(No Model.) 3 Sheets—Sheet 1.

E. F. AUTENRIETH.

PLANING MACHINE.

No. 414,833. Patented Nov. 12, 1889.

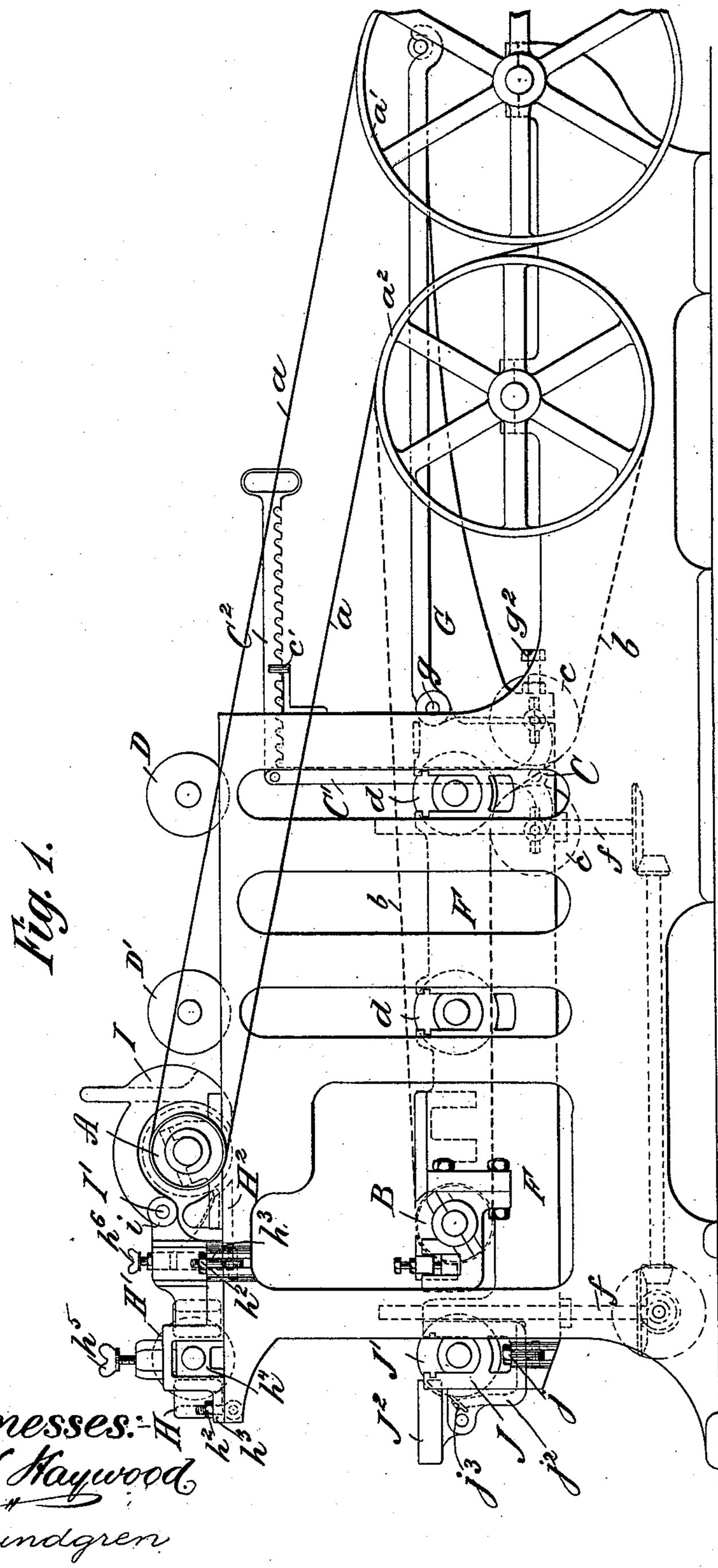

Fig. 1.

Witnesses:-
D. H. Haywood
O. L. Sundgren

Inventor:-
Ernest F. Autenrieth
by his attorneys
Brown & Griswold

(No Model.) 3 Sheets—Sheet 2.

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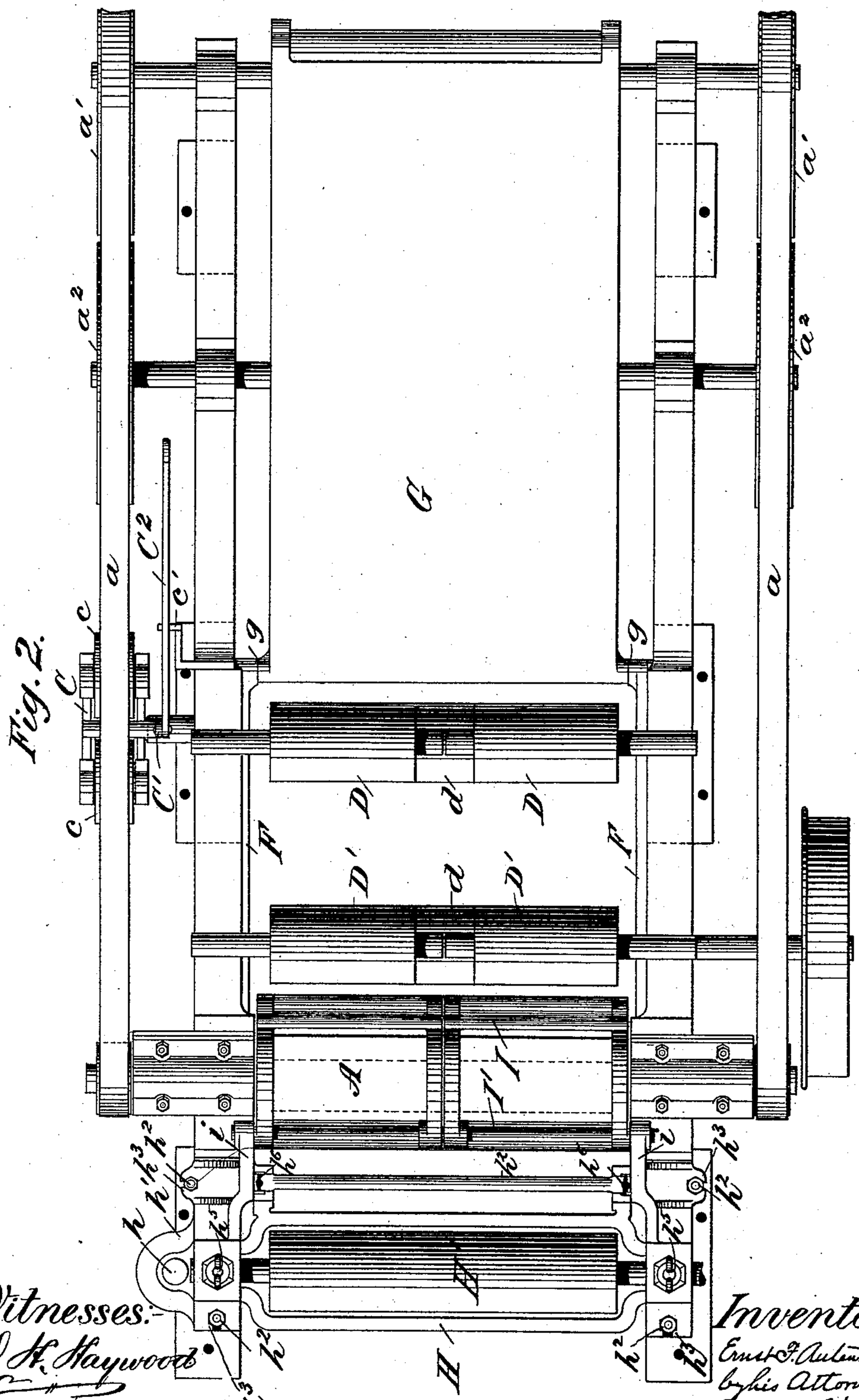
Fig. 2.



Witnesses:-
D. H. Haywood
C. L. Sundgren

Inventor:-
Ernst F. Autenrieth
by his Attorneys
Brown & Griswold

(No Model.) 3 Sheets—Sheet 3.

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PLANING MACHINE.

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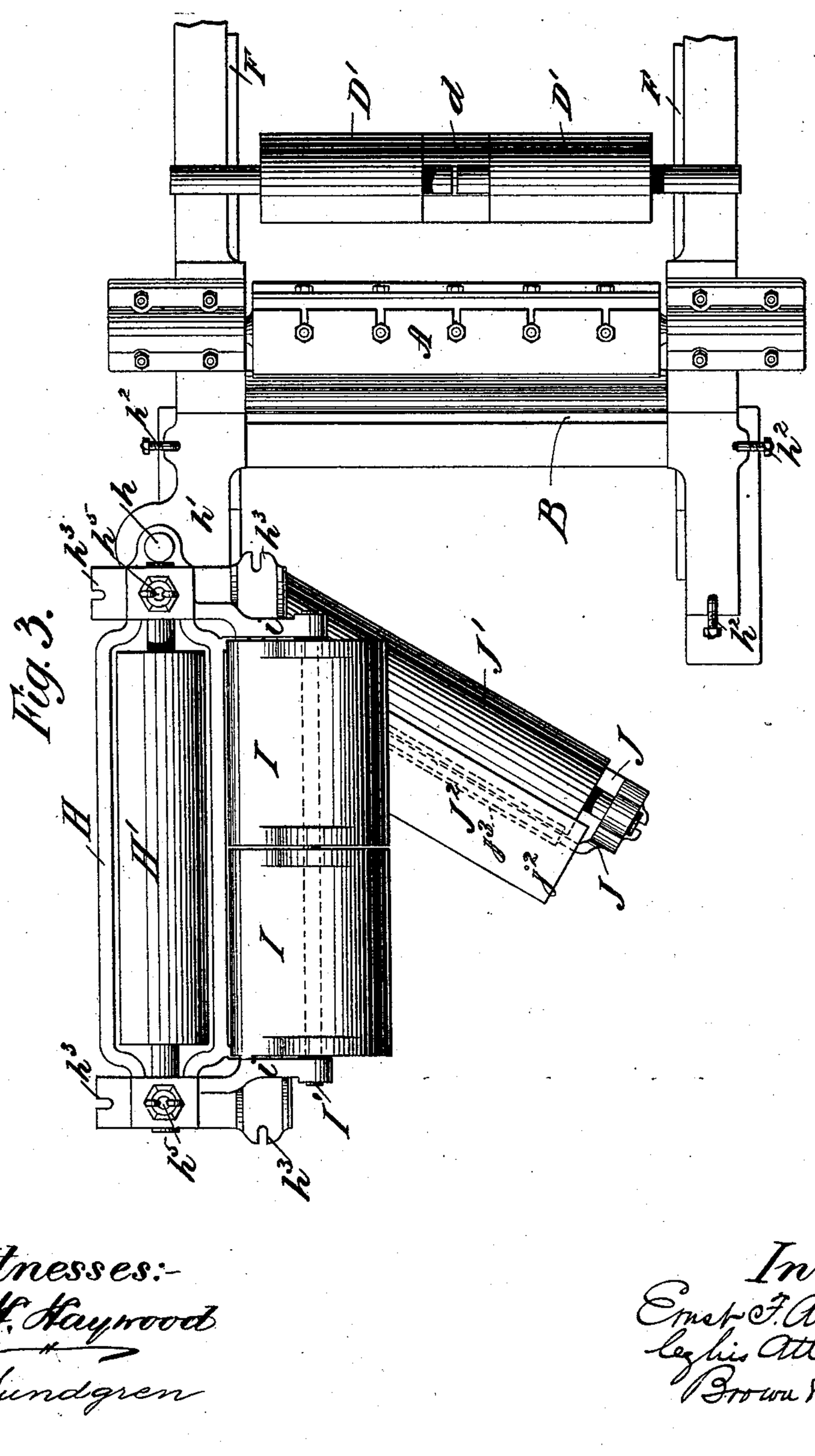

Fig. 3.

Witnesses:-
D. H. Haywood
C. L. Sundgren

Inventor:-
Ernst F. Autenrieth
by his Attorneys
Brown & Griswold

UNITED STATES PATENT OFFICE.

ERNST F. AUTENRIETH, OF NEW YORK, ASSIGNOR TO THE GLEN COVE MACHINE COMPANY, (LIMITED,) OF BROOKLYN, NEW YORK.

PLANING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 414,833, dated November 12, 1889.

Application filed August 3, 1889. Serial No. 319,643. (No model.)

To all whom it may concern:

Be it known that I, ERNST F. AUTENRIETH, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Planing-Machines, of which the following is a specification.

My improvement relates to means of obtaining ready access to the cutter-heads of planing-machines.

I will describe my improvement in detail, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side elevation of a planing-machine embodying my improvement. Fig. 2 is a plan or top view of the same. Fig. 3 is a plan or top view of a portion of the machine, showing certain parts in a different position from that which they occupy in Figs. 1 and 2.

Similar letters of reference designate corresponding parts in all the figures.

In carrying out my improvement I mount the chip-breaker and presser-roll for the upper cutter-head and the presser-roll for the lower cutter-head so that they may be swung round to one side, as shown more clearly in Fig. 3. Ready access may then be had to both the upper and lower cutter-heads for the purpose of sharpening the cutters, or for any other desired purposes.

I have shown my improvement as applied to a planing-machine ordinarily known as a "surfacer," and which is, in the present example, of ordinary construction. Motion may be transmitted to the machine in any desired or well-known manner, and is conveyed to the upper cutter-head A by means of a belt a, passing about a pulley a' and a second pulley a^2. I have shown two of such belts and two of each of the pulleys, the belts being arranged upon opposite sides of the machine, so that the cutter-head A is driven from two ends. The lower cutter-head B is driven by a belt b, arranged upon one side of the machine and passing about one of the pulleys a^2 and also about a belt-tightener C. The belt-tightener C comprises two pulleys $c\,c$, mounted on a T-shaped lever C′, which lever is fulcrumed upon the frame of the machine. The lever C′ may be rocked by a bar C^2, which bar is notched upon one side and engages a catch c', in order to lock the lever in any position into which it will be adjusted. According to the way the lever is rocked the belt may be loosened or tightened.

Upon the upper bed of the machine are journaled feed-rolls D D′, the journals of which, however, are not shown, but are of ordinary construction. The lower cutter-head B is journaled in a vertically-movable lower bed F, also of ordinary construction. Vertical movement is imparted to this bed by means of screws f, deriving motion from gearing in the ordinary way. In the movable lower bed are mounted feed-rolls d.

G designates a table having a pivotal connection at g with the lower movable bed F. This table will be swung up and down during the movement of the lower movable bed F, and will accommodate its position to such bed. An adjusting-screw g^2, engaging the table and abutting near one end against the lower bed F, may be manipulated to assist in maintaining the table level.

I will now describe the means for obtaining access to the upper cutter-head.

H designates a frame. This frame is pivoted at h upon a portion h' to the side frame of the machine, and it may be swung round into the position shown more clearly in Fig. 3, or back into the position shown in Figs. 1 and 2. When in the latter position, it may be locked by means of swing-bolts h^2. I have shown said swing-bolts as swung down in Fig. 3. When employed to lock the frame in position, they engage notches h^3 in the frame H. In the frame H is journaled a presser-roll H′, said roll being journaled in movable boxes h^4, which movable boxes may be adjusted by means of adjusting-screws h^5, as is usual. In the frame H is also mounted a presser-bar H^2. (Shown more clearly in dotted outline in Fig. 1.) This presser-bar is also capable of adjustment, as usual, by means of adjusting-screws h^6.

A chip-breaker I is made as here shown, in two sections, or, in other words, is what is termed a "divided chip-breaker." It is hung loosely upon a bar or shaft I′, journaled in arms i upon the frame H. When the frame H is to be swung around into the position shown in Fig. 3, the chip-breaker is swung

over upon the bar or shaft I′ until it rests, in this instance, upon the adjusting-screws h^6, upon which it is supported. It will therefore be seen that the presser-roll, the presser-bar, and the chip-breaker may be all swung round together to one side and out of the way, so as to give free access to the upper cutter-head A.

In order to obtain access to the lower cutter-head, I swing round a frame J, pivoted in a like manner to the frame H, and capable, when in position, of being locked by a swing-bolt *j*. The frame J has journaled in it a presser-roll J′, and comprises a table J^2, over which the planed material will pass when leaving the machine.

On the frame J and fixed to arms j^2 thereon is arranged a scraper j^3. (Shown in dotted outlines in Figs. 1 and 3.) This scraper operates to scrape from the roll J′ any material which may accumulate thereon. It will thus be seen that the frame J, together with the roll J′, the table J^2, and the scraper j^3, may all be swung round to one side, in order to afford free access to the lower cutter-head B.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a planing-machine, the combination, with an upper cutter-head, of a frame pivoted so as to be swung round to one side of the machine, a presser-roll mounted in said swinging frame, and a presser-bar also mounted in said frame, substantially as specified.

2. In a planing-machine, the combination, with an upper cutter-head, of a frame pivoted to be swung round to one side of the machine, a presser-roll mounted in said frame, a presser-bar, also mounted in said frame, and a chip-breaker pivoted upon said frame, so as to be swung upwardly and downwardly upon the same from over the cutter-head, substantially as specified.

3. In a planing-machine, the combination, with a lower cutter-head, of a frame pivoted to be swung round to one side of the machine, a presser-roll mounted in said frame, a table upon said frame, and a scraper for the presser-roll, also upon said frame, substantially as specified.

ERNST F. AUTENRIETH.

Witnesses:
FREDK. HAYNES,
D. H. HAYWOOD.