C. & G. F. BUSS.

Planing-Machine.

No. 161,749. Patented April 6, 1875.

Fig. 4.

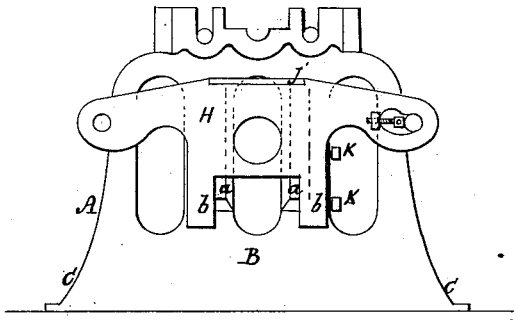


Fig. 3.
on line a b of Fig. 1.

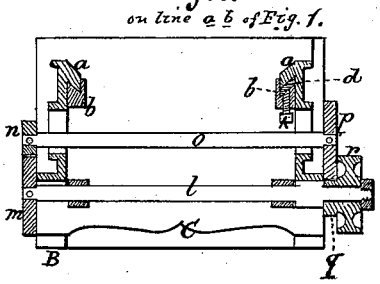


Fig. 1.

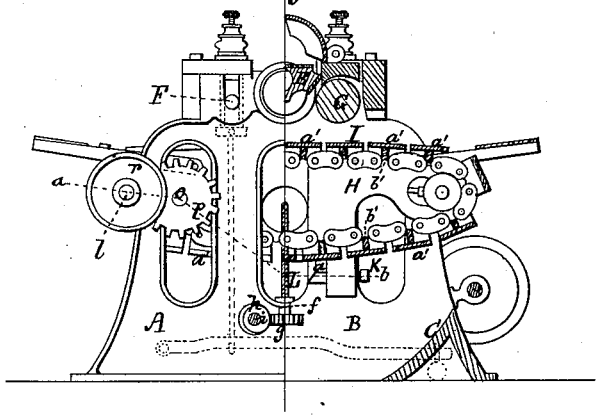
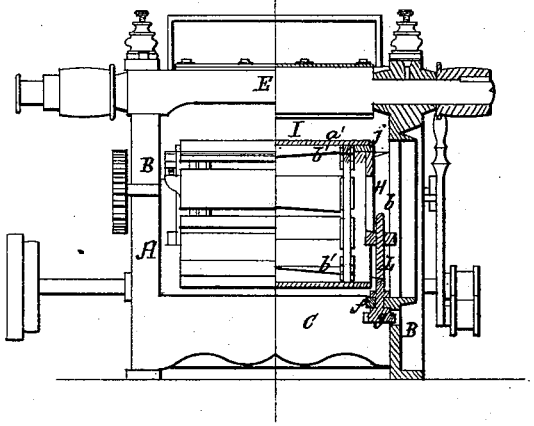


Fig. 2.



WITNESSES.
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UNITED STATES PATENT OFFICE.

CHARLES BUSS AND GEORGE F. BUSS, OF MARLBOROUGH, N. H.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **161,749**, dated April 6, 1875; application filed September 18, 1874.

To all whom it may concern:

Be it known that we, CHARLES and GEORGE F. BUSS, of Marlborough, Cheshire county, New Hampshire, have invented an Improvement in Planing-Machines, of which the following is a specification:

The drawings accompanying this specification represent, in Figure 1, a sectional side elevation; Fig. 2, a sectional end elevation; Fig. 3, horizontal section of feed; Fig. 4, side elevation of one of the head-rails and end standards.

In these drawings the main frame is shown at A as composed of end housings or standards B B, united at bottom by horizontal girts C C, and at top by rails, the girts or lower beams C C being triangular in cross-section, as represented, by which we economize space, and obtain ample room for access to the lower part of the machine, and leave the feed-apron unobstructed. The cutter-head of the machine is shown at E, and two pressure-rollers, which bear the material to be planed down upon the feed-apron, at F G, these parts being arranged in manner similar to machines now in use. H H represent two horizontal rails or carriages, disposed between the housings B B, and immediately adjacent to the latter, the purpose of these bed-rails being to support the movable bed or endless apron I, which travels over them, and supports and bears along the board or other object to be planed. Each rail H H is supported as follows: Upon the inner face of each housing B B we cast two upright guides or ribs, *a a*, each of which is undercut or dovetailed, and the two receive each a bar, *b*, cast upon and depending from the under side of each bed-rail, the guides *a a* and bars *b b* constituting ways and slides by which the two rails and the endless apron are raised and lowered with respect to the cutter-head E. Through each bar *b* we screw several set-screws, K K, which bear at their inner ends against a plate or block, *d*, inserted between them and the adjacent rib or guide *a*, these screws and plates serving to effectually prevent looseness and trembling of the bed-rails and apron, while the ribs *a*, bars *b*, and plates *d*, constitute a powerful and unyielding support to said bed-rails and apron. In order to raise and lower the bed-rails H H, we screw through the lower part of each an upright screw, L, which is mounted at bottom in a shelf, *f*, cast upon each housing, the lower extremity of this screw carrying a worm-gear, *g*, which is engaged and driven by a worm, *h*, affixed to a horizontal shaft, *i*, extending transversely of the machine below the feed-apron, the outer end of this shaft being rotated directly by a crank or band wheel, or by any suitable mechanism.

The central portion of the upper part of each bed-rail is faced with a plate, *j*, of hardened steel by which its wear is greatly prolonged, and a smooth finished surface is always presented.

The mechanism for feeding the endless apron, and the stock to be planed, is as follows: The shaft which carries the forward pair of sprocket-wheels for feeding the apron is shown at *l* as carrying at one end a spur-gear, *m*, while engaging this gear and rotating it, and the shaft is a pinion, *n*, mounted upon a second shaft, *o*, in rear of and parallel to the shaft *l*, this latter shaft *o* being in turn provided with a spur-gear, *p*, affixed to its outer end, which gear meshes into and is driven by a pinion, *q*, making part of the hub of a pulley of the feed mechanism.

The feed mechanism thus organized is very powerful and certain in its action, and feeds the apron and stock rapidly, and possesses many advantages over a direct-motion feed.

We claim—

The herein-described combination of the ribs *a a*, bars *b b*, and packing-plates *d d*, in connection with the housing B B, and bed-rails H H, substantially as and for the purposes stated.

CHARLES BUSS.
GEORGE F. BUSS.

Witnesses:
NELSON CONVERSE,
JAMES KNOWLTON.