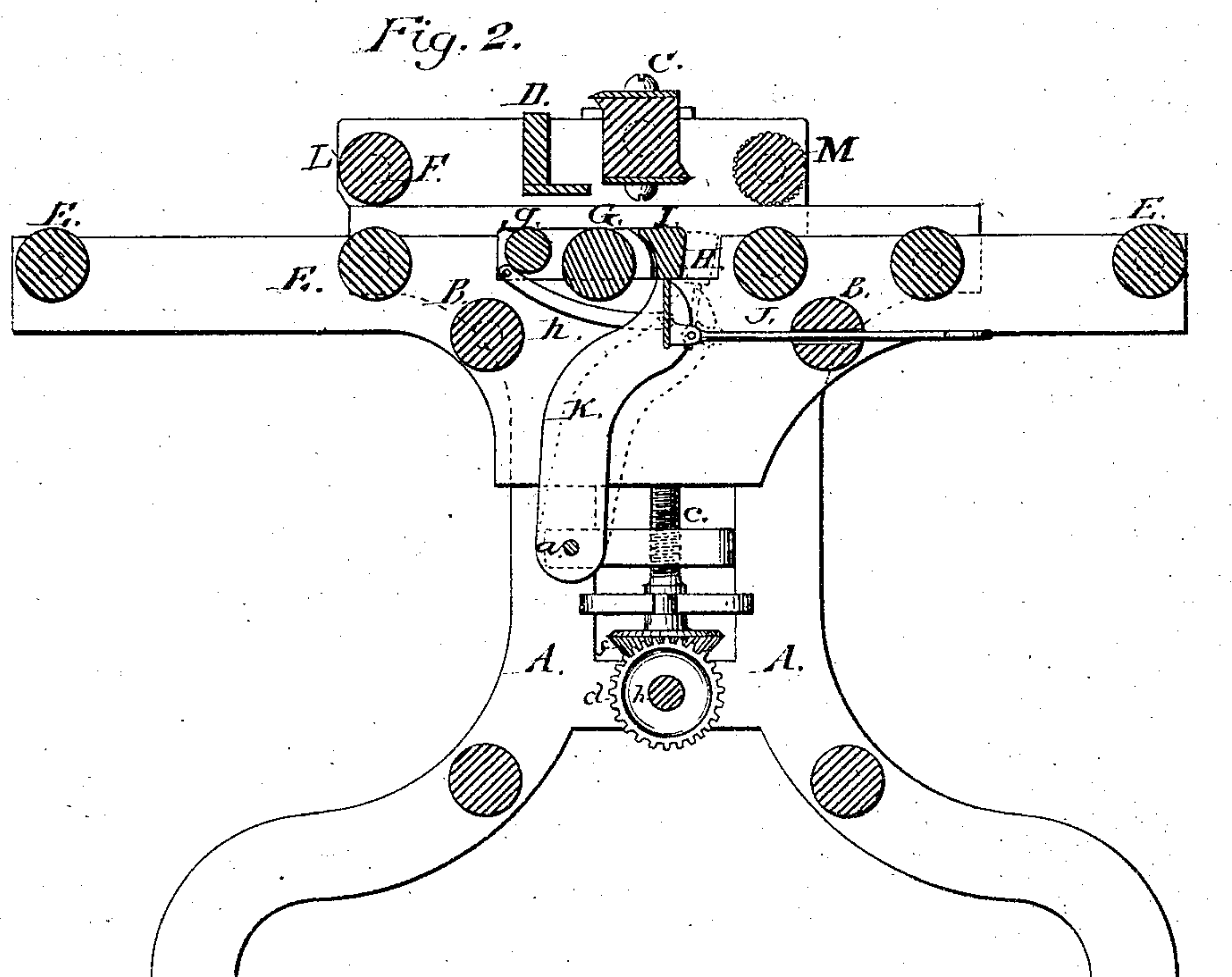
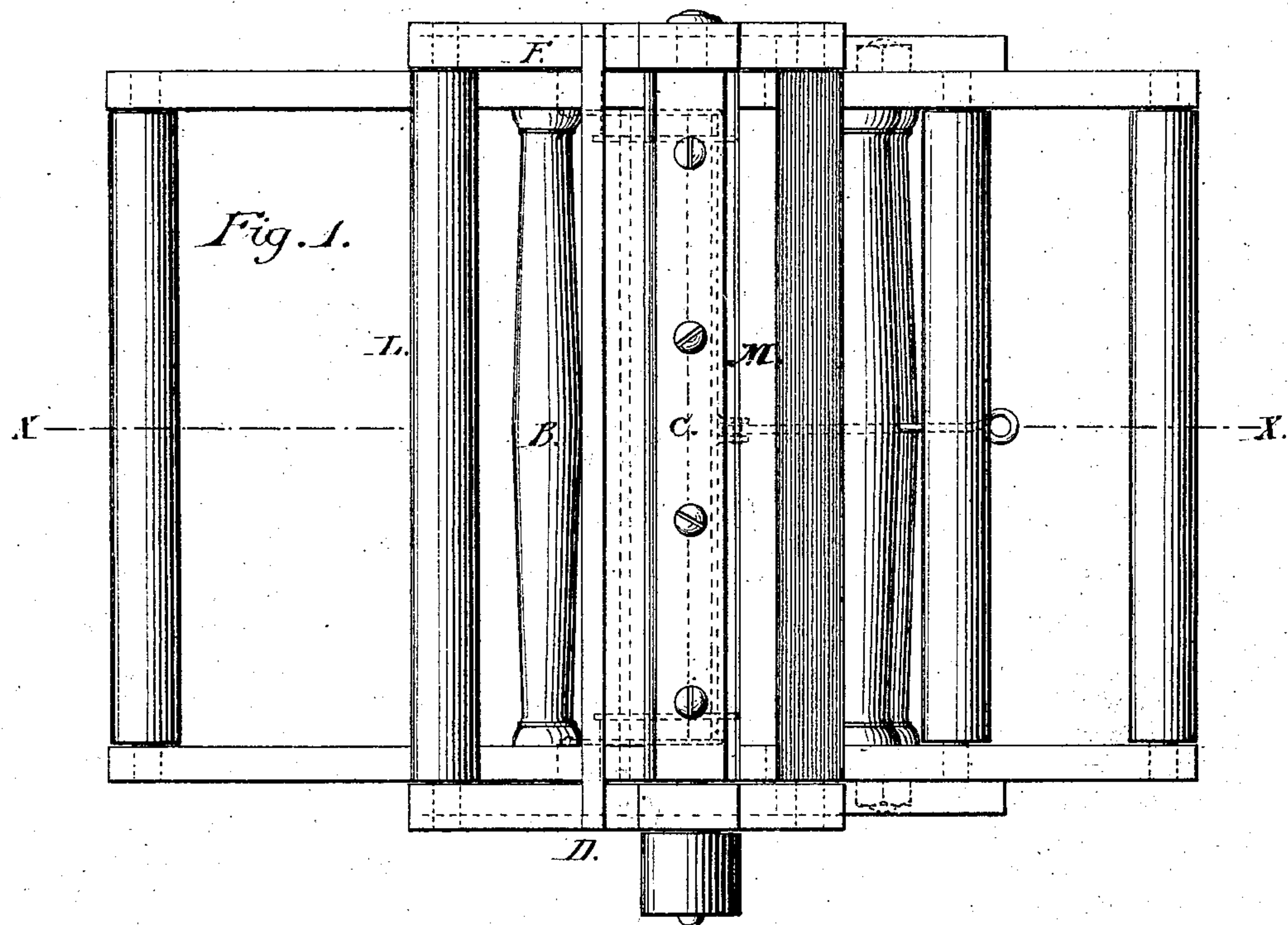


A. BEAN.
Planing Machines.

No. 155,359.

Patented Sept. 29, 1874.



Witnesses:

Fred Collins
Maurice Austin

Inventor:

Augustus Bean
by J. D. Abbott
att'y

UNITED STATES PATENT OFFICE.

AUGUSTUS BEAN, OF CONCORD, NEW HAMPSHIRE.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **155,359**, dated September 29, 1874; application filed September 4, 1874.

To all whom it may concern:

Be it known that I, AUGUSTUS BEAN, of the city of Concord, in the county of Merrimack and State of New Hampshire, have invented certain new and useful Improvements in Planing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a top view of the machine, Fig. 2 being a longitudinal section through the line *x x* of Fig. 1.

This invention relates to that class of wood-planing machines usually denominated surface-planers; the object being to so construct an adjustable bed that the stock being planed shall, as it passes beneath the cutting-cylinder, rest upon a bed or roll at the will of the operator, thus enabling him, should the forward movement of the stock be arrested by any means, or stick in passing through upon the fixed bed, to relieve it at once, by substituting for the bed a roll, which, by removing the friction, enables the feeding apparatus to perform its work in feeding forward the stock without delay; and it consists in placing the bed and rolls upon which the stock rests while passing under the cutting-cylinder in a sliding adjustable frame, as will be hereinafter fully described, and then claimed.

Suitable standards A A support the bed-frame B, which is provided with a series of carrying-rolls, E, and with suitable grooves or recesses for the reception of the sliding frame H, which carries bearing-rolls G *g*, and assists in retaining in position the bed I. This bed, which is very narrow, is also supported by the vibrating standards K, which oscillate upon the bearings *a*, and to the upper ends of which the bed is secured. A suitable device—as, for instance, the rod J—is attached to the frame H, for the purpose of enabling the operator to move the frame when desired; but many other devices may be employed for the accomplishment of this purpose. Connecting-links *h*, it will be observed, connect the frame

with the standards K, thus causing them to move simultaneously when the bed is in use. The standards occupy a nearly vertical position, thus enabling them to support the bed steadily under the great pressure to which it is subject when in use; but should it become desirable to withdraw this bed and substitute therefor the roll G, it may be accomplished by moving the frame and standards into the position indicated by the dotted lines in Fig. 2, when the latter will assume an inclined position, and, as the bed I moves with them upon the arc of a circle, it is evident that, when in such position as to bring the bearing-roll G directly beneath the cutting-cylinder of the machine, the bed will be lower than the upper surface of the rolls, thus allowing the material to be planed to rest wholly upon them, entirely avoiding the friction caused by its passage over the bed. A vertically-adjustable frame, F, carries the cutter-cylinder C, together with the feed and pressure rolls L M, and pressure-bar D. The vertical adjustment of this frame is accomplished by means of two or more screws, *c*, which are connected and caused to revolve simultaneously by means of the bevel-gears *d f*, and shaft *h*. It will be apparent that, by the revolution of this shaft, the screws will be turned, and the frame F elevated or depressed.

In operating this machine for dressing rough lumber, the adjustable bed I is so placed that it is directly under the cutting-cylinder. The stock to be planed is then introduced and forced through beneath the cylinder and over the bed by means of the feed-rolls. Should it meet with any impediment and stop in its progress through the machine, the bed is at once withdrawn, leaving the stock resting wholly upon the rolls—the roll G being directly under the cutting-cylinder, and the small roll *g* under the pressure-bar D—when, as the excessive friction caused by the pressure upon the stationary bed is avoided by its removal, the material passes forward without difficulty; and as the roll G occupies the same relative position to the cutting-cylinder as was occupied by the bed, no appreciable difference is discoverable in the thickness of the lumber. In dressing the second side of the

stock the bed may be dispensed with altogether and the roll substituted, thereby facilitating the operation.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States, the following:

1. A planing-machine provided with an adjustable bed, I, and roll G, as and for the purpose specified.

2. The movable frame H, carrying the rolls G g, in combination with the adjustable bed I and standards K, as set forth.

3. The frame H, provided with the connecting-link h, in combination with the standards K and rod J, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereunto affixed my signature this 28th day of August, 1874, in the presence of two witnesses.

AUGUSTUS BEAN.

Witnesses:

JOHN H. ALBIN,
PHILIP C. BEAN.