(No Model.) 2 Sheets—Sheet 1.

W. H. DOANE.

PLANING MACHINE.

No. 352,307. Patented Nov. 9, 1886.

Fig. 1

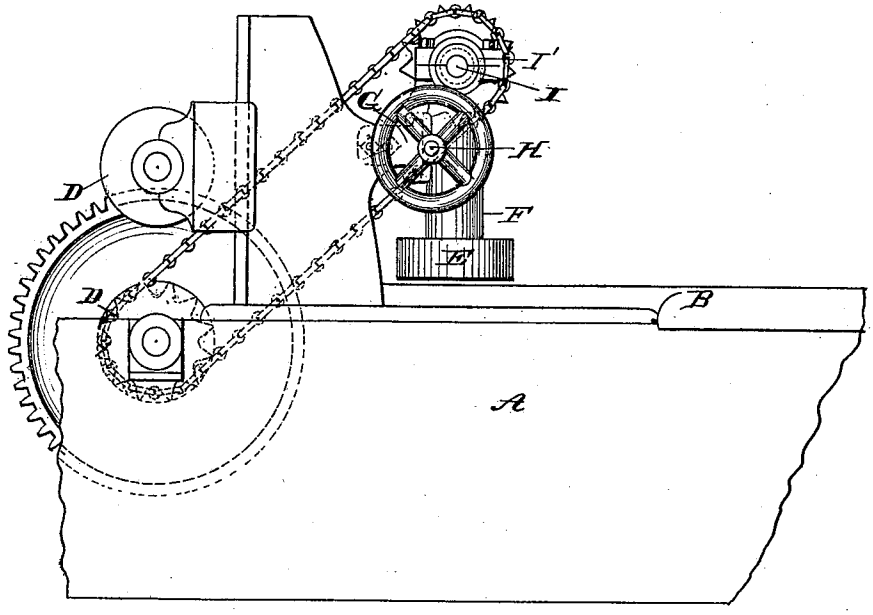
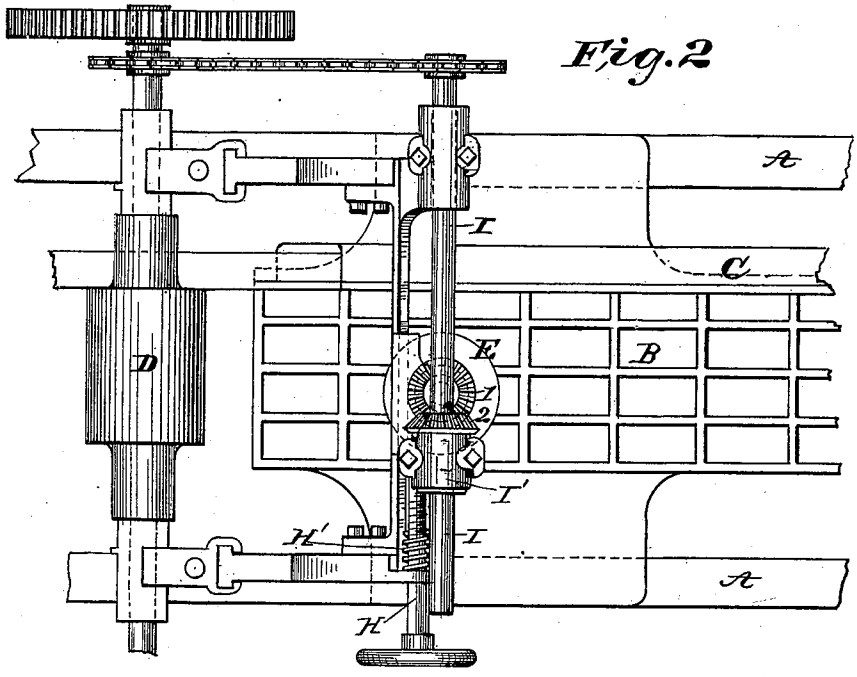


Fig. 2



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

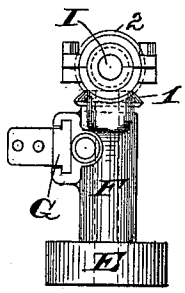


Fig. 3.

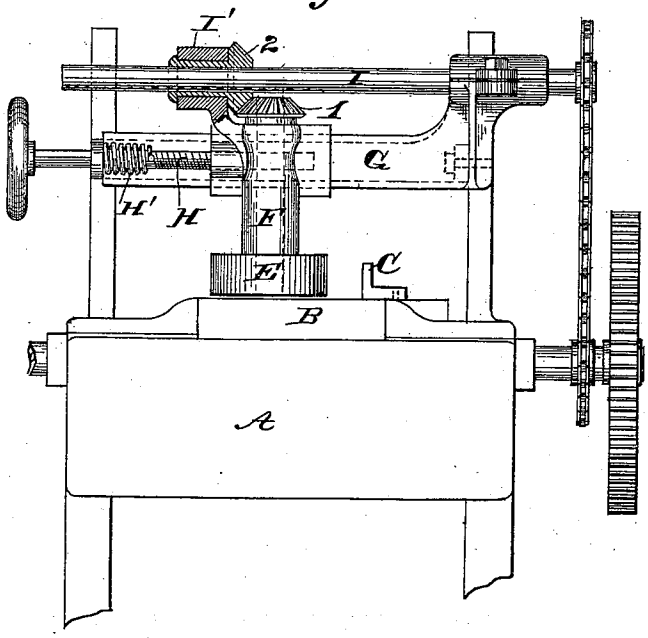
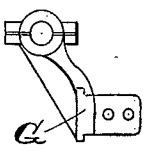


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM H. DOANE, OF CINCINNATI, OHIO.

PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 352,307, dated November 9, 1886.

Application filed May 25, 1886. Serial No. 203,239. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DOANE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Planing-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 wood-working machines organized with a pendent edge feed-roll—that is, a feed-roll suspended above the platen or bed of the machine.

My improvement consists of certain features of construction having reference to the mode of mounting and manner of adjusting such edge feed-roll, all as will be fully explained in the ensuing description, and clearly pointed out in the claims at the close thereof.

Figure 1 represents so much of the feeding-in end of a wood-planing machine embodying my improvement as will suffice to clearly illustrate the construction and application of the same. Fig. 2 represents a plan view of the same. Fig. 3 represents an end view of the same, showing portion in section. Fig. 4 represents a side elevation of the edge feed-roll with its bearings and supporting-rail and driving-shaft gears detached. Fig. 5 is an end view of the bearing end of the supporting-rail.

The same letters of reference indicate identical parts in all the figures.

A refers to the frame, B to the platen, C to the fixed guide-rail, and D D to the first pair of feeding-in rolls, of the planing-machine. The vertical shaft of the edge feed-roll E is journaled in a bearing, F, movably mounted on a horizontal rail, G, which in this instance is bolted to the feed-roll and stands at the respective sides of the machine. The bearing F is held in position and may be adjusted along rail G across the platen of the machine by an adjusting-shaft, H, a screw-threaded portion of which engages a nut or screw-threaded hole of said bearing. The adjusting-shaft is journaled in one of the rail-stands and provided with a hand-wheel, as usual, for operating it. A stiff spiral spring, H′, encircles the adjusting-shaft H between a projection on the feed-roll stand and a cross-pin on the shaft. The edge feed-roll can yield to a limited extent by pressing the adjusting-shaft outward against the pressure of the spiral spring, and thus accommodate itself to inequalities in the width of the board it operates on. The upper end of the shaft of the edge feed-roll is provided with a bevel-wheel, 1, which is driven by a bevel-wheel, 2, on the horizontal driving-shaft I, which is driven in this instance by a drive-chain and sprocket-wheel from the shaft of the lower horizontal feeding-in roll. The driven shaft I is supported by a bracket-bearing bolted to one of the roll-stands of the machine and in a bracket-bearing, I′, formed on the bearing F of the edge feed-roll. The bevel-wheel 2 on the driven shaft I may be connected with the bracket-bearing I′, as shown in Fig. 3, so as to turn with its hub in such bearing. The bevel-wheel 2 is provided with a key which engages a long slot in the driving-shaft, so that the latter can turn such bevel-wheel in any position to which it may be carried by the adjustment of the edge feed-roll.

It will be observed that the bracket-bearing I′ forms the out-bearing for the driving-shaft and supports it always at the point where the greatest strain comes upon it.

The overhead rail G need not necessarily be bolted to the feeding-in-roll stands, but may be independently supported on the frame of the machine.

I claim as my invention—

1. The combination, with a wood-working machine, of a rail overhanging the platen of the same and rigidly connected to the frame of the machine, and a pendent edge feed-roll mounted on said rail, substantially as described.

2. The combination, with a wood-working machine, of an overhanging rail extending transversely of the platen and rigidly attached to the frame of the machine, and a pendent edge feed-roll adjustable upon said rail, substantially as described.

3. The combination, substantially as before set forth, of the pendent edge feed-roll, the adjustable bearing of the same, the overhanging rail for supporting said bearing rigidly con-

nected with the frame of the machine, and the driving-shaft and the shaft of the feed-roll being operatively connected.

4. The combination, substantially as before set forth, of the pendent edge feed-roll, the adjustable bearing for the same, the overhanging rail for supporting said bearing rigidly connected to the frame of the machine, the driving-shaft, and a bearing for said shaft connected to the bearing for the feed-roll, the driving-shaft and the shaft of the feed-roll being operatively connected.

5. The combination of an adjustable pendent edge feed-roll and an arm rigidly connected to the frame of the machine, supporting the same above the platen, with the upper and lower feed-rolls and the guide C, substantially as described.

6. The combination, in a planer, of an adjustable pendent edge feed-roll and a rail rigidly connected to the frame of the machine supporting the same with the feeding-in rolls, the feeding-in rolls and the pendent edge feed-roll being operatively connected.

7. The combination, in a planer, of an edge-guide and feeding-in rolls, of a pendent edge feed-roll and arm rigidly connected with the frame supporting the same, the edge feed-roll and the feeding-in rolls being operatively connected, substantially as described.

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

WILLIAM H. DOANE.

Witnesses:

A. M. NEWKIRK,

ALBERT STEPHAN.