(No Model.)

J. J. HEWIT.

HOOP MACHINE CUTTER HEAD.

No. 362,625. Patented May 10, 1887.

Fig. 1.

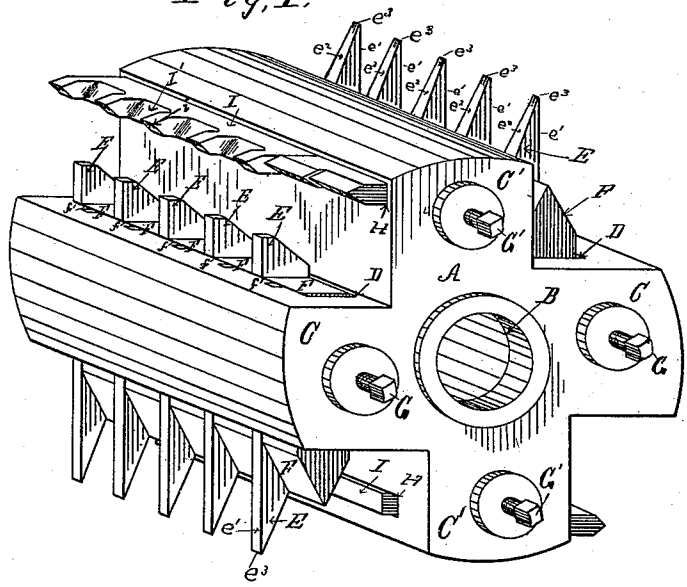


Fig. 2.

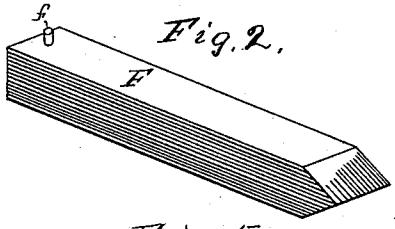


Fig. 6.

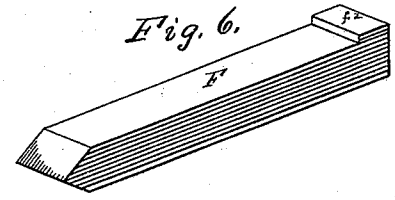


Fig. 5.

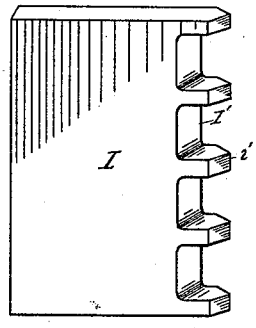


Fig. 3.

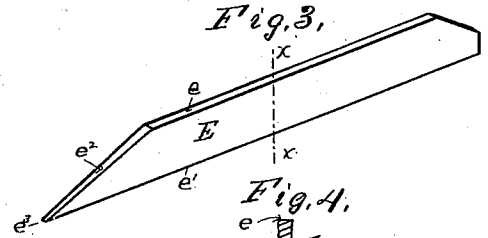
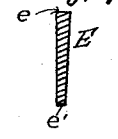


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN J. HEWIT, OF ALBION, PENNSYLVANIA.

HOOP-MACHINE CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 362,625, dated May 10, 1887.

Application filed July 12, 1886. Serial No. 207,841. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HEWIT, a citizen of the United States, residing at Albion, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Hoop-Machine Cutter-Heads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention relates to hoop-machine cutter-heads; and it consists in the improvements hereinafter set forth and explained.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of one of my improved hoop-machine cutter-heads complete. Fig. 2 is a perspective view of my improved knife-spacing block for separating the splitting-knives in my improved cutter-head. Fig. 3 is a perspective of one of my improved splitting-knives. Fig. 4 is a cross-section of same on line $x\,x$ in Fig. 3. Fig. 5 is a perspective of one of my improved hoop-planing knives. Fig. 6 is a view of a modified form of my improved knife-spacing block.

Like letters refer to like parts in all the figures.

In the construction of my improved cutter-head shown, A is the body of the head, having its central opening, B, adapted to fit upon the mandrel of the machine. This body A is provided with four arms, C C C′ C′. In these arms C C′, I insert cutters, as follows: I cut mortises D in the arms C C nearly the full width of the head A and of sufficient depth to take in the splitting-knives E, Fig. 3, edgewise, as shown in Fig. 1. These knives E are constructed with the under edge thereof, e, about one-third thicker than the upper or outer edge, e', so that the cutting-edge e^2 is somewhat thicker than the outer edge, e', so as to insure clearance. These knives E are usually five or more in number; but any number desired may be used. They are secured in the arms C as follows: I make spacing-blocks F, Fig. 2, which are preferably made of cast or wrought metal, planed or otherwise finished to proper size, so that the spaces between the splitting-knives E coincide with the width of the hoops to be cut therewith.

In the back end of the block F, I place a small pin, f, or construct thereon a shoulder, f^2. (Shown in Fig. 6.) In case the pin f is used, I construct recesses f' in the back sides of the arms C, as shown in Fig. 1, into which the pins f fit. When, however, I use the block provided with the shoulder f^2, the shoulder f^2 fits against the back side of the arm C, the object of the pin f and of the shoulder f^2 on the spacing-block F being to prevent the blocks F from being moved out of place by the centrifugal force exerted thereon. I place the blades E and the spacing-blocks F in the mortises D in the arms C C substantially as shown in Fig. 1, where they are secured by the set-screws G G in the ends of the arms C C. The advantage of this construction is that in case the points e^3 of any one or more of the knives E are broken they can be quickly removed and sharpened or new ones substituted therefor, while, as these knives are now constructed—viz., in a solid piece with the planer-blades—the breaking of one of the points e^3 requires the grinding back and resharpening of the entire blade. After fitting the two arms C C with the splitting-knives E E, as described, I cut mortises H H in the opposite arms, C′ C′, in which I place planer-knives I I. (Shown in Fig. 5.) These knives are provided with serrated edges I′, of suitable shape to dress and round the edges of the hoop-blanks separated by the splitting-blades E. The serrations I′ in the knives I I being of only sufficient depth to properly finish the edges of the hoops, the projecting points i thereof, being short, are not easily broken, and when dulled the knife can be readily and easily sharpened without cutting away any great amount thereof. I make the serrations in this blade I of such size and so adjust them in the arms C′ C′ that the points i of the planer-blade I will exactly follow the splitting-blades E in the arms C C as the head A rotates. The blades I, I secure in the arms C′ C′ of the head A by set-screws G′ G′ in the ends of the arms C′ C′.

The operation of my invention is so obvious to those skilled in the art to which this invention appertains that further description thereof is unnecessary.

I am aware that cutter-heads have been here-

tofore made with composite knives for matching and grooving machines. Therefore I do not claim, broadly, a cutter-head constructed in this manner; but

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, in a hoop-machine cutter-head, of the removable splitting-blades E, with the spacing-blocks F, having pins *f* therein, adapted to fit into recesses *f'* in the backs of the cutter-head arms C, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN J. HEWIT.

Witnesses:

JEDUTHAN WELLS,

GEORGE SPAULDING.