

No. 615,152.

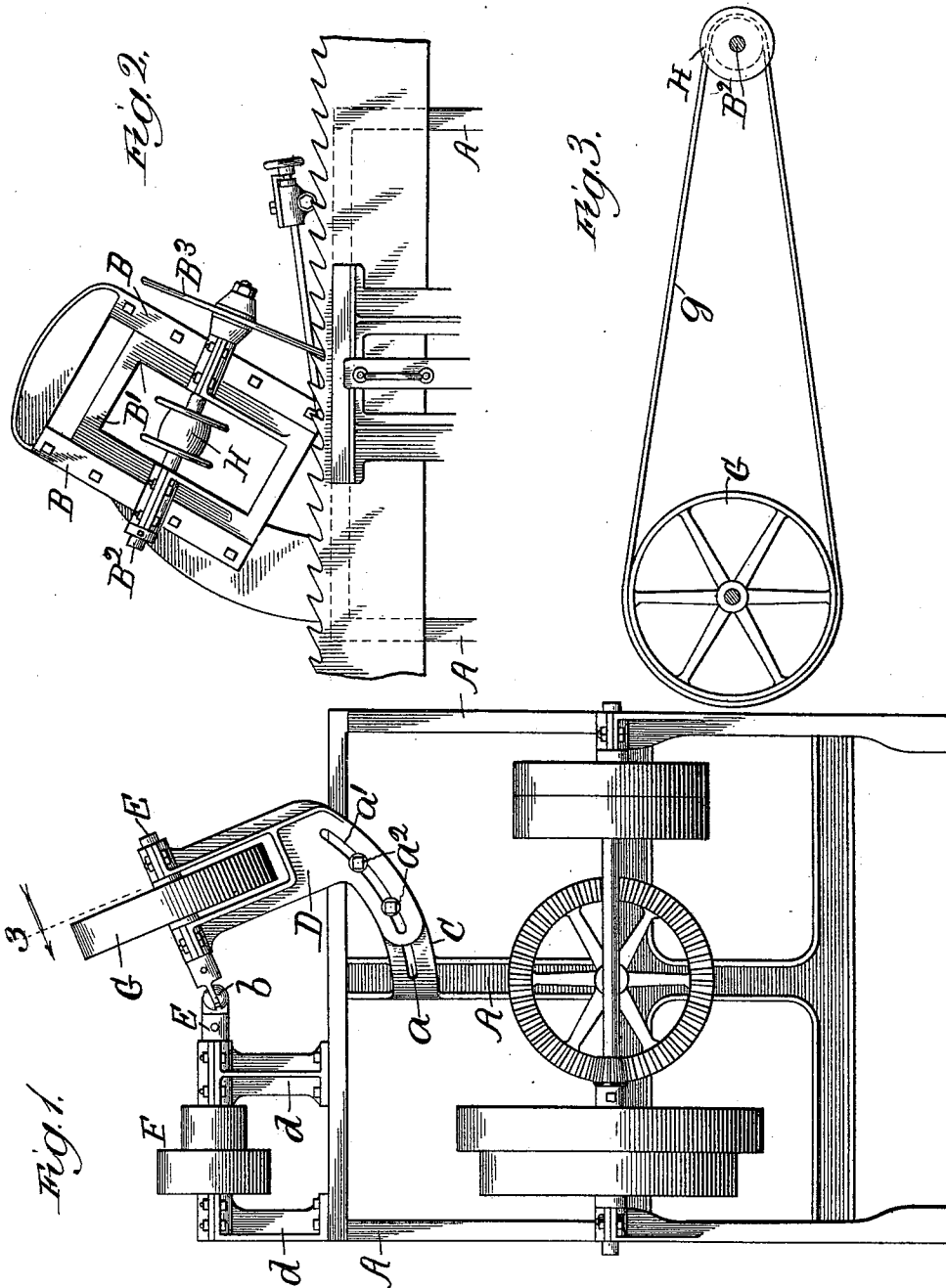
Patented Nov. 29, 1898.

L. L. FILSTRUP.

SAW SHARPENING MACHINE.

(Application filed Aug. 19, 1897.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

LARS LARSEN FILSTRUP, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF  
TO HENRY P. SCHOFIELD, OF SAME PLACE.

## SAW-SHARPENING MACHINE.

SPECIFICATION forming part of Letters Patent No. 615,152, dated November 29, 1898.

Application filed August 19, 1897. Serial No. 648,744. (No model.)

To all whom it may concern:

Be it known that I, LARS LARSEN FILSTRUP, a subject of the King of Denmark, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Saw-Sharpener Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in that class of automatic saw-sharpening machines set forth in Patent No. 574,855, dated January 5, 1897.

The object of this invention is to provide an improved feature wherein the driving-shaft may be set at an angle corresponding in degree to the inclined position of the grinding-wheel gate and the guide-standards in which the same moves. Under the present arrangement the driving-shaft of the machine is mounted in a horizontal position and cannot be adjusted to follow the inclined adjustment or position of the grinding-wheel gate-head. This has the effect of running or straining the driving-belt off to one side, causing it to frequently run off of the pulleys and wearing it out too soon. The improved feature obviates these objections and causes the driving-belt to always run over the center of the pulleys no matter at what angle the grinding-wheel gate may be set.

Figure 1 is a rear elevation of a machine embodying my improved features. Fig. 2 is a broken-away front elevation of the same; and Fig. 3 a detached side elevation of the driving-pulleys and connecting-belt.

A represents the different parts of the main frame; B, the inclined guides; B', the grinding-wheel gate moving therein; B<sup>2</sup>, the arbor provided with suitable journal-bearings, and B<sup>3</sup> the grinding or sharpening wheel mounted on said arbor. These different parts are capable of being adjusted to any desired angle in accordance with the form of the saw-tooth required and is the ordinary arrangement in this class of machines.

The rear part of the frame is provided with an arm C, having a curved slot *a* therein, as shown in Fig. 1. The lower end of a bear-

ing-bracket D is provided with a corresponding slot *a'*, and is adjustably attached to the arm C by a number of bolts *a*<sup>2</sup>, inserted through the companion slots.

The normal position, Fig. 1, of the bearing-bracket D is at an inclined angle and has one end of the driving-shaft E journaled in the upper end thereof.

The driving-shaft E is constructed in two parts, connected together by a universal joint *b*, so that both parts rotate together, but adapting one part to be adjusted at an inclined angle with reference to the other part. The horizontal part of the shaft E is journaled in standards *d d*, rigidly mounted on the frame, the inclined part being journaled in the upper end of the adjustable bracket D. The shaft-driving pulley F is mounted on the horizontal part of the shaft, and the pulley G, transmitting motion to the grinding-wheel arbor, is mounted on the inclined part of said shaft. A pulley H is mounted on the arbor B<sup>2</sup> and is connected with pulley G on the driving-shaft by means of a belt *g*, as shown in Fig. 3. By this arrangement one part of the driving-shaft may be adjusted to any angle corresponding to the inclined adjustment of the grinding-wheel gate.

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

1. In a saw-sharpening machine, the combination with an arm, provided with a curved slot and secured to the frame, of a bearing-bracket, having a corresponding slot in its lower end, the bolts, inserted through said companion slots and securing the bearing-bracket to said arm in an adjustable relation, a driving-shaft, constructed in two parts and connected by a universal joint, the inclined part being journaled in the bearing-bracket, and the grinding-wheel gate, substantially as described.

2. In a saw-sharpening machine, the combination with a driving-shaft, constructed in two parts and connected by a universal joint, whereby one part may be set at an inclined angle with reference to the other part, of an adjustable bearing-bracket, supporting the inclined part of said shaft, the grinding-wheel gate and its arbor, and means for transmit-

ting motion from the driving-shaft to said arbor, substantially as described.

3. In a saw-sharpening machine, the combination with a grinding-wheel gate, set at  
5 and moving in an inclined plane, the arbor, carrying the sharpening-wheel, a driving-shaft, constructed in two parts and connected by a universal joint, and a bearing-bracket, supporting one part of said shaft and adapted  
10 to be adjusted to an angle corresponding to

that of the grinding-wheel gate, and means for transmitting motion from the driving-shaft to said arbor, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

L. LARSEN FILSTRUP.

Witnesses:

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