E. B. Requa,

Saw-Mill Head-Block.

No. 40,502. Patented Nov. 3, 1863.

Fig. 2.

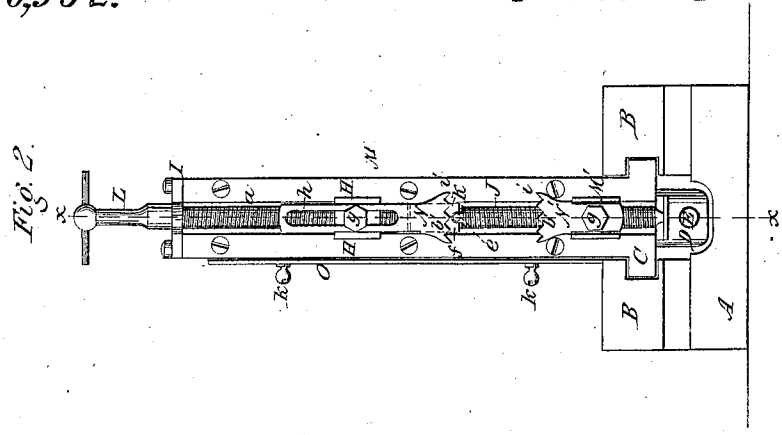

Fig. 3

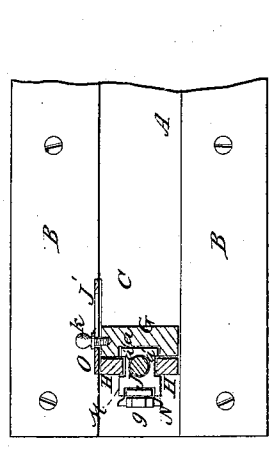

Fig. 1.

Witnesses:

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UNITED STATES PATENT OFFICE.

E. B. REQUA, OF JERSEY CITY, NEW JERSEY.

IMPROVED HEAD-BLOCK FOR SAW-MILLS.

Specification forming part of Letters Patent No. **40,502**, dated November 3, 1863.

To all whom it may concern:

Be it known that I, E. B. REQUA, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Head-Block for Saw-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a front elevation of the same; Fig. 3, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a head-block of simple construction which will admit of crooked timber—such as ship-timber, for instance—being dogged in proper position with the greatest facility, and also admit of timber being readily dogged so as to be resawed or divided into two longitudinal parts, as well as being dogged for cutting into boards or planks of any desired thickness.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a block or bed-piece, to which two parallel guides, B B, are attached longitudinally, and between which guides a slide, C, is fitted and allowed to work freely, said slide having a nut, D, attached to its under side, through which a screw-rod, E, passes, said screw-rod having a crank, F, attached to one end of it.

G represents a vertical metal bar, which is firmly secured to the outer end of the slide C, and has a groove, *d*, made longitudinally in its outer side, which extends its whole height, and H H are two metal bars, which are secured to the outer side of the bar G by bolts or screws and slightly lap over the edges of the the groove *a*, as shown clearly in Fig. 3. On the top of the vertical bar G there is secured a cap, I.

J J′ represent two screws, which are fitted vertically in the bar G, one directly above the other. The upper screw, J, has its bearing in the cap I, and the lower screw, J′, is stepped in a plate, *b*, attached to the under side of the slide C, as shown in Figs. 1 and 2.

The two screws J J′ are connected by a clutch, K, which is composed of a tube fitted loosely on the adjoining ends of the screws, and provided at its upper part with two vertical oblong slots, *c c*, in which the ends of a rod, *d*, are fitted, said rod passing transversely through the screw J. The lower end of the tube has two slots, *e e*, cut vertically into it, in which the ends of a rod, *f*, are fitted, which rod passes transversely through the upper part of the screw J′. When the tube is shoved down so that the slots *e e* will catch over the rod *f* of the screw J′, the two screws J J′ will be connected and both turned by turning the screw J; but when said tube is shoved upward so that the slots *e* will be above rod *f*, the two screws will be disconnected, and J may be turned without communicating motion to the screw J′. The screw J has a key, L, fitted on its upper end for the convenience of turning it.

On each screw J J there is fitted a nut, M M′. These nuts are grooved vertically at two opposite sides, as shown at *a′*, to receive the inner edges of the bars H H, as shown clearly in Fig. 3. These bars H H serve as guides for the nuts, and prevent the latter from bearing laterally upon or against the screws J J′. The nuts M M′ are grooved vertically at their outer sides, and in these grooves dogs N N′ are fitted and secured by screws *g*. The upper dog, N, has an oblong slot, *h*, made in it to admit of a certain degree of vertical adjustment of said dog on the nut. The lower dog, N, is not thus arranged, as it does not require this adjustment. The lower end of the upper dog, N, is curved slightly outward, as shown at *b′*, and provided with teeth *i*, and the upper end of the lower dog, N′, is constructed in the same way.

To one side of the vertical bar G there is attached a gage, O, which is simply a plate having two horizontal slots, *j j*, made in it, through which screws *k* pass into the bar G.

From the above description it will be seen that the two dogs N N′ may be adjusted higher or lower and at any desired distance apart, so as to receive logs of different diameters and of any shape or crook the log may have—for instance, there are several of these head-blocks attached to a saw-mill carriage at suitable distances apart, and a log, when placed on a carriage, if crooked, will require to have the dogs of the several head-blocks adjusted so as to

grasp the log above and below it. If there is a high crook in the log in front of any one of the head-blocks the upper dog, N, is raised above the log by loosening its screw *g*. The two screws are then, if disconnected, connected, and the screws J J′ turned until the lower dog, N′, is fastened in the under side of the log. The screws are then disconnected and the upper dog, N, forced down in contact with the log by turning the screw J. The two dogs, it will be seen, when the screws J J′ are connected and turned, move simultaneously toward and from each other. The log is adjusted to the saw after each cut by turning the screw E, and one or both of the upper surfaces of the guides B may be graduated to insure the exact adjustment of the log. In consequence of having the nuts M M′ provided with grooves *a*′ to receive the bars H H, the screws J J′ are relieved from all lateral pressure which would otherwise be produced by the gravity of the log, and, in consequence of having the dogs bent or curved obliquely outward, the log, as the dogs are forced into it, is drawn snugly to the bar G or to the edge of the gage O.

The gage O is used for resawing, and principally for dividing or slitting lumber into two parts, the gage being adjusted so as to cause the log, when brought in contact with it, to have a proper relative position with the saw. This gage also may be shoved outward sufficiently far to prevent the log coming in contact with the dogs N N′, and the device may then be used as a common head-block, the ordinary hook-dog being used.

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

1. The employment or use of two screws, J J′, connected by a clutch, K, arranged as shown, or in any equivalent way, in combination with dogs N N′, connected with the screws through the medium of nuts M M′, and arranged, substantially as shown, to admit of the simultaneous adjustment of both dogs N N′ and the separate adjustment of one dog, N, when required, for the purpose herein set forth.

2. The two bars H H, attached to the bar G and fitted in grooves *a*′ in the sides of the nuts M M′, as and for the purpose specified.

3. The attaching of the upper dog, N, to its nut M by means of a screw, *g*, passing through a vertical slot, *h*, in the dog, for the purpose of admitting of a vertical adjustment of said dog, as described.

E. B. REQUA.

Witnesses:
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