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Improvement in Setting Blocks for Saw Mills.

Fig. 1 of the accompanying engravings presents a perspective view of an improved device for setting logs to be sawed to any required thickness. The setting frame, it will be seen, is not in proportion to the carriage and frame, as the representation was taken from a model; practical sawyers will, however, readily understand the operation of the device. Fig. 2 is a top plan of the setting device.

The machine is driven by a belt on the pulley, A, on the same shaft of which is another pulley, driving by the belt, B, a loose pulley, C, the hub of which is a clutch engaging with a similar clutch forming part of the pinion, D. A lever, E, serves to ship the gear and clutch, D, from contact with the gear, F, and pulley, C, when the machine is to be operated by hand. A belt from the pulley, G, the shaft of which carries the gear, F, drives the pulley, H, Fig. 1, and this, by means of the gear, I, same figure, turns the screws that move the head blocks, J, the two screws being connected by pulleys and belt as seen in both figures. The connection between the driving power and the movable heads is thus sufficiently explained; the automatic setting of the log is assured by the device to be described.

Fig. 1.

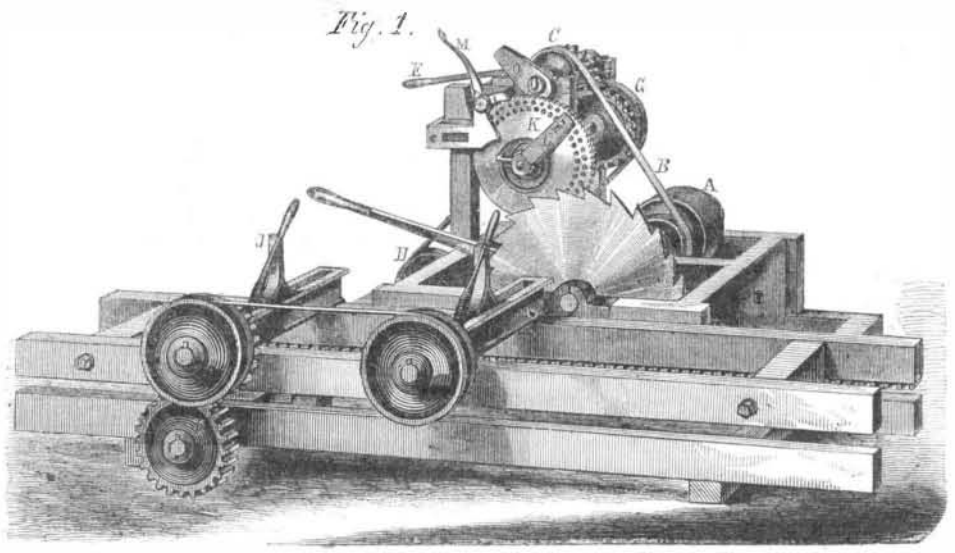
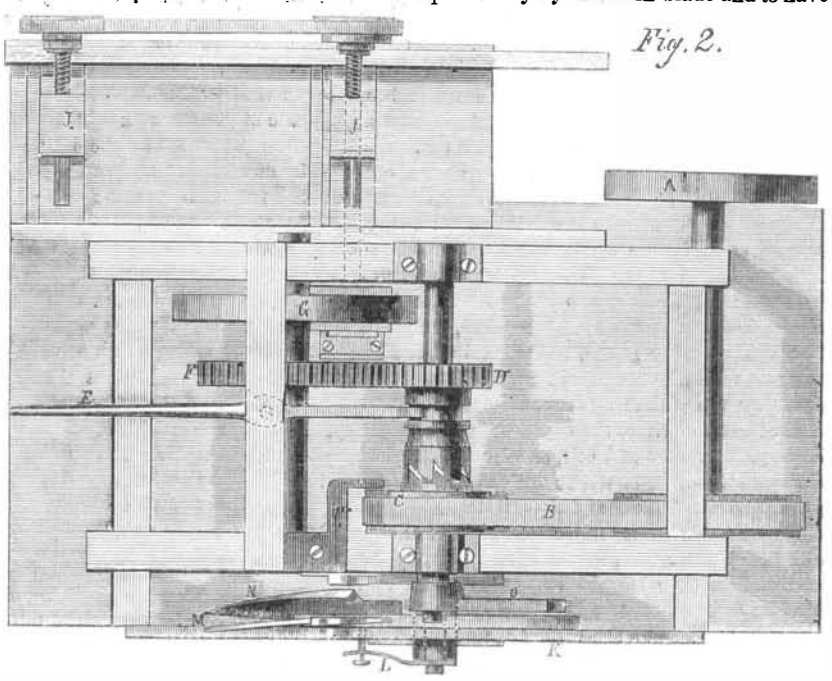


Fig. 2.



On the shaft that carries the pulley, G, is an index plate, K, perforated with holes, and having a toothed or serrated edge. In the holes fits a pin passing through a slot in the spring, L. A pawl lever, M, held to the periphery of the index wheel, K, by a spring, engages with the ratchet teeth on the disk. Attached to the disk or index is a cam, N, seen in Fig. 2, that operates an arm, O, secured to the shaft on which are the wheels, D and C, and moves the clutch on the same shaft to disconnect it with the pulley, C, which is held in place by the guide, P, Fig. 2.

The holes in the disk are numbered, and spaced to correspond with the pitch—four to the inch—of the screws which move the head-blocks, J. Of course the gears, D and F, have teeth, in number conforming to regular proportions, those in the first being just half as many as those in the latter. Consequently, for every turn of the screws, the wheel, D, makes two revolutions, while the gear, F, makes one. By these means unfailing accuracy is secured.

When any given thickness of lumber is required, the pin in the spring, L, is set in that hole in the index numbered to correspond to half the number of revolutions of the pinion, D. If, for example, ten revolutions are required to move the log the distance desired, the pin is set in the hole numbered five. The two halves of the clutch are then engaged, and the machine put in motion, when a little dog on the shaft, carrying the arm, O, successively, moves one tooth after another with each revolution of the shaft, and the movement being completed, the cam, N, engages with the arm, O, and instantly disconnects the clutch, and stops the transverse motion of the log. Then, by drawing back the pawl lever, M, the index is thrown back to its starting point by means of a coiled spring, and engaging bar on its face—seen in Fig. 1. When only half a turn is desired, the pin is set in one of the inner circle of holes in the index

The inventor claims, that with this machine the work can be done quicker and better than by hand, that the device sets the log always accurately, and its use dispenses with the labor of one man or boy. It can be changed instantly, while the machine is running, from one grade or thickness of lumber to another. Lumber sawed by a machine provided with this attachment is much more even in thickness than that which is sawed on the ordinary mill where the stock is fed to the saw by hand. The patentee will sell the right for the Eastern States. The letters patent, dated Sept. 17, 1807, were procured through the Scientific American Patent Agency by Titus Whitmore, Dubuque, Iowa, whom address for further information.

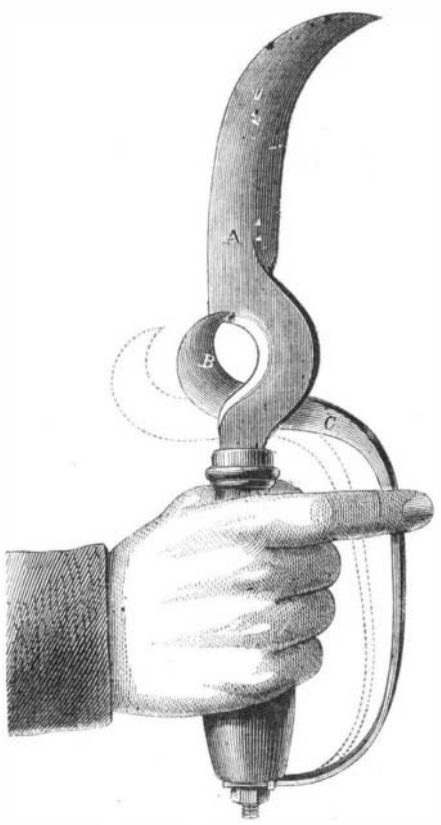
WHITMORE'S PATENT HEAD-BLOCKS.

Important Patent Suit.

A patent case of great importance to stave manufacturers has recently been decided in the United States Circuit Court for the western district of Michigan. This was a suit in chancery between parties residing at Kalamazoo, for the infringement of a patent for a stave machine, granted to Wm. Sisson, of Fulton, N. Y., on the 24th of Sept., 1861, under which the complainants claimed. The defense denied that the improvement was invented by Wm. Sisson, and also alleged that if he was the inventor he had abandoned the invention to the public before making application for his patent. The case came on for a final hearing at the October term, and the Court fully sustained the patent, and issued an injunction to restrain the defendants from the further use of the machine.

BARLEY'S CANE STRIPPING AND PRUNING KNIFE COMBINED.

The improvement illustrated in the engraving is intended for topping, stripping, and cutting off the cane of sorghum or the ordinary sugar cane to prepare it for the grinding or squeezing process. The blade used for topping the cane is



curved as at A, similar to the blade of a pruning knife. Its back at the rear end next the handle is formed into a curved edged jaw, in connection with which the spring jaw, B, completes a device for stripping the cane of its leaves.

In operation, after topping the cane with the blade, A, a pressure of the index finger on the spring, C, opens the jaw, B, to receive the cane, when the tension of the spring, C, will grasp the stalk, and a downward motion of the hand holding the stripping knife cleans off the leaf blades, and a drawing motion toward the operator will cut the cane off at any required point. By removing the spring and blade, B and, C the implement becomes an efficient pruning knife. The dotted lines show the position of the spring blade when brought up to receive the cane. This blade with its spring is attached by a nut and screw or some other suitable device to the end of the shank of the knife proper, and is constructed so as to pass freely by the main blade and to have its point engage with the opposite side of the blade, which gives it a firm hold in the act of stripping.

This improvement was patented through the Scientific American Patent Agency, Sept, 24th, 1867, by J. H. Barley, who will reply to all communications addressed to him at Sedalia, Mo. Territorial and manufacturing rights for sale.

PASSENGER TRAVEL ON BRITISH RAILWAYS.

From the columns of an exchange we transfer the following interesting correspondence respecting English railways as compared with those of our own country. The rolling stock on the English roads when contrasted with that found on American railways at first strikes the stranger unfavorably. The locomotive without polish, painted with a dull, gray, stone paint, illustrates the contempt for appearances as to attractiveness in color or model characteristic of English ideas.

"Cars with like dark, dingy color, improved by coal smoke, and ugly baggage railings on top, with some tarpaulin coverings thrown over the unsightly piles of old trunks and furniture, make up even the first-class trains. Coal is burned in these locomotives, in furnaces at the rear within the exterior circle of the tubular boiler, the heat being conducted through the boiler by a multitude of small tubes terminating in front, in a common air or smoke chamber, from which a funnel or flue, about twelve inches in diameter, with a top shaped like an inverted bell, rises perpendicular about three feet above the top of the boiler. Of course they need no spark arresters, and seem to require less draft in running their fires than ordinary wood engines.

"These engines are scarcely two-thirds as high as locomotives on American roads. It seems to be a desideratum to place the weight of the machine and the water of its boiler, as near the track as can be done, and still leave the necessary space for its wheels and machinery. The cars are about twenty-five feet in length, and run on double trucks like ours, but on two pairs of wheels to each car, with a shaft passing through a frame on which the car body rests, with intervening springs. The wheels are not as large or so heavy as those used on American roads, bringing the body of the cars some eight to ten inches nearer the track.

"Each car is divided into three compartments or 'carriages,' each carriage with two seats across the car, facing each other—the entrance being on the side, between the seats. Each seat will accommodate three first-class passengers, or four second or third-class. The interiors of the first-class carriages are luxuriously upholstered, the seats being finished as easy chairs with side arms, so that the seats occupy the width of the car, and eighteen sittings will fill an entire car. The second-class cars or carriages, for first, second and third-class carriages or compartments, are sometimes found in the same car, and are furnished with cushioned seats and cushions for the back, but have no divisions into separate seats, so that eight passengers can sit quite comfortably in each carriage, or 24 in each car when full. Third-class cars have either plain board seats, or in some cars, none at all.