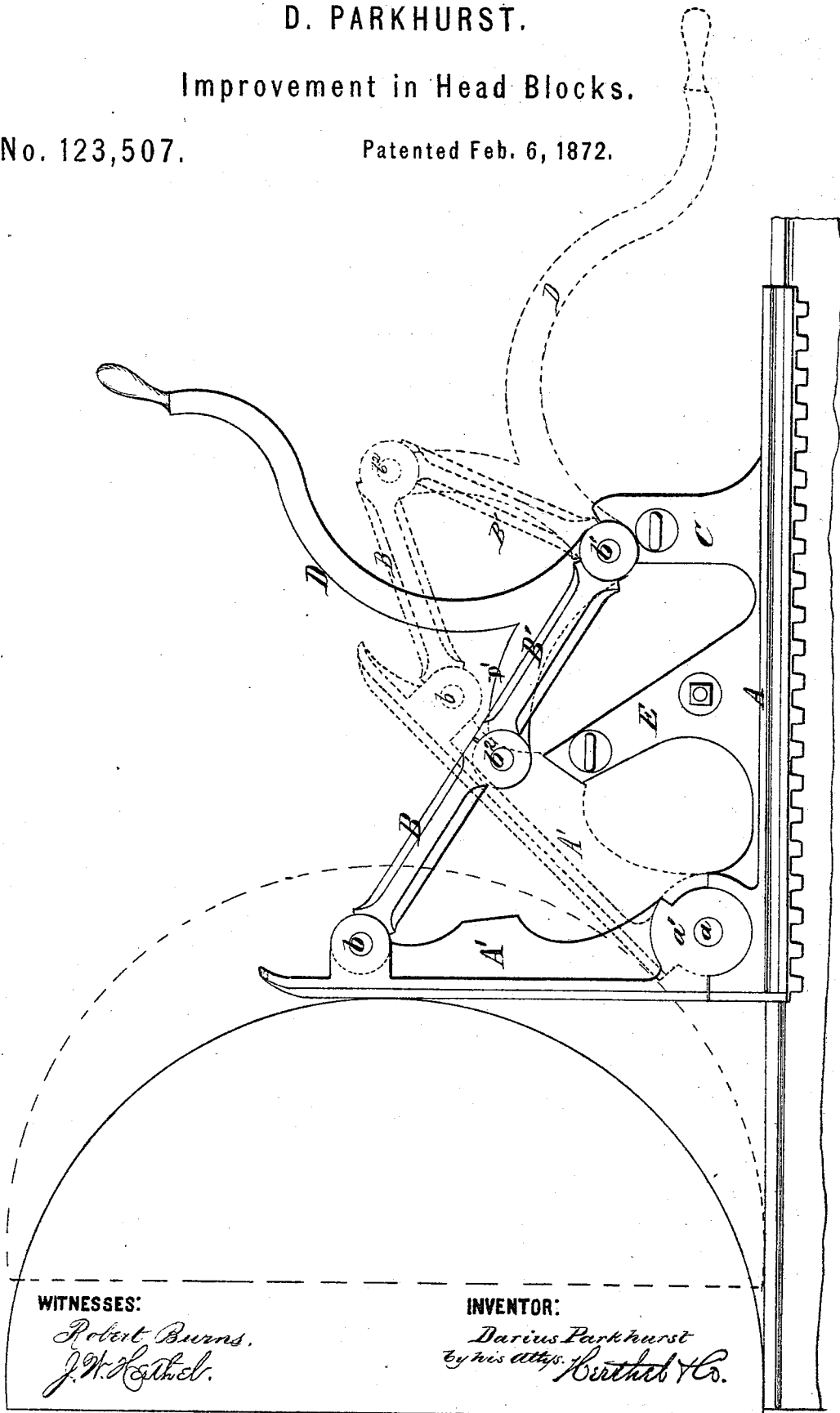


D. PARKHURST.

Improvement in Head Blocks.

No. 123,507.

Patented Feb. 6, 1872.



WITNESSES:

Robert Burns.
J. W. Keith.

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UNITED STATES PATENT OFFICE.

DARIUS PARKHURST, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN HEAD-BLOCKS.

Specification forming part of Letters Patent No. 123,507, dated February 6, 1872.

To all whom it may concern:

Be it known that I, DARIUS PARKHURST, of St. Louis, in the county of St. Louis and State of Missouri, have made a certain new and useful Improved Adjustable Knee for Head-Blocks for Saw-Mills; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The ordinary knees or sliding rests for head-blocks, against which the logs are held, are constructed with an upright standard or vertical part at right angles with its sliding or horizontal part. In the use of said ordinary sliding knees it is well known that in rolling a heavy log on the head-block there is great danger of fracturing or breaking the uprights of said knees; and, also, that in turning the log in the position required the head-block and knees are frequently broken by the force and weight of the falling log. Further, it is known that the ordinary knees are unadapted to accommodate the crooked and inconvenient shapes of logs, necessitating "propping" or "blocking up," and also a greater propelling power; and thus much time and labor is involved in manipulating and securing the logs properly to accomplish the different purposes of sawing.

The object, therefore, of this invention is to construct an adjustable or falling knee, which shall avoid the inconveniences aforesaid, and in the use of which a more perfect manipulation of the logs is achieved. The nature, therefore, relates chiefly to the arrangement of the upright or vertical part of the knee in a pivoted or hinged manner to its horizontal part, so as to be readily adjusted to any required angle by means of a hand-lever and toggle-joints; and also to the manner of supporting the said adjusted knee in position, all of which will now more fully be described.

To enable those skilled in the art to make and use my said improvement, I will now more fully describe the same, referring to the drawing, which represents a side elevation; also, showing in dotted lines the adjustability of the falling knee.

The head-block rests and is operated in a proper carriage in the usual manner. The

head-blocks support thereon the sliding rests or knees proper, consisting of the horizontal part A and vertical knee part A'. The horizontal part A is arranged with tooth-racks to be actuated forward and backward as usual. The vertical knee A', however, is pivoted at *a* to its horizontal part A by means of a hinge or rule joint, *a'*, to form a falling knee, as stated in the nature of this invention. In order to adjust the falling knee A' to any required angle the toggle-joints are pivoted or hinged at *b*, said toggle-joints consisting of the arms B B', the opposite end of said joints being pivoted at *b'* to a vertical standard, C, which forms part of the knee proper, as shown in the drawing. The toggle-joints are operated by a hand-lever, D, which is pivoted to the standard C at *b'*; and further, said lever has an extension arm, D', which is attached to the center joint *b*² by the same bolt that secures the toggle-joint. The falling knee A', when adjusted by means of the hand-lever aforesaid, is supported by or abuts against an inclined standard or support, E, which is cast or forms also a part of the horizontal knee part A, as clearly illustrated in the drawing. The said standards C and E are provided with eyebolts, to which the dogs are attached for holding the log in position against the knee A', as usual.

By such a manner of construction the falling knees A' can be adjusted, as illustrated by dotted lines in the figure. Thus any serious concussion is prevented; also, the log is propelled to the saw with less power, the power being applied at the bottom, almost directly in line with the falling knee.

When the log is "dogged up" against the knee it rests in position for sawing as usual. In turning the log the upper part of the falling knees acts as a fulcrum and allows the log to slide easily down the face of the adjusted knee.

Further, by my said improvements the larger sizes of logs can be placed on a common-sized head-block, the falling knees being adjusted as illustrated. Finally, the knees can be adjusted to suit all irregular shapes of logs, and especially it will be noticed that any taper can be sawed by moving the knees in or out, as desired.

Having thus fully described my said improvements, what I claim is—

The falling knee A', toggle-joints B B', hand-lever D, its extension part D', when said parts are hinged, in combination with the horizontal knee part A having extension supports C E, substantially as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

DARIUS PARKHURST.

In presence of—

WILLIAM W. HERTHEL,
ROBERT BURNS.