

(No Model.)

A. GUERDAN.

CUTTER HEAD.

No. 250,726.

Patented Dec. 13, 1881.

Fig. 1.

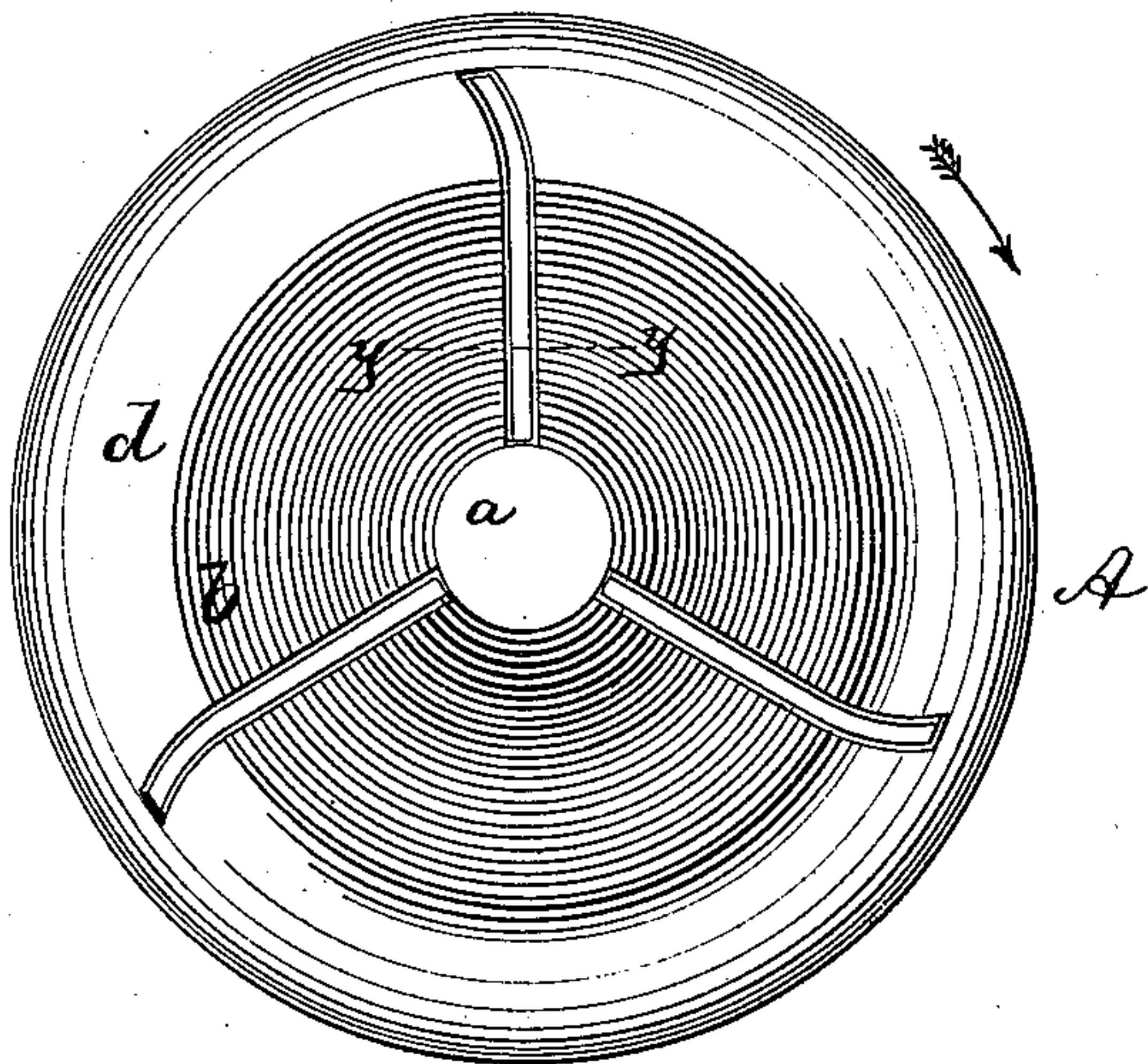


Fig. 2.

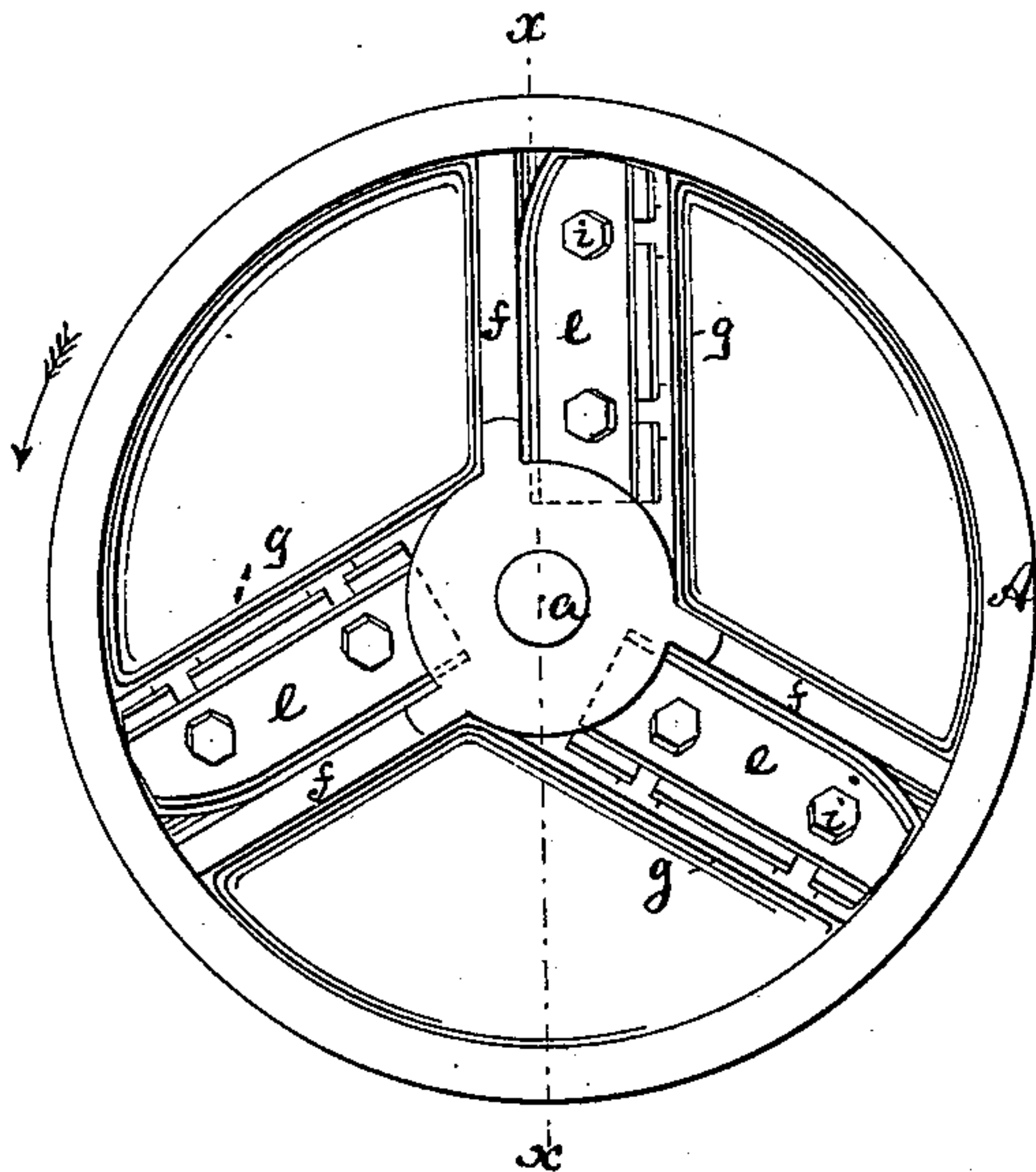


Fig. 3.

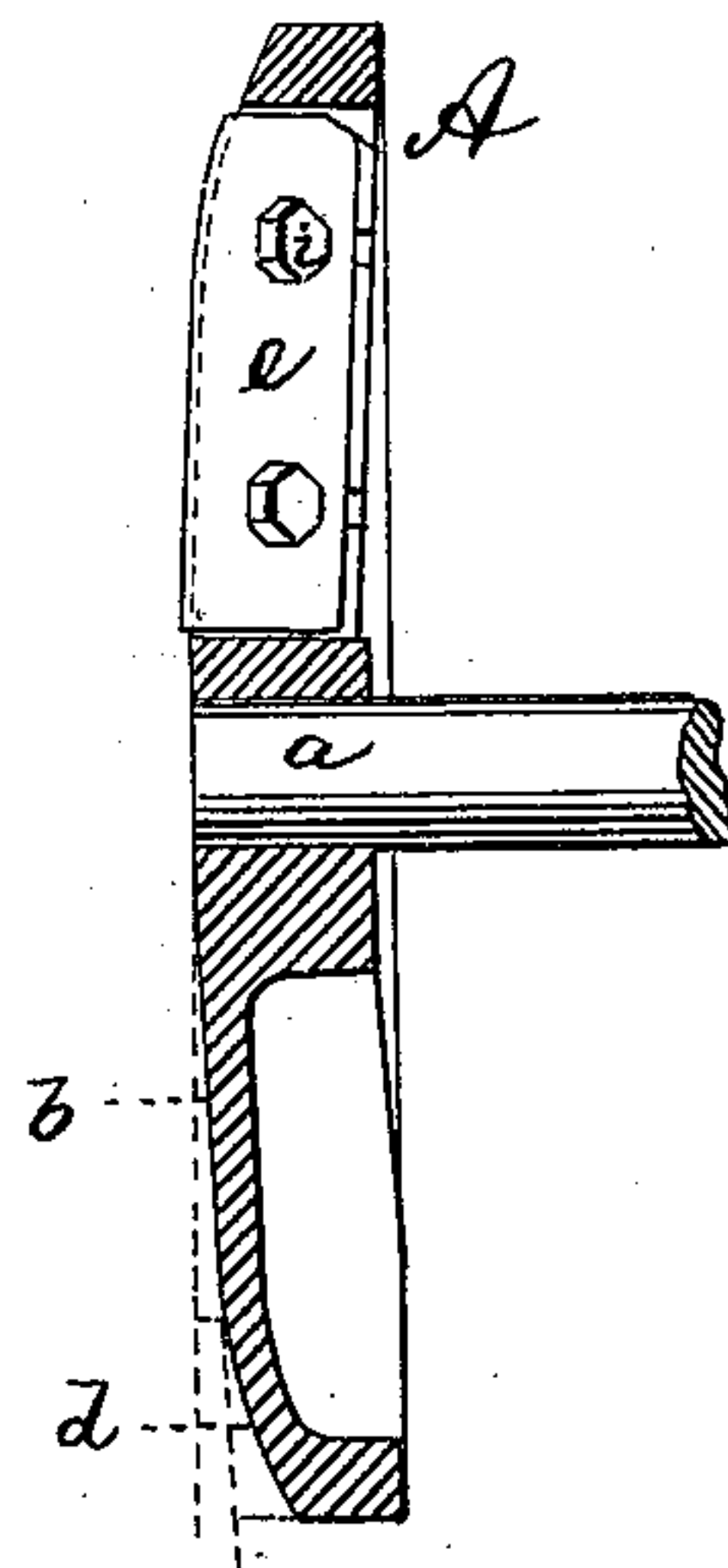


Fig. 5.

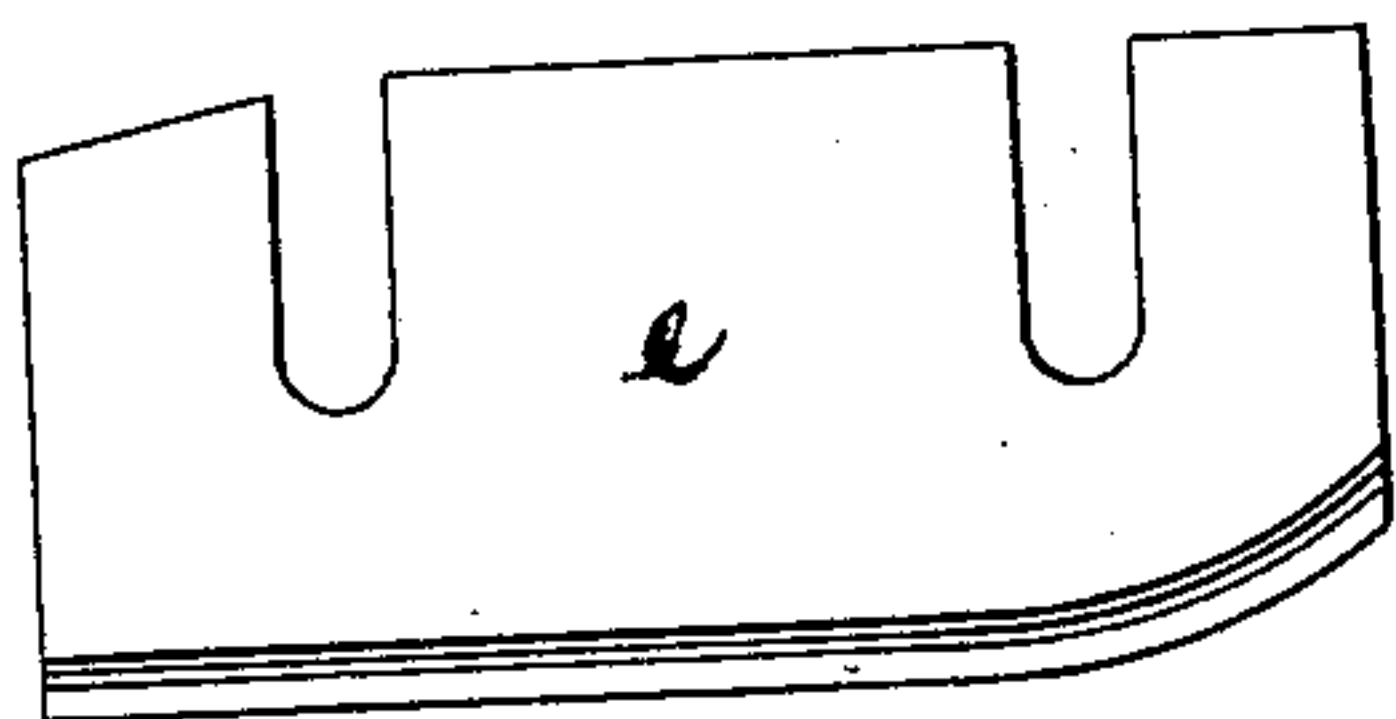
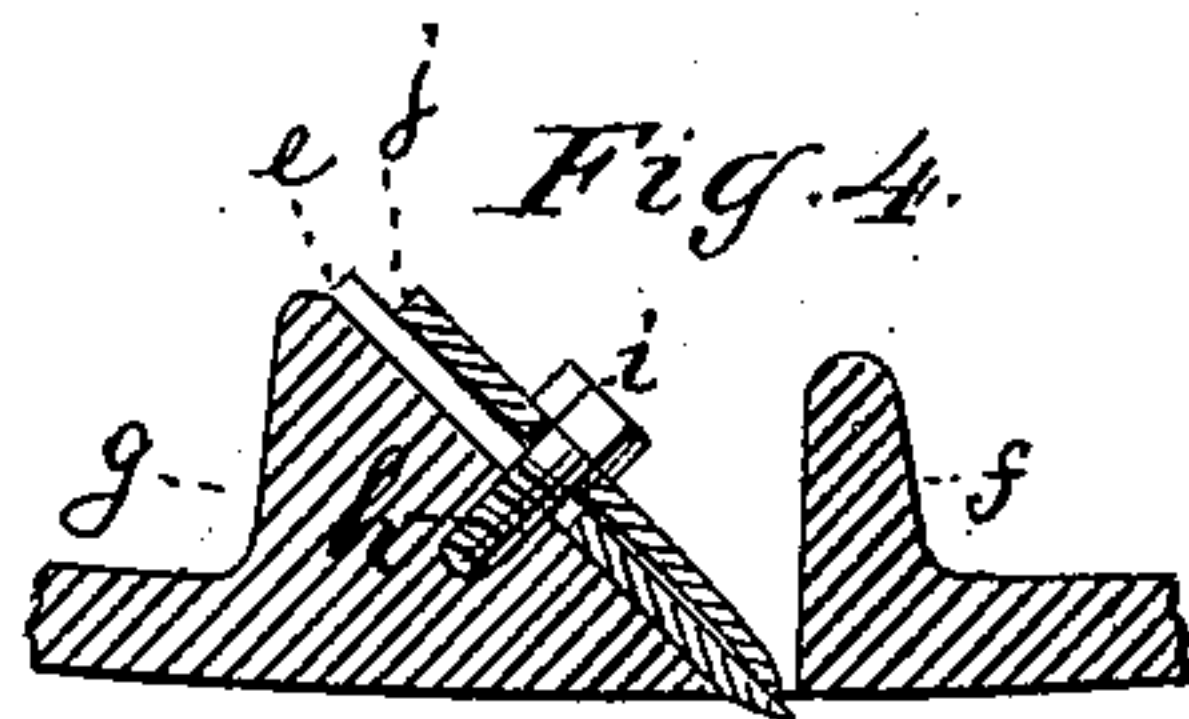


Fig. 4.



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ADAM GUERDAN, OF NEW YORK, N. Y., ASSIGNOR TO HENRY SCHWARZWALDER AND ERNST H. HERB, BOTH OF SAME PLACE.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 250,726, dated December 13, 1881.

Application filed October 26, 1881. (No model.)

To all whom it may concern:

Be it known that I, ADAM GUERDAN, of the city of New York, county and State of New York, have invented a new and Improved Cutter-Head for Stave-Sawing Machines, of which the following is a specification.

In the drawings, Figure 1 is a face view of my improved cutter-head for stave-sawing machines. Fig. 2 is a back view of the same. Fig. 3 is a central cross-section on the line x x , Fig. 2; Fig. 4, a section on line y y , Fig 1, on an enlarged scale; and Fig. 5, a side view of one of the knives, on an enlarged scale.

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

This invention relates to an improved cutter-head for stave-sawing machines, by which the required bevel is imparted to the edges of staves.

The invention has for its object, principally, to so construct the cutter-head that the edge of the stave will be sawed or cut and planed at one and the same operation; and it consists in the combination of a slotted cutter-head, having sections of different angular inclination, with knives having curved cutting-edges, and with means for properly attaching the knives to the cutter-head, all as hereinafter more fully described.

In the drawings, the letter A represents my improved cutter-head proper. The same is made of circular form, and adapted to revolve with its horizontal axle a , to which rotary motion is imparted. Directly in front of the cutter-head a feed-table should be placed at or about equal height with the center of the cutter-head. The cutter-head A is convex at its face and concave at its back. The face has two different angular inclinations—that is to say, from the axle a the face recedes first in one uniform degree, and then in a different but greater degree up to its circumference. The first of these sections is marked b , the latter d . The section b is annular, has but a slight inclination, and is straight in radial cross-section. The section d has a considerably greater inclination, and is curved in radial cross-section. The different inclinations on the face of the cutter-head are apparent from Fig. 3, in which the vertical lines indicate the perpendiculars drawn, respectively, from the axle a and from the periphery of the section b .

Through the cutter-head A extend three (more or less) slots, cut at an acute angle. The upper portion of each slot—to wit, that portion which is in the section d —will be curved, as shown in Fig. 1. Through the slots extend the cutting-edges of the knives e . The lower portion of each knife e —to wit, the portion extending through section b —is straight, while the upper portion, or portion extending through section d , has a curved edge, Fig. 5.

Figs. 2 and 4 show the manner in which the knives are attached to the cutter-head.

At the back the cutter-head is provided with ribs f g . One rib, f , is forward of each of the slots, and one rib, g , directly backward of each of the slots. The rib f may be of suitable shape, and serves for strengthening purposes; but the rib g has an inclined face toward the slot, the inclination being about forty-five degrees. Upon this inclined face the knife e is fastened by pins h , as shown, passing through slots in the knife, and by nuts i and plates j , or in other suitable manner. In this way the knife e is adjustable and projects through its slot at the proper angle.

The operation of the machine is as follows: The stave is placed upon the feed-table at an inclination toward the cutter-head, held between proper clamps. The table is advanced. The edge of the stave is thereby first brought in contact with the curved portion d of the cutter-head, and the rounded edges of the knives e will cut the desired bevel. As the stave advances, the cut edge will be presented to the section b and to the action of the straight edges of the knives. Owing to the smaller inclination of the section b , the knives will now cut but slightly into the raw edge of the stave and shave or plane the same. The edge of the stave, after completely passing the cutter-head, will be properly cut and planed.

I claim as my invention—

The combination of the cutter-head A, having sections b d and ribs g , having inclined face, with the knives e , having curved cutting-edges, and extending through curved slots in the cutter-head, substantially as specified.

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Witnesses:

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