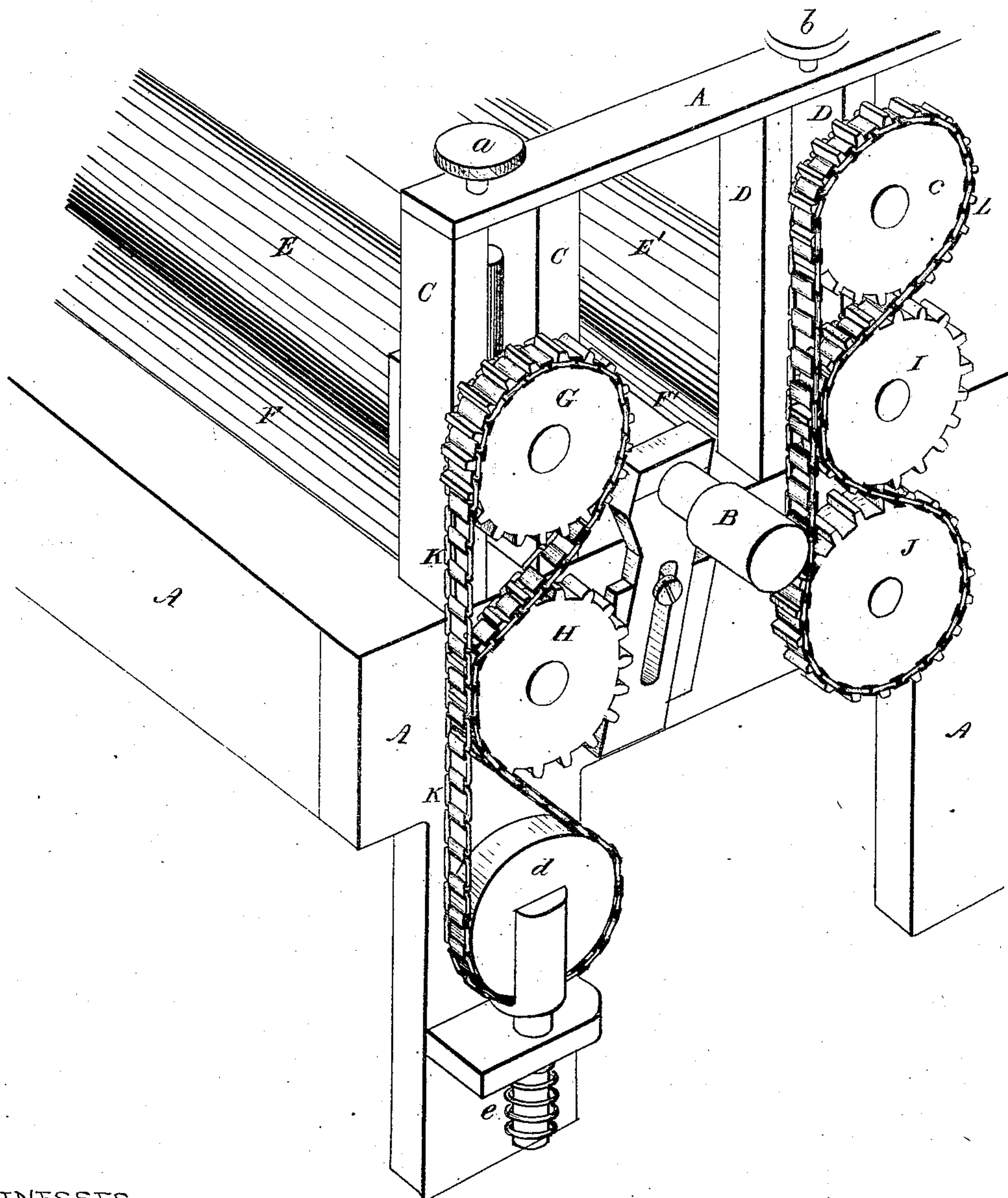


L. M. COLLINS.
Planing Machines.

No. 155,364.

Patented Sept. 29, 1874.



WITNESSES.

E. M. Johnson
C. C. Durgin

INVENTOR.

Laroe M. Collins
per *C. C. Durgin*
Atty

UNITED STATES PATENT OFFICE.

LAROE M. COLLINS, OF LEBANON, NEW HAMPSHIRE, ASSIGNOR OF
ONE-HALF HIS RIGHT TO MARTIN BUCK, OF SAME PLACE.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **155,364**, dated September 29, 1874; application filed
February 25, 1874.

To all whom it may concern:

Be it known that I, LAROE M. COLLINS, of Lebanon, county of Grafton and State of New Hampshire, have invented certain Improvements in Planing-Machines, of which the following is a specification:

My invention relates to machines for planing boards, planks, &c., and consists in a novel construction and arrangement of parts which have for their object to improve the operation of feeding the machine, as will be fully hereafter set forth.

The drawing is a perspective view of a portion of a planing-machine embodying my improvements.

A A represent the framing of the machine; B, the cutter cylinder; E' F', a pair of feed-rollers. The upper one, E', works in boxes sliding between guides or posts D D. These rollers are driven by the toothed wheels I J, secured to their shafts, around which wheels the endless-chain belt L passes, the links of which coincide with and are entered by the teeth of the wheels as they, the wheels, revolve. By this arrangement a positive motion is given to the rollers, while they can be adjusted in relation to each other independently of their gear-wheels, the teeth of which may be of the ordinary depth. For adjusting the rollers vertically, a screw, *b*, is provided, which works in a screw-tube connected to the boxes of the rollers. The chain-belt is kept tight by being passed over a fixed pulley, as shown at *c*, to keep the chain properly distended and in contact with the tooth-wheels of the rollers.

From the foregoing it will be seen that the

driving-wheel is absolutely stationary as regards reciprocating movement. The advantage of this arrangement is self-evident. It disposes of all complicated intermediate mechanism, which as a matter of necessity must be employed when the driving-wheel reciprocates with the roller it drives. The driving-wheel in my machine is generally on the shaft of the lower roller, but, as is shown at G, it may be the uppermost wheel.

Any suitable chain may be used, the teeth of the wheels being shaped to enter and accommodate themselves to the links. This manner of driving the rollers allows of a wide range of adjustment of them, and constitutes a positive, smooth, and quiet means of imparting motion to them, and without liability to derangement.

I am aware that chains and spur-wheels have been used to transmit motion, and I disclaim, broadly, such a device; but I am not aware of any instance in which a self-adjusting chain-driving mechanism has been employed in combination with feed-rollers, as shown and described in this specification.

I claim—

The mechanism for operating feed-rollers in planing-machines, consisting of the stationary driving-wheel J, spur-wheel I, adjusting-wheel C, and endless-chain L, constructed and arranged to compensate the rise and fall of the feed-rollers, substantially in the manner described.

LAROE M. COLLINS.

Witnesses:

C. A. DURGIN,
JAMES S. PECK.