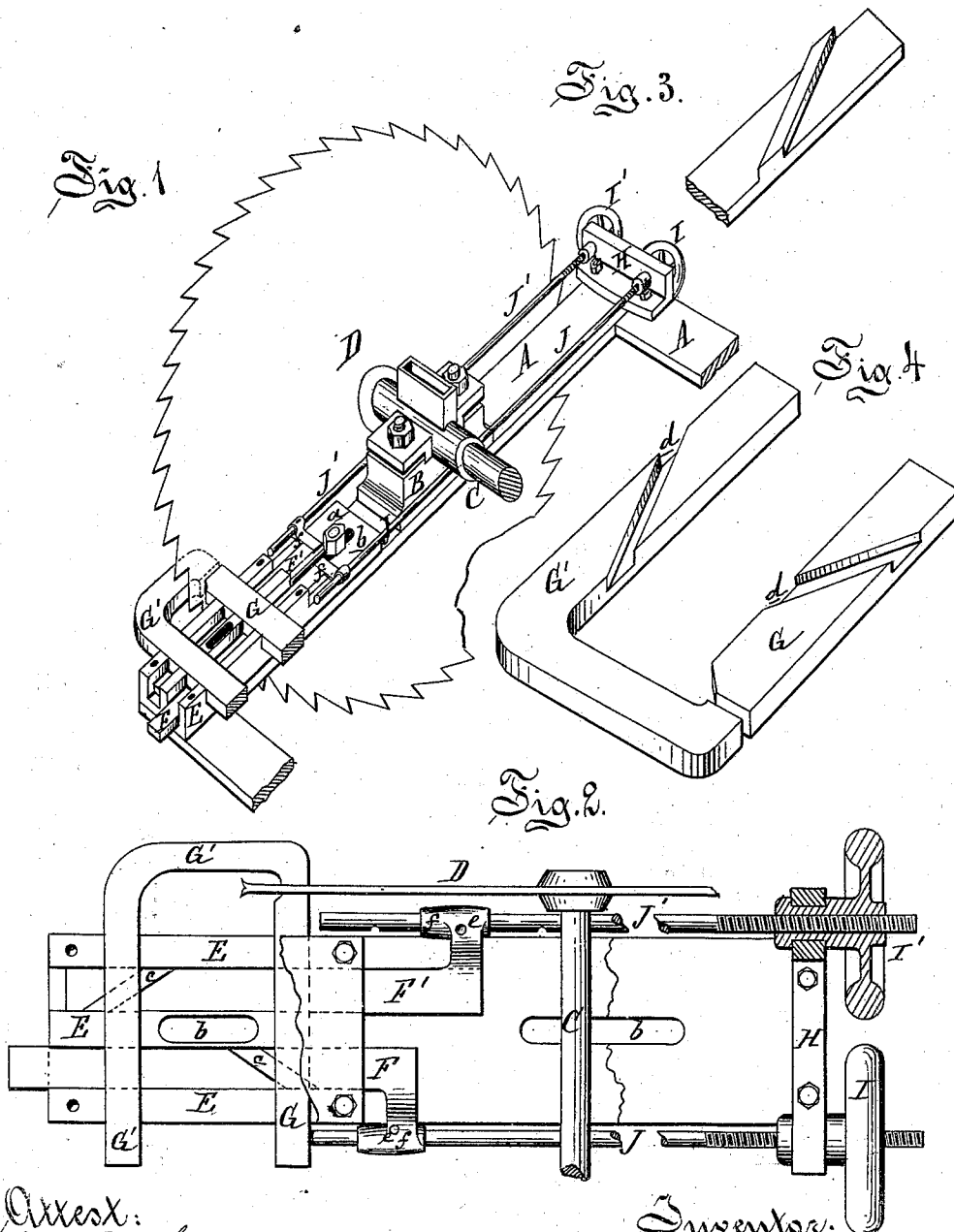


W. M. FERRY.

SAW-GUIDES FOR CIRCULAR SAW-MILLS.

No. 173,927.

Patented Feb. 22, 1876.



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WILLIAM M. FERRY, OF GRAND HAVEN, MICHIGAN.

IMPROVEMENT IN SAW-GUIDES FOR CIRCULAR-SAW MILLS.

Specification forming part of Letters Patent No. 173,927, dated February 22, 1876; application filed August 27, 1875.

To all whom it may concern:

Be it known that I, WILLIAM M. FERRY, of Grand Haven, in the county of Ottawa and State of Michigan, have invented an Improvement in Saw-Guides for Circular-Saw Mills, of which the following is a specification:

My invention has for its object to provide the saw-frame of a circular-saw mill with a device or devices by means of which the sawyer can adjust the saw-guides quickly, accurately, and with perfect safety from his post behind the saw, and while it is running.

The invention consists in an adjustable connection between each slide and its screw-rod, whereby the saw-guides can be used with saws of various diameters without altering the length of the screw-bars; also, in making the outer guide in one piece, which can be readily detached from the guide-frame by simply running the wedge below out of its diagonal slot, first uncoupling the slide from the screw-rod.

Figure 1 is a perspective view, showing a portion of the saw-frame of a circular-saw mill fitted with my improved saw-guides, the cover of the guide-frame being removed. Fig. 2 is an enlarged plan of the guides and their adjusting devices. Fig. 3 is a perspective view of a part of a slide and its wedge. Fig. 4 is a bottom plan of the saw-guides.

In the drawing, A represents the saw-frame of a circular-saw mill. B is one of the boxes through which is journaled the arbor C, carrying a saw, D. E is a guide-frame, cast with two longitudinal ways or recesses, and is adjustably secured to the side of the saw-frame, near the cutting-periphery of the saw, by means of bolts *a*, through slots *b* in its bed-plate. In the ways of the guide-frame are laid two sliding bars, F F', each having a rib, *c*, diagonally placed across its upper surface. G G' are the saw-guides, laid in slots across the ways of the frame E, resting on the bars F F'. In the under side of each guide there is a diagonal groove, *d*, in which is received the rib *c* of the slide below. The bar F, when moved longitudinally, actuates the guide G in the direction of its length—that is to say, across the bar F. In like manner the bar F' actuates the bar G'. The guide G is straight, and its outer end impinges upon and guides

the inner face of the saw, near the cutting-periphery. The guide G' is bent to a right angle, with its outer extremity turned slightly inward, to impinge upon the outer face of the saw and guide it. At the rear end of the saw-frame, on the "saw" side thereof—if that be, as is usually the case, the sawyer's post—a bracket, H, is erected, through which two hand-wheel nuts, I I', are journaled, through which nuts the screw-rods J J' are respectively tapped, and are connected with the bars F F' in the following manner: The rear ends of said bars are bent outwardly, and a sleeve, *f*, is longitudinally formed on the end of each to receive the end of the screw-rod, which is secured therein by a pin, *e*, sitting into a transverse keyway on the rod. As saws of various diameters are used on the arbor at various times, the rods are disconnected from the bars, and the guide-frame is adjusted on the saw-frame so as to bring the guides into their proper position; and, as several key-seats are cut on each rod, it is an easy matter to couple the rods to the sleeves again; and any adjustment of the guides to or from the saw can then be made by means of the hand-nuts, which the sawyer can turn in perfect safety while the saw is running, without the loss of much time consumed in adjusting the guides heretofore used.

It is well known, to all conversant with the manufacture of lumber with circular mills, that the great majority of accidents and loss of life and limb occur to sawyers while adjusting the saw-guides, who have heretofore been compelled to make such adjustments while close to the cutting-edge of the saw while in motion. With my improved guides, it will be seen that the mechanism for adjusting them is so far removed from the cutting-periphery of the saw as to preclude the possibility of accidents. It will also be noticed that these adjustments of the guides can be effected very quickly, which is an important feature, as, owing to the filing of the saw, or a peculiarity of the grain of the log, the saw will have an incline to or from the log, which must be counteracted by an adjustment of the guides.

The viscous inner bark of logs and slivers are apt to jam between the guides and the

saw, causing the latter to heat. These obstructions are quickly removed by easing up the jammed guide for a moment, when said obstructions will drop out.

In changing saws it is necessary to remove the outer guide, which can be quickly done by uncoupling the bar from its screw-rod and sliding it forward until the rib of said bar is out of the groove in the guide, when the latter can be entirely withdrawn from the guide-frame.

What I claim as my invention is—

1. The sleeve *f* on the rear end of each guide-bar, and a pin or key, *e*, for adjustably connecting the same with its screw-rod, substantially as described.

2. The guide *G'*, made in one piece, as described, and adapted to be removed from the guide-frame, and adapted to the saw, substantially as set forth.

WILLIAM M. FERRY.

Witnesses:

H. F. EBERTS,

H. S. SPRAGUE.