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Rail Road News.

Placing Obstructions on Railways.

We frequently hear of some railway accident caused by the placing of stones, or logs of wood on the track. Of all the crimes of which debased and brutalized mortals can be guilty, none is blacker than this. Those who can be guilty of such a crime are fit for anything in the trade of their master, Satan—and they should be treated in this world, as near as possible to that kind of discipline they will have to undergo in the world to come. They are demons, and unfit to dwell among men. A short time since an outrage of this kind was committed upon the line of the Connecticut River Railroad between Smith's Ferry and Ireland depot. The outrage consisted in placing stones and sleepers across the track in no less than seven different places. The intent was doubtless to throw the train that passed during the evening off the track, but the first obstruction struck by the engine being a decayed sleeper, it was cut in two and the alarm being given, the train proceeded slowly along with a good look-out and was able to escape the dangers prepared for it by the bloody miscreants who were guilty of the outrage.

Road Across the Isthmus of Tehuantepec.

A stage road across this Isthmus, belonging to Mexico, is now nearly completed, and stage coaches will soon be running on it from the Atlantic to the Pacific. A line of steamers will yet run from this city, and it will yet be found that this is the most important route to our California Territories, because it is the shortest of all by 2000 miles. A railroad is contemplated across this route, and an Agent from Mexico has been in this city during the past summer, making arrangements for its construction.

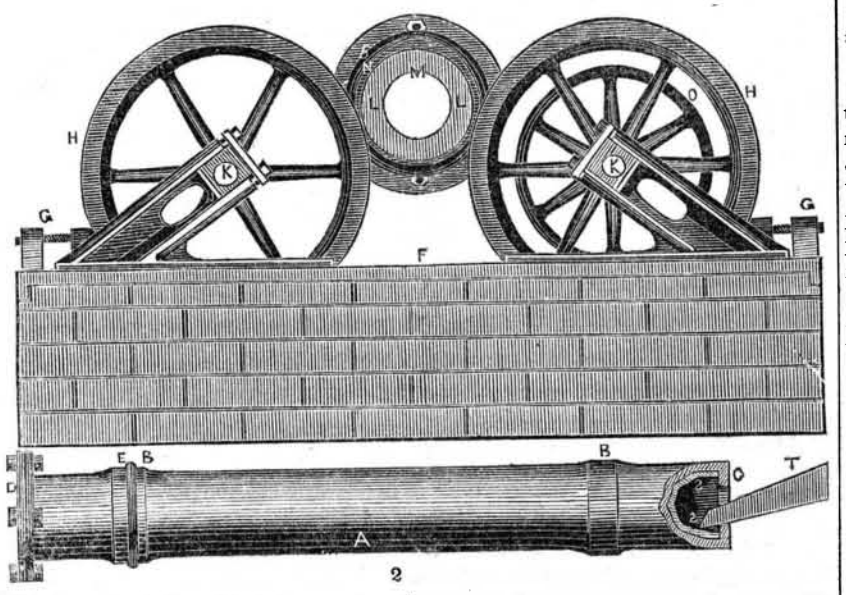
Sub Bituminous Coal for Locomotives.

Some of our railroads, we hear, are experimenting with soft coal. It is time that wood was dispensed with by our railroads. Our forests, vast though they be, deserve a better fate than to be eat up by the iron horse, when fuel from beneath the surface of the earth will do just as well.

A Balloon Frozen.

Two gentleman a short time since, ascended in a balloon from Bedford, England, and when at an elevation of two miles, they got into a cloud of sleet and snow, and the balloon was quickly covered with ice. The gas soon began to expand; but in trying the valve, above and below, it was found to be frozen. In this emergency, they applied a knife, and made an incision of twenty-four inches, in the silk. The gas issued forth in one continuous stream, through a two-foot opening; and singular to relate, the gas that had been passed into the silken globe, an invisible vapor, rushed out as white as the steam from a steam engine; such was the effect of the frosty air upon the gas.—And thus the æronants were rescued from the jaws of destruction. They decended safely.

MOULDING PIPES WITHOUT CORES.---Fig. 1.



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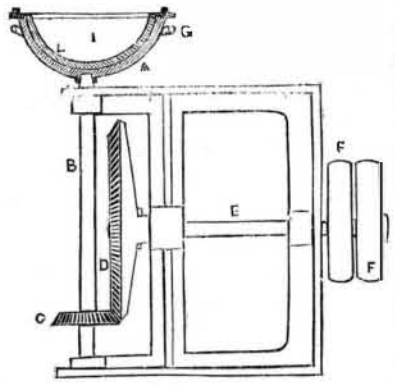
This invention is the subject of a recent patent, in England, by Mr. Andrew Shanks, an engineer in London; a description of it first appeared in the London Patent Journal. By the articles upon "Iron Moulding," which have already appeared in the Scientific American, it is known by all our readers that cores have to be prepared of the size of the hollow part of pipes, &c., that are moulded in the usual way. The metal is cast around the core, which is afterwards destroyed. This process is the cause of great expense, and the object of this invention is to dispense with cores altogether, by causing the metal while it is fluid, to assume the required form, by centrifugal force, by giving the mould a rotary motion, which is kept up till the metal is set to retain the form imparted, when it is removed from the mould.

Figure 1 is an end elevation of the apparatus employed, and fig. 2 is a longitudinal view of the mould, with different letters on it from the transverse section, seen between the two wheels, H H, fig. 1. A A, fig. 2, is the mould or flask, represented as cut across by L L, fig. 1. It is made with two raised parts, B B, which are turned concentrically true. It is a simple iron mould box, with an internal flange, M, which answers for a core, as is there exhibited. The mould box is mounted between the peripheries of four wheels (two seen) H H, which are placed at suitable distances apart to correspond with the raised parts (B B, fig. 2,) *b*, fig. 1; K K are the shafts of these wheels. They are placed on angular bearing blocks, to increase or shorten the distance between them, by setting screws, G G; F is a plate on the top of the frame, for the bearing blocks to work on. Motion is communicated to one of the shafts, by a band from any suitable power passing over the rigger or pulley, O. The frictional contact with the wheel and mould box, causes it to rotate and to communicate motion to the other wheel, H. To keep the mould box snug in its position, a small bead (E, fig. 2,) is received into a recess on the periphery of each wheel, H; D is a moveable flange on the mould box, for the purpose of removing the casting. T is a spout to convey the molten metal, S S, to the mould-box—this is done while the mould is in motion. A sufficient quantity is poured in to form the casting, which, by the centrifugal force, is thrown outwards to the exterior of the mould box, as shown at N, fig. 1, in which position it is retained by the rotary motion, until the metal is set, when the mould box is removed from the driving wheels, and the casting withdrawn, which is easily done by the contraction of the metal.

Fig. 3



This is an apparatus for casting hollow vessels. A mould box, A, of the desired shape, is mounted on a vertical spindle, B, which derives a rapid rotary motion by means of the wheel and pinion, C, D; the axis, E, of the wheel being driven by the ordinary strap riggers F. The mould, A, is furnished with a conical hole, fitting on to the upper end of the spindle, B, which produces sufficient friction to carry the mould, at the same time admitting of the mould being lifted off when desired, for which purpose two handles, G G, are provided; the top of the mould is fitted with a moveable flange, H: the metal is thus retained during the rotary motion, by which the upper lip or edge of the casting is produced. The metal in a fluid state, is poured into the centre of the mould, and the machine set in motion; or it may be run in while the mould is in motion, its rotation causing the fluid metal, I, by the centrifugal force produced by the motion imparted to it, to depart from the centre, the motion of the mould being so regulated as to insure the proper thickness of metal throughout. All the moulds whether made of iron only, or if lined with loam or other material, should be warmed before the metal is introduced, to prevent it from *setting* too rapidly.

New York Valuation.

The valuation of the property of the city of New York for the present year is, real, $197,761, 119, personal, $58,455,174, total, $256,217,093. This shows an increase over the valuation of last year of $4,732,848 in the real estate, and a decrease in the personal estate of $2,709,276. The decrease in personal estate is accounted for by the removal of families from the lower part of the city to the adjacent towns, and perhaps still more by the fact that each ward elects its own assessors by popular vote, and the interest of the assessors is not to overvalue the property of their constituents. The rate of taxation is $1 18 on the $100.

Useful Receipts.

Cure of Cancer.

The extract of wood sorrel, used as a plaster through the day, and slippery elm bark at night, will cure any cancer that has ulcerated or that has not live skin over it; the skin should be broken in some way. To burn a piece of punk on the place, is a good method, then apply the salve, as before directed. The extract is obtained simply by pounding the common sorrel in a morter, or other vessel, and pressing out the juice, then put it in a pewter dish or basin, and place it in the sun, until it dries to the consistence of tar, when it is fit for use.

[The above we select from an exchange, and we do not endorse it, but merely at present what is held to be good for this inveterate evil. Oxalic acid would answer as well, as the sorrel, in our opinion. We have seen a receipt recommending a poultice of cranberries for the same disease, and it may be that this acid, oxalic, which has been found in both, possesses some great virtue to cure the cancer.

To Preserve Meat for Voyages.

Much has been said about preserved meats spoiling: I preserved some in the following manner: Have the meat cooked and packed in well made tin boxes, and well soldered, except a very small hole in the centre of the top; set them on a stove or some suitable place, and when the steam is up take a bit of fusible metal and a small size cork to press the metal on to the hole, when it melts and stops the steam: chill with cold water. The collapsing or concavity of the heads indicate if the work is well done.

To open them for use set them on a stove and of course they vent themselves. I opened some in 28° South latitude, and the last a few days ago, which were as good as when put up. I don't know how others put it up. H. C.

Comparative Weight, Fusibility, Malleability, Tenacity, and Ductability of Metals.

Specific Gravity.—Platinum, Gold, Mercury, Lead, Silver, Bismuth, Copper, Iron, Tin, Zinc, Antimony.

Fusibility.—Mercury, Tin, Bismuth, Lead, Zinc, Antimony, Silver, Copper, Gold, Iron, Platinum.

Malleability.—Gold, Silver, Copper, Tin, Platinum, Lead, Zinc, Iron.

Tenacity.—Iron, Copper, Platinum, Silver, Gold, Zinc, Tin Lead.

Ductility.—Gold, Silver, Platinum, Iron, Copper.

To Preserve Cabbages.

Dig trenches about two feet deep and insert the cabbages upright; then put a layer of straw around them, and cover up, with a tube made of reed stuck down to circulate air among the buried plants. They will keep well all winter.

Rule for Finding the Best Proportion of Power to Tonnage, in Steamboats.

From the square of the velocity of any given vessel, in good weather, subtract the square of the velocity of same vessel in the worst weather; divide the difference by the square of the former velocity, and the quotient, multiplied into double the horse-power of said vessel, will give the power which would propel the same vessel in the same circumstances with the smallest quantity of fuel.

Great complaint is made by the merchants in this city against a common habit of manufacturing establishments in Pennsylvania, New England, and all parts of Europe, to put up dry goods marked with a yard or half a yard more on each piece than there is in actual measurement.