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Noah's Ark and the Great Eastern Steamship

A correspondent of the *London Times* makes a comparison between the dimensions of Noah's Ark and those of the Great Eastern steamer now building on the Thames. He comes to the conclusion that, both in respect of superficial area and stowage room, the steamer will be larger than the Ark.

Bad Effects of Snuff.

The *Anstin (Texas) Intelligencer* notices the death of a little girl some five or six years old, from the effects of taking snuff. She was so addicted to its use, child as she was, that she literally ate, and lived on it. In our next number we will publish a communication setting forth the poisonous character of adulterated snuff.

Color of the Moon During Eclipses.

Prof. Faye, of the Faculty of Sciences at Nancy, France, observed a fact during the last eclipse of the moon, which serves to explain the peculiar color assumed by the moon when under the shadow of the earth. By covering the part not eclipsed by a distant object, such as the angle of a roof, or the top of a chimney, the tint of the part eclipsed is entirely changed, and in place of a reddish-brown there is seen only a lively rose-red, like that which is so common on clouds near sunrise or sunset, and which gave origin to the epithet rosy-fingered applied to the dawn. The color seen ordinarily in case of eclipse is consequently an effect of contrast, due to the usual yellowish shade of the moon's light.

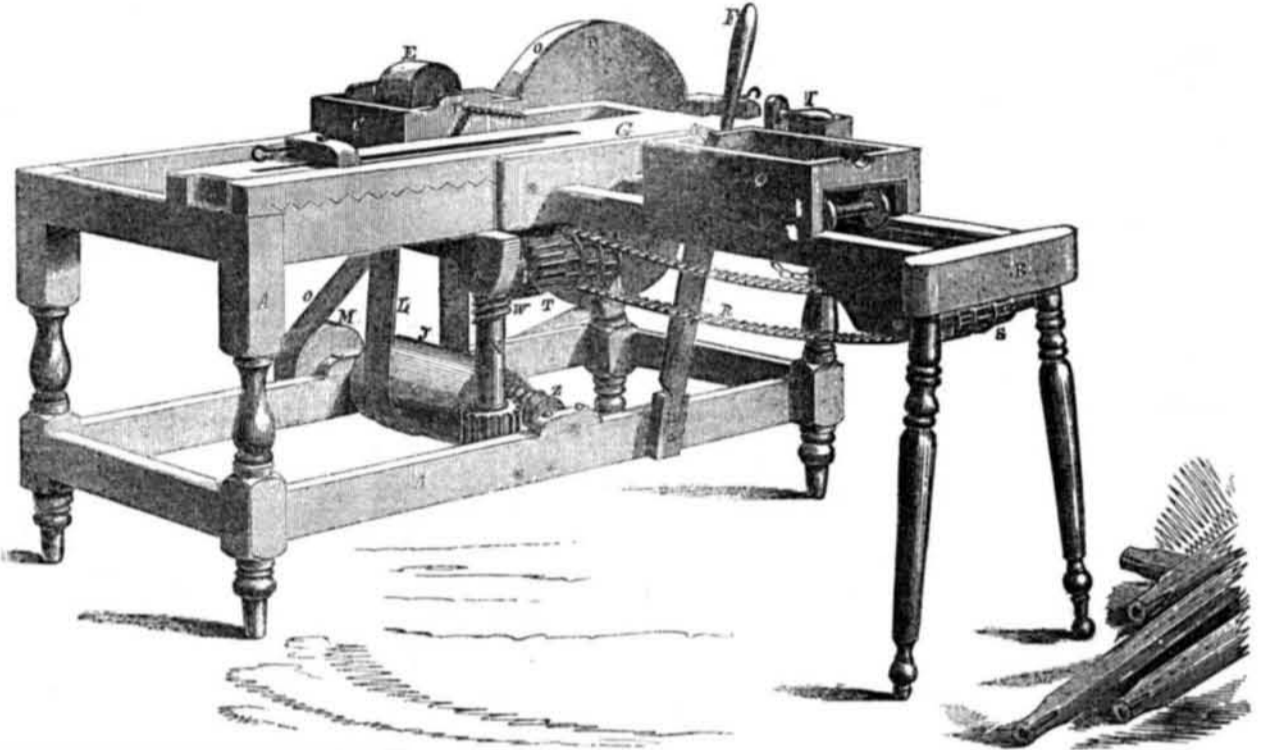
Post and Pump Boring Machine.

This illustration represents a portable boring machine, patented by Samuel Klahr, of Bernville, Pa., on the 16th of December last. To use many words in setting forth the nature and advantages of a good machine for the familiar purposes of boring posts and pump stocks, would be verbiage. We have but to state its objects, when its extensive application and uses are presented to every mind.

The accompanying description will render the construction and operation of the machine clear to all.

A is a square frame supporting the devices for boring posts, pump stocks, or any long pieces of timber endwise; B is an extension frame attached to frame A; C is a railway carriage resting on the top of the frame, A, it carries the long auger, D. There is a pulley, E, on the auger shaft; F is a lever attached to carriage, C, by which it and auger D, are moved forward whilst boring, or withdrawn at any time from the piece bored; G is a horizontal and adjustable platform to which the post or piece of lumber is attached, and which is moved crosswise, the required distance to regulate the holes apart. The platform, G, has rack teeth underneath which are operated by a pinion below, that is moved by the crank, I. There is a drum, J, on a cross shaft, secured to the frame by journal boxes. This drum, J, causes the auger, D, to revolve by a band, L, passing around it and

POST AND PUMP BORING MACHINE.



the pulley E. The pulley, M, is put in motion by a band, O, passing around it and the main driving wheel, P. The carriage, Q, on the frame, B, which carries the pump stock to the auger, D, is attached to an endless chain, R, which passes around pulleys, S and T. These pulleys are of three sizes, and the endless chain is placed over the larger or smaller pulleys, according to the speed required. The pulleys have projecting pins which catch the links of chain, R, and prevent its slipping.

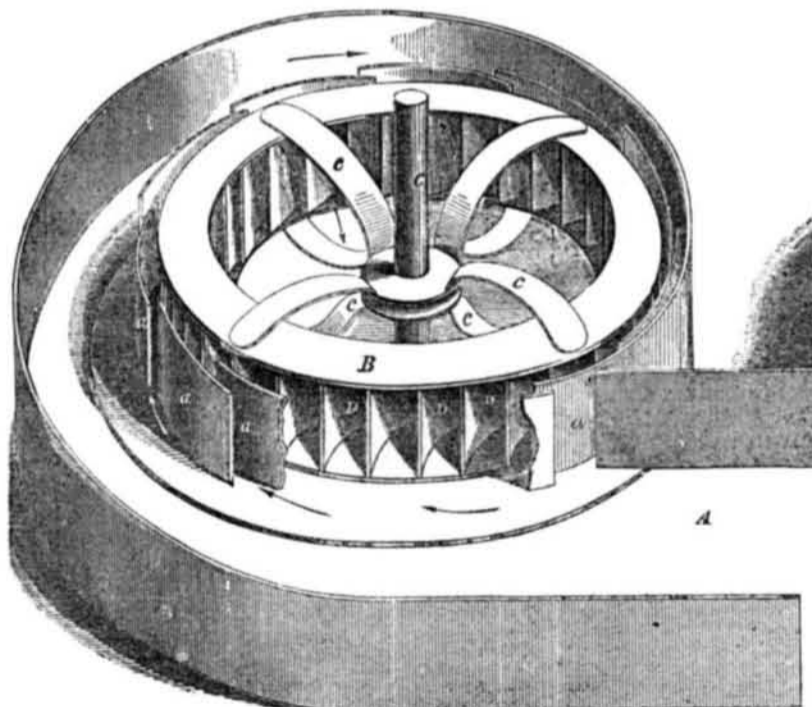
The pulleys, T, have a pinion, V, on their shaft, which receives its motion from a vertical endless screw, W, on the upper end of vertical shaft X. This shaft has a pinion at its lower end. An endless screw, Z, on the lower horizontal shaft gears into the pinion on vertical shaft, X, and the endless screw, W, gears into the pinion, V, and thus the pulleys, T, receive their motion.

The post, pump stock, or whatever article is to be bored, is placed on the railroad car-

riage, Q, which has a recess in its top to hold it. When the boring of the article is executed, the auger is withdrawn as has already been described. There are two carriages in this machine, which have reciprocating motions for feeding and boring the posts and pump stocks. The parts are few and simple and the machine easily operated.

Further information may be obtained by letter addressed to Mr. Klahr, at Bernville, Pa., or P. Buffenmyer, Intercourse, Pa.

MUNROE'S IMPROVED TURBINE WHEEL.



The accompanying figure is a perspective view of an improvement in water wheels, for which a patent was issued to A. Munroe, of Worcester, Mass., on the 22d of July last. The improvement in this class of wheels consists in employing a series of deflecting or guide plates in the scroll, for the purpose of causing the water to act in the proper direction against the buckets. The buckets are concave, and the central arms are inclined plates, which tend to a more free discharge of the water from the wheel to relieve it, after the water has acted on the buckets.

The wheel is horizontal, with a vertical shaft, and is submerged. A represents the

scroll for conducting the water, and B is the wheel fitted within it; C is its shaft; a a are the oblique guide plates, secured to the scroll, like the slats of a blind, outside of the wheel rim. The water passes from the scroll in the direction of the arrows, between the guide plates, a, and acts against the buckets, D, passing through them from the periphery, and discharging at the center. The buckets are of a concave form, placed vertically and tangentially between the upper and lower rim of the wheel, so that their inner ends are closer together than their outer ends. The arms, c, secured on a center hub of the wheels are curved and bent upwards and down-

wards, as shown by the arrow, so as to facilitate the discharge of the water.

The guide plates, a, are placed relatively to the buckets, D, so as to direct the water to act against the outer edges of the buckets at right angles with them. The water then passes into the center of the wheel, thence out into two columns, one above and one below, divided by the arms, c, which, as they rotate, direct the water out in an easy, steady current. In a wheel of four feet diameter, about fifteen guide plates are employed to thirty-five buckets, D. These guide plates or slats direct the water in such a way that if the wheel runs fast, it does not, like some wheels, discharge more water without producing a corresponding effect, but discharges less water, and thus they serve the purpose of self-regulators. One or more wheels may be placed on the shaft. Altogether about fifty of such wheels are now in operation in various places, and give good satisfaction. One of them, at Woonsocket, R. I., performs, it is stated, one-third more work than a breast wheel, with the same water, in grinding meal and flour. We have been shown certificates from some of those who are now running them, speaking in the highest terms respecting their efficiency.

More information respecting rights, &c., may be obtained by addressing Mr. Munroe, as above.

A Gigantic Bird.

The Paris Academy of Sciences has been presented by M. Lartet, Professor at Anch, with three fragments of the **shoulder** of an unknown bird, dug up in the department of the Gers. The three fragments placed end to end measured fifty-eight centimeters, or nearly twenty-three inches, which is alone about a third more than that of the albatross, which of all known birds, has the largest humerus. Fossil birds are comparatively rare.