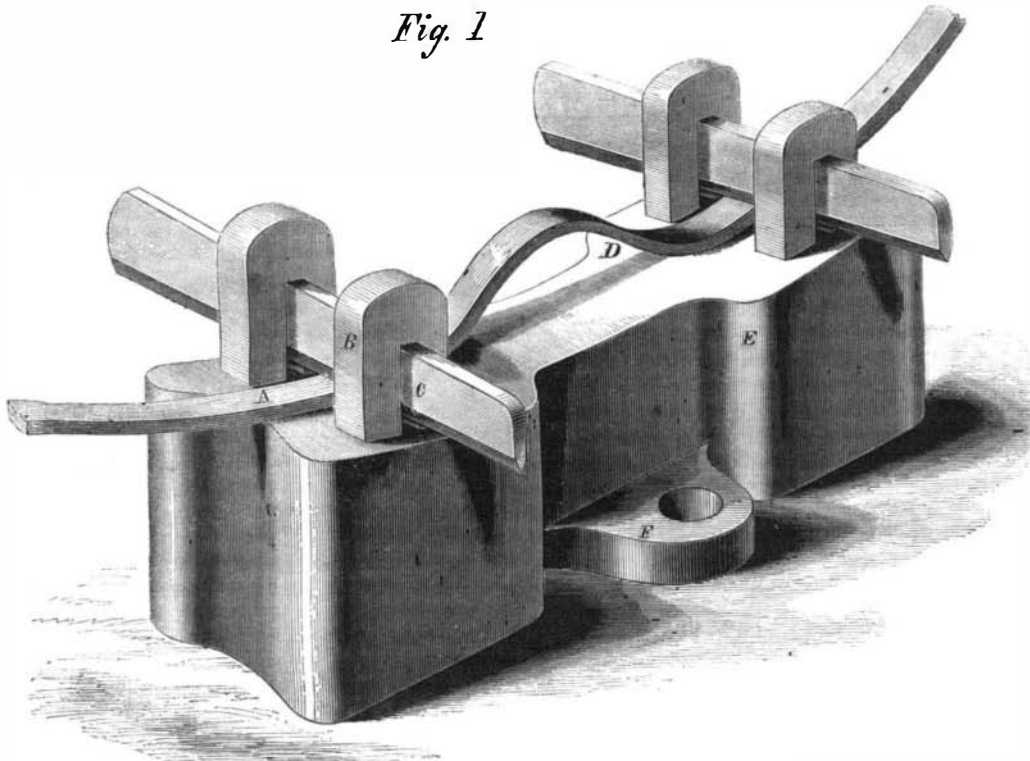


Improved Machine for upsetting Tires.

We present our readers this week with a view of Dole's arrangement for upsetting tires for wagons or other wheels. The engravings represent the machine very perfectly. The operation is performed by inserting the tire, A, between two sets of lugs, B, provided with keys, C; the tire, having previously been formed with a bend in it as at D, is held tightly by the keys while the blacksmith sets the bend down, which being hot compresses the metal together and thus shortens the tire. The lugs, B, are made of wrought iron, and are formed into a loop at the bottoms, as in Fig. 2; they are set in the mold when the anvil or bed, E, is cast, and are kept in place by the casting surrounding them. By this method of con-

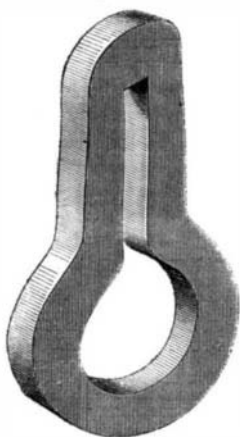
struction a very strong link is secured. The keys are of steel, and have V-shaped edges so that they bite into the metal of the tire and hold it in place firmly, and the anvil has lugs, F, by which it may be bolted down to a firm foundation. This is a very convenient

Fig. 1

**DOLE'S MACHINE FOR UPSETTING TIRES.**

struction a very strong link is secured. The keys are of steel, and have V-shaped edges so that they bite into the metal of the tire and hold it in place firmly, and the anvil has lugs, F, by which it may be bolted down to a firm foundation. This is a very convenient

Fig. 2



and useful machine, and will accomplish the object for which it was intended. It was patented on Jan. 12, 1864, by L. A. Dole, of Salem, Ohio. For further information address Dole & Silver, at that place.

The Product of Petroleum.

The Buffalo Commercial Advertiser, of April 15th, contains a very long "Oil Circular," by F. S. Pease of Buffalo, from which we gather the following statements:—

"The exports of petroleum from the United States for the year 1863 have been large—28,250,721 gallons, against 10,955,991 gallons in 1862. The product of the wells is set down at 2,000,000 bbls., or 80,000,000 gallons for the year, being 10,643,735 gallons more than in 1862. California seems to be well supplied

with asphaltum and petroleum, both of which exist in large quantities. Immense beds of the former are found on the sea-shore in the vicinity of Santa Barbara, and is used largely in the construction of sidewalks, roofing, &c., at San Francisco. Some 18 miles west of Buena Vista Lake, an extensive deposit of asphaltum has been found, boiling up from numerous springs, being warm and in a fluid state when it comes to the surface, and of a dark and viscous color. During the last year another extensive spring has been discovered near Pyramid Lake. On the coast, petroleum springs are met with at Santa Cruz, and San Pablo, in Contra Costa county, 10 miles from San Francisco. The Conway Petroleum Association has bored several wells, one of which

discharges considerable quantities of oil. In Santa Clara county, oil springs have been found near the Los Cates Creek."

Migration of the Stump of a Tooth.

A young lady, who was sent some months since to M. Delistie by one of his friends, had on the left side of the palate, on a line with the first molar, which was absent at one-third of an inch from the edge of the gums, a mass of substance regularly rounded off, blackish, of the size of a small pea, with regular edges. Several doctors had been consulted, and the affection looked upon by them as caries of the maxillary, had been submitted to different kinds of treatment, all of which had been of no avail. M. Delistie tried to find out by the help of a stylet what affection he had to deal with. This instrument hit on an uneven mass, which gave neither the crepitation of caries nor the roughness of a sequestrum. On pressing heavily all around he thought he felt it moving slightly, and introducing the two very slender points of a pincers for extracting stumps, to his great astonishment he drew out the root of a tooth nearly one-third of an inch in size. This root evidently came from the first molar; it had made its way through the maxillary bone, and had placed itself perpendicularly to the roof of the palate. The patient having been seen a fortnight afterward, was perfectly cured.—*Dublin Medical Press.*

THE JAPAN VARNISH TREE.—*Le Moniteur Illustré des Inventions* recommends the introduction into France of the Ailanthus tree (*rhus vernice*), which yields the Japan varnish. This is not the same as the silk-worm Ailanthus. It is cultivated in Japan and China, and could doubtless be raised to any extent in this country. The varnish is procured by making an incision in the trunk in the same way that is practiced in gathering pitch from the pine. The yield is said to be very large, and there is every prospect that the cultivation of the tree would be profitable.

A Furnace falling into a Coal Mine.

A very startling occurrence happened recently, near Wolverhampton, England. When the charge was nearly ready for being drawn off, one of the three blast furnaces at Rough Hills, belonging to Messrs. Aston and Shaw, suddenly fell into ruins. The furnaces were put up on an old colliery, the crust of which is only about seventeen yards thick; and it is thought that the pillars in the bottom coal, which was found at this distance, had been taken from either beneath the furnace or else so near to it as to gradually draw it down, but it had previously exhibited no evidence of danger. Two men were sadly burnt by the accident.

HAIR-DRESSING.—Ladies will find the mode of plaiting eight strands, illustrated and described on page 244 of the SCIENTIFIC AMERICAN, current volume, a handsome way for dressing their braids.

THERE are one hundred and forty-nine shoe establishments and thirteen kid and morocco houses in Lynn, Mass. The internal tax on this department of manufactures amounted last year to \$252,759.

THE

Scientific American,**FOR 1864!**

VOLUME X.—NEW SERIES.

The publishers of the SCIENTIFIC AMERICAN respectfully give notice that the Tenth Volume (New Series) commenced on the first of January. This journal was established in 1845, and is undoubtedly the most widely circulated and influential publication of the kind in the world. In commencing the new volume the publishers desire to call special attention to its claims as

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