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## Steam-Bollers.

M. Fontaine-moreau, of Finsbury, England, has recently patented two new arrangements of boiler and furnace for steam-engines and other purposes. One of them consists of a cylindrical boiler above and two smaller ones below, connected with the upper one by vertical tubes of nearly similar diameter to the smaller boilers. On each side of the furnace are large vertical hoppers, reaching higher than the top of the boiler, in which the fuel is supplied, and falls down as the ignited part beneath the boiler burns away, being thus self-feeding after the hoppers are once filled. The furnace is supplied with proper air valves, and the peculiar construction of the grate affords the means of cleaning the furnace and boilers, without interrupting their operation, combustion being maintained on one side while the other is suspended. The slags are collected in heaps beneath the fire-bars, and expelled through an aperture at bottom. The claim is for a double feeding apparatus, the part immediately leading to the furnace being inclined, and for the construction of a double acting grate. The other improved arrangements consists in having any number of metal tubes placed beneath the boiler, their extremities being fixed in two chambers, one in front and the other behind the boiler, one of them only communicating with the boiler, for the passage of steam. This communication can be intercepted by a stopper when required. The supply of water to the boiler is regulated by a valve connected with the feed pump, and a gauge cock shows the height of the water.—The tubular apparatus is set on each of two boilers, independent of each other, and possesses the advantages of allowing one of them to be taken out and cleaned without disturbing the other, or stopping the working of the engine.

## Improvements in Furnaces.

R. Gordon, of Heaton Norris, Lancashire, Eng., has patented a peculiar construction of furnace, in which the fuel is deposited in a hopper at the mouth, and slowly carried forward during the combustion on the upper surface of revolving cylinders, until it is deposited in the form of ash at the bridge gate. The air necessary for complete combustion is supplied through hollow tubes and openings, in several discs. The speed at which the revolving bars cause the coal to travel through the furnace is regulated according to the time required for complete combustion.

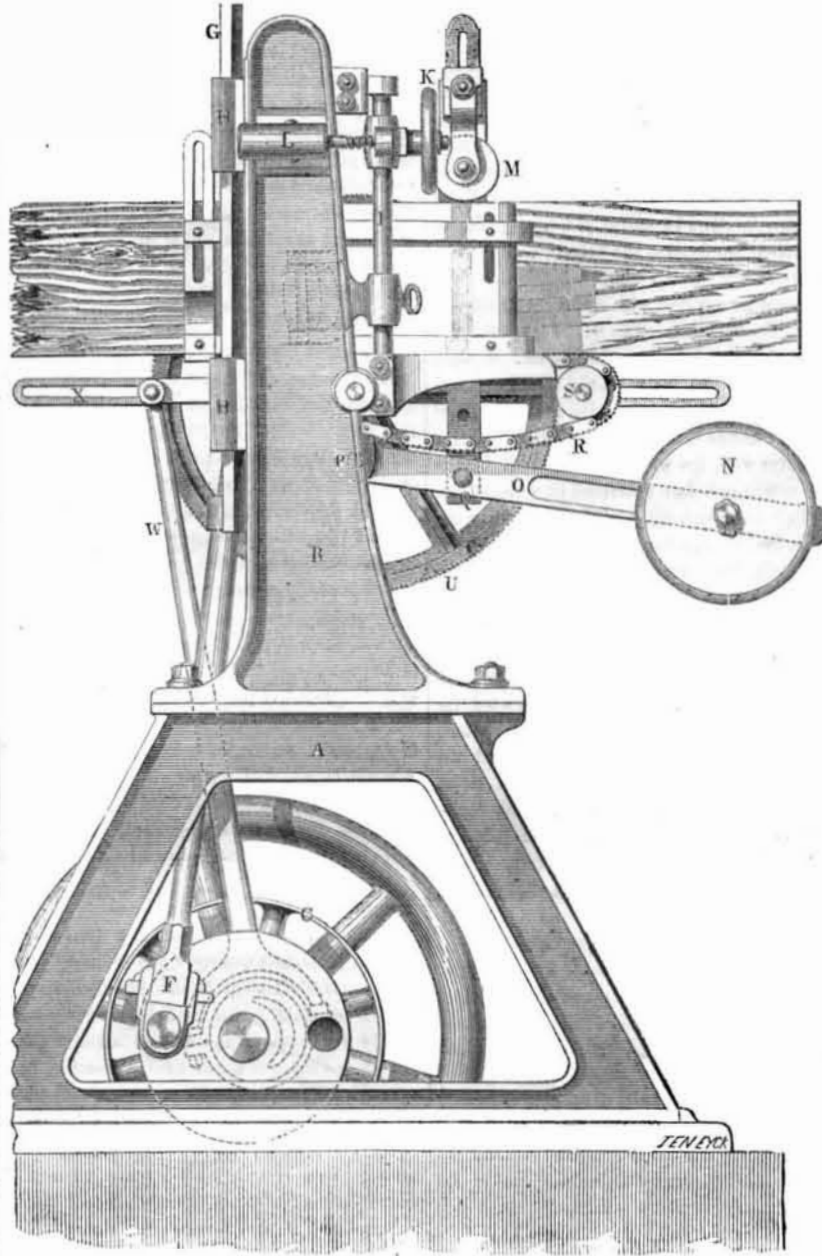
## Steam on Canals.

The Baltimore "Patriot" describes an experiment soon to be made on the Chesapeake and Ohio Canal to propel the boats by steam instead of horse power. It is thought by those having the matter in charge, that it will succeed. There is to be a regular line of steam coal boats, and a company is now organized for that purpose.

## California Wine.

A cask of California wine has been presented to the President of the United States by Senator Gwin, in the name of Mr. Purdy, Lieutenant-Governor of California, and Collector Hammond, of San Francisco. It is the grape and manufacture of the State.

## DEAL SAWING MACHINE.



We present our readers this week with an illustration of a deal sawing-machine, recently patented in England, by Mr. Archbutt, of Chelsea. It embraces a novel feed motion, which will be interesting to our readers. We have had it engraved from illustrations in the Practical Mechanic's Journal.

The main framing consist of a pair of lower vertical standards, A, bolted down to a stone foundation, and carrying two upper standards, B, bolted on by intermediate flanges, to form continuous pillars. The whole of the movements are worked from the fast and loose pulleys, C, attached to the projecting end of the horizontal shaft, carried by an end bearing on the stone foundation, and a second bearing in the base of one of the standards. This shaft, which is fitted with a small fly-wheel, to steady the motion, has on its inner end a crank disc, E, from the face-pin of which a connecting-rod, F, passes upwards to the saw frame. The machine is duplex, taking in two deals, the working frame being divided down the middle, so that the upper end of the actuating connecting-rod joined to the centre of the frame, thus saving height, without interfering with the efficient action of the machine. The slide-pieces, G, of the frame, are guided in the stationary eyes, H; and on the opposite side of the standards are two parallel spindles, I, carrying adjustable lever pressure pulleys, J, for bearing up against the timber in passing through. These spindles are grooved, to allow of the setting up

or down of the pulley-holders; and the requisite set-up is accomplished by the hand-wheels, K, set on screw spindles, passed through nut levers on the upper ends of the spindles, I, spring-boxes, L, being fitted to the framing, to secure the necessary elastic action in working. The bearing down-pulleys are at M, in adjustable eye-pieces above the timber, the bearing pressure being obtained from the weights, N, hung to the free ends of a pair of pressure levers, O. These levers are suspended from fixed stud centres, P, and links, Q, pass upwards from them to the pulley holders, sliding in slotted guides above. This pressure keeps the deal well down upon the feed chain, R, which is carried at one end of a stationary pulley, S, and at the other upon a similar pulley on the spindle, T, of the large ratchet-wheel, U. Each sawing action has, of course, a separate chain and pulley arrangement, and both are worked from the eccentric, V, on the first motion spindle, D; a rod, W, from which passes up to a ratchet-lever, X, working the ratchet-wheel, U. The exterior working edges of the bearing surface or edges of the chains, R, are serrated, so as to obtain a hold upon the timber; and as the eccentric, V, revolves, it actuates the ratchet-wheel, U, and through it the chains, R, thus feeding the deals steadily up to the cut. This ingenious movement forms a very efficient more than the simplest mechanism, and fewest possible working parts.

## Recent Foreign Inventions.

WEAVING GINGHAMS OR ORNAMENTAL FABRICS.—John Lyle, of Glasgow, Scotland, patentee.—In manufacturing goods according to this invention, the different colors of the weft to form the desired pattern are measured off in separate lengths, and these are tied together in a continuous piece, and the whole is then wound upon a reel as if the weft were one single colored piece. This chain of colors is made to correspond to the fabric in such a manner that each increment of each colored section of yarn shall form a certain defined length of color in the woven fabric. The weft so prepared is then wound upon spools or pirns, and transferred to the shuttle in the usual way. The weaving of the colored fabric then goes on from the shuttle by successive spools, each color being woven into its destined position in the piece, just as if a separate shuttle were used for it. This invention is to obviate the use of more than one shuttle in a loom. The idea is a good one, but we think it will be very difficult to make the weft match; to do so, the loom must work with the accuracy of a chronometer, and the spooling must be very carefully performed. It is a subject worthy of the attention of our carpet and gingham manufacturers.

SOLAR WATCH.—Alfred Sandoz, of Pentz, Switzerland, patentee.—This is an instrument upon which the shadow cast from a thread upon a dial, is made to indicate the hour of the day.

LUBRICATING MATERIAL.—Louis Defever, of Bruges, Belgium, patentee.—This preparation is composed of four gallons of colza oil, in which two pounds of india rubber is dissolved under a considerable heat. While the mixture is still hot, it must be filtered through a cloth, to remove all impurities.

PRODUCING DESIGNS AND PATTERNS IN WOOD.—S. George, of Worcester, Eng., patentee.—The inventor takes tolerable thick pieces of wood of various colors and forms, according to the pattern to be produced, and then mounts them in a frame side by side, in the direction of their length. He then removes the frame and glues each piece of wood to that which is next to it, and then presses the whole together by a binding hoop, or by cords. When the glue is completely dry he cuts off transverse veneers in slices, all of which will bear the same uniform pattern, and applies them as veneering to inlay the articles to be ornamented.

SMOKE AND STEAM ENGINE.—John Imrey, of Lambeth, Eng., patentee.—An apparatus is divided into suitable compartments, into which are introduced fuel, and air for its combustion, and also water, so that the heated gases arising from the combustion of the fuel shall pass over the surfaces of the apartments containing water, and also be forced through it in small divided currents to heat the water, and catch all impurities in the smoke. The steam thus generated is applied to drive machinery—a steam engine—and the smoke obtained in a deposit at the bottom of the heating apparatus can be used for chemical purposes.

This invention is not an improvement.

Among the new patents is one to Adolphus Theodore Wagner, of Berlin, in the kingdom of Prussia, professor of music, for the invention of "a psychograph, or apparatus for indicating persons' thoughts by the agency of nervous electricity."

[Collated from our foreign cotemporaries, the "Mechanics' Magazine," "Newton's Journal," "Artisan," and "Mining Journal," London; "Genie Industriel," "L'Invention," and "La Lumiere," Paris, and the "Glasgow Mechanics' Journal."]

Gen. Robert Armstrong, of the "Washington Union," died suddenly at Washington, on the 23rd inst. He was a highly esteemed friend of Andrew Jackson, and possessed many very estimable qualities.