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## Steam Floating Batteries and Gun Boats.

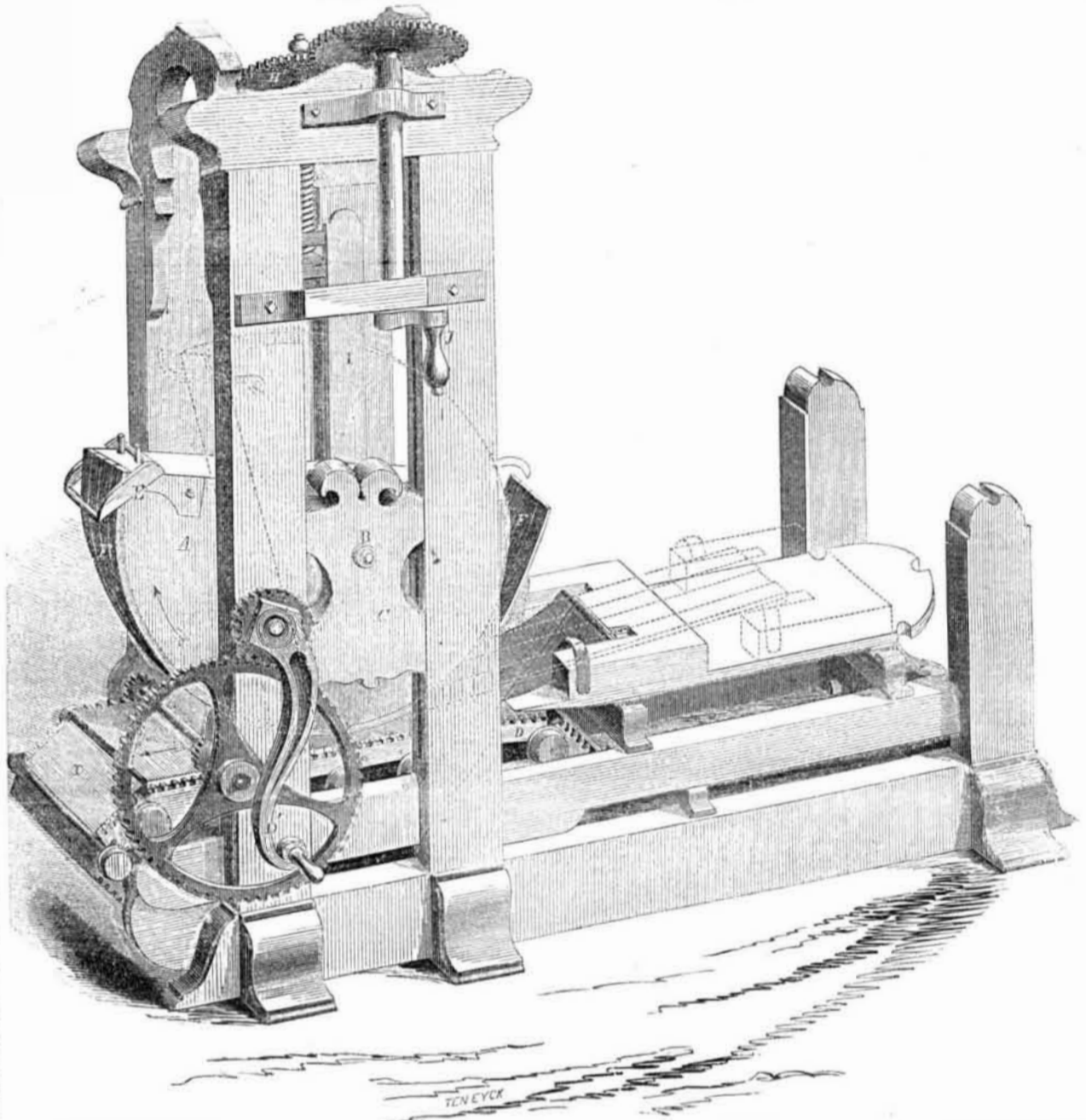
On the 23d of last month the grandest naval review ever witnessed was held near Portsmouth, England. The fleet extended in double line for a distance of twelve miles, and numbered more than 200 steam vessels of all sizes huge line-of-battle ships, frigates, gun-boats, and floating batteries. Our government might learn a useful lesson regarding the construction of some floating batteries at the review, viz., to let out all its ship and engine building by contract to able and responsible private companies, as we have more than once advised. We learn by one of our London exchanges that three of these steam floating batteries were contracted for only on the 1st of January last, and were to be finished complete by the 15th of April—a little over three months—under a penalty of \$5000 for every days' delay afterwards. At the time specified they were all completed, according to the specifications, and one of them sailed a distance of 500 miles to be present at the review, eight days after the date of contract expired. Each vessel is 2,000 tons burden, 186 feet long, 50 wide, and 16 deep. The outside planking is 4-inch wrought iron plate, which is lined with teak plank, 6 inches thick. The decks and sides are considered shell and bullet proof. The engines are 200-horse power, high pressure, and work rotary blowers to ventilate between the decks. They are all armed with large cannon and mortars.

Our floating battery at Hoboken has been under construction for more than ten years, and is not yet finished. There are parties in our country, who, no doubt, would contract for, and complete any government job, as well and as speedily as any parties the government works of the British, or any other government. It is mortifying thus to be receiving such lessons from other countries. Let us wake up to a sense of our duty and responsibilities in order that we may sustain our already well earned reputation of an enterprising and active people without a peer.

Among the objects that attracted general attention at the naval review alluded to, were more than 100 steam gun-boats, varying from 400 up to 1,400 tons burden. They have all come into existence in the course of two years, and are novelties in modern warfare. They are considered to be a great improvement, and fulfil the same offices in a navy that flying artillery do in an army. It is rather singular that Jefferson, when President, had a strong predilection for gun boats, and had quite a number of them built during his administration. These were afterwards condemned by our government naval authorities; and yet we find that his views are now adopted by England as being wise and sagacious, respecting the efficiency of such vessels. It is true, his gun boats were sailing vessels, while the new ones of England are propelled by steam engines; but the question of their efficiency in a navy is the same in both cases.

The sulphuret of carbon is proposed as a solvent for scouring wool and making soaps, as a substitute for caustic alkali.

## MACHINE FOR BENDING WOOD.



### Wood Bending Machine.

The invention illustrated in our engraving is adapted to the bending of all descriptions of wood, from plow handles up to ship timbers; but the particular machine which we represent is used for forming fellies for wagon wheels.

One of the principal objections to the use of many of the more ordinary bending machines, is the havoc which they occasion by breaking the wood during the process. We are told that it is quite common to estimate the loss of stuff, from this cause, at twenty-five to thirty-three per cent. That is to say, the manufacturer finds that only two-thirds of his stock, after it has passed through the operation, is fit for use.

It is claimed for the invention now under discussion that it saves all this loss, besides doing the work in a superior manner. If this is so it is an important improvement and merits attention. Let us see how the machine is constructed.

A is the former or pattern block, which determines the form that the wood is to receive. A is shaped like a half moon, and pivoted in its center, B, to the slides, C, of which there are two, one on each side of the frame. D is an endless revolving bed or apron, put in motion by means of the crank, D', and cog wheels. The bending is done by attaching one end of the stuff to the former, A, by means

of a clamp, E, and then moving the bed, D, in direction of the arrow. The stuff to be bent is pressed tightly between the former, A, and bed, D, so that when the latter is moved the wood is drawn in between.

In the cut, F is the board, partly bent. The position of the stuff, and also of former, A, at the commencement of the operation, are indicated by the dotted lines.

The pressure of the stuff between the former, A, and bed, D, is obtained by means of the screw, so that it can be regulated with the utmost nicety. It is to this excellent manner of pressing the wood that the success of the machine, in bending without breaking, is due. H is the screw, having a pinion, H', at its top, its lower end being connected, by means of rods, I, with the slides, C. The latter, as we have before stated, carry the bearings of former, A. When, therefore, the slides, C, are moved up or down, the former, A, rises or is depressed accordingly. J is the crank of a shaft having a pinion upon its upper end, which gears with pinion H' on the screw, H. The former, A, is raised and lowered by turning J; the convenience and accuracy of this mode of adjusting former A must be obvious. The wood, almost at the moment of bending, being firmly pressed between A and D, its fibers cannot separate, but come out whole.

This machine is easily worked, hand power only being required for fellies, and such like

articles. By its use one man and a boy can bend ten sets of fellies per hour. Each of these sets is afterwards divided into eight pieces, so that the product is eighty sections of fellies, or eight hundred per diem of ten hours. Machines like that here shown sell for \$150, but their cost of manufacture is much less.

Mr Edward J. Updegraff, York, Pa., is the inventor, and will be happy to give further information. Patented April 8, 1856.

### Grape Vines in Gardens.

Grape Vines delight in being well manured, and will not give the best satisfaction without a dry bottom and abundance of rich soil. At this period of the season, those who have trained grape vines in their gardens, should examine them thoroughly, to destroy caterpillar worms while they are small. One may now be found in almost every bud, rolled up in a pellet of fine wool. All the labor thus spent will pay for itself. During warm dry weather, the surface of the ground around the roots of vines, should be covered with litter to protect the tender rootlets, that spread out so near the surface.

There are eighteen establishments for manufacturing steel in our country; these have a capacity for making 14,000 tons per annum. We have the best ores in the world for making steel.



[Reported Officially for the Scientific American.]

LIST OF PATENT CLAIMS Issued from the United States Patent Office FOR THE WEEK ENDING MAY 20, 1856.

CUTTING MEAT—G. V. Bracht, of St. Louis, Mo. I do not claim to be the inventor of a meat cutter. But I claim the roller, as constructed of a series of circular plates, having teeth or hook, on their peripheries, which, said plates, are put on a twisted square shaft, thus making rows of teeth or the edges of the several plates, and by the twist of the shaft, giving them a spiral form.

TELEGRAPHS—D. E. Hughes, of Louisville, Ky. I do not claim any feature of any existing printing or marking telegraph, as any part of my invention, nor do I desire to interfere in the least with any heretofore invented. Conceiving that I have made an important improvement in telegraphs, I desire protection only for that which is novel and of my own invention.

CARRIAGE SHAFT COUPLING—James D. Larven, of Columbia, Tenn. I am aware that the ball and socket or universal joint coupling is old, and that a journal with a spherical enlargement in the center is old, and therefore I do not claim either the one or the other.

DESIGNS. STOVES—Samuel W. Gibbs, (assignor to W. and T. Treadwell, Perry & Norton,) of Aitany, N. Y. PARLOR STOVES—David Hathaway, (assignor to Cox, Richardson & Boynton,) of New York City. COOKING STOVES—Thomas A. Herrick, of East Bridgewater, Mass., (assignor to Lemuel M. Leonard, of Taunton, Mass.)

Romance of the Steam Engine.

Viewing one of those gigantic engines to be seen in some of our steamers, who will deny that there is something awfully grand in the contemplation of it? Stand amidst its ponderous beams and bars, its wheels and cylinders, and watch their unceasing play, how regular, yet how wonderful! A lady's Geneva watch is not more nicely adjusted,—the rush of the waterfall is not more awful in its strength.

Prevention of Steam Boiler Explosions.

In spite of the great amount of information that has been published on explosions, it pains us to hear of so many continually taking place. It appears to us that many of these are caused by ignorance on the part of those having charge of steam boilers.

Georgia Factories.

The manufactories in Georgia which started full handed, and were based on sufficient capital, have uniformly succeeded; and even during the terrible pressure of 1850 and '51 there was no failure among them.