

(Model.)

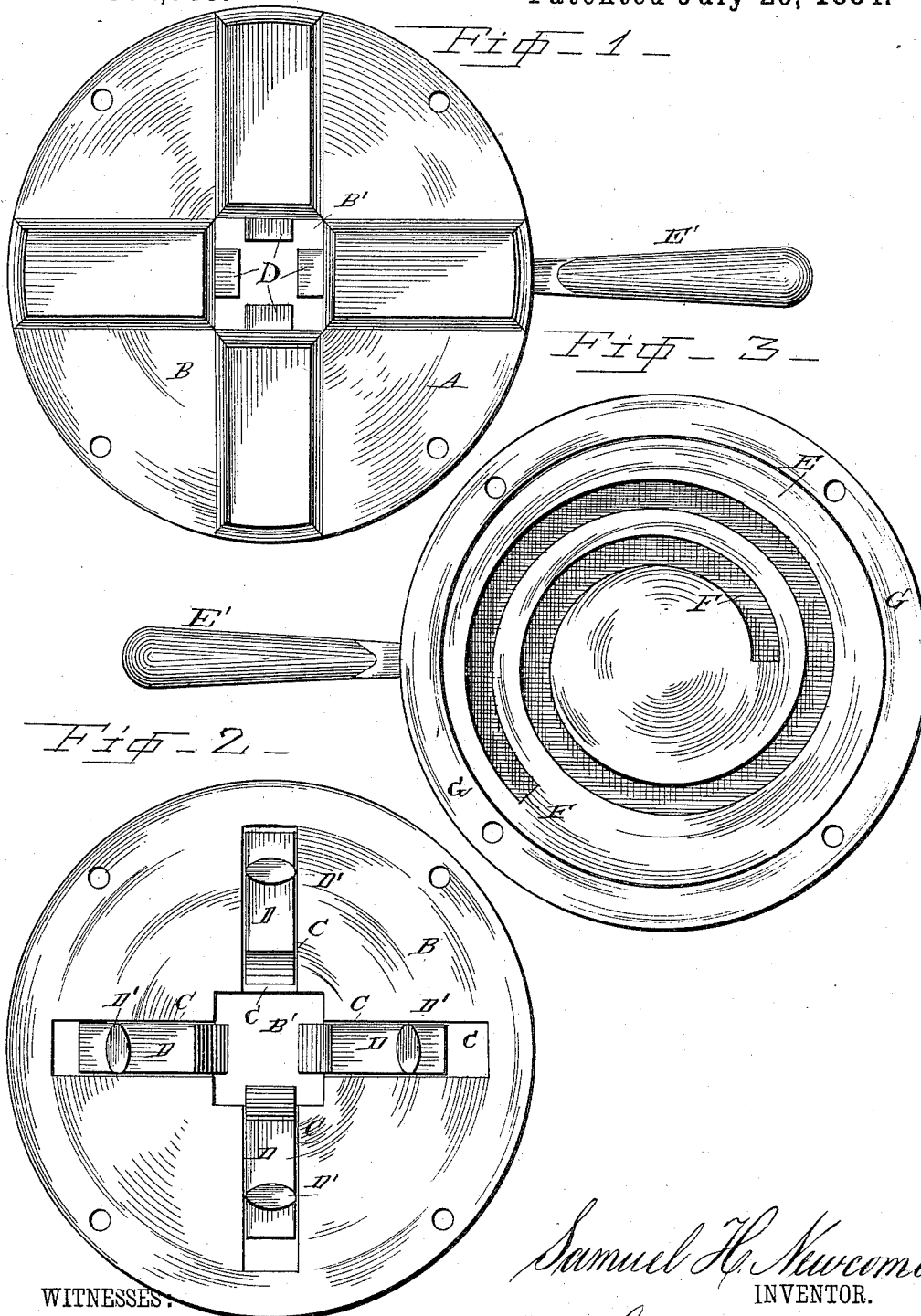
2 Sheets—Sheet 1.

S. H. NEWCOMB.

HOLLOW AUGER.

No. 302,765.

Patented July 29, 1884.



WITNESSES:

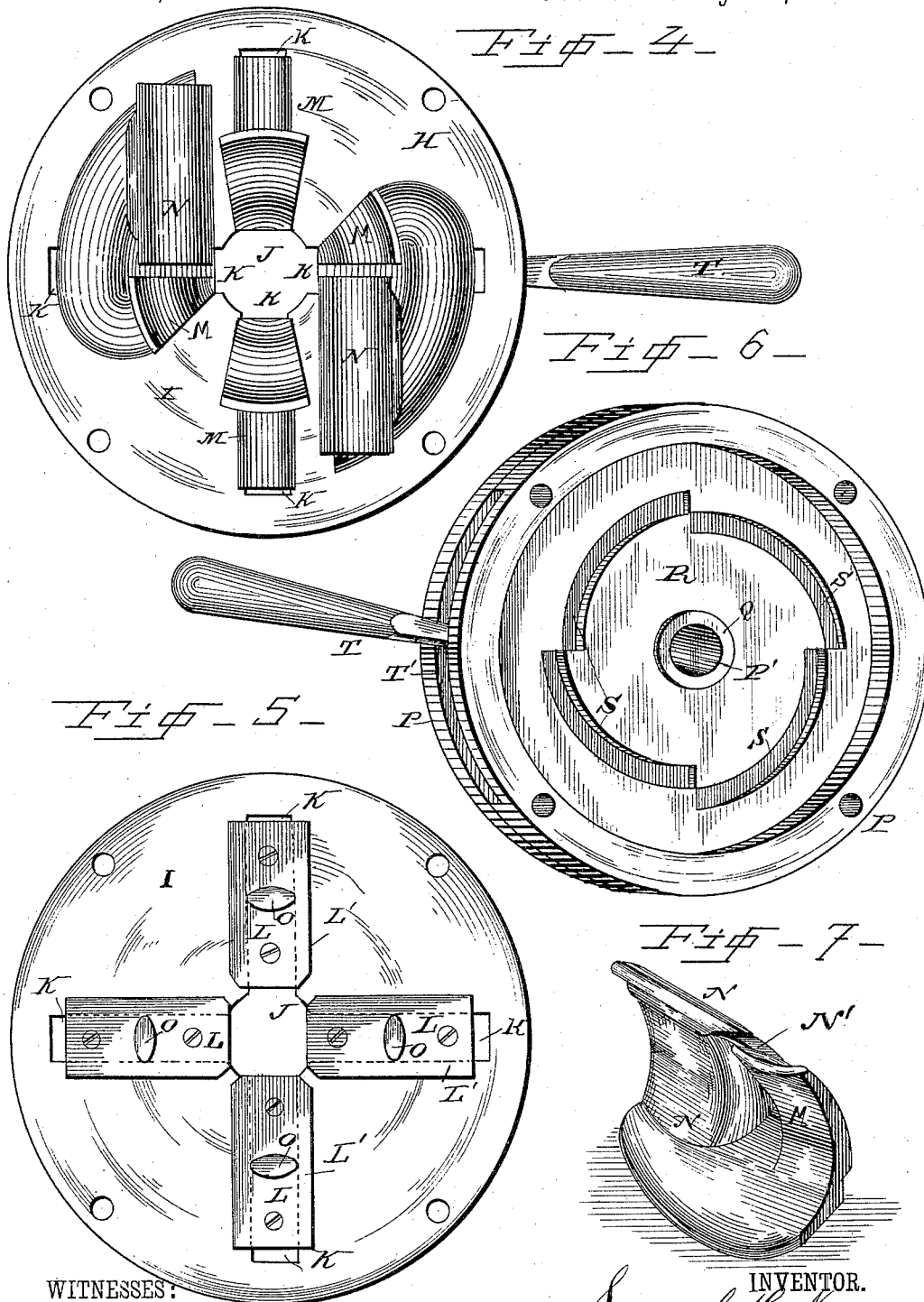
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UNITED STATES PATENT OFFICE.

SAMUEL HARMON NEWCOMB, OF PORT WILLIAMS, NOVA SCOTIA, CANADA.

HOLLOW AUGER.

SPECIFICATION forming part of Letters Patent No. 302,765, dated July 29, 1884.

Application filed December 26, 1883. (Model.)

To all whom it may concern:

Be it known that I, SAMUEL H. NEWCOMB, a subject of the Queen of Great Britain, and a resident of Port Williams, in the county of Kings and Province of Nova Scotia, Canada, have invented certain new and useful Improvements in Attachments for Machines for Cutting Treenails; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is an end view of the holding device, forming a part of my improved attachment for machines for cutting or turning treenails. Fig. 2 is a plan view of the inner side of the end plate of the same, showing the adjustable dogs. Fig. 3 is a similar view of the other half or section of the holding device. Fig. 4 is an end view of the rotary cutter-head, in which the cutting-knives are adjustably secured. Fig. 5 is a plan view of the inner side of the end plate of the same. Fig. 6 is a perspective inner view of the other half or section of the rotary cutter-head; and Fig. 7 is a perspective detail view of one of the cutting-knives with one of its guides and supporting-blocks.

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

My invention has relation to attachments for machines for cutting or turning treenails; and it consists in the improved construction and combination of parts of the same, as will be hereinafter more fully described and claimed.

In the accompanying drawings, A represents the device for holding one end of the rectangular block of wood from which the treenail is turned, the said device being rigidly secured in a suitable casting upon a carriage traveling in the usual manner upon the bed of the treenail-cutting machine. This device consists of an end plate, B, provided with a square central aperture, B', and having on its inner side the recesses C, running at right angles to one another, as shown in Fig. 2 of the drawings.

D represents the dogs, which slide within the recesses C, and have secured upon their

inner face the projections D', for the purpose hereinafter described.

E represents the adjusting-plate, having secured upon its outer side an operating handle or lever, E', and provided upon its inner face with the spiral groove or recess F.

G indicates an annular piece recessed upon its inner side for the reception of the adjusting-plate E.

When the parts comprising the holding device are secured together in their operative position, the lugs D' on the dogs D will fit within the spiral groove F, the said lugs being secured or cast upon the dogs D, at unequal distances from the end of each dog, so that the inner ends of the dogs will be all at an equal distance from the center of the central aperture, B'. Now, by rotating the adjusting-plate E by means of the handle E', the dogs D will be advanced or retracted, so as to adjust the opening or distance between their meeting ends, according to the size of the end of the rectangular block of wood from which the treenail is to be cut. The construction and operation of these several parts will readily be understood by reference to the drawings.

H represents the rotary cutter-head, which is secured upon the bifurcated end of a shaft working in suitable bearings upon the bed of the treenail-cutting machine, the said shaft having a pulley secured upon its opposite end, by means of which a rotary motion is imparted to the cutter-head.

Inasmuch as the above-mentioned shaft, with its bearings, pulley, &c., are old, and form no part of my invention, I have not deemed it necessary to burden the drawings with their illustration.

The rotary cutter-head comprises the end plate, I, provided with a central circular aperture, J, and slots or openings K, extending from the center at right angles to one another. Within these openings K slide the blocks L, provided with notches L' upon either side, to adapt them to fit and move within the said openings, and to which the guides M and knives N are secured. One of these knives N, with its guide M, is shown in detail in Fig. 7 of the drawings, the said knife and its guide both curving outward from the center of the cutter-head, the cutting-edge of the knife-blade

being beveled or cut away upon its rear side, as shown at N', Fig. 7 of the drawings. The curved guide M is secured upon the block L in such a position as to permit of the cutting-edge of the knife operating upon the rectangular block of wood from which the treenail is to be cut. The knives N are secured upon the blocks L, at right angles to the central aperture of the same, as clearly shown in Fig. 4 of the drawings. Upon the inner face of each of the blocks upon which the knives and guides M are secured is attached a lug or projection, O, for the purpose hereinafter described.

P represents the rear portion or frame of the cutter-head, which is provided with a central aperture, P', and an inwardly-projecting collar, Q, surrounding the said opening and forming a central bearing for the adjusting-plate R. The adjusting-plate R, which is shown more clearly in Fig. 6 of the drawings, is provided with the segmental grooves S, each of which has a different center, and is further provided with a handle, T, moving in a slot, T', in the side of the cutter-head frame, by which it is operated. When the parts comprising the cutter-head are secured together in their operative position, the lugs O on the blocks L will fit within the segmental grooves S, and as each of the said grooves curves away, as it were, from the center of the cutter-head, it will be seen that by turning the adjusting-plate R by its handle T the blocks which support the knives and guides can be advanced or retracted, as desired, to regulate the size to which the treenail is to be turned.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my improved attachment for machines for cutting or turning treenails will readily be understood without requiring further explanation.

It will be seen that by constructing the hold-

ing device in the manner described the center of the rectangular block from which the treenail is to be cut will be brought exactly to the center of the cutter-head, while by constructing the cutter-head in the manner described the four guides will be advanced equally toward the center of the said head, the cutting-knives remaining at right angles to the block from which the treenail is being cut, whatever its size may be.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improvement in cutter-heads for treenail-cutting machines, the combination of an end plate having a central aperture and provided with suitable openings extending from the centre at right angles to one another, adjustable blocks provided with suitable longitudinal notches to adapt them to slide within the openings of the end plate, and provided with lugs adapted to fit within the segmental grooves of an adjusting-plate, a suitable frame provided with a central aperture and having an inwardly-projecting collar surrounding the said opening, an adjusting-plate having a central aperture and an operating handle or lever, and provided with segmental grooves having different centers and curving outward from the center of the adjusting-plate, curved knives N, having their cutting-edges beveled or cut away upon their rear side, and curved guides M, all constructed and arranged to operate substantially in the manner and for the purpose shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

SAMUEL HARMON NEWCOMB.

Witnesses:

JOSEPH B. DAVISON,
BOWMAN O. DAVISON.