

GEORGE R. HAY
Improvement in Machines for Planing Barrel Heads.
No. 122,828.
Patented Jan. 16, 1872.

Fig. 1.

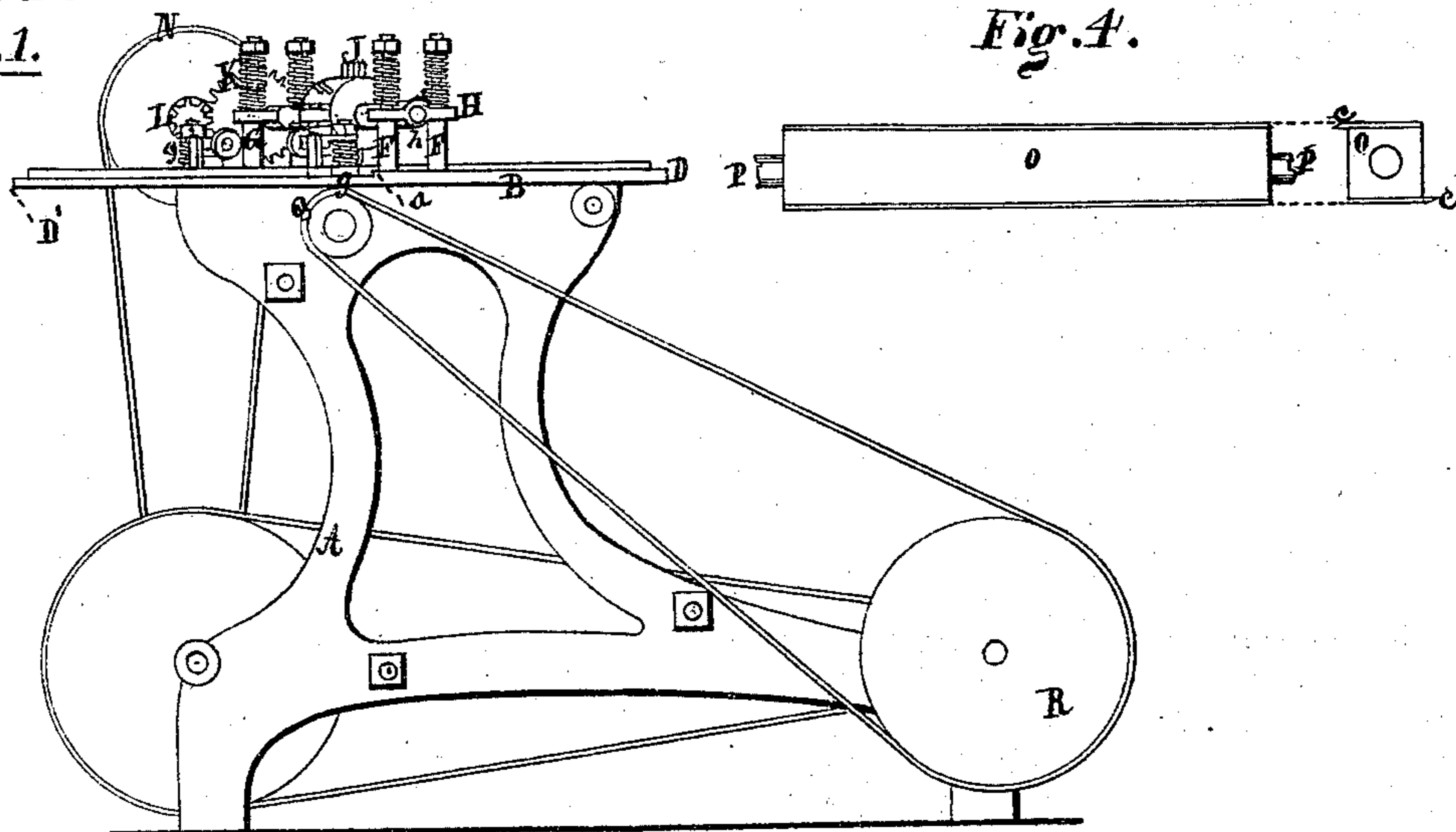


Fig. 4.

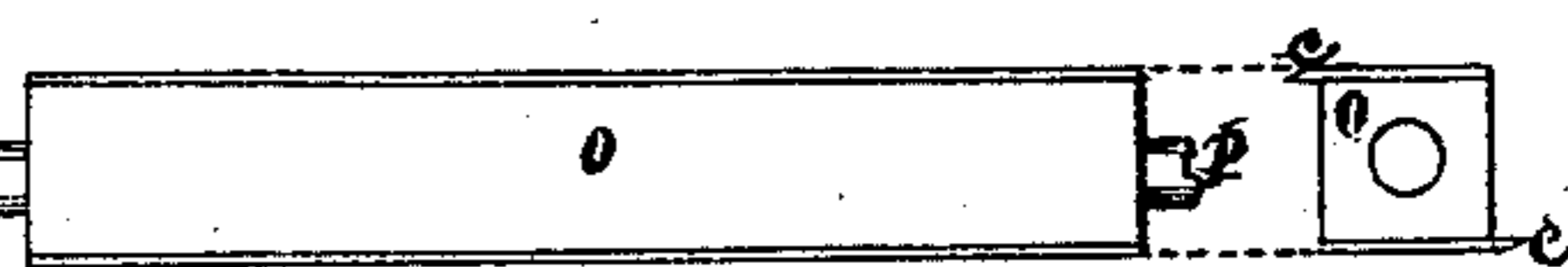


Fig. 2.

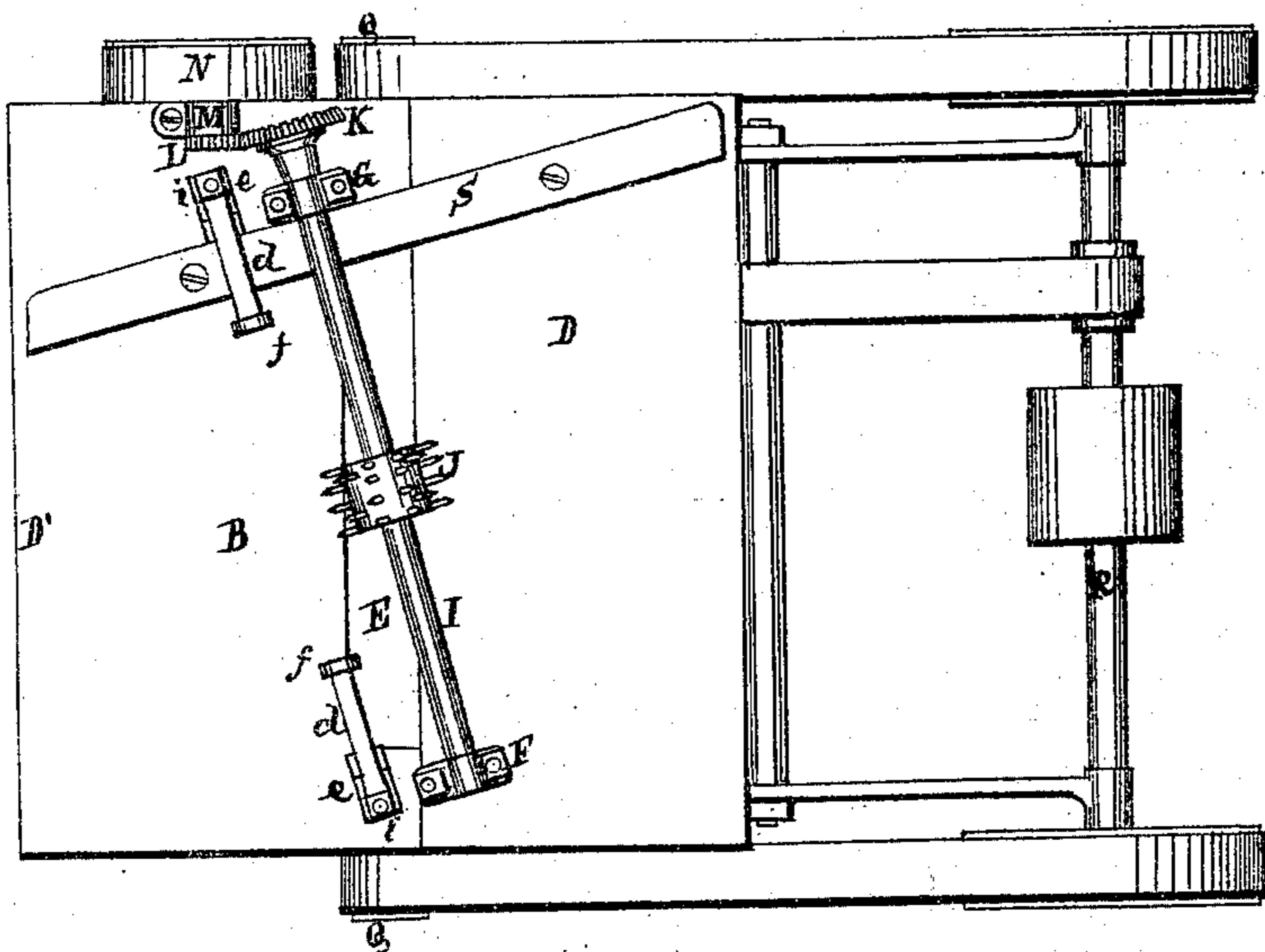
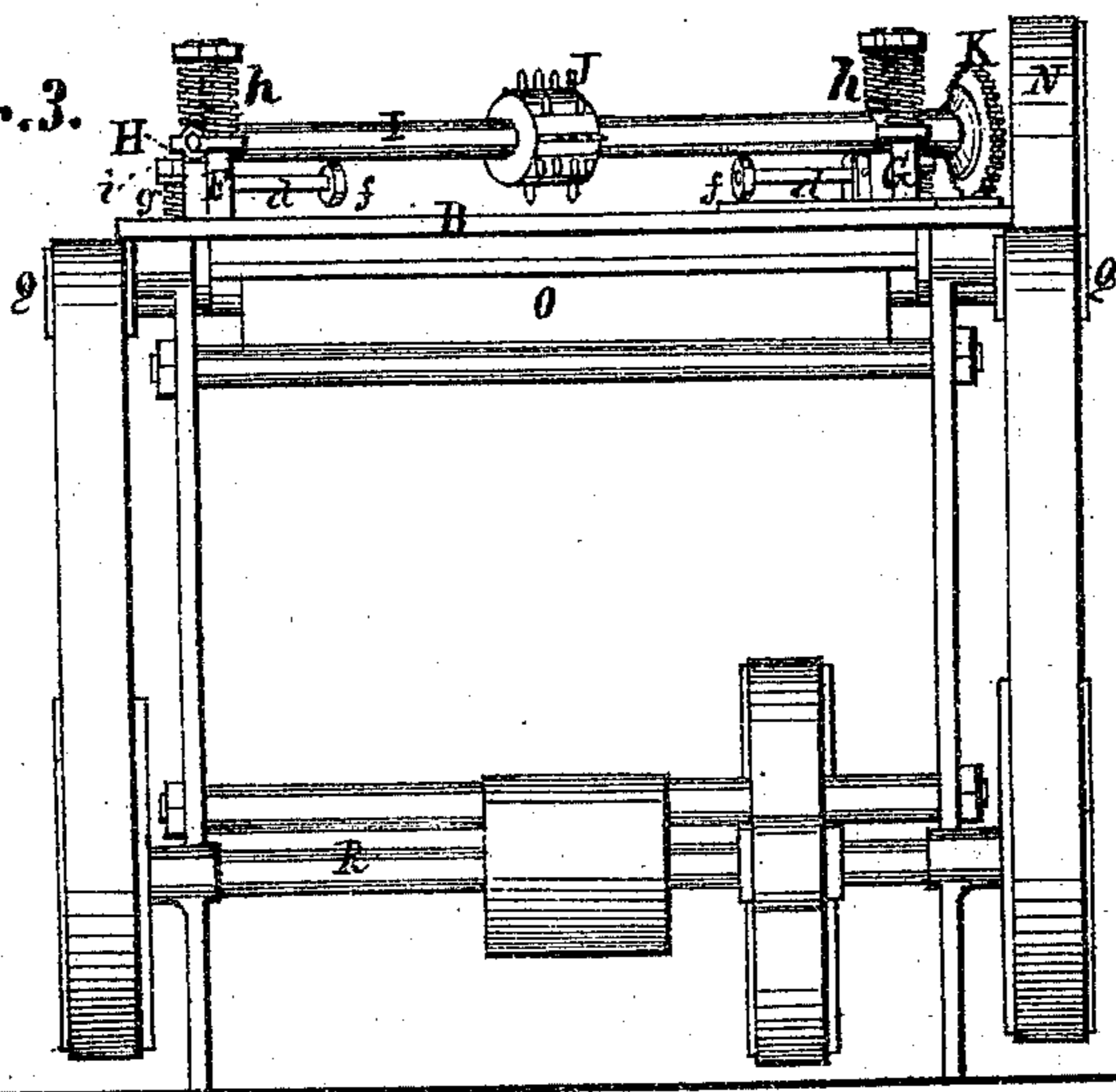


Fig. 3.



Witnesses.
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IMPROVEMENT IN MACHINES FOR PLANING BARREL-HEADS.

Specification forming part of Letters Patent No. 122,828, dated January 16, 1872.

To all whom it may concern:

Be it known that I, GEORGE R. HAY, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Barrel-Head Planer and Floater; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawing making part of this specification.

Figure 1 is a side elevation of the machine. Fig. 2 is a plan view. Fig. 3 is an end view. Fig. 4 is a detached section.

Like letters of reference denote like parts in the different views.

The nature of this invention relates to a machine for planing barrel-heads; and the object thereof is to plane said heads when the sections comprising the head are put together, the planing being done by means of horizontal cutters revolving under a table, through an opening in which the edge of the cutters pass as they revolve, and cut or plane the head on the lower side as it is fed along over the table from a low to a higher level of the surface of the table; and which difference in the elevation of the plane of the table gauges the thickness of the shaving cut from the head.

A more full and complete description of the machine is as follows:

A, Fig. 1, represents a frame, on the top of which is secured a table, B. It will be observed that the table is not of an equal thickness throughout, but that about one-half of the table, indicated by the letter D, Fig. 2, is some thicker than that indicated by the letter D', as will be seen on an examination of Fig. 1. The increase of thickness forms a shoulder at the point *a*, which, as will be seen in Fig. 2, extends across the face of the table and forms the rear side of the opening E, through which the edge of the revolving cutters project so far as to be flush with the surface of the thick part D of the table. F G are a pair of standards, arranged upon the table in the order and relative position to each other and to the opening E as shown in the drawing. To each pair of standards is fitted a yoke, H, in which is journaled a shaft, I. On said shaft is secured a spurred feed-roller, J, directly over the opening E. Above said yokes are springs *k*. Said shaft is rotated by a cog-wheel and pinion, K L, Fig. 2, the pinion being journaled in a stay, M, and driven by a band-pul-

ley, N. A detached view of the cutters referred to is shown in Fig. 4, which, as will be seen, is a square shaft, O, having bearings P, whereby it is journaled in the cheeks of the frame A immediately under the table, and in such relation to the opening E as to revolve partially therein, as aforesaid. The blades or cutters *c*, Fig. 4, are two in number, and are screwed to the sides of the shaft O so that the cutting edges project beyond the corners of the shaft, as shown in the end view of Fig. 4. The shaft and cutters, when in place, are driven by a band and pulleys, Q, receiving motion from the main shaft and pulleys R.

Having described the construction and arrangement of the machine, I will now proceed to describe the operation of the same, and which is as follows:

An undressed barrel-head is laid upon the front of the table D', which, as above said, is lower than the after part D. The heading is then pushed forward under the feed-roller and against the side of the guide S, Fig. 2. As the heading is drawn along by the roller the under side is planed off, leaving the dressed surface even with the surface of the higher part D of the table, over which it slides while it is being planed. The thickness of the shavings or chips thus cut off is, as a consequence, equal to the difference in the height of the two planes D D' of the table, otherwise that of the shoulder *a*, and which serves as a gauge to regulate the cut of the knives. Should the heading be so irregular of surface that it is not planed evenly the first time, it is then passed through a second time, and the wind and all the unevenness then worked out.

It will be observed that the yokes in which the feed-roller shaft is journaled are not fixed to the standards, but loosely fitted thereto, so that they are free to move upward; the purpose of which is to adapt the feed-roller to a variable thickness of the heading, as each piece or head differs more or less in thickness. The springs U above the yokes press the roller down upon the heading; hence a thin or a thick piece will be carried through by its contact with the roller, and planed smooth on the under side.

The purpose of arranging the guide S obliquely across the opening E is to allow the heading to cross the cutters at an angle with the grain of the wood, as the planing is done

smoother and with less liability to tear the fiber of the wood than when the planing is done lengthwise the grain.

The levers *d d* are hinged or pivoted to the standards *e e*. On the long arm of each lever is a roller, *f*, and under the short arm is a spring, *g*, through which spring and end of the short arms passes or extends a stud or post provided with a screw-nut, *i*, on the upper end, as seen in Fig. 2. By means of this arrangement of the levers, rollers, and adjusting-nuts the lumber or material is held down while being planed, and by the same devices the rollers are adjusted to various thicknesses of material to be worked.

Claims.

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

1. The cutters *c*, as arranged in relation to the opening E, in combination with the guide S and roller J, as and for the purpose substantially set forth.

2. The adjustable or hinged levers *d*, provided with rollers *f* and springs at the ends thereof, in combination with the cutters *c* and table B, substantially as and for the purpose set forth.

3. The roller J, provided with adjustable boxes and springs at the ends thereof, in combination with the cutters *c*, table B, levers *d*, rollers *f*, and guide S, as and for the purpose substantially set forth.

GEORGE R. HAY.

Witnesses:

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