

is allowed a large and munificent reward, not only on account of the benefits which he may have conferred upon his race, but that his brilliant success may stimulate other inventors to renewed and increased exertion. Rather than with a begrudging spirit grumble at the success of such an inventor, and fear that he may profit too much, we should congratulate ourselves that a wise provision of the law has placed it in our power to bestow a reward upon him commensurate with the benefits which he has conferred upon the public. It is a peculiar feature of this case that the opposition to the extension does not come from those persons who have adopted and paid for the improvement, but from certain rival iron manufacturers and contractors, who, during the fourteen years of the existence of this patent, have probably accumulated larger fortunes from their regular business than Mr. Hyatt has from his invention. The fate of the inventor is a hard one at best. No matter how valuable and important his invention may be, he must first overcome the prejudices of the public, before he is able to obtain any remuneration. By this time, as a general thing, the duration of his patent has already partially expired. Then, as soon as he has succeeded by his labors and perseverance in satisfying the public of the advantages of his invention, and has created a market, hundreds of greedy rivals at once by a system of piracy attempt to rob him of his property. Rich and powerful combinations are formed against him. He is compelled to abandon his invention or submit to prolonged vexations and expensive litigation. Nine inventors out of ten, unable to withstand the pressure brought against them, retire broken-hearted from the contest and finish their lives in poverty and want, while those who have robbed them reap all the profit. The applicant in this case is, to a certain extent, a living example of the truth of these statements. It was about seven years after the patent was granted before he succeeded in conquering the prejudices of the public, and rendering his invention profitable; and although he has not as yet been prevented by infringers from realizing some remuneration, still he now finds them remonstrating against the further extension of his patent.

After having devoted more than fourteen years of the best portion of his life to this invention, he has succeeded in realizing a profit of \$93,000. This covers his profit both as inventor and manufacturer, as well as all that may be properly chargeable to his other patents. A thorough investigation of the case has satisfied my mind that the profit which the applicant has received from his invention is not sufficient, when compared with the advantages which the public have experienced from it.

It is therefore ordered that the patent be extended for seven years from the 12th day of November, 1859.

W. D. BISHOP,
Commissioner.

FOREIGN SUMMARY.

At the recent meeting of the British Association of Social Science, Lord Brougham, at the advanced age of 82 years, delivered an address over two hours long with all the vigor and eloquence of a young orator. At this meeting many gratifying facts were reported by Mr. A. Baker, regarding the benefits conferred by the Factory Act upon the operatives in English factories. He stated that by the reduction of the hours of labor, there had been a marked and decisive improvement in the health of factory operatives, and an entire disappearance of the physical deformity and excessive mortality which prevailed among those classes previously. In the condition now brought about by that act there was no greater amount of disease, deformity, or mortality among factory laborers than others, while for some years previous to 1832, a marked and alarming deterioration of physical strength had occurred.

The Queen had attended the opening of the new water-works for the city of Glasgow, at Loch Katrine, in Scotland, made famous in classic song as being the scene of Sir Walter Scott's "Lady of the Lake." It is a beautiful sheet of water, very deep and clear, and is conveyed about the same distance through a conduit as the Croton water at New York. Heretofore, the city of Glasgow has been supplied with water pumped from the river by huge steam-engines; it is now to be supplied by gravitation, and the expense will be much less. As a work of engineering it can compare favorably with some of the greatest achievements of ancient or modern times, and deserves to be very generally known. It embraces 13 miles of tunneling, $9\frac{1}{2}$ miles of aqueduct, and $3\frac{3}{4}$ miles of huge iron tubing. There are altogether 70 distinct tunnels, upon which 44 vertical shafts had to be sunk for facilitating the work. The first tunnel is 2,325 yards long, and 600 feet below the summit of the mountain. It was excavated from twelve shafts, which had to be sunk 500 feet deep. There is another tunnel 3,650 yards long, cut through blue basalt, at 250 feet below the summit of a hill. The rock in all the tunnels is very

hard, being mostly gneiss interspersed with veins of quartz. In some places it required a new drill for every inch that was bored, and although the work was carried on night and day in some shafts, they sometimes could not make over three yards of progress in a month. The undertaking was commenced three years ago, and was recommended by Stephenson and Brunel. It is remarkable that the *Great Eastern*, the Victoria Bridge, and the Glasgow Water Works, with which the names of these great engineers are associated should have been completed just about the time they departed, and that they were denied the pleasure of seeing their designs perfectly finished. The supply of water to Glasgow will be 50,000,000 gallons per day, with a store sufficient for 120 days without rain.

The metal market has been somewhat depressed since our last. This is attributed to the unsettled state of political affairs. Banco tin has fallen slightly, but copper has somewhat advanced. The export of British coal has increased during the past year to the extent of 270,000 tons, the whole being 4,499,956.



ISSUED FROM THE UNITED STATES PATENT OFFICE
FOR THE WEEK ENDING NOVEMBER 8, 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, N.Y.

26,005.—Corinth Alden, of Cassadaga, N. Y., for an Improved Clothes' Ironing Apparatus:

I claim the arrangement of the box, A, with the follower, B, or its equivalent, in combination with the tank, D, substantially as and for the purpose specified.

[With this invention the operation of ironing is rendered so easy that it requires no bodily exertion, and in fact neither particular attention nor great skill. The clothes are neatly folded in a box, and compressed by means of a follower, and in this state they are exposed to the influence of steam for a few hours. When properly folded they become perfectly smooth.]

26,006.—Ephraim C. Allen, of Le Roy, N. Y., for an Improvement in Corn-planters:

I claim the arrangement of the various parts of the seeding machine described, when the whole are constructed and combined for operation conjointly, as an for the purposes in this specification set forth.

26,007.—John Aspinall, of London, England, for an Improvement in Refining Sugar. Patented in England Feb. 8, 1859:

I claim the method described of effecting the blowing-up or melting of raw sugars; that is to say, by so supporting or upholding the sugar that successive portions will be brought into contact with the water, whereby the sugar will be melted at or near the surface, for the purposes and substantially in the manner set forth.

26,008.—Merrick Bemis, of Ashburnham, Mass., for an Improved Compensating Pendulum:

What I claim is my improved mode of making a compensating pendulum, namely, by arranging a part of the rod in the form of a bow or sectoral bend, and applying to such bend or part a clasp or bow of metal having a different expansive ratio, the whole being substantially as specified.

26,009.—Robert Blair, of Malugin Grove, Ill., for an Improved Device for Applying Steam as a Motor:

I claim the combination with a radial lever, or frame, D, and circular railway, A, and central revolving power-transmitting shaft, C, of a traction steam-engine, B, when the crank axes of said engine radiate from the central shaft, C, and the inner traction wheels are made of smaller diameter than the outer one, the whole arranged and operated substantially in the manner and for the purpose set forth.

[The object of this invention is to supersede the various horse-powers that are now used for driving portable machinery, chiefly such as are used by agriculturists, as threshing machines, for instance, churns, pumps, and the like. The invention consists in placing a traction engine on annular ways, and having said engine attached to a radius frame, the center shaft of which is provided with a toothed wheel or pulley, from which the power is taken as the engine passes around the annular ways.]

26,010.—Nelson Burr, of Batavia, Ill., for an Improvement in Corn-shellers:

I claim the peculiar arrangement of the action, e, provided with the ring, j, and placed relatively with the cylinder, A, and adjoining sections, d, f, to effect the object set forth, substantially as described.

[This invention consists in the employment or use of a rotating cylinder and a stationary shell, the latter being provided with a door and wing, and the whole so arranged that a very simple and efficient combined corn-sheller and cob-grinding mill is obtained, the machine being capable of being used in either capacity by a very simple adjustment.]

26,011.—Thos. Carpenter, of Battle Creek, Mich., for an Improved Shoemaking Table:

I claim the movable bottom, D, arranged in combination with the bench, A, and compartment box, B, constructed as described, substantially in the manner and for the purpose specified.

26,012.—R. Carkhuff and B. Chalfant, of Lewisburgh, Pa., for an Improvement in Steam Valves:

We claim the peculiar arrangement of the slide, T, and transverse bar, L, which form the valve of the steam chest, K, the bar, U, and the cross-arm, X, of rod, S, whereby said valve is allowed a lateral as well as a longitudinal movement within the chest, for the purpose set forth.

26,013.—L. C. Chase, of Boston, Mass., for an Improvement in Girth Buckles:

I claim constructing a buckle with wings, B, B, or their equivalents, and furnished with holes, b, b, substantially as set forth and for the objects specified.

26,014.—B. S. Church, of Manhattanville, N. Y., for an Improvement in Water-meters:

I claim, first, The arrangement of the partition, g, g', in the trough G, as described, in combination with the air-tight chamber, D, chamber, F, and tubes, I, whereby that portion of the water which does not pass through the measuring buckets is prevented carrying off any of the air in the chamber, D.

Second, Arranging in the air-chamber, D, a float, j, in combination with a valve, h, or its equivalent, substantially as and for the purpose described.

26,015.—George Clay, of New York City, for an Improvement in Packing for Sliding Gas-lights:

I claim the combination with the pipe, D, shell, A, and pipe, B, of the elastic tube, C, when the latter is fitted so that its central portion will contract and press upon the burner or upon the sliding pipe, so as to form a gas-tight joint, all as shown and described.

[This packing is so simple in its application and so efficient in its action, that it recommends itself to all gas-fitters. It consists simply of an elastic tube, the ends of which are expanded over two nipples, whereby its central part collapses, thereby making a tight fit on the sides of a pipe which passes through said elastic tube, and at the same time allowing the pipe to slide up and down.]

26,016.—J. W. Cochran, of New York City, for an Improvement in Projectiles for Rifled Ordnance:

I claim, first, The band, C, of copper or other wire, applied substantially as described, in combination with the cup, or cup-like frame, B, attached to the rear of the projectile, for the purpose described.

Second, The expanding ring, D, applied substantially as described, in combination with a conical surface, F, formed behind a shoulder on the front part of the projectile, for the purpose set forth.

26,017.—J. W. Cochran, of New York City, for an Improvement in Projectiles for Rifled Ordnance:

I claim the application to a projectile for rifled ordnance of a covering, or of one or more bands, composed of a coil or coils of copper or other wire, wound upon its exterior, substantially as described for the purpose specified.

26,018.—D. W. Comstock, of Chicago, Ill., for an Improved Railroad Gate:

I claim placing the ends of two pairs of adjoining rails, B, on a rising and falling platform, C, when the latter is suspended from the short arms, d, of crank levers, e, e, the long arms, e, e, of which carry the panels, F, of a gate, substantially in the manner and for the purpose described.

[This invention is of great importance, particularly in such places where railroads pass through towns, or wherever a railroad crosses a common road. The gate opens as the train approaches, and as soon as the last car has passed it closes again, so that nothing can pass into the road which might cause an obstruction to the approaching train.]

26,019.—Wm. F. Converse, of Harrison, Ohio, for an Improvement in Railroad Car Springs:

I claim, first, The combination of a clamp, f, g, h, with a disk spring, in the manner and for the purpose explained.

Second, In connection with the above, I claim the series of annular steel disks, of unequal diameter, arranged in manner and for the purpose described.

26,020.—N. B. Cooper, of Gratis, Ohio, for an Improved Churn-dasher:

I claim the arrangement of the arms, d, d, on the two points, b, b', one on each side of the upright, B, when the upright, B, is made removable by means of the ways, x, x, substantially as set forth.

26,021.—Edward Crane, of Dorchester, Mass., for an Improved Steam Boiler:

I claim a fire-box surrounded by a water-jacket, the combination of the tubes in the fire-box, with the boxes or chambers, as described, so that a number of tubes shall have the same connections through the said boxes or chambers with the water-jacket and steam chamber, and shall also be capable of being put in and taken out of the boiler at the same time.

I claim the use of tubes coiled or folded into the fire-box, and connected with the water-jacket and steam chamber through the boxes or chambers, a and b, and a' and b', as described, of such length in proportion to their diameter that all the water entering them at the lower end shall be converted into steam in the lower portion, and the steam be superheated in the upper portion before it is discharged into the steam chamber.

I claim the use of tubes in the steam chamber for discharging the steam generated in the tubes in the fire-box, so bent that the superheated steam issuing therefrom shall be discharged into a drum around the chimney and against the chimney, in the first instance, and then against the surface of the water, as described.

I also claim the use of the drum around the chimney in the steam chamber for securing the discharge from the tubes, and checking the disturbance of the water through the whole extent of the steam chamber, arranged and constructed as described.

I claim the combination of the blow-off cocks, e, with the stop cocks, g, for the purpose of blowing off each section of tubes separately, as described.

I claim the use of the tube coiled around the chimney, for the purpose of taking the steam from the steam chamber, at the point where it has the highest temperature.

26,022.—Edward Crane, of Dorchester, Mass., for an Improvement in Railroad Car Wheels:

I claim a wheel having its rim and the secured together by india-rubber vulcanized in place, as set forth.

26,023.—Munson C. Cronk, of Auburn, N. Y., for an Improved Clothes' Dyer:

I claim the combination and arrangement of the hollow post, A, the sliding piece, R, brace cords, M N O P Q, the hub, B, the stands, W X Y Z, and the radial arms, C D E F G, the ring, V, substantially in the manner and for the purpose specified.

26,024.—C. A. Desoumy, of Plaquemine, La., for an Improvement in Pans for Evaporating Cane Juice:

I claim the heaters, B, B, of inverted cup form, applied within the pan, in combination with the system of connections, E F F', and the two series of pipes, S S and W W below the pan, substantially as described.

And in combination with the said heaters, connections, and two systems of pipes, I claim the pipes, b, b, passing through the said heaters, substantially as described.

[This invention consists in a certain novel system of heaters arranged within an evaporating pan, in combination with a suitable system of connections with two series of pipes arranged below the pan for supplying steam to the said heaters and conveying away the water of condensation, whereby I am enabled to present an extensive and very effective heating surface to the liquid or substance within the pan, and to prevent effectively any collection of water upon the said surfaces.]