Kindleberger & Arnold.

Cutter Head.

No. 95,809. Patented Oct. 12, 1869.

Fig. 1.

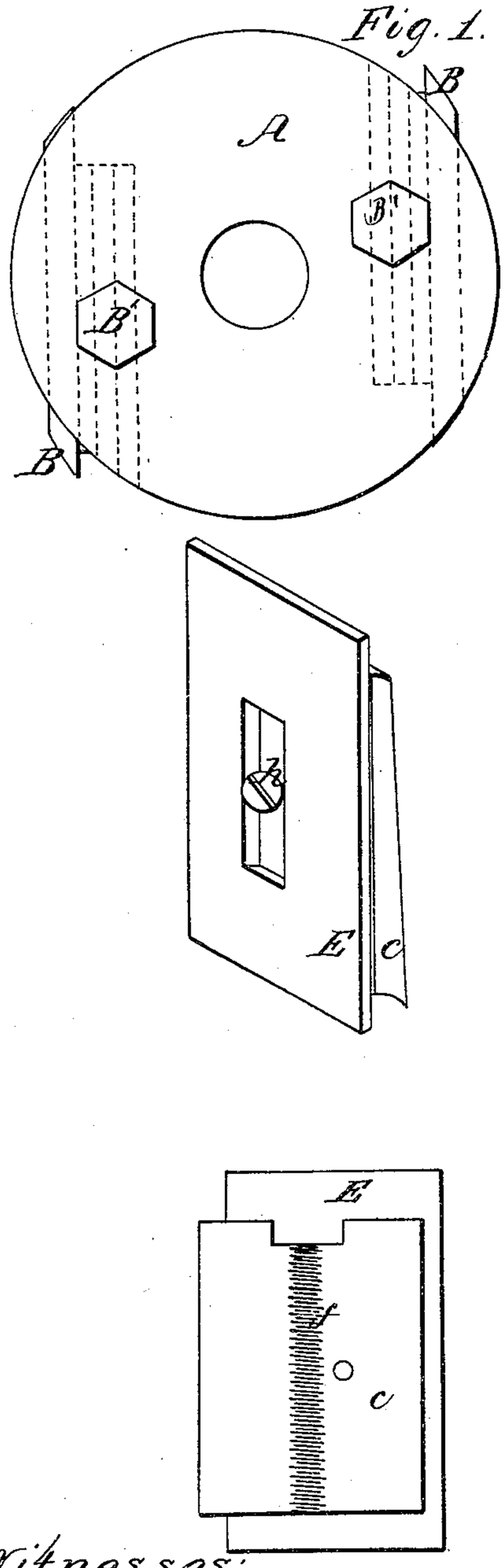


Fig. 2.

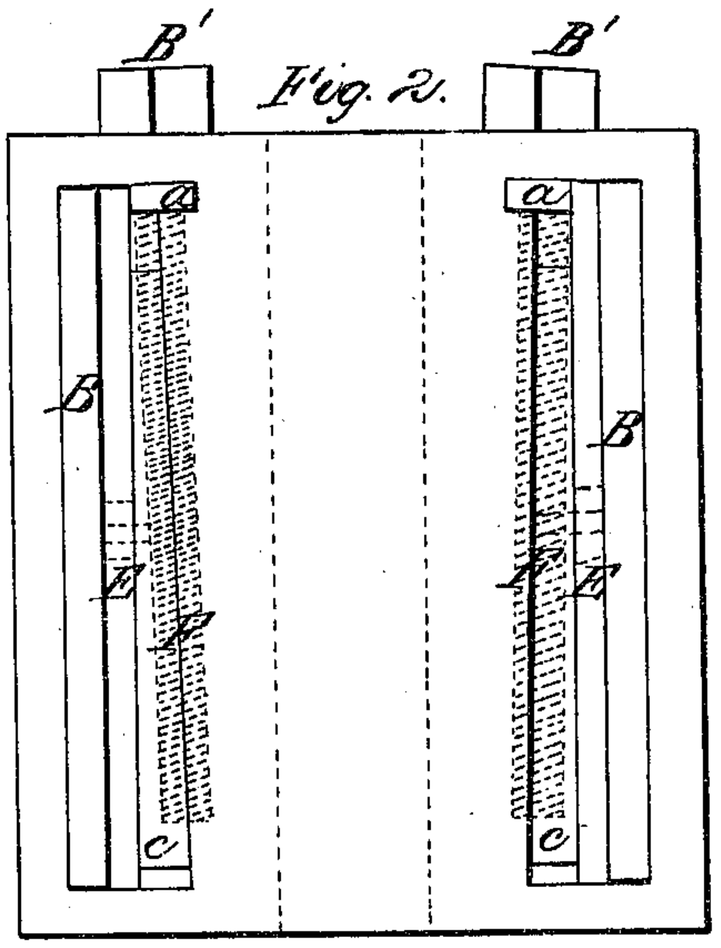
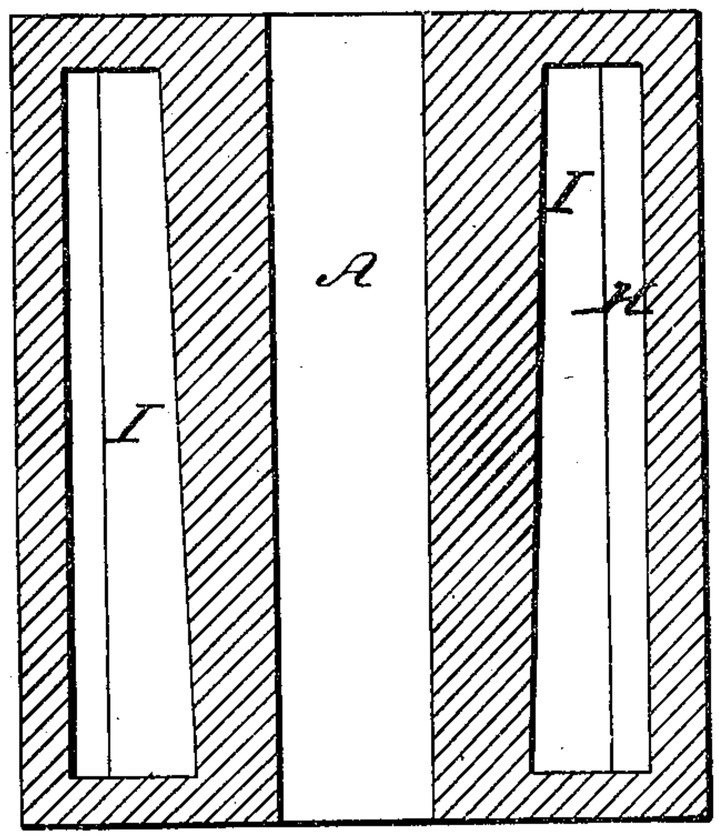


Fig. 3.



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Letters Patent No. 95,809, *dated October* 12, 1869.

IMPROVEMENT IN CUTTER-HEAD.

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, JEFFERSON KINDLEBERGER and WILLIAM AUGUSTUS ARNOLD, of the city and county of San Francisco, State of California, have invented an Improved Cutter-Head for planers; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use our said invention or improvement without further invention or experiment.

Our invention relates to an improved cylinder or cutter-head for wood-planing-machines; and

It consists in a novel and improved method or arrangement for securing the cutting-bits in the planer-head, so that they may be permanently fixed, when desired, and readily adjusted when necessary.

In order to more fully illustrate and explain our invention, reference is had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an end view of the planer-head.

Figure 2 is a side view, with the cutters in place.

Figure 3 is a side view, with the cutters removed.

A is the cylinder or planer-head, which carries the bits or cutters B.

The cutter-head is made, as shown at fig. 3, having the longitudinal slots H passing thro ugh it, opposite to each other, and on both sides of the centre.

These slots or chambers are so made that the sides toward or nearest the centre are made on an incline in one direction, while the sides forming the planes of the segment J, or opposite sides, are straight.

A shoulder, I, is formed by a projecting flange near the side of the opening or slot through which the rear end of the bit passes, narrowing the slot, until it is just large enough to partially close the opening, and leave space for the bit to pass through.

A screw, F, having a square-cut thread, is secured to one end of the planer-head, by means of a shoulder, *a*, on the inside of the slot H and a nut, B′, and on the outside or end of the planer-head, thus fixing the screw to its place, but allowing it to turn freely through the partition between the slot and end of the cylinder, and forming a set-screw.

This screw is so arranged that it lies partly embedded in the metal of the cylinder on the under side, or side nearest the centre, in a recess or channel prepared to receive it, thus leaving only the upper half of its circumference projecting upward.

The planer-bits or cutters B are made of the exact length and width required to fit into the slots resting against their upper sides, the bits or cutting-points projecting through the narrow portions of the slots in the cylinder.

Underneath the cutters B are two metal plates, *c* and E.

The plate *c* is made tapering on one side, so as to form a wedge, and has on its under side a semicircular female screw, *f*.

This plate rests upon the inclined bottom of the slots H, in such a manner that the upper or projecting half of the screw F will operate in the semicircular female screw in the plate.

The other plate, E, is placed between the plate *c* and cutter B, and is held in place by a screw, *h*, which passes through a slot in the plate, and is firmly screwed into the wedge-shaped plate *c*, thus holding them together, but allowing either to be moved a certain distance from side to side.

In securing the cutters in the slots, the two plates *c* and E are first inserted into the slot, and placed so that the female screw *f* shall rest upon the set-screw F; the cutter is then introduced above these two plates, and set with its bit or cutting-edge projecting to the required distance from the cylinder; the set-screw F is then turned, drawing the wedge-shaped plate *c* toward the narrow end of the slot H, thus binding the cutter firmly to its place.

By this means the cutters can be readily and firmly fixed to their proper places, and, when desired, can be adjusted in any manner required, by simply loosening the plates *c* and E, by turning the screw F.

The usual nuts which project from the circumference of the cylinder are done away with, thus allowing the bits to be set as short as desired.

Having thus described our invention,

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

The cylinder A, provided with wedge-shaped slots, H H, in combination with the plates E E and wedge-shaped plates *c c*, constructed and arranged to operate substantially as described.

In witness whereof, we have hereunto set our hands and seals.

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Witnesses:

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