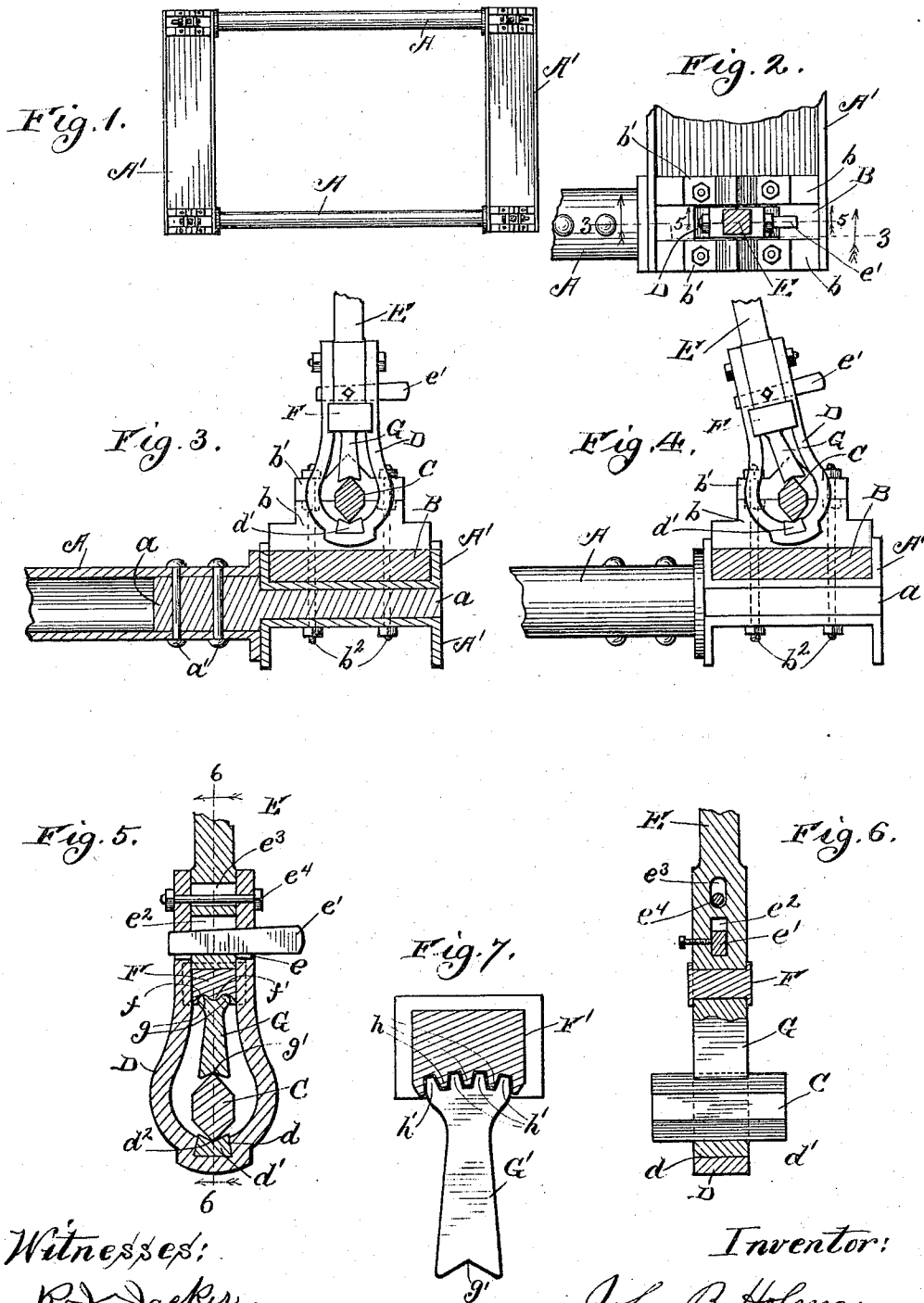


(No Model.)

J. B. HOLMES.
HANGER FOR STONE SAWING MACHINES.

No. 545,077.

Patented Aug. 27, 1895.



Witnesses:

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HANGER FOR STONE-SAWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 545,077, dated August 27, 1895.

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To all whom it may concern:

Be it known that I, JOHN B. HOLMES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hangers for Stone-Sawing Machines, of which the following is a specification.

This invention relates to improvements in hangers for the frame carrying the saws in stone-sawing machines; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a hanger for stone-sawing machines, which shall be simple and inexpensive in construction, strong and durable, and effective in operation; second, such a hanger which will permit of the oscillating or rocking movement of the frame carrying the saws, and, third, such a hanger which, by reason of its peculiar construction, will be more durable and less liable to be damaged by the sand or small particles of stone than hangers of the ordinary make.

Another object of my invention is to provide a means whereby the parts of the hanger may be readily adjusted should the same become loose or worn by continuous operation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a plan view of the saw-carrying frame of a stone-sawing machine, showing one of my hangers at each corner thereof and the saws removed. Fig. 2 is an enlarged plan view of a portion of the frame and one of my hangers. Fig. 3 is a sectional view taken on line 3 3 of Fig. 2, showing the hanger in its normal position. Fig. 4 is a view in elevation, partly in section, of a portion of the saw-frame with my hanger applied thereto, showing the position of its parts when the frame is rocked or moved. Fig. 5 is a vertical sectional view taken on line 5 5 of Fig. 2 of the hanger detached from the frame. Fig. 6 is a vertical sectional view taken on line 6 6 of Fig. 5; and Fig. 7 is a view showing a

modification in the construction of the oscillating arm and its guide-block, the same being detached from the hanger.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the side rails and A' the end rails of the frame for the saws of the sawing-machine, which saws may be located and secured in the said frame in the ordinary or any desired manner. The side rails A are usually formed of tubular pieces, and are united at their ends to the rails A' in any suitable manner, but preferably as shown in Figs. 3 and 4 of the drawings by means of a core *a*, which fits within the tubular pieces A, and is secured thereto by means of bolts or rivet-pins *a'*, which are passed through both the tube and core.

To and on the outer portion of the cores *a* or the ends of the side rails are secured the end rails A', which are preferably U-shaped in form in cross-section, as shown in the different views of the drawings.

One of my hangers is designed to be attached to the frame near each of its four corners, and as each of the hangers are counterparts of one another it will be necessary only to describe one of them. Near each corner of the saw-frame the end rails A' are provided with a bearing-box B, composed of two pieces *b*, in which the pivot-bar C has its bearings and is secured by means of the caps *b'*, which are secured to the pieces *b* by means of suitable bolts *b''*, which are passed through the said pieces and end rails of the frame. As is clearly shown in Figs. 3, 4, and 5 of the drawings the pivot-bar C is hexagonal in shape in cross-section and has its acute angles at its top and bottom to furnish bearings for the suspending-strap and oscillating arm, as will be presently explained.

As will be seen by reference to Figs. 2, 3, and 4 of the drawings the pieces *b* constituting the bearing-boxes B are placed transversely on the end rails A', and the pivot-bar C is secured transversely to said pieces and longitudinally with said rails. Between the pieces *b* constituting bearing-boxes B and underlying the pivot-bar C is a strap D, which is bent back upon itself, and is secured at its upper ends to the suspending-rod E, which is secured at its upper end to a suitable support

and in any desired manner. The strap D is formed in its lower portion with a recess d , into which is fitted a block d' of tempered steel or other hard substance. The upper surface of the block d' is formed with a slight depression d^2 to receive the lower acute angle of the pivot-bar C. The upper portion of the strap D is provided with a vertical slot e for the reception of a wedge e' to be used for tightening the parts of the hanger should they become loose from wear by constant usage. The lower portion of the suspending-rod E is provided with a slot e^2 for the reception of the wedge e' and above said slot with another one e^3 for the bolt e^4 , which is used for securing the upper ends of the strap D thereto. Just below the lower end of the suspending-rod E and between the forks of the strap D is located a block F, which is provided in its lower portion with a toothed recess f , within which is the oscillating arm G, the upper portion of which is formed with forks g to stride the tooth or projection f' of the block F, and are rounded so as to rock or oscillate in the groove. The lower end of the arm G is provided with a recess or A-shaped depression g' for the reception and operation of the upper acute angle of the pivot-bar C, which engages the oscillating arm and block d' in the strap D, as is clearly shown in Figs. 3 to 5, inclusive, of the drawings.

In Fig. 7 of the drawings I have shown a modification in the construction of the oscillating arm and its guide-block F, which consists in forming the groove of the block F' with a series of teeth h instead of one tooth, as is shown in Fig. 5, and of providing the arm G' with a number of teeth h' to fit within the depression between the teeth h of the block.

From the foregoing and by reference to the drawings it will be seen and readily understood that by the use of my hangers the weight of the saw-carrying frame will rest upon the lower acute angles of the pivot-bars C and that as the frame is rocked or swung back and forth the oscillating arms G, resting on the upper acute angle of the pivot-bars, will yield or oscillate, as is shown in Fig. 4 of the drawings, yet will hold the strap securely to the pivot-bar, thus producing uniform action of the saws on the stone. Should the angles of the pivot-bar become worn by long usage and the parts of the hanger become loose, it is obvious that by inserting the wedge into the slot e of the strap and e^2 of the suspending-rod E that the strap will be raised

thereon, and it is for this purpose that the slot e^3 within the suspending-rod is elongated. It is further apparent that by the use of my angular-shaped pivot-bar that a very small surface is afforded upon which the sand or fine particles of stone flying from the material under the saws can have any effect and the wear thereof is greatly diminished.

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

1. The combination with the saw-carrying frame of the angular pivot bars mounted in suitable bearings thereon, the suspending straps provided in their lower parts with hardened depressions to engage the pivot bars, the suspending rods secured at their upper ends to a support and at their lower ends to the straps, and the oscillating arms pivotally secured at their upper ends above the pivot bars and engaging therewith at their lower ends, substantially as described.

2. The combination with the saw-carrying frame of an angular pivot bar mounted in suitable bearings thereon, the suspending strap D, having in its lower part the block d' , provided with the recess d^2 , and the slots e , in its upper portion for the wedge e' , the block F, having the groove f , provided with the tooth f' , and secured in the strap below the slot e , the forked arm G, having the depression g' , in its lower end, and the suspending rod E, provided in its lower portion with the slots e^2 , and e^3 , and the wedge e' , and bolt e^4 , in said slots respectively, all constructed, arranged and operating substantially as and for the purpose set forth.

3. The combination with the saw-carrying frame of an angular pivot bar mounted in suitable bearings thereon, the suspending strap D, having in its lower part the block d' , provided in its upper surface with the recess d^2 , a block having a toothed groove or recess in its lower portion and secured in the strap D, above the pivot bar, an oscillating arm having at its upper end teeth or projections to engage those of the grooved block, and in its lower end a depression to engage the upper angle of the pivot bar, and the suspending rod E, secured at its upper end to a support and at its lower end to the strap, substantially as described.

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