

New Inventions.

Canal Locks Superseded.

On the Monkland Canal, at Blackhill Locks, (Scotland) the waste of water, time and labor have been obviated by the substitution of a steep incline, with rails and water tight cradles. The boat is floated into one of the latter, when it is drawn up by a wire rope-worked with drums, by the power of a steam engine aided by the descending cradle filled with water. In five minutes a boat is hoisted up the incline, numbering eight large locks, at very little expense, and with the waste of no more water than that displaced by each boat when floated into its cradle. The engineer is a Mr. Leslie, of Edinburg, who has adopted the plan from American practice. Thus, as we stated two weeks ago, about British marine engines, "the scientific world now borrows and lends."

Patent Impulsoria.

The number of the "Illustrated London News," for June 22nd contains an engraving and description of a new patent machine to supersede the locomotive, and to be worked by animals on a railway. It was invented a short time since, in Italy, and has been exhibited on the South Western Railway, England. The inventor is Signor Clevent Masserano, of Piedmont. This invention is one of "Wheeler's American Horse Powers," applied to propel wagons on a railway." And such is the present state of invention in Italy—the land of Galileo. Well, how the mighty are fallen.

Improved Foot-Operating Bath.

Mr. Thomas Holbrook, of Utica, N. Y., has invented an improvement whereby he places a double force-pump on the floor of the bath—the said pump having its chambers made on the bellows principle—each chamber made of one piece, and the two set in such a way as to be operated by the foot of the bather, he throwing his weight upon one foot after the other, thereby working the pumps and throwing up a steady stream of water, which is discharged vertically downwards by a bent tube with a rose on the end of it. The water to supply the bath is kept in a box or reservoir below, and any quantity desired, hot or cold, may be first placed in it.

Measures have been taken to secure a patent.

Capt. Taggart's Flying Machine.

At Lowell, on the 4th, at 4 P. M., Captain Taggart made a balloon ascension with his flying machine attached. He was up 1½ hours, travelled about 75 miles, and showed himself over Dracut, Tewksbury, Haverhill, Reading, Andover, Ipswich, Georgetown, Lawrence, Danvers, Methuen, Salem, and other towns.—He also went some distance out to sea. On his way back to Lowell, at Middleton, the gearing to his flying machine broke. Had not this accident happened he would have landed in or near Lowell, where he started from.—Capt. Taggart has exhibited a great deal of energy on trying his experiments, although we have seen no balloon to satisfy us of the safe and economical feasibility of travelling through the air; yet, may we not expect the next great invention of locomotives to be an aerial one—and such an one as will save the construction of railroads, steamboats, and all clamjarmfry.

Drinking Vitriol.

A man at Newton Falls, the other day, took up a pitcher to drink out of it, when he swallowed a large quantity of oil of vitriol instead of water. He was given lamp oil immediately and is still alive.

[The above we take from an exchange. If any person in a dyework or bleachwork, should by accident drink vitriol, a remedy can be had at once in using soda ley or potash, or what is commonly at hand "urine." The last is certainly the best remedy.

It appears after all that Table Rock, at Niagara Falls, has actually fallen. Last week we did not believe it, but now, since the table is really turned, we must knock under,

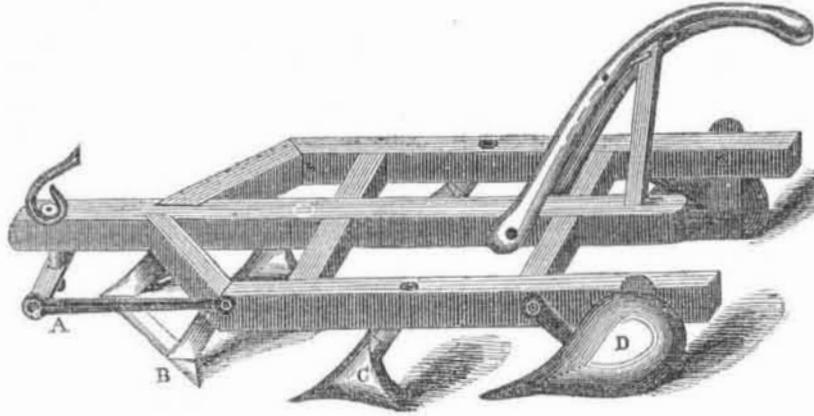
Improved Bedstead.

Mr. John W. Favor, of this city, has taken measures to secure a patent for an improved method of coupling bedsteads, and for an improvement on their bottoms. His coupling consists in having wedge projections on the posts, and metal boxes with wedge grooves secured on the ends of the rails, so that by inserting the projections in the grooves, the posts and rails become perfectly dovetailed together. The bottom of the bed is made of thin strips of metal interlaced.

Improved Harpoon.

Capt. Chas. F. Brown, of Warren, Rhode Island, has invented a new Harpoon, which, in one respect, is an important improvement,—it is to prevent the harpoon being easily pulled out after it has struck. Its head is of a peculiar shape, viz., of a flat chisel form, angling to the section of a screw to its back. It therefore cannot enter straight, but with a slight curving motion, and cannot be drawn out by a straight pull. Whalers will understand the value of this improvement. He has taken measures to secure a patent.

RODGERS' PATENT WEED CUTTER AND CULTIVATOR.



This improved implement of agriculture is the invention of Dr. Charles Rodgers, of Jefferson, Jefferson Co., Wisconsin, to whom was granted a patent, the claim of which will be found on our columns of last week, to Dr. Rodgers of Montpelier, Vt. A is a regulating bar; B is the weed-cutter; C the cultivation feet; D are side plows. When the implement moves the bar, after having been set to regulate the depth intended to be cut, it presses down the weeds in front of B, the weed-cutter, then the weeds are shaved off at the depth of about two or three inches, thus injuring the most vital part of them. The cultivators then come along, cutting about three inches deeper, so as to destroy the roots and to loosen the soil. The side plows then come along outside, and make drills, and when run across again, make square hills. These side plows can be removed when not required along with the cultivator. An examination of the above implement will show the advantages it is confidently claimed to possess over all other implements of a similar kind, for it combines the action of the weed-cutter, cultivator and plow, and by its combination is calculated to supersede entirely the use of the hoe at a time when labor generally is scarce and the weeds grow rapidly to the injury of crops; it is not only a labor-saving but a cheap tool, for with

it a man, boy and horse can perform more work and more efficiently, than twenty men could. Experiment has taught every farmer that the hoe frequently merely transplants the weeds, without materially injuring them, which hardly can happen with the above implement.

The Weed-cutter and Cultivator are well adapted for all crops planted in hills or drills, and in all locations where the land can be plowed, but it will also be found to be a most valuable implement at all seasons when it is desirable to kill weeds and loosen the soil, and can have no superior in eradicating thistles and brakes. In addition we add the opinion of Mr. Ruggles of the celebrated firm of Ruggles, Nourse & Mason, of Boston, a gentleman whose experience and judgment in these matters is in all probability unsurpassed by any other person in the world. In a private letter to the inventor he says—"We are much pleased with the general arrangement and construction of your cultivator; it will undoubtedly be very much of a labor-saving and efficient implement."

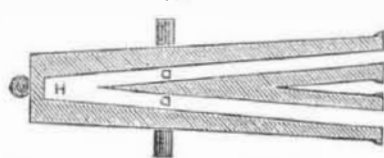
Mr. Rodgers is desirous of selling out the whole or part of his patent; any person desirous of obtaining more information about it may do so by letter, post-paid, addressed to Mr. Chas. Rodgers, at the above mentioned place, Wis.

New Manure.

By experiments which have recently been made in England with guano, common barn yard manure, and five other different kinds, proved that the nitrate of soda was the best of all. On one acre manured with the nitrate of soda, there were raised nearly 19 tons of turnips, there being used 2 cwt. 18 lbs to the acre. This was an astonishing crop.

Projectile for Cutting Rigging of Vessels.

FIG. 1.



This is the invention of Mr. Hubbell N. Hale, of Cato-4-Corners, N. Y. Its object is set forth in the caption of this article. Fig. 1 is a section of the cannon, and figure 2 is a view of the shot. The cannon has two bores, D D; a cartridge is to be thrust into each, with the design to make them come in contact at the breech, H. An instrument like a knife, instead of a priming wire, is to be used, and the fuse-hole is to be fitted for the instrument to let both cartridges be primed at once, or the cannon may be made with a moveable breech. The cannon is to discharge two balls, figure 2, which are united by rods of metal and by a chain link at B. The angle of the rods is such that when shot out of the cannon they will

straighten and whirl horizontally with terrific effect for the purpose stated. This cannon has been tested, and a caveat filed in the Patent Office. The inventor would like some person or persons, who have means to assist him in completing his inventions and bringing them before the public. Any reasonable share in the invention will be given.

FIG. 2.



More information may be obtained by letter, (p. p.) addressed to Mr. Hale, at his residence mentioned above.

New and Improved Abdominal Supporter and Chest Expander.

Mr. John K. Henry, of Alabama, has invented a new apparatus, which combines some excellent qualities. It is so constructed that its various parts can be taken apart and one worn without the other, so as to adapt it for different persons, or for different kinds of employment, or for different attitudes, such as walking, sitting or lying. It is all combined to a peculiarly formed metallic waist-band, to which is attached side spring metal crutches with cushioned tops, to come under the arms and support them. The straps to hold back the shoulders are secured behind, and are combined either to be rigid or elastic, and in all

cases to leave the chest perfectly free for the lungs to inflate to the fullest extent. The abdominal supporter is also attached to the metal waist-band, and can be worn along with or apart from the chest expander.

Measures have been taken to secure a patent.

The Feeding of Silk Worms with a New Food.

As the raising of the raw material had always been found inadequate to supply the demands of the French weavers, M. V. Repos, of Avignon, has devoted much attention to discover some other food for the silk worm, equally suitable as the mulberry, and from many experiments it appears he has at last succeeded. He first analyzed the mulberry leaves to discover their composition, and after many trials with the leaves of other plants he found the snake grass to answer his purpose. The leaf of this contains gum and sugar, and in other proportions than those of the mulberry, and a milky substance, which is not injurious to the worms; but as the plant does not contain all the elements necessary for the silkworm, he supplied this deficiency of vital matter by immersing the leaves of the snake-grass in the following liquid:—water, 1,000 grammes; powdered sugar, 30; powdered gum, 5; hydrochlorate of ammonia, 2; extract from the stems of the mulberry, 4.

The extract from the stems of the mulberry imparted to the leaves of the snake-grass all the flavor of that of the leaves of the mulberry; there is no doubt that the resin, which it contains in large quantity, powerfully assists the silk-worm in the fabrication of its precious thread; the other substances render it easy of digestion, and capable of assimilation to the requirements of the worm.

When the above-named substances are dissolved in water, the liquid is placed in a vessel, and 20 kilogrammes of snake-grass leaves are immersed in it, after which operation the leaves are placed on nets or wicker work. The leaves thus prepared over night are given to the silkworms the next day.

This method has completely succeeded, and among other places at the Royal Silkworm Rearing Establishment, at Neuilly, near Paris, in the months of May and June, 1847, under the superintendence of M. Aubert, the ex-king's steward, and a distinguished silk cultivator.

The snake-grass is sown towards the end of February; at the season of the hatching of the silk-worm, that is to say, about the middle of May in the country, the leaf has attained a height of from four to six inches; it is then in the condition most suitable to be cut; eight days after there will be leaves to cut from the same plant, and thus it will continue to furnish a supply during the time of rearing the silkworm. This system of rearing the silkworm has, besides, the advantage of being able to be practised in any latitude, and the ground will be taken from ordinary agricultural purposes but for four months, whilst the mulberry takes ten years to be productive.

As the snake-grass is a bi-annual, it may be left in the ground until the time of its maturity. It has the three-fold advantage of making two rearings with its leaves, and of collecting the roots for table use or for cattle. He did not speak of a rearing which might be made in autumn, which would be very practicable for those who could give it their attention.

American Vessels in England.

The American underwriters and navigators of American sailing vessels are endeavoring to have removed the regulation which requires that fire and light shall be put out while the vessel is lying in the Liverpool docks. In consequence of this regulation, the captain, officers and sailors are unable to live on board, being obliged to stay on shore at hotels and boarding houses at an extra expense to themselves, and to the serious detriment of the morals of the sailors and boys composing the crews. Steps are already taken to ascertain if American ships can find accommodation in the Birkenhead docks, on the other side of the Mersey from Liverpool, where no such restrictions exist.