

C. B. Cottrell,
Wood Planing Machine.
No 24,078. *Patented May 17, 1859.*

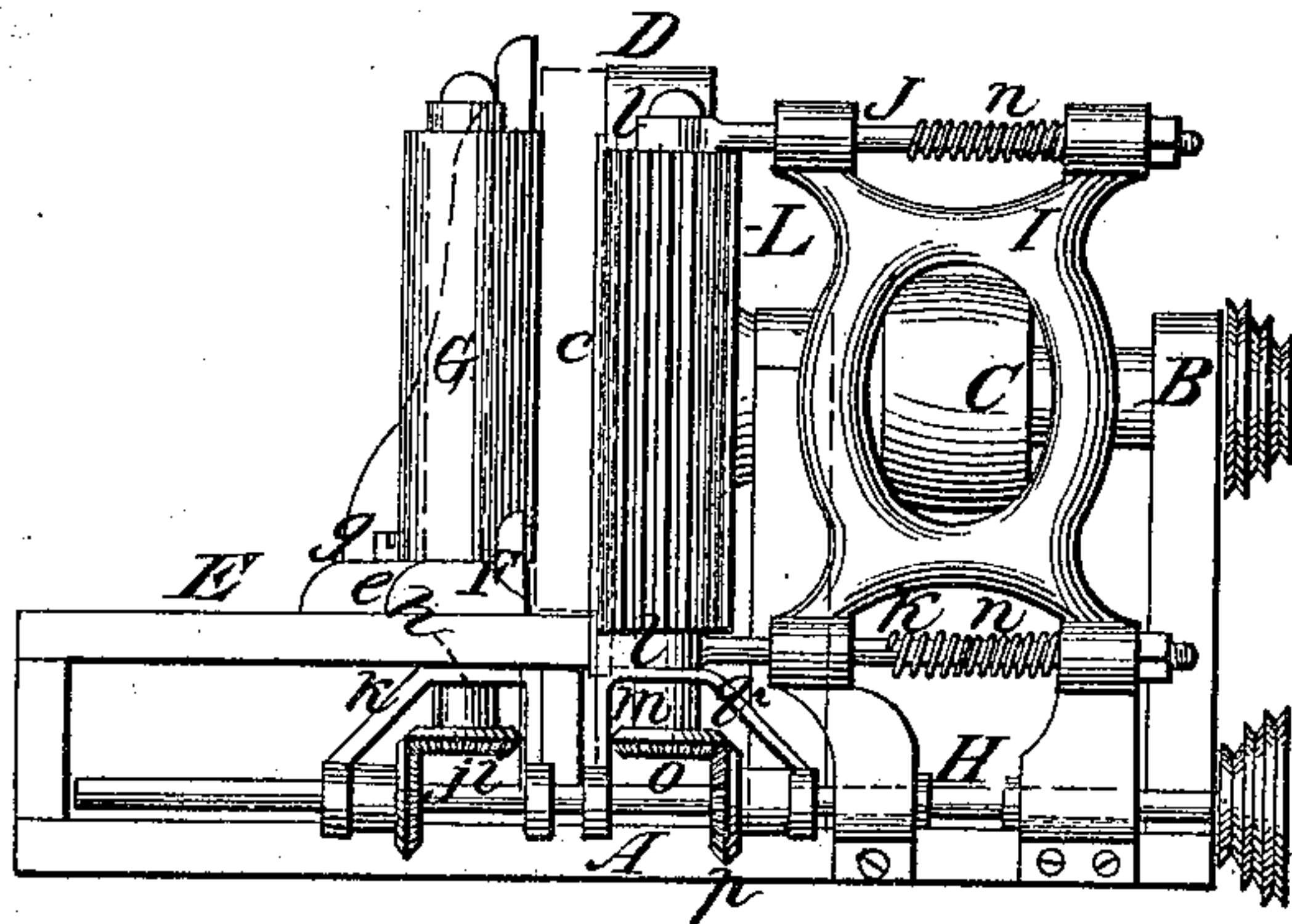


Fig. 1.

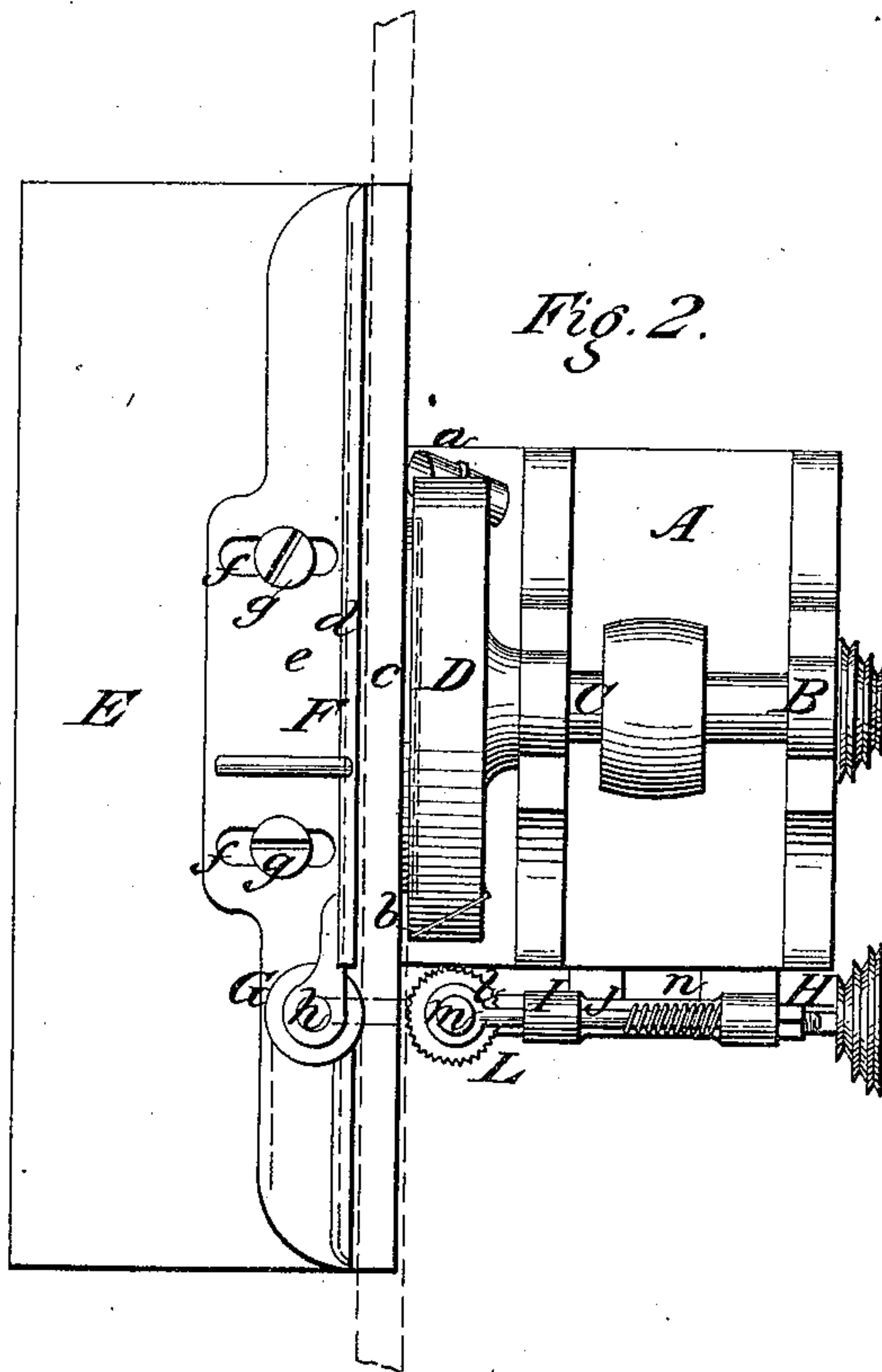


Fig. 2.

Witnesses:
William P. Foy
L. H. Babcock

Inventor:
C. B. Cottrell

UNITED STATES PATENT OFFICE.

C. B. COTTRELL, OF WESTERLY, RHODE ISLAND, ASSIGNOR TO HIMSELF AND
NATHAN BABCOCK, OF SAME PLACE.

IMPROVED FEEDING DEVICE FOR PLANING-MACHINES.

Specification forming part of Letters Patent No. 24,078, dated May 17, 1859.

To all whom it may concern:

Be it known that I, C. B. COTTRELL, of Westerly, in the county of Washington and State of Rhode Island, have invented a new and useful Improvement in Wood-Planing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front view of my invention; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improvement on a planing-machine for which Letters Patent were granted to me bearing date October 5, 1858.

The object of the within-described invention is to facilitate the feeding of the "work" to the cutters, and also to place the feeding device more fully under the control of the operator than formerly, so that the feed may be checked or stopped independently of the movement of the cutter head or ring and still be driven from the same shaft.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a bed-plate on which a head B is secured, said head having a shaft C fitted in it, with a cutter-head D attached to one end, said cutter-head having cutters *a b* secured to its periphery. In the face side of the cutter-head D a circular recess is made to receive a stationary bearing-plate *c*, around which the cutter-head B is allowed to rotate freely.

E is an elevated horizontal plate, which forms a bed for the gage F, which is of usual construction—to wit, a fence *d*, attached to a base *e* through slots *f*, in which set-screws *g* pass into the plate E. (See Fig. 2.) At the front end of the fence *d* of the gage a vertical roller G is placed. The lower part of the axis *h* of this roller passes through the base *e* and through an oblong slot in the plate E. To the lower end of the axis *h* a bevel-pinion *i* is attached, and this pinion gears into a corresponding pinion *j*, which is placed loosely on a horizontal shaft H below the plate E. The pinion *j* is allowed to slide on the shaft

H, but is made to turn therewith by means of a feather and groove. The lower part of the axis *h* of the roller G passes through a curved plate *k*, through the lower ends of which the shaft H passes loosely. The pinions *i j* are within this curved plate, which forms a sort of box for them.

I is an upright frame attached to the front end of the bed-plate A and having two sliding arbors or shafts J K fitted in it—one at its upper and the other at its lower end—both arbors or shafts being in the same plane. At the inner ends of the shafts J K eyes or bearings *l* are formed to receive the journals or axis *m* of a vertical feed-roller L, which may be fluted or corrugated vertically. On each arbor or shaft J K a spiral spring *n* is placed, said springs having a tendency to keep the roller L pressed toward the plate E. On the lower part of the axis *m* of the feed-roller L a bevel-pinion *o* is placed, and this pinion gears into a corresponding pinion *p*, which is fitted loosely on the shaft H, but made to turn with it by a feather and groove precisely similar to the pinion *j*. The pinions *o p* are also inclosed by a bent plate *q*, fitted loosely on shaft H, the lower part of the axis *m* passing through said plate *q*. (See Fig. 1.)

The operation is as follows: The stuff to be planed is fed between the fence *d* of the gage F and the bearing-plate *c* by means of the feed-roller L. The roller G reduces friction by preventing the stuff being pressed entirely against the fence *d*, the roller receiving a part of the pressure. Both rollers G L are rotated from the shaft H by means of the gearing *h j m p*, and the shaft H is rotated from the shaft C. Each roller G L, it will be seen, is rendered capable of being adjusted laterally without in the least interfering with its rotation, the roller G being allowed to move with the gage F, in order that said roller and gage may be adjusted according to the thickness of the stuff, and the feed motion of the stuff may be stopped at any time by throwing back from the stuff the roller L and compressing the springs *n n*, which, when not thus acted upon, keep the feed-roller L to its work. Thus it will be seen that the feed movement of the stuff may be stopped without stopping the rotation of the cutter-head, and that either roller G L is rendered capable of a lateral ad-

justment, one roller G being adjustable with the gage F and the other adjustable in itself.

I do not claim separately the employment or use of an adjustable feed-roller nor an adjustable anti-friction; but

I do claim as new and desire to secure by Letters Patent—

The combination of the anti-friction and

feed rollers G L, applied to the class of planing-machines described, and driven from one and the same shaft H by gearing arranged as shown to admit of a separate lateral adjustment of each, for the purpose set forth.

C. B. COTTRELL.

Witnesses:

WILLIAM P. COY,
G. H. BABCOCK.