

Strong & Buskirk.

Cutting Shingles.

No 93,496.

Patented Aug. 10, 1869.

Fig. 1.

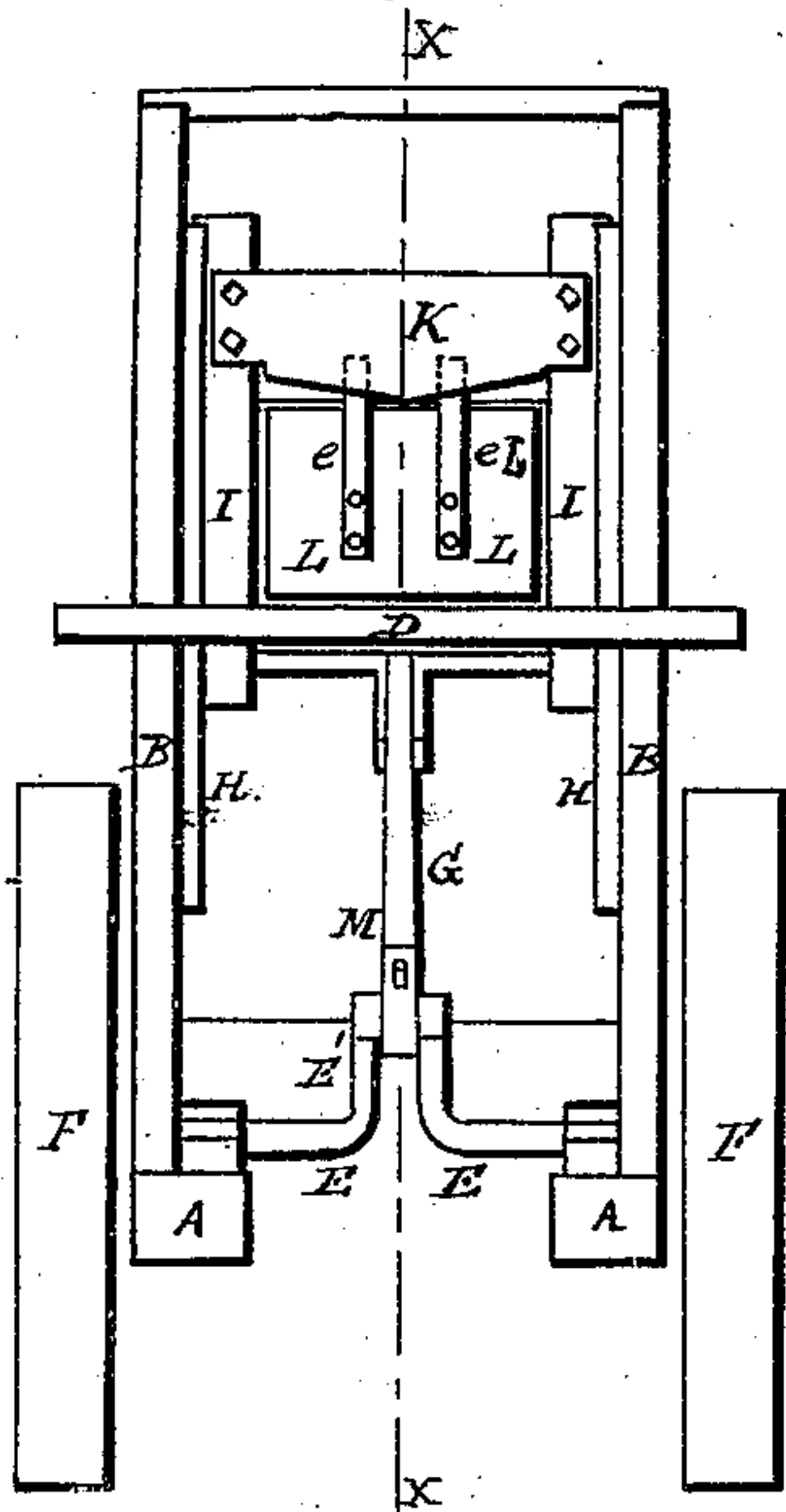


Fig. 3.

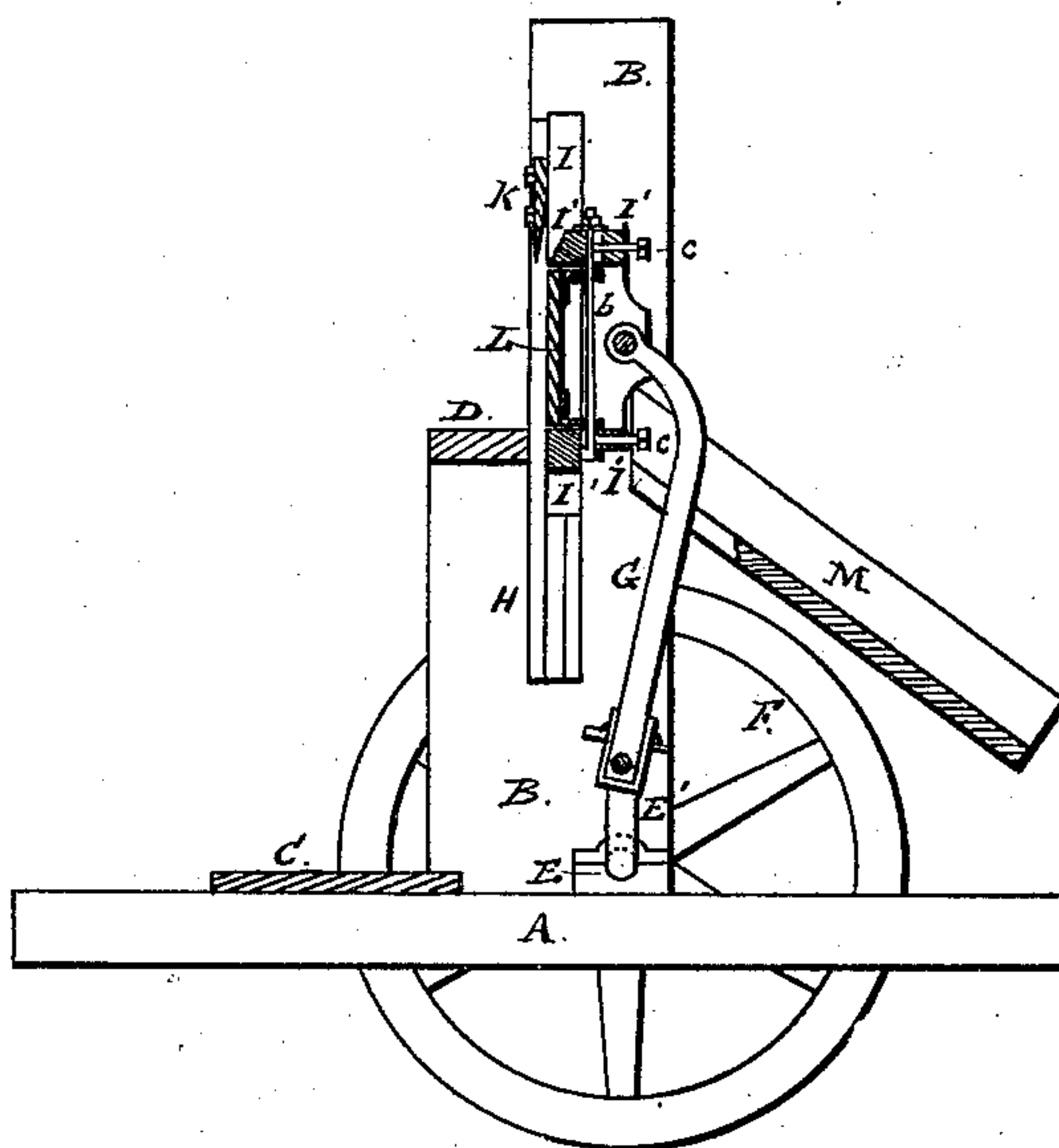


Fig. 2.

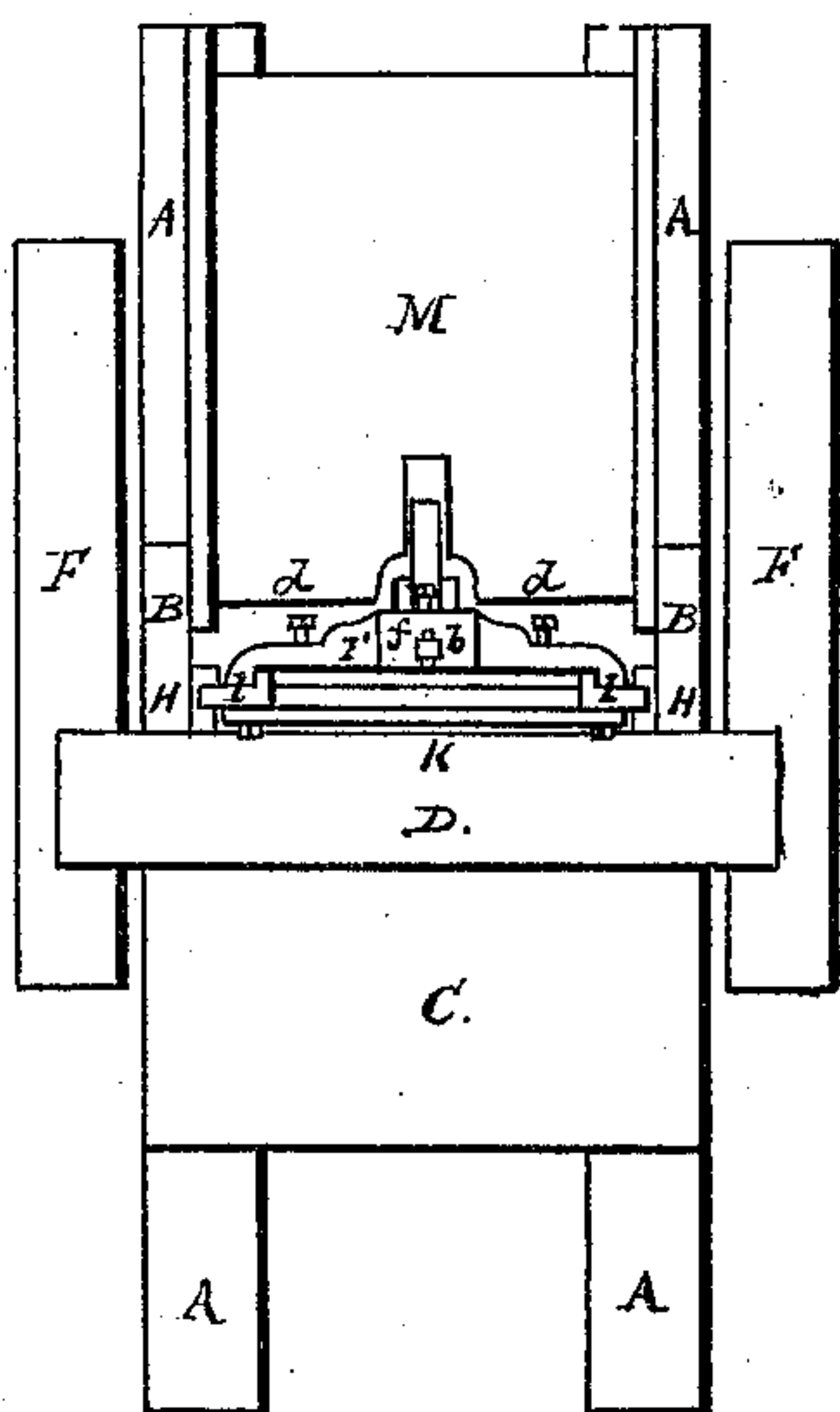


Fig. 4.

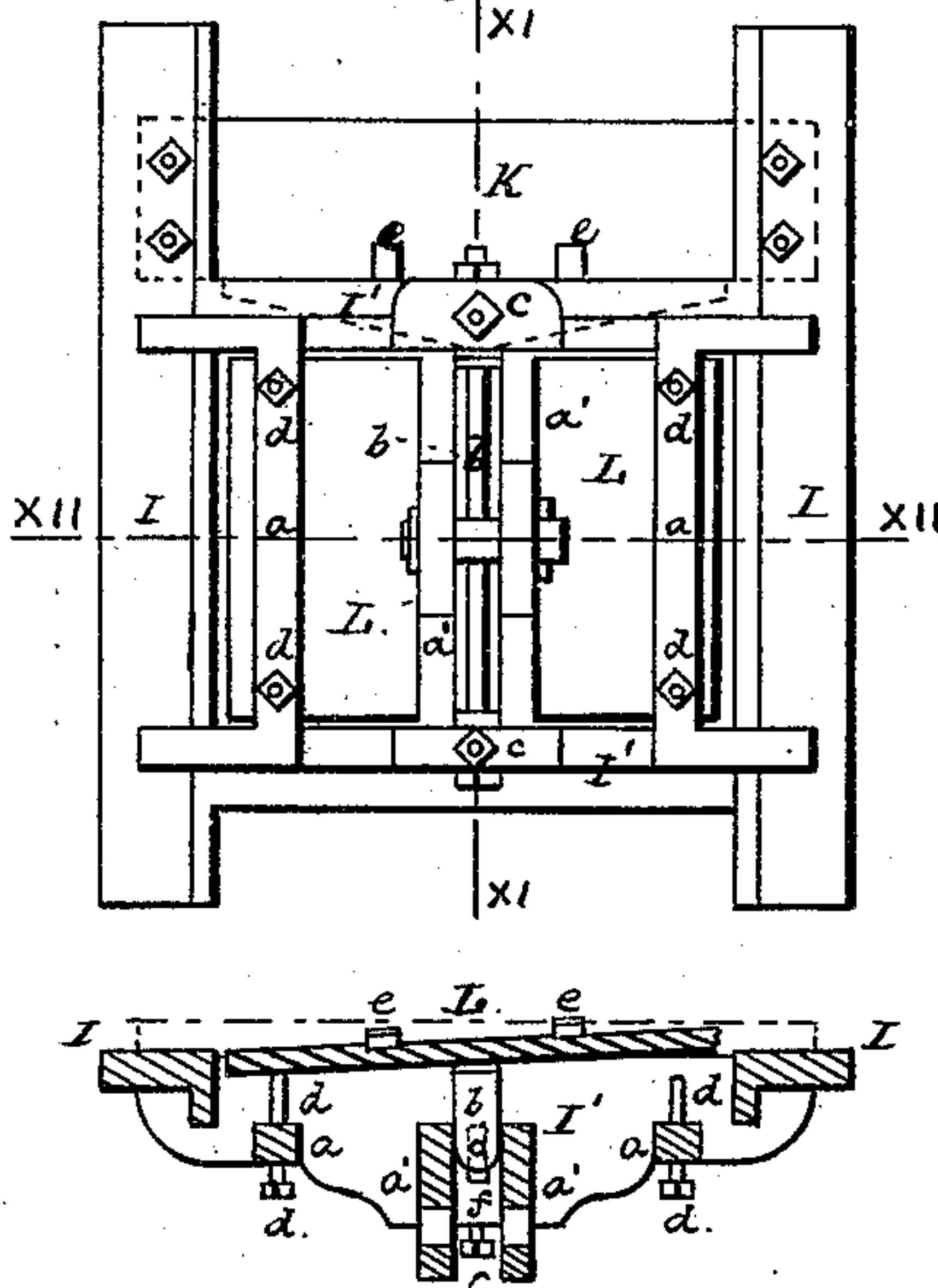


Fig. 5.

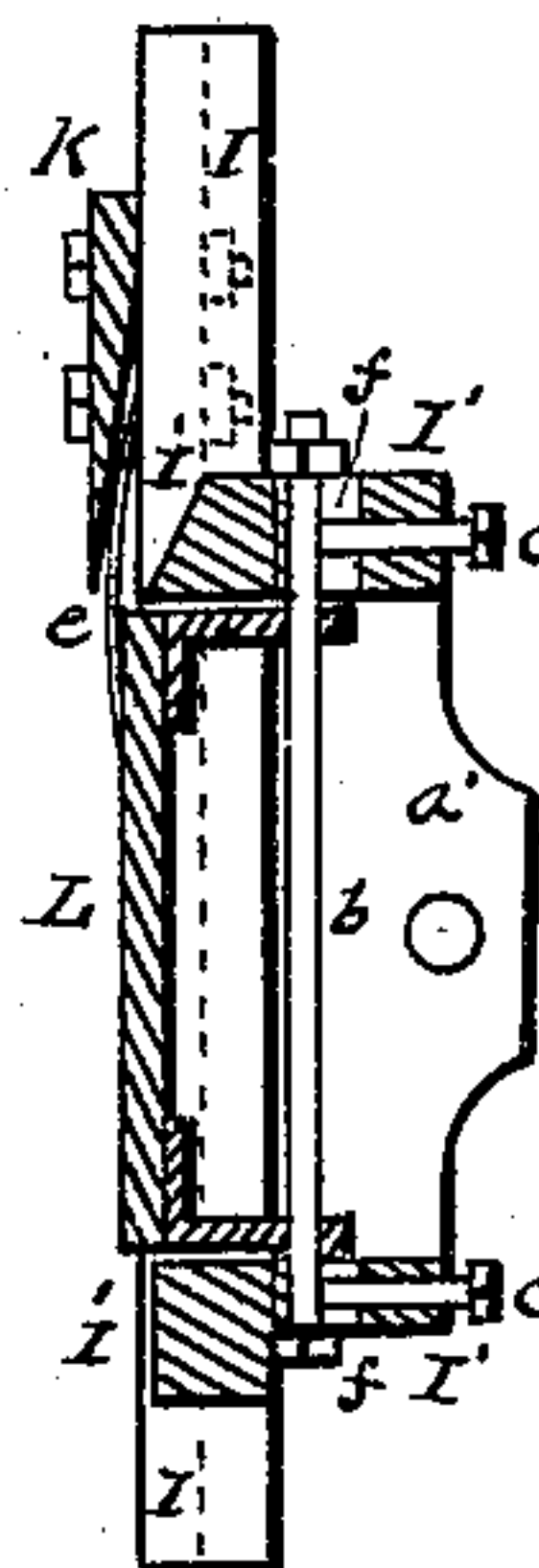
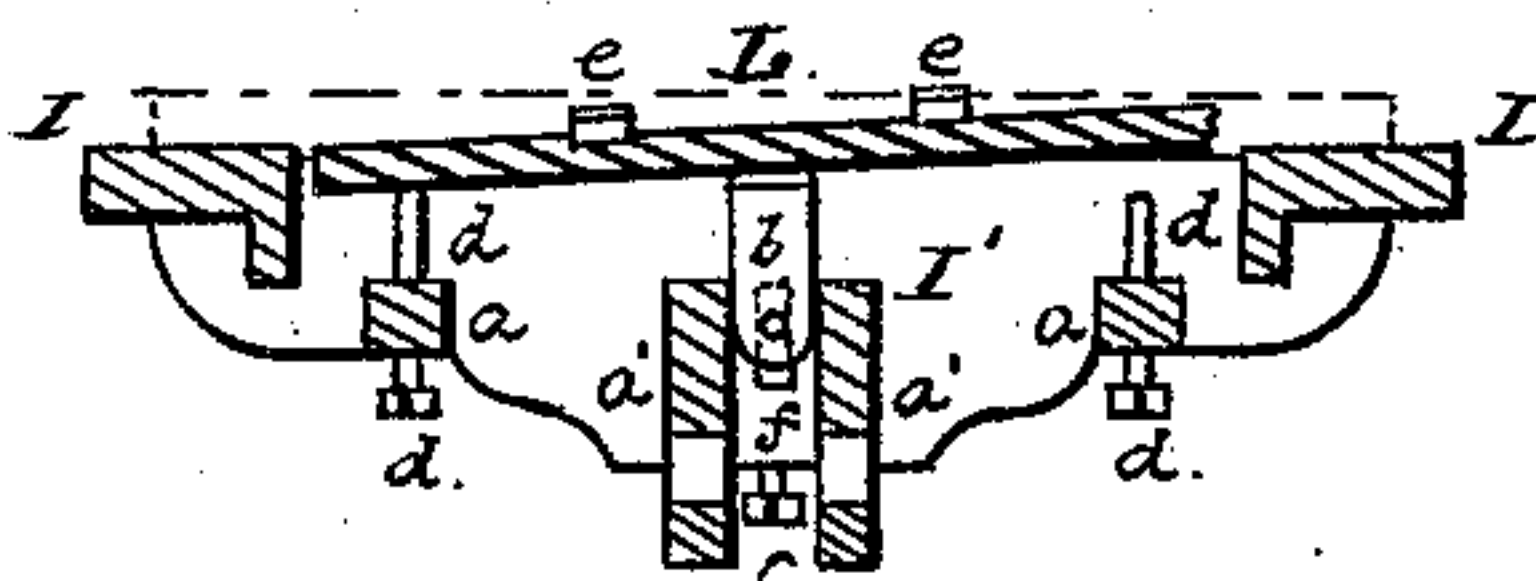


Fig. 6.



Witnesses.

John R. French
Chas. Herron

Inventors.

Daniel B Strong &
William Buskirk
By D. E. Jones & Co.
Attys.

United States Patent Office.

DANIEL B. STRONG AND WILLIAM BUSKIRK, OF WINCHESTER, MISSOURI.

Letters Patent No. 93,496, dated August 10, 1869.

IMPROVEMENT IN SHINGLE-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, DANIEL B. STRONG and WILLIAM BUSKIRK, of Winchester, in the county of Clark, and in the State of Missouri, have invented new and useful Improvements in Shingle-Machines; and they do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation;

Figure 2, a plan or top view; and

Figure 3, a vertical section through the centre of our improved machine on the X-X of fig. 1.

Figures 4, 5, and 6 are enlarged views, respectively, of a rear elevation, vertical section on the line XI-XI of fig. 4, and horizontal section on the line XII-XII of same figure, showing the knife and gauge-plate, and the sash which supports them.

In shingle-machines, as commonly constructed, the speed of running is limited to the rapidity with which a man can work in taking off by hand each shingle as it is cut, and removing it from the knife, to make way for its successor.

In our improvement, the machine is self-clearing, and may be run by hand, so as to cut from fifteen hundred to two thousand shingles per hour.

In the drawing—

A A are the sills, and

B B are the uprights of our machine.

C is a platform, on which the feeder or attendant stands, and

D is the bed, on which the block from which the shingles are cut, is to rest as it is fed to the machine.

E is the driving-shaft, having at one or both sides of the machine a fly-wheel, F, which may each be furnished with a crank, when the machine is to be run by hand, or a pulley, when it is to be run by other than hand-power.

In the centre of the shaft is a crank, E', to the pin of which is connected one end of the pitman G, the other end being attached to the knife-sash, as will be hereafter described.

To the uprights B are firmly attached the guides H H, each having a groove, in which the sliding edges of the knife-sash work.

I I are the uprights or slides of the knife-sash, and to these uprights is bolted the knife K, as seen in the drawing where fig. 1 shows a front view, and fig. 4, an enlarged rear elevation of the sash.

I' I' are cross-ties, connecting the uprights or slides I I.

It will be seen, on reference to figs. 3 and 5, that a space is open between the edge of the knife and the front face of the upper cross-tie I', through which the shingle will pass, after being separated from its block, as indicated by the arrow.

Two uprights, a a, extend from one cross-tie I' to the other, between the slides I, and two other uprights a' a', near the centre of the sash, strengthen it, and

afford a bearing for the pin, to which the upper end of the pitman G is attached by a strap-joint. (See figs. 3, 4, 5, and 6.)

The slides I, cross-ties I', and uprights a a', may be all one casting.

An upright spindle, b, extends from the centre of one cross-tie I' to the other, and is made adjustable to or from the front of the machine, by being allowed to move laterally in the slots f f, through the cross-ties, and in which it may be fixed by tightening the nut at its upper end, while the set-screws c c will prevent it and the gauge-plate L from being forced back, as the block is brought up against the plate.

By this arrangement is determined and fixed the thickness of the shingle at the middle of its length.

The gauge-plate L is hung upon the spindle b, so as to vibrate in such a manner that the plane of its face may be presented obliquely to the shingle-block, toward either side of the machine.

The taper of the shingle, as shown in fig. 6, where the edge of the knife is represented by the broken and dotted line, is determined by the degree of oblique vibration allowed to the plate L, and this is fixed by the temper-screws d d d d, which are tapped through the uprights a a.

To the face of the gauge-plate are attached two springs e e, which may be fixed in recesses in the plate, so that when the block is held against the plate, the springs will be flush with its surface.

These springs extend up above the top edge of the gauge-plate, and behind the knife above its edge, pressing against the back face of the knife, when not forced into their recesses in the plate, as seen in fig. 5.

When a shingle is being cut, it passes, as the knife descends, between its rear face and the spring. It is there held while the knife ascends to make a new cut, and as this is done, on the descent of the knife, the shingle that was held between the springs and the knife is pushed out and rearwards by the shingle that takes its place, and is held until it, in its turn, gives place to another.

As the shingles fall, they are conveyed by the chute or incline M, to a point convenient for bundling.

Having thus fully described our invention,

What we claim therein as new, and desire to secure by Letters Patent, is—

The gauge-plate L, in combination with the spindle b, slots f f, set-screws c c, and temper-screws d d d d, substantially as and for the purposes set forth.

In testimony that we claim the above-described improvements in shingle-machines, we have hereunto signed our names, this 8th day of June, 1867.

DANIEL B. STRONG.
WILLIAM BUSKIRK.

Witnesses:

T. W. ARNOLD,
T. F. BEALL.