

New Inventions.

Improved Corn Sheller.

On our List of Patent Claims for last week, there was one of Messrs. D. W. Harris & E. P. Carter, of Yorkshire, Cattaraugus Co., N. Y., for an improved Corn Sheller. This machine, just with one man turning the handle, can shell a bushel of shelled corn in one minute, and separate it from all impurities at the same time. It is also self-feeding, and is constructed upon the most improved principles. From its real merits, we will publish an engraving of it in a short time, and enter into a full description.

Patent Churn.

Messrs. E. S. Cleveland & Co., of this city, have just negotiated the purchase of the right of the State of New Hampshire for Anthony & Emerson's "Patent Double Acting Rotary Churn," and intend soon to exhibit its wondrous qualities as a rapid butter maker, for the inspection of the "Granite Boys." They will visit all the principal towns in the State, for the purpose of making sale of the town and county rights, in the course of the ensuing month. The utility of this churn has been established beyond peradventure, and has met the unqualified approval of all who have used it.

The Electric Light in Military Operations.

An experiment was lately made at Montpelier, France, which excited a considerable amount of curiosity amongst the neighboring population. On the occasion of the annual visit of the inspector of engineers, a new apparatus was tried, the object of which is to cast a bright light to some distance, to be applied in lieu of Bengal lights, etc., used for lighting up besieging lines, roads, etc. It is an application of the galvanic light, by means of which a semicircle of about 400 yards was illuminated so strongly as to render even small objects nearly as distinct as in daylight.

Patent Improved Matches.

By our last valuable exchange, the London Patent Journal, we learn that a Mr. Knapp, chemist, has obtained a patent for the following mode of making matches:—

"Take the splints and dip them into resin oil, then put them on shelves to drip and until they are dry enough to pack."

This is the whole sum of a new patent in England, which could not be secured for less than \$600—a sum for which twelve patents could be secured in the United States. Yet we are told by those who know, that most of the English patents, if they have any merit at all, pay well.

Improved Hydrant.

Mr. James Ingram, plumber in the Bowery this city, has made a valuable improvement in hydrants, for which he has applied for a patent. It is one which will no doubt command attention, as it is combined with the screw plunger, and in a very simple manner drains off all the back water, so that there is no fears of the pipes freezing, and it provides for taking up the valve and putting it in again in a few seconds, to repair or pack from the top of the hydrant.

Improvement in Carriage Wheels.

Messrs. J. C. & G. F. Fowler, of Newbury, Vt., have made a good improvement on carriage wheels, for which they have taken measures to secure a patent. It consists in having a hollow metallic hub in the inside of which the spokes are secured by screw nuts. The spokes are set into the hub upon the suspension principle.

Improved Camp and Cot Bedstead.

Mr. John H. Landell, of Newark, N. J., has made a most admirable improvement on the Cot Bedstead, for which he has taken measures to secure a patent, and which is well worthy of attention. The legs can be taken apart in a second, and it can be folded up in two halves—thus making it into a camp stool, or capable of packing it up in a very small space for transit, or to occupy little room in a chamber

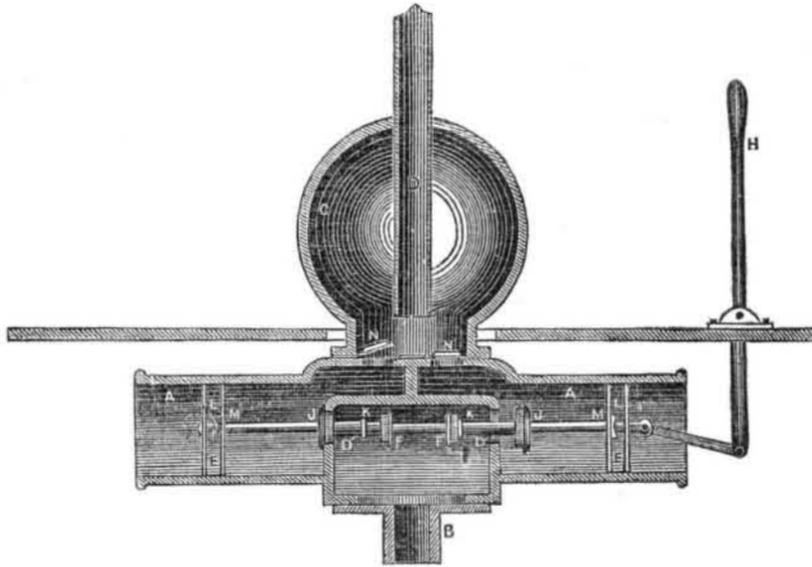
Reported New Steamship.

It is reported that there is a young gentleman of great wealth, in this city, who has invented some improvements on steam ships that will enable him to cross the Atlantic in less than four days. We doubt the success of the scheme—it is too good news to be true. About ten years ago, we remember, the celebrated steamboat called the "Dove," which, on paper, was to go to Albany in four hours. We like to see men of wealth, however, devoting their genius and money to scientific experiments—a far more commendable course of action, than squandering it in luxurious living or political chicanery—for assuredly some good will be performed in the one case, whereas nothing but evil will be committed in the other.

Improved Slitting Machine.

At Liverpool, near Syracuse, N. Y., Messrs. E. and T. Ring have set up their patented machinery (they being the proprietors of Bryant's Patent) for slitting barrel hoops and such like purposes. They can slit 40,000 hoops in one day, and as many feet of white oak for clapboards, where that timber is cheap. They can slit all of 40,000 laths per day, and it can be used for many other purposes, such as splints for surgery, &c. This new machinery, we have been informed, is the most perfect of any other in the world, for the same purpose. It will be great for some parts of Ohio, where white oak is plenty—and is especially of importance in regions where there is plenty of white elm or good free ash.

JEFFREY'S PUMP.



This pump is the invention of E. A. Jeffrey, of Corning, Steuben Co., N. Y., who has made application for a patent. This is a vertical longitudinal section, and exhibits all the parts.

A A are the pump barrels; B is a suction pipe; J J are entry valves; N N are discharge valves; C is an air vessel; D is the discharge pipe; D 1, D 1, are hollow valve stems, sliding on the piston rod, and packed to prevent leakage at F F; K K are stops to prevent the valves from opening too far. E E are pistons, each composed of two discs, the inner one being on the piston rod, and the outer one sliding upon it, the inner discs, M, are pierced with holes which are covered with a valve, L. When the piston is forced inwards the water in the barrel, passing through the holes in the inner disc, into the space between it and the outer one, packs the piston and prevents leakage; as the piston is drawn outwards the pressure of the atmosphere, acting on the outer and moveable disc, compresses the water packing between the two, while its escape is prevented by the closing of the valve, L. If the discs do not fit the barrel sufficiently tight, they may have a flange of leather or india rubber fitted to them, or the two discs may be united by a short cylinder of india rubber, which will effectually prevent the leakage of the water from between the two. H is the hand lever or brake.

The following reasons will show that the pump thus constructed will work better than any heretofore known; first, its barrels are horizontal and its discharge passage lead out of

the uppermost parts of the barrels, hence any air which may have entered with the water through the suction pipe, will be first discharged from the barrel, and when the piston arrives at the end of its stroke, the clearance in the end of the barrel and the discharge passage are left filled with water, which being unexpansive does not prevent the barrel from being re-filled entirely from the suction pipe. Second, The entry valves, from the friction of their packing, are worked by the piston rod, and are opened and closed without any pressure from the entering or effluent water, hence these valves will always open whether the vertical distance from the pump to the water be small or great, and although working horizontally, will always close at the commencement of the return stroke, whether the barrel be filled wholly or partially with water. To these advantages this pump unites those of a vertical barrel, in which the water floating on the top of the piston, prevents the entrance of external air into the barrel, through leaks in the piston; for by this construction a disc of water, sufficient even, if unreplenished, to supply the leakage for many consecutive strokes, is interposed between the external air and the space within the piston, thus preventing the entrance of even the least quantity of air through the leaks of the piston.

Communications addressed (p. p.) to Messrs. E. A. Jeffrey & D. C. Gardner, at Corning, (proprietors) will meet with a gentlemanly and prompt response.

Extraordinary Invention.

A Mr. Appeld has invented a remarkable machine, called the "Centrifugal Pump," for draining marshes, &c., and a most ingenious affair it is. You have heard of the turbine—a small box water-wheel, possessing extraordinary capabilities for work. Well Mr. Appeld's model contains such a wheel made of tin, a little thicker, but no larger than a half-penny. This is fitted at the bottom of a square tube dipping into a small cistern containing water, which may represent a lake, &c. The little wheel being made to rotate with great velocity, throws up water rapidly into the tube above itself, until it overflows in a continuous stream at the top, and the volume of the stream is such as to deliver eight gallons per minute; and, on applying a nozzle,

the stream is driven to a distance of twenty feet. This, you will say, is a marvellous effect from so apparently insignificant a cause; but a wheel, about fifteen inches in diameter, exhibited at the same time, will deliver 1,800 gallons per minute; it requires to be worked by an engine of four horse power. Mr. Appeld has lately proposed to the engineer of the Dutch Government to fix a similar wheel on the Haarlem Sea, now in process of being drained, by forty pumps, driven by steam. A centrifugal pump of forty feet in diameter would do more work than all the others put together, and would deliver—so the inventor asserts—1,500,000 gallons per minute. With such power at command, one would think we ought never more to hear of ships foundering at sea; and the emptying and reclamation of the Zuy-

der Zee resolves itself into a possibility.

[The above is from the London Times copied from a Dutch paper. Every little while we see some such *new* invention heralded by the press. This extraordinary pump is no less than two hundred years old, at least. We notice these things to point a moral. There can be no progress without a knowledge of the past.

Railroad in Broadway.

MESSRS EDITORS—Amongst many schemes and plans that have hitherto been proposed for a railway in Broadway, we have not as yet seen one that seems to be practicable. We have heard of tunnelling beneath and arching above the street, suspension railway, &c. &c.; but all attended with obstacles that would render them impracticable. However, Mr. Editor, there is a way which will obviate all these hitherto objections, and give us a railway without any obstructions. The plan I propose is to build the road above the sidewalk upon arches as high as convenient, say nine or ten feet—this would not only give us a site for a railway, but would be a good substitute for awnings and a shelter from the weather. In crossing intersecting streets, a suspension bridge could be built. Now all we want is a motive power, which I will propose, providing this meets your approbation.

Respectfully yours, GEO. W. DRIGGS.
Williamsburgh, Nov. 13, 1849.

[Our proposition was to build a double track on the causeway, in the middle of the street. The idea of Mr. Driggs is good, but there is an obstacle in the way, viz., the consent of the owners of property. By our plan a law could be passed at once, and no payment for property in any shape required for the track; and we must confess that we do not see how an elevated railroad came to be proposed by so many persons. In our humble opinion, (differing from so many ingenious men that have advocated an elevated railway,) we altogether prefer *terra firma*—there are surely less objectionable features to it, than the elevated or under-ground plans.

A word here. We perceive that our predictions about the granite paving of Broadway are beginning to be verified. We will refer more pointedly to the subject by and by.

Steam on Canals.

MESSRS. EDITORS—Major Harris, of the firm of Hunter & Harris, contractors for the completion of the Chesapeake and Ohio Canal, is fitting up a steam tow-boat for the purpose of towing canal boats upon the canal from Cumberland to Georgetown, or Alexandria; the engine will be of twelve horse power, driving two paddle wheels, each of seven feet diameter, placed at the stern of the boat, one on each side of the rudder, and so constructed that as the wheels revolve, the paddles will always remain in a vertical position, by which it is supposed the swell will operate less injuriously upon the banks.

It has long been my opinion that if ever steam is successfully used upon canals, each boat must carry its own engine; that for freight boats a speed of more than 2½ or 3 miles per hour, is not practicable with safety; and the idea so tenaciously adhered to and so little accomplished, of building a boat that will cause little or no swell, must be abandoned in favor of utile principles, and those who have the direction of canals must protect their embankments by walling or riprap, i. e., covering the slope two or three feet above and below the water line with moderately coarse broken stone, for which 16 perches (of 25 cubic feet) per 100 feet, for a single bank is ample. ECONOMY.

[We respond to the opinions in our correspondent's letter. There are some canals in the world, on which steam is used, and we have seen it tried more than once on the Erie Canal. It is imperatively demanded that a new system of propulsion should be adopted on all our canals. Our canals should be made subservient to the spirit of the age.

Prompted by the powerful competition springing up from American enterprise, the W. I. Mail Co. are about to build several new ships with which to perform the Atlantic voyage at a speed of twelve knots.