die, for the purpose of cutting off the blank at sufficient distance from the ends of the dies to leave material for the head, and carrying it over to the stationary jaw, at the same operation, as described

Fourth, we also claim attaching the gauge firmly to the carriage of the pointing rollers. so that it will be withdrawn as the point is drawn out by the rollers. and returned to its position, when the pointers are withdrawn without any other mechanism to actuateit, as described.

[See description of this excellent machine on page 188, Vol. 8, Sci. Am]

ATMOSPHERIC TELEGRAPH AND RAILWAY—By I. S. Richardson of Boston, Mass. Patented in England Dec 7, 1852 ; I claim, first, the check plate, consisting of three pieces, two being stationary, and the third or middle one, revolving between them, air tight, constructed as described, or in any manner substantially the same, and for the purposes set forth.

Second, the turn-table constructed as described, of the ring and its station box, in combination with the two rings, or their equivalents. as set forth.

Third, the method of announcing the arrival of the plunger, by means of the compression of the air within the cylinder at the instant of the arrival of the plunger, operating through the orifice in the cylinder, the valve, and the hammer, as described, or in any other manner equivalent thereto, the compressed air being the agent.

Fourth, I claim the combination of the pendant lever with the valve and spring, or anologous devices, by which means the valve is drawn up to its seat when no longer kept open by the pressure of the atmosphere, and firmly locked in that position, until the lever is again tripped by the passing plunger or load.

[See engravings of this invention on page 265, Vol. 8]

PRINTING PRESSES—By S. P. Ruggles, of Boston, Mass Ante-dated Feb 2, 1853 : I claim the combination of the adjustable gauge with the diverging spriogs for catching and guiding the edge of the sheet when it is sliding to its position, as described.

INDICATING THE HEIGHT OF WATER IN STEAM BOILERS—By Nathan Thompson, Jr, of Williamsburgh, N. Y. : I do not claim either floats or valves, or chambers or levers as my invention, nor the combination of a float within a boiler, with indicators or alarms.

I claim the method, as described, of slowing and stopping the main engine, by means of a float, or its equivalent, which is governed in its position by the height of the water in the boiler, whereby I am enabled to furnish a reliable and not to be diregarded intimation of the level of the water in the boiler.

Secondly, I claim a hook and pin, or their equivalents, in combination with a boiler float, whereby said float is prevented from acting during ordinary fluctuations of the water level, as specified.

(The boat is made to work the throttle valve—ED]

MACHINERY FOR MAKING RAILROAD CHAIRS—By Wm. Van Anden, of Poughkeepsie, N. Y : I claim the combination of rollers with adjustable shear stocks for cutting and shaping the lips of wrought-iron railroad chairs, as set forth, and their combination with the dies for that purpose.

I also claim the use of a movable drop, upper half or female die, in combination with a stock, as set forth, and their combination with the discharging apparatus operated as set forth.

I also claim the use of adjustable and removable benders, in bender stocks, in combination with the levers and cams on the main shaft, for operating the same in an oblique and downward direction, and their combination with the dies and cutters for making wrought-iron railroad chairs.

OBVIATING THE DANGER FROM STEAM BOILER EXPLOSIONS—By Stephen Waterman, of Williamsburgh, N Y. : I do not confine myself to placing the cold water reservoir on the top of the safety-chamber, as it may be placed in other positions, and instead of communicating with the safety chamber, may communicate with the steam space of the boiler ; nor do I confine myself to the particular mechanical means by which the tearing apart of the safety plate is made to open the communications between the water reservoir and the boiler, and safety chamber

But I claim the combination with the safety-chamber and safety plate of a cold water reservoir, which has means of communication at the lower part with the safety chamber or steam space in the boiler, and at the upper part, with the steam space in the boiler, which said means of communication are closed when the boiler is in proper operation, by cocks, or their equivalents, which are caused to open by the tearing apart of the safety plate in any manner as described, for producing the effect set forth

[See notice of this invention on page 204, Vol. 8, Sci. Am]

ARRANGEMENT OF PIPES FOR HOT BLAST FURNACES - By Jesse Young, of Franklin Furnace, Ohio : I claim the arrangement of a series of angular horizontal pipes, three short vertical connecting pipes, which also serve as supports or pedestals, and a hollow base, through which the cold air passes into the pipes, and upon which hollow base the pipes rest, by which arrangement the air is made to pass slowly through the pipes and base, and is exposed a sufficient length of time to the action of the heat to become heated with a small expenditure of fuel.

[This is a valuable invention, and one which will enhance the iron interests at the West very extensively. See brief description of this invention on page 197, Vol, 8.)

MANUFACTURE OF PAPER STUFF—By J T. Coupier & M. A C Mellier, of Paris, France Patented in France, May 7, 1851 : We do not claim the use of alkalies in the treatment of vegetable fiber for the preparation of paper pulp ; nor do we claim the individual parts of the apparatus employed in our process

But we claim first, the process described, of reducing straw and other similar vegetable matters into pulp for making paper, said process consisting in applying and circulating the solution of the hydrate of soda or potash in the manner described, and at or about the strength indicated, in combination with the apparatus, as described, by which means we are enabled to effect the reduction of a very large amount of pulp with a comparatively small quantity of liquor, and preserve the requisite strength in the liquor, and also obtain facility for its evaporation

We do not claim the use of hypochlorites for bleaching pulp, but we claim, secondly, the employment of hypochlorites in the process of bleaching straw or similar vegetable matter, when prepared as described, for the purpose of making paper, that is to say, using the mat or about the strength set forth, viz ; 3 degrees Baume ; and we claim this degree of strength only when employed upon such materials.

[This is a singular claim truly.]

ELASTIC TYPE FOR PRINTING ON IRREGULAR SURFACES—By Julios Herriet, of New York City, (assignor to J. Gaylord Wells, of Hartford, Ct : I claim making by casting in moulds, or by pressure plates with raised characters or figures, the entire substance of such plates being sufficiently elastic as to adapt it to printing, as described.

HOT AIR ENGINES—By A O. Willcox, of Philadelphia, Pa : I do not claim the use of renovating discs outside of the working cylinder, either when alternately travelling through the heated and cold air, or when stationary, and alternately transmitting heated and cold air, as I am aware such have been before used.

I claim placing the economizing discs within or attaching them to the driving piston itself, whereby I am enabled to effect the complete rarefaction of the heated air, while the piston is descending, and before the cold air is again let into the cylinder, as described.

[This appears to be like Stirling's Air Piston : see page 668 "Galloway History"—ED.]

I also claim enclosing the exhaust end of each single acting working cylinder, with an air tight head, when combined with a self acting valve, which opens from said exhaust end of the cylinder into the eduction pipe, in order to exclude the external atmosphere ; and also for the double purpose of enabling any degree of rarefaction to take place within the exhaust end of the cylinder, without the return of air from the reservoir, and to allow the spent air finally to escape to said reservoir, as set forth.

I also claim enclosing each working cylinder within a jacket (of any suitable material), regularly increasing in thickness from the bottom to the top, in such a manner that when it is surrounded by water or other fluid, the temperature of the working cylinder will be kept reduced to a proper and nearly uniform degree (without much waste of heat), so as not to injure the lubricating fluid inside, whereby I am enabled to apply the heat of the furnace immediately under said cylinder, thus obviating the use of an expansion heater, as described.

ANTI FRICTION BOXES—By G. T. Parry, of Spring Garden, Pa (assignor to John Rice, of Philadelphia, Pa : I claim making the rollers in the form of double frustrums reversed, and united at their bases, and travelling in circular grooves of nearly corresponding form of the surfaces between which the rollers are interposed as set forth.

DESIGNS.

SEWING BIRD—By A. Gerould & J. H. Ward, of Middletown, Ct.

COOKING STOVE—By Julius Holzer, of Philadelphia, Pa. (assignor to North, Chase & North.

A Complimentary Letter.

MESSRS. EDITORS—I cannot let this opportunity pass of thanking you for the able manner in which your paper has treated many important subjects of late. Its firm unyielding opposition to all forms of humbug and imposture, which come before the world under the name of "new invention," has prevented many unscientific persons from investing their property in worthless machinery. Its strict construction of such patent "claims" as have of late grown so broad as to become unjust monopolies, and threaten to retard rather than facilitate the business operations of the country has been of great service. It has very properly exposed the hyperbolical statements of the daily press in regard to the novelty and efficiency of machines and apparatus of doubtful utility, and convinced the public that Technology is a department of knowledge in which most of our newspaper editors are sadly deficient. I wish you complete and continued success in all your undertakings for the advancement of the useful arts. S. D. T.

Seneca Falls, N. Y., July 30, 1853.

[The above letter is from one of our most intelligent readers; it is a spontaneous tribute —we shall always endeavor to merit such opinions.

Flax Culture in Indiana.

Mr. R. T. Brown, of Crawfordsville, in a communication to Governor Wright, President of the Indiana State Board of Agriculture, says :—

"I send you enclosed a few samples of flax cotton presented to me by the Hon. H. L. Ellsworth, of Lafayette. Mr. Ellsworth has secured the machinery necessary for the manufacture of cotton, and will have it in operation early in the season. He has on hand the stem grown on 120 acres last season, which, from experiments already made, will, he supposes, yield about 300 pounds per acre of cotton similar to No. 2 of the enclosed specimens. The expense of reducing the fibre to this state, after the stem is produced, is about two cents per pound, which, at the usual price of cotton (10 cents) will leave eight cents per pound, or $24 per acre for the farmer who produces it. To this must be added the value of the seed, which will range from $6 to $8 per acre—giving a final result of $30 at least for each acre. This is Mr. Ellsworth's calculation.

Recent Foreign Inventions.

BURNING AND APPLYING GAS.—J. Whichord, and S. E. Rosser, of London, patentees. This invention consists ; firstly, in an improvement in the mode of burning and applying gas for lighting. This is effected by the introduction of a ventilating bell and tube, placed in a convenient and suitable position above the gas-burner. These are made with a trough or channel, to receive the condensation of any aqueous vapors arising from the combustion of the gases ; the said trough or channel being so placed that the aqueous products can either be carried away by a pipe (or other means) or become evaporated, and driven off through the chimney when the gas is burning.

Secondly, in effecting such an arrangement of the globes, glasses, and chimneys of gas burners, as to introduce a current of cold air between the external surface of the ventilating bell or glass, and the interior of the globe which encloses the gas-burner ; and also a second current between the external surface of the gas-chimney and the inner surface of the ventilating glass or bell. In this arrangement the pendent glass or bell above the burner dips down below the mouth of the surrounding globe, and at the same time descends externally below the upper orifice of the chimney of the gas-burner. By this means the atmospheric air, which can only enter at the top of the globe, is made to descend between the inner surface of the globe and the outer surface of the pendent bell, carrying with it the whole of the products of the combustion of the gas up the ventilating tube.

Thirdly, in an improved mode of applying gas for heating purposes. The gas burner of a stove is, in this case, placed within or under a tube or casing for conveying the heat through a chamber surrounded with water or other fluid. This chamber or casing is made with a trough or channel placed in a suitable position for conveying off the condensed aqueous vapors that may be formed inside the chamber by the combustion of the gases, and is so placed, that the aqueous products can be either carried away by a pipe, (or other means) or become again evaporated and carried up through the chimney. The tube or casing may be made similar to the worm of a still or refrigerator, and have its end turned down to carry the aqueous products off into a vessel placed to receive them.

SMELTING METALLIC ORES.—T. B. Smith, of Bristol (England) patentee.—This invention has reference more particularly to the first operation in smelting sulphuret copper, and other ores ; namely, their calcination, by which a portion of the sulphur is expelled, and the metals they contain are oxidized.—The inventor proposes to avoid the inconvenience and injury of the ordinary process caused by allowing the free vapors to pass into the open air ; and, by condensing the gases which are evolved in the process in flues or pipes, to use the sulphurous vapors for the manufacture of sulphuric acid. For these purposes he uses nearly closed chambers, furnaces, or retorts, which are heated from without, and by passing heated air into these he does not admit the products of combustion from the fire to mix with the vapors or gases evolved in the process of calcination, as such products would render these vapors unfit for the manufacture of sulphuric acid. With the chamber, furnace, or retort employed, he connects suitable flues or pipes, to carry away the vapors, in which he condenses the volatized metals, while the sulphurous vapors are carried away to suitable chambers, and proceeded with in the ordinary manner of obtaining sulphuric acid from them.

When sulphuric acid is not needed, the process of calcination may be much facilitated, by introducing a much larger quantity of air, which will be an advantage to the smelters.

The inventor also proposes to use a portion of heated oxygenated air at times, to assist the calcination of metallic ores.

[Condensed and selected from the "London Mechanics' Magazine."