

UNITED STATES PATENT OFFICE.

JAMES S. SCOFIELD, OF LITTLE SIOUX, IOWA.

IMPROVEMENT IN SAW-MILL HEAD-BLOCKS.

Specification forming part of Letters Patent No. 200,940, dated March 5, 1878; application filed January 4, 1878.

To all whom it may concern:

Be it known that I, JAMES S. SCOFIELD, of Little Sioux, county of Harrison, and State of Iowa, have invented a new and Improved Head-Block and Carriage for Saw-Mills, of which the following is a specification:

Figure 1 is a plan view of a head-block and carriage embodying my improvements. Fig. 2 is an end elevation. Fig. 3 is a transverse section taken on line *xx* in Fig. 1. Fig. 4 is a vertical transverse section taken on line *yy* in Fig. 3. Fig. 5 is a detail view of the carriage-tightening eccentric.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

In the drawings, A A' are rectangular frames, each supported by track-wheels *a*, which are secured to axles *b*, that are journaled in the timbers of the frames. The head-frame A' is attached to a bar, B, which has a rack upon its under side, that is engaged by the usual driving-pinion. The frame A is movable on the bar B, the said frame being notched to receive the bar, and provided with a clamping-bolt, *c*, that hooks under the bar, and extends upward through the frame A, and through a plate, *d*, at the top of the frame, and is provided with a nut, that bears upon the upper surface of the plate. An eccentric-lever, *e*, is journaled in the frame A below the plate *d*. By moving this lever the plate is raised, bringing the head of the bolt against the bar B, clamping the said bar and the frame A together. Upon each of the frames A A' a head-block, C, is placed, which consists of two similar iron parts, *fg*, separated by a block, *h*, at each end, and secured together by bolts *i*. In the inner face of each part *fg* a screw-rack, *j*, and rib or guide *k* are formed. A short knee, *l*, having grooves in its sides for receiving the guide *k*, is placed in the head-block, and it is provided with ears *m*, that project downward, and with a short upwardly-projecting arm, *n*, that is apertured to receive a stake or extension-piece, and is beveled downward toward the saw end of the head-block, to adapt it to the surface of the larger logs. The knee

is provided with the usual log-hook *o*. Between the ears *m* and upon a shaft, *p*, that is journaled in the head C, a tubular screw, *q*, is placed, which is kept from turning on the shaft by a spline in the screw and a slot in the shaft. Upon the end of the shaft *p*, opposite the saw end of the head-block, bevel-wheels *r* are placed, and a shaft, *s*, which is journaled in brackets *t*, attached to the head-blocks, carries bevel-wheels *u v*. The bevel-wheel *u* is keyed to the shaft *s*, and the bevel-wheel *v* is provided with a spline fitted to a slot in the shaft.

By turning the shaft *s* by means of the hand-wheel *w* the tubular screws *q* are simultaneously rotated, so as to carry both of the knees *l* forward at once.

When it is desired to increase or diminish the distance between the head-blocks the cam-lever *e* is raised, so as to release the bar from the clamping device, when the frame A will remain stationary, while the frame A' is moved in either direction, as may be required. The bevel-wheel *v*, being loose on the shaft *s*, admits of being moved along on the shaft as the frames A A' are shifted.

The knees *l* are made shorter than those in common use, to admit of rolling a large log upon a short head-block.

When required, stakes may be placed in the knees *l* to increase their height.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The carriage having its first section adjustably fastened to the rock-rail by a rock-shaft and eccentric-lever, as shown and described.
2. The combination, with head-blocks, of the short beveled and mortised knee, the bevel striking the log directly under the circle, and close to the point where it rests on the block, and driving the dog into the log.
3. The short beveled and mortised knee *l*, in combination with the head-block C, substantially as herein shown and described.

JAMES SYLVESTER SCOFIELD.

Witnesses:

GEO. F. STRAIT,
E. K. SCOFIELD.