

MISCELLANEOUS SUMMARY.

In the drainage of the Cornish mines the economy of fuel is much attended to. A bushel of coals usually raises forty thousand tons of water a foot high; but it has on some occasions raised sixty thousand tons the same height. Let us take its labor at fifty thousand tons raised one foot high. A horse worked in a fast stage-coach pulls against an average resistance of about a quarter of a hundred weight. Against this he is able to work at the usual speed through about eight miles daily; his work is therefore equivalent to about five hundred tons raised one foot. A bushel of coals, consequently, as used in Cornwall, performs as much labor as a day's work of one hundred such horses.

A PINT of water may be evaporated by two ounces of coals. In its evaporation it swells into two hundred and sixteen gallons of steam, with a mechanical force sufficient to raise a weight of thirty-seven tons a foot high. The steam thus produced has a pressure equal to that of common atmospheric air; and by allowing it to expand, by virtue of its elasticity, a further mechanical force may be obtained, at least equal in amount to the former. A pint of water, therefore, and two ounces of common coal, are thus rendered capable of doing as much work as is equivalent to seventy-four tons raised a foot high.

THE great pyramid of Egypt stands upon a base measuring seven hundred feet each way, and is five hundred feet high, its weight being twelve thousand seven hundred and sixty millions of pounds. Herodotus states that, in constructing it, one hundred thousand men were constantly employed for twenty years. The materials of this pyramid could be raised from the ground to their present position by the combustion of about four hundred and eighty tons of coals.

A POUND of coke burned in a locomotive engine will evaporate about five pints of water. In their evaporation they will exert a mechanical force sufficient to draw two tons weight on the railway a distance of one mile in two minutes. Four horses working in a stage-coach on a common road are necessary to draw the same weight the same distance in six minutes.

THE circumference of the earth measures twenty-five thousand miles; and if it were begirt with an iron railway, such a train as above described, carrying two hundred and forty passengers, could be drawn round it by the combustion of about thirty tons of coke, and the circuit could be accomplished in five weeks.

MR. OLIVER LESLIE, of Attica, Ind., has called at our office and shown us a plan of a novel battery, which he has designed for destroying ships of war. We are prohibited from disclosing any of the details of its construction, but from the projection of it shown, it seems to be a very destructive-looking concern. Most of the principles embraced in its construction are sound, and we can add sincerely that we should like very much to see it tried.

GROG.—Mixed liquors are called "grog" because Admiral Vernon, who was the first to mix his sailors' allowance with water, was nicknamed "Old Grog" from his wearing a *grog* coat; and this name (grog) was given to the adulterated liquor he compelled the seamen of the fleet to drink.

ONE quart of wheat flour weighs 1 lb. avoirdupois; one quart of Indian meal, 1 lb. 2 oz.; one quart of soft butter, 1 lb. 1 oz.; one quart of lump sugar, 1 lb.; one quart of white powdered sugar, 1 lb. 1 oz.; one quart of best brown sugar, 1 lb. 2 oz.; 10 eggs, average size, weigh 1 lb.

FROM late English papers we learn that there were 180,000 bales of cotton on their way from India to Liverpool, in the last week of January, and 6,000 bales had arrived in that week from Egypt.

OVER 1,000 tons of iron ore were thrown out at a single blast at the Lake Superior mines, on the 19th of January. The *Marquette News* says it is intended to fire a still larger blast on the Fourth of July next, as a national salute.

It is estimated that it costs \$20 a ton for transportation of merchandise per one hundred miles on an ordinary road; \$2 on a railroad and 20 cents on the ocean, for the same distance.

SHIP-BUILDING IN PHILADELPHIA.—Messrs. Cramp & Sons have recently launched four propellers, one 225 feet long, 32 feet beam and of 1,000 tons burden; two of 175 feet length, 30 feet beam and 19 feet hold; burden, 600 tons each; and a tugboat of 300 tons, the dimensions being—length, 120 feet; breadth of beam, 28 feet; depth of hold, 11 feet. The above firm has now five vessels on the stocks. One of these is a Government side-wheel steamer, which, it is expected, will be completed in about four weeks. She is 240 feet long, 34 feet beam and of 1,200 tons burden. At Neaffie & Levy's, machinery is being constructed for some forty different steamers. An iron steamer, 240 feet long, 34 feet beam, 22 feet hold and of 1,800 tons burden, is being completed and will be ready for launching about the middle of this month. At this yard there are between five and six hundred men employed.

THE DEMAND FOR LABOR IN PITTSBURGH.—The scarcity of rolling mill hands, &c., is severely felt by Pittsburgh manufacturers, and steps are being taken to secure a supply from England. Two of the heaviest manufacturers in the above city left for England last week, for the purpose of bringing out hands of this character. They will bring out altogether some two hundred, and at the present high rate of wages in Pittsburgh they will have no difficulty in getting all they want.

THOSE who profess to know say that the warm Gulf Stream is gradually drawing nearer our coast, moderating our winter weather. The sharks which have frequented our coast for the last two summers and the mildness of the winters for the past two years are considered proofs of this fact.

WORTH OF A PAPER DOLLAR.—When men read of gold being at 170, they naturally conclude that a paper dollar is worth but 30 cents; but the 30 cents in gold, at 70 per cent premium, is worth but 51 cents in paper, so that paper is worth about 60 cents on the dollar when gold is quoted at 170.

LAKE VILLAGE, N. H., has three large hosiery establishments, turning out about five hundred dozen pairs daily. A large Government contract has just been completed. The place also has two sawmills, turning out 30,000 feet of lumber per day; a large machine-shop, with box factories and planing mills to match.

LACONIA, N. H., has four hosiery mills, making 600 dozen pairs of hose daily, beside a large quantity of ladies' stogings, hoods, &c., and some very fine cassimeres. There is also a shoe-peg mill which produces daily 250 barrels of shoe-pegs, which are sent to Boston.

Cutting Timber.

The following information about cutting timber has been forwarded to us from a correspondent, who states he found it among the manuscripts of a deceased friend. It appears to be practical, and deserving of general attention:—

"Tradition says that the 'old' of the moon in February is the best time to cut timber; but from more than twenty years of observation and actual experience, I am fully convinced that it is about the worst time to cut most if not all kinds of hard wood timber. Birch, ash, and most or all kinds of hard wood will invariably *powder-post* if cut any time in the fall after the tree is frozen, or before it is thoroughly leaved out in the spring of the year. But if cut after the sap in the tree is used up in the growth of the tree, until freezing weather again comes, it will in no instance produce the powder-post worm. When the tree is frozen and cut in this condition, the worm first commences its ravages on the inside film of the bark, and then penetrates the wood until it destroys the sap part thereof. I have found the months of August, September and October to be the three best in the year to cut hard-wood timber. If cut in these months the timber is harder, more elastic and durable than if cut in winter months. I have, by weighing timber, found that of equal quality got out for joiners' tools, is much heavier when cut and got out in the above-named months than in the winter and spring months, and it is not so liable to crack. You may cut a tree in September, and another in the 'old' of the moon in February following, and let them remain, and in one year from the cutting of the first tree you will find it sound and unhurt, while the one

last cut is scarcely fit for firewood, from decay. This I know by experience. I know of several buildings the frames of which were cut in the 'old' of the moon in February, principally of beach timber, now literally eaten up by the powder-post worm; while other timber, cut before the frost came, remains perfectly sound, without the least mark of a worm. Chestnut timber for building will last longest, provided the bark be taken off. Hemlock and pine ought to be cut before being hard frozen, although they do not powder-post; yet if they are cut in the middle of the winter or in the spring of the year, and the bark is not taken off, the grub will immediately commence its ravages between the bark and the wood. I have walnut timber on hand which has been cut from one to ten years, with the bark on, which was designed for ax-helves and ox-bows, and not a worm is to be found therein; it was cut between the first of August and the first of November. I have other pieces of the same timber cut in the winter months, not two years old, and they are entirely destroyed, being full of powder-post and grub worms. Within the last ten or twelve years I have stated the result of my observation on, and experience of, cutting timber in different seasons of the year, to many of my neighbors and others; and all who have made the trial are satisfied that the above statement is correct. Others more incredulous follow traditions. It is a fact which is beyond contradiction that when there is the least sap in timber it is the most durable and solid, and will, when seasoned, be the heaviest. And I am fully persuaded that nine cords of wood cut in those months above-named, will go further than ten cut in the winter months. It will burn clearer, the coals will be more solid, and they will retain their heat double the length of time. Who does not know that wood cut in the winter and suffered to remain in the log, or exposed to the weather, is of but little value? especially beach, birch, maple, &c.; being so far decayed it rather molder away than burns, making no coals and giving little heat. Hoop poles ought to be cut before frost comes, and they will last three times as long as when cut in the winter, and will remain free from worms. The late Mr. Leonard Kennedy, of Hartford, Conn., stated to me some twelve years since that he had lost more or less walnut timber yearly, which he was in the habit of purchasing for screws, printing presses, vices, &c., by its powder-posting, although he had been particular to have it cut as far as possible in the 'old' of the moon in February, and he inquired of me if I could inform him how to prevent it. I told him to order his timber cut in August and September, instead of February. He afterward told me that the advice was of much value to him as he had lost none since, if cut in those months; and that he thought the screws were better. Many others might be named who have followed the same advice, and none have failed of success. Most if not all persons are more or less interested in the above, either in building-timber or mechanical business; and on a fair trial they will find they have not been deceived by me."

The Earth is Safe.

The *London Times* says mankind are using up the world too fast. Incessant cultivation, it is alleged, is stripping the earth of its coat of mold, which cannot be replaced except by a return to the primeval forest. There are facts in existence a little inconsistent with that alarming statement. The plain around Benares has certainly been cultured for three thousand years, and is as rich as ever. The country around Damascus was a garden in the beginning of history and is a garden now. No forest ever renewed the soil of Northern Italy, nor is the glorious fertility of Asia Minor artificial. Districts have, it is true, perished, but it has always been from human folly, the cutting-down of the trees till the rain ceased and the wells sank, as is now occurring in some parts of Upper India. When we conquered the Punjaub that vast province did not contain one tree, and in thirty years would have become like the Babylonian desert, a sterile plain, and from the same cause.—*London Spectator*.

COBALT.—The word "cobalt" is derived from the German *kobold*—"a devil;" this term was applied to that metal by the German miners, who considered its presence unfavorable to the existence of more important metals.