(No Model.)

H. M. WILCOX.
CUTTER HEAD.

No. 604,707. Patented May 24, 1898.

Fig I

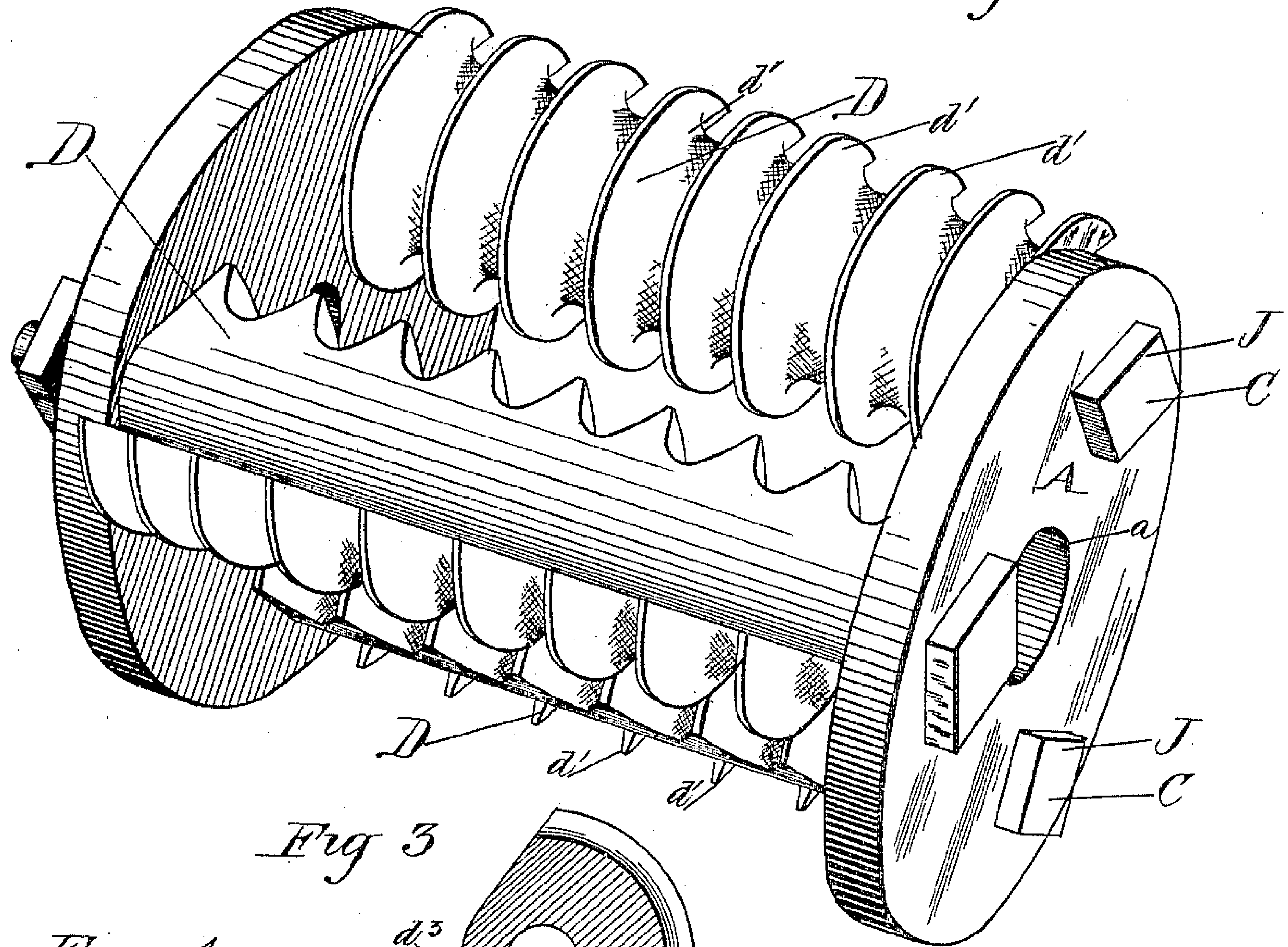


Fig 3

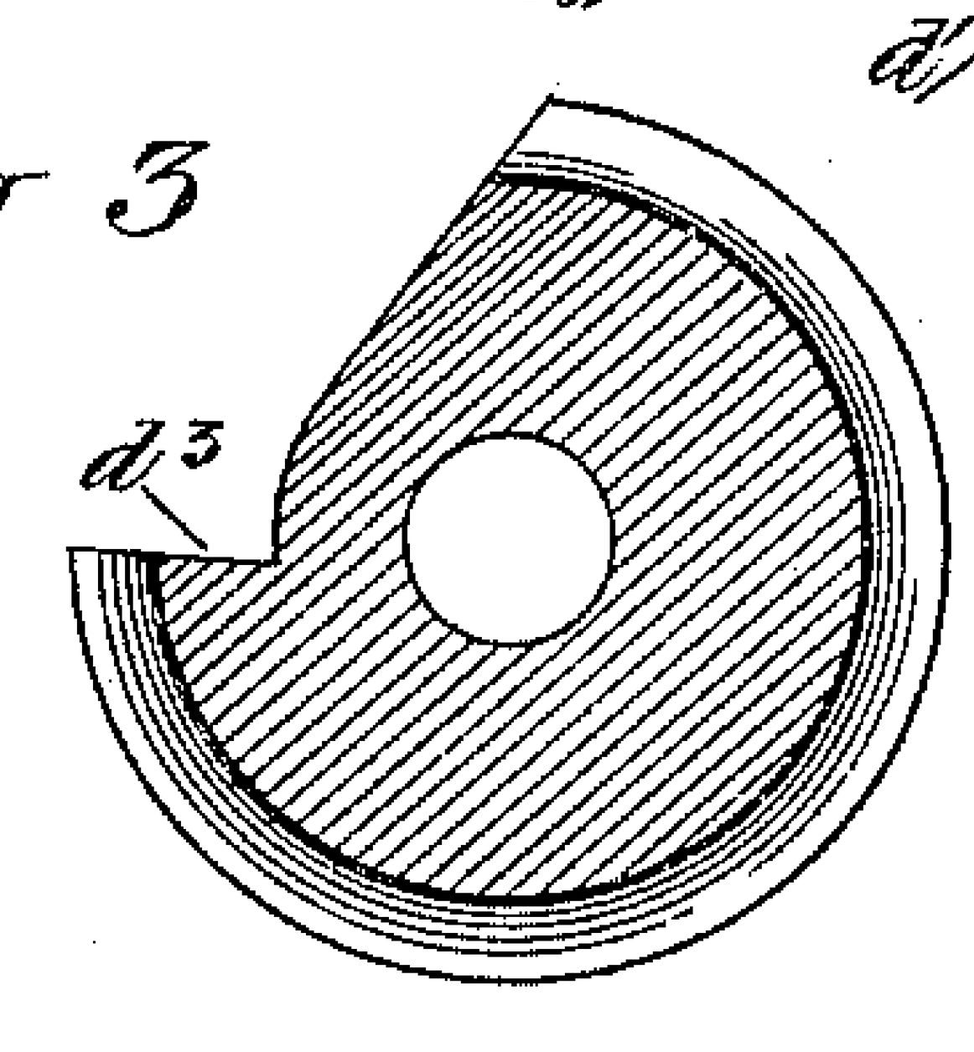


Fig 4

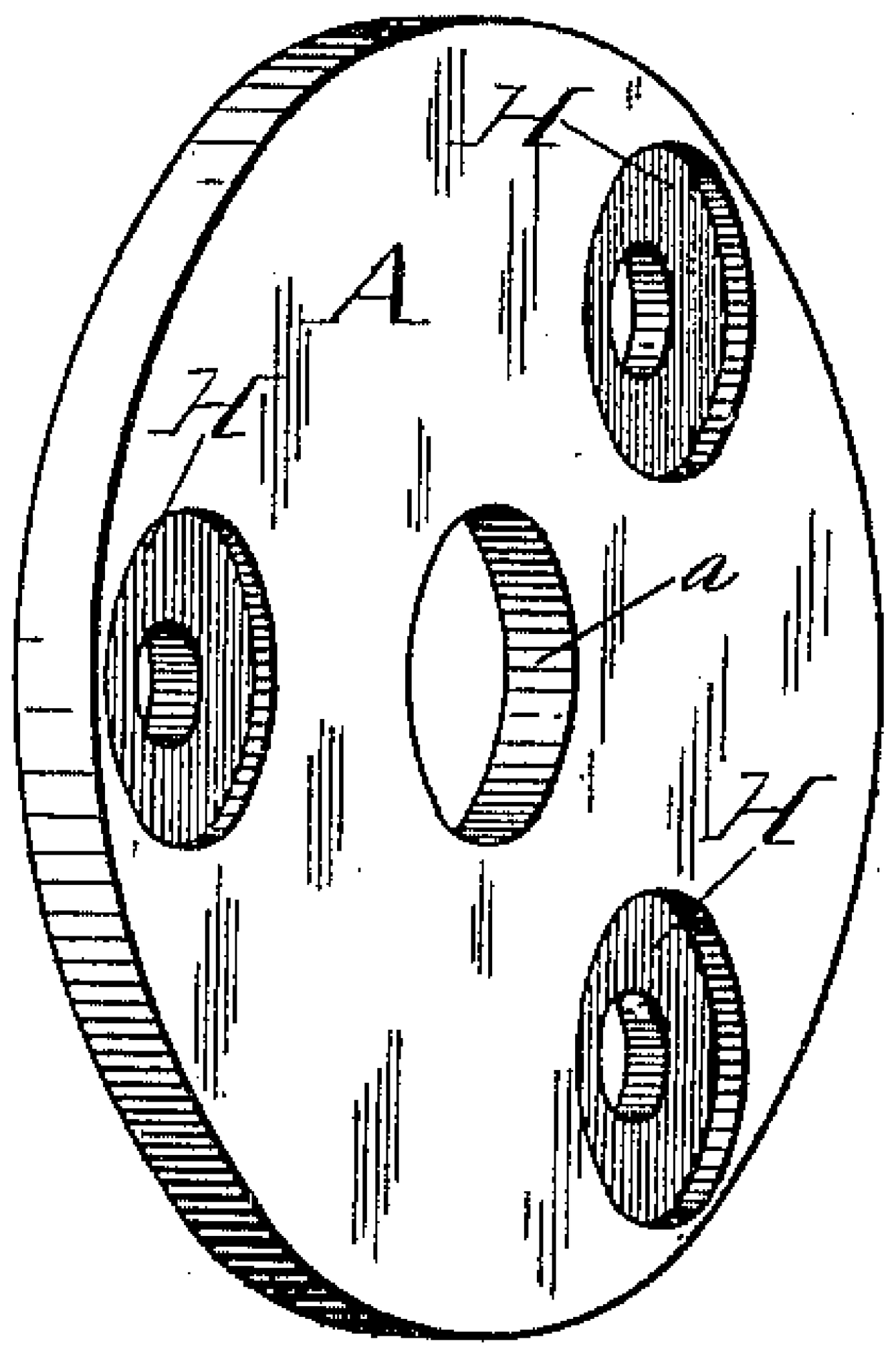
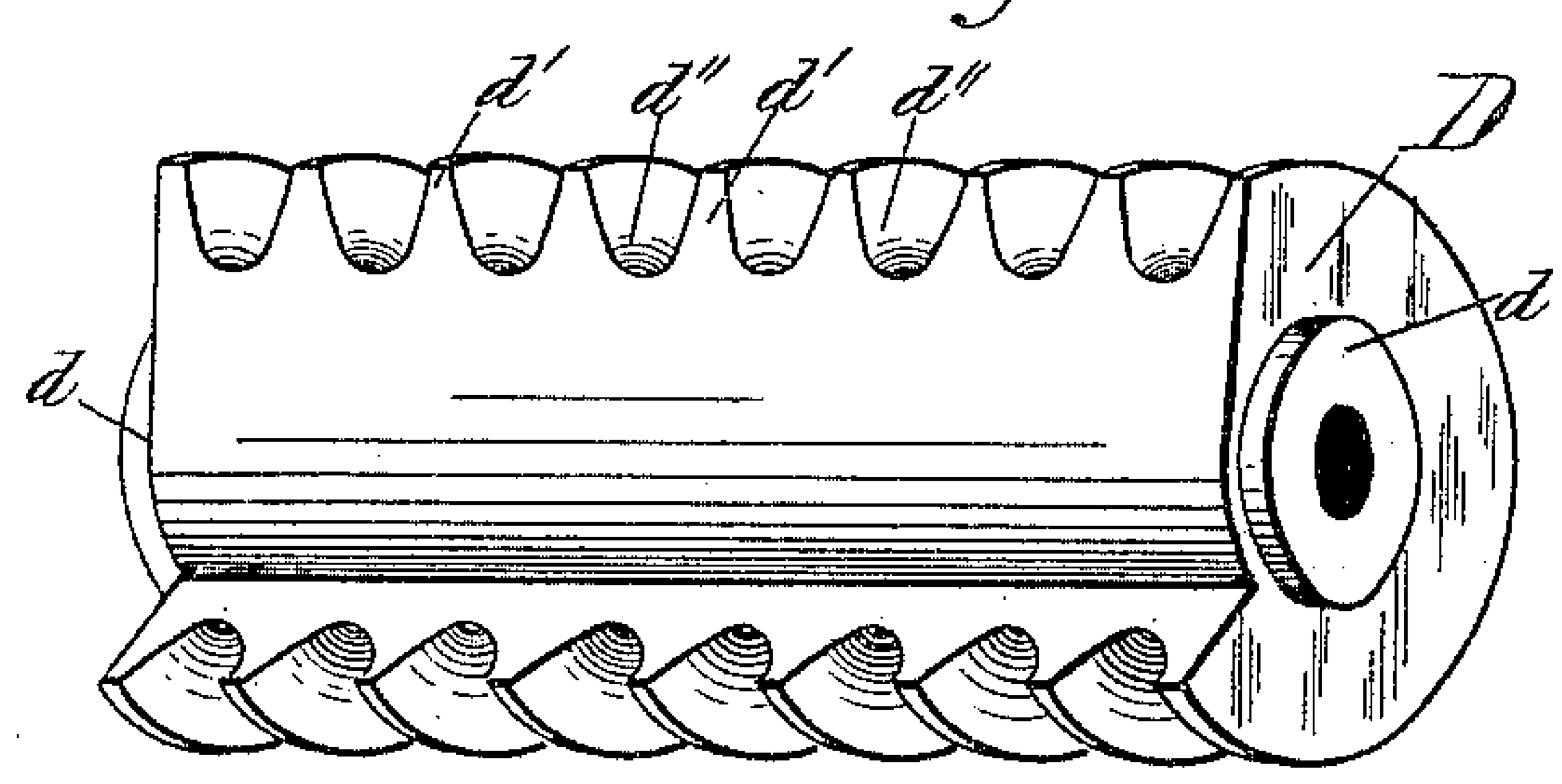


Fig 2



Witnesses

R. A. Sydney.
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UNITED STATES PATENT OFFICE.

HARVEY M. WILCOX, OF OWEN SOUND, CANADA.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 604,707, dated May 24, 1898.

Application filed March 11, 1897. Serial No. 627,051. (No model.)

To all whom it may concern:

Be it known that I, HARVEY MILTON WILCOX, of Owen Sound, in the county of Grey, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Cutter-Heads for Woodworking Machinery; and I hereby declare that the following is a full, clear, and exact description of the same.

In the specification and drawings constituting part of F. W. Harrison's Letters Patent of the United States No. 568,677 and dated September 29, 1896, there is shown and described a machine for pointing skewer-blanks. Each of these skewer-blanks consists of a rounded piece of wood of a small diameter, and the process of making them consists of running the material through what is known as a "sticker-machine," the cutter-knives, when the material is going through for the first time, cutting the material partially through and half-rounding it. The material on going through the second time is reversed, the cutter-knives cutting it into rounded strips.

The object of this invention is, therefore, to devise a cutter-head which will positively and accurately cut the material into rounded strips of the same diameter throughout expeditiously and without waste; and the invention consists, essentially, of a cutter-head comprised of two circular side plates and a plurality of cylindrically-shaped knives mounted in the side plates, each knife having a plurality of concentric cutting-blades arranged equidistant from each other, the cutting-blades of all of the knives in proper alinement, the whole device being hereinafter more fully set forth, and more particularly pointed out in the claim.

In the drawings, Figure 1 represents a perspective view of one of the cutter-heads. Fig. 2 is a similar view of one of the knives. Fig. 3 is a sectional view of one of the knives. Fig. 4 is a perspective view of one of the side plates.

Like letters of reference refer to like parts throughout the specification and drawings.

A A represent the circular side plates, each side plate having a central bore *a* to receive a shaft. The plates A A are to be keyed or otherwise rigidly fastened to the shaft in order that they can revolve with the shaft during its revolution.

C C C represent three spindles mounted in the side plates A A at equidistant points from each other and concentric with the central shaft.

D D D represent three cutting tools or knives comprising recessed cylinders, one mounted on each of the spindles C. Each cutting tool or cylinder D consists of a hub *d*, slightly greater in length than the distance between the inner sides of the plates A A.

d' d' represent a plurality of cutting-blades formed integrally with the hub *d*. The curve of the edges of the cutting-blades *d'* is concentric with the bore of the hub *d*, the sides of the cutting-blades being concaved in order that the union of the sides of two adjacent cutting-blades will practically form a semicircular interval *d''*. Each cylinder D is recessed longitudinally to form a cutting edge d^3, extending throughout the length of the cylinder. The cutting-blades *d'*, in addition to being concentric with the bore of the hub, are laterally concentric with each other, and the distance between the cutting-blades of each knife being the same it follows that if the cutting tools or knives are properly set the cutting-blades will be in alinement. The cutting front d^3 of each tool as it comes in contact with the material passing through the machine on the first operation cuts the material partially through and semicircular in shape. On the second operation the material is reversed and the cutting tools or knives cut it into rounded strips of the same diameter throughout. The material in the first place is cut into pieces equal in width to the distance between the outer blades *d' d'*. Consequently the reversal of the material will allow of the blades making the second cuts in alinement with the first.

H H represent three recesses or seats formed in the inner faces of each of the side plates A A to receive the ends of the hubs *d*. By the entry of the ends of the hubs into the seats H the inner side faces of the side plates can be brought close to the adjacent cutting-blades of the tools.

Each of the spindles C C C preferably con-

sists of a bolt fitted at one end with a head J and at the other with a threaded nut. By this means any desired pressure can be placed on the side plates to hold the cutting-tools firmly in position.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A cutter-head comprising parallel circular side plates each formed with a central bore, and with centrally-bored recessed seats on its inner side, in combination with stay-bolts extending through the bores in said seats, a cutting-cylinder mounted on each of said stay-bolts, each of said cylinders having hubs fitting the seats in the side plates, and parallel cutting-blades having concave sides to form semicircular spaces between the blades and being longitudinally recessed to form a front cutting edge d^3.

Owen Sound, January 25, A. D. 1897.

H. M. WILCOX.

In presence of—
A. D. CREASOR,
H. B. SMITH.