

(No Model.)

H. F. BURKHARDT.

COMBINED SAW AND PLANER.

No. 359,497.

Patented Mar. 15, 1887.

Fig. 1.

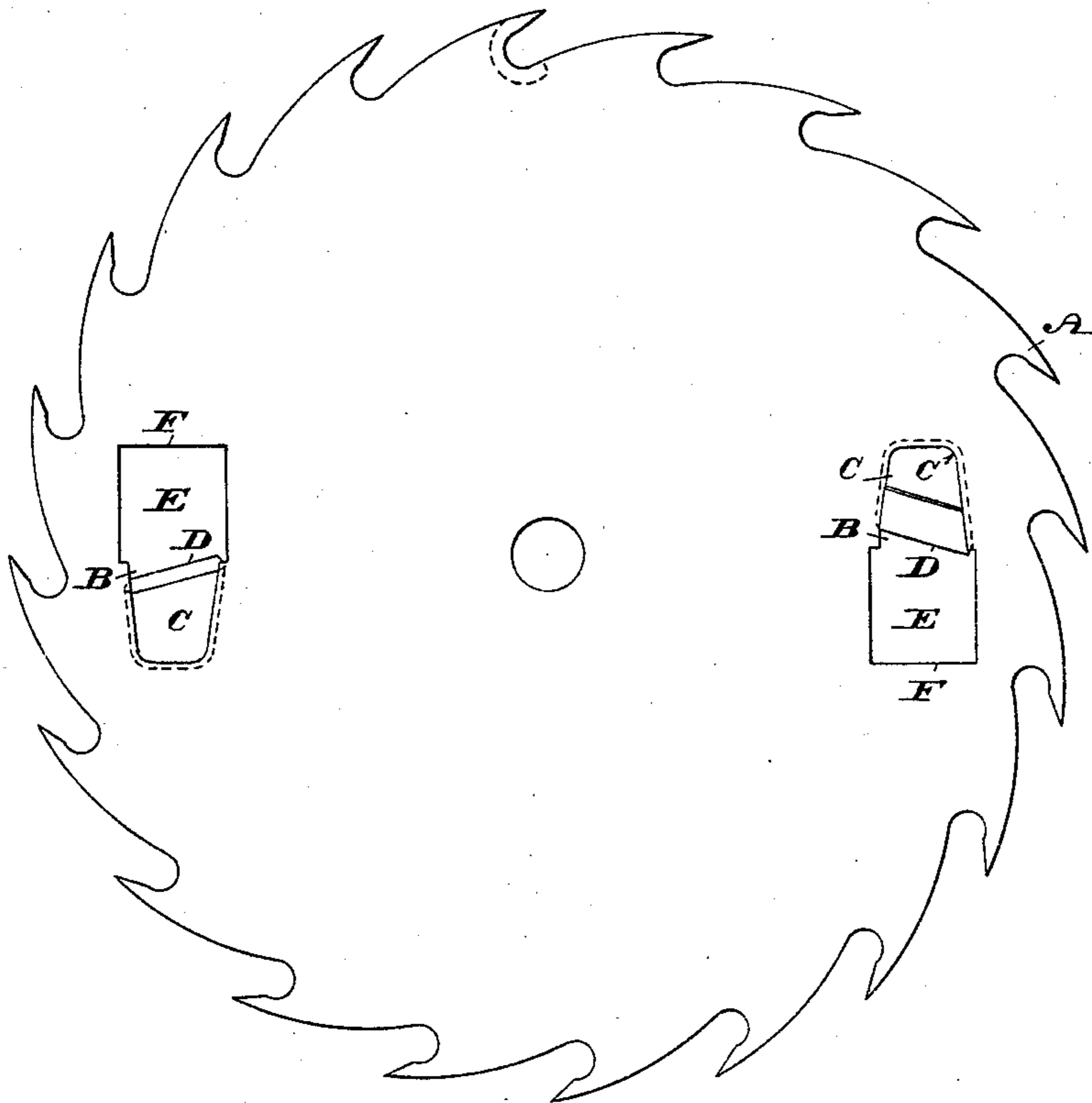


Fig. 3.

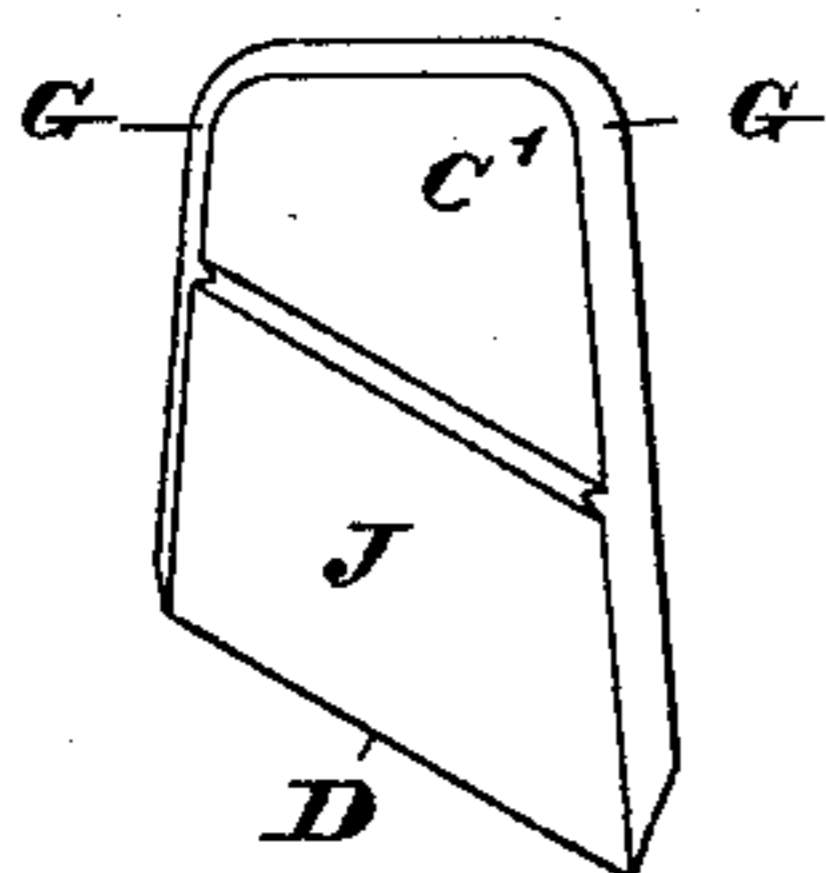


Fig. 2.

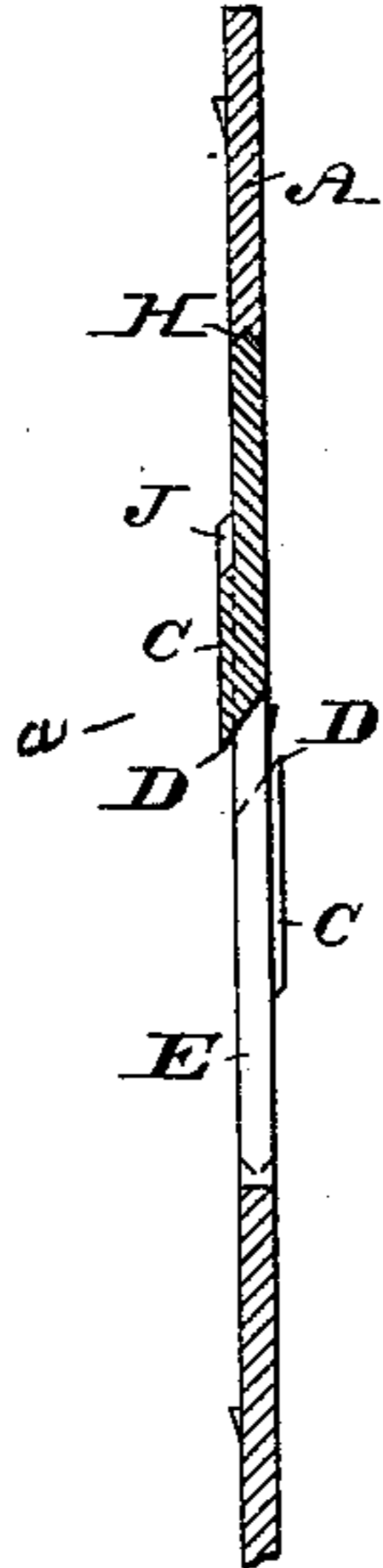
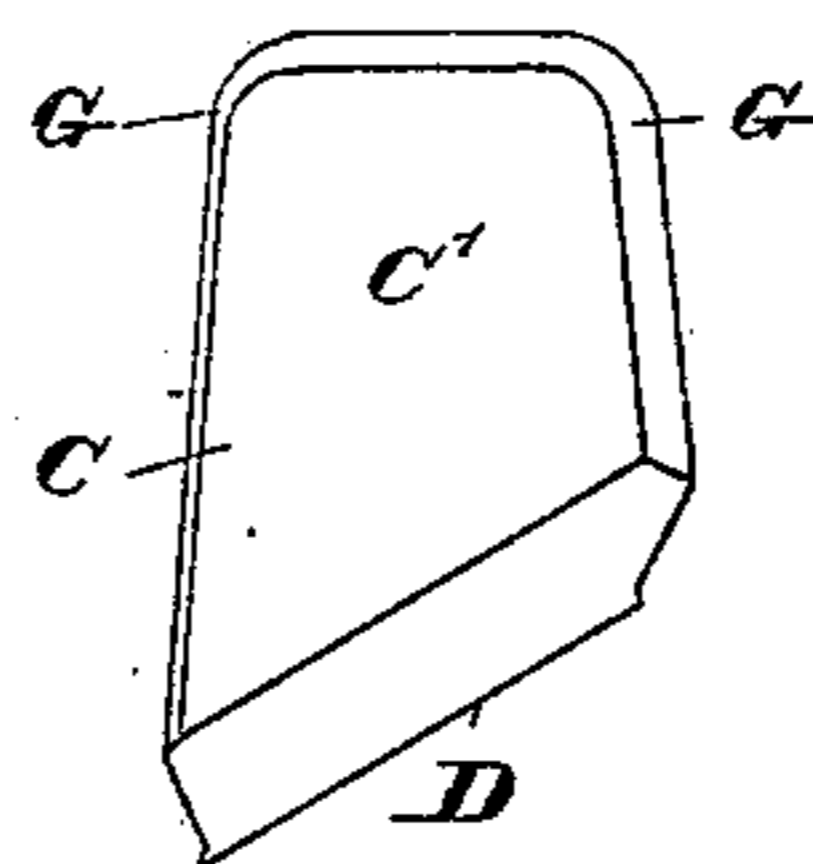


Fig. 4.



WITNESSES:

Th. Rolle.
Edu. Louville

INVENTOR:

Howard F. Burkhardt
BY John A. Wiedersheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

HOWARD F. BURKHARDT, OF PHILADELPHIA, PENNSYLVANIA.

COMBINED SAW AND PLANER.

SPECIFICATION forming part of Letters Patent No. 359,497, dated March 15, 1887.

Application filed October 14, 1886. Serial No. 216,246. (No model.)

To all whom it may concern:

Be it known that I, HOWARD F. BURKHARDT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Combined Wood Saws and Planers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a wood-saw embodying my invention. Fig. 2 represents a section of a portion thereof in line *x x*, Fig. 1, on an enlarged scale. Figs. 3 and 4 represent perspective views of the planer-bit.

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

My invention consists of a saw having a planer-bit attached thereto in such manner that immediately following the sawing operation the cut edges of the wood are planed.

Referring to the drawings, A represents a circular saw, which may have fixed or removable teeth, as well known. In the body of the saw, near the periphery thereof, are recesses B, in which are inserted planer bits or teeth C, whose cutting-edges D project slightly beyond the sides of the saw-body, said bits occupying portions of said recesses B, so as to leave throats E between the cutting-edges D and opposite walls F of the recesses.

The planer-bit is formed of steel or other suitable metal with a shank, C', and has its opposite edges inclined from the cutting-edge toward the back thereof, the said back and edges being provided with a tongue adapted to fit within the groove H, which is formed in the side walls of the recess and parallel or approximately parallel to the plane of the sides of the saw, whereby the bit is securely and tightly held in position. The cutting-edge of the bit is formed upon a thickened or enlarged portion of the front thereof, which portion has a flat outer face projecting beyond the side of the saw. This enlargement forms a shoulder, J, and adds strength to the bit at the place where it is subjected to great strain during the planing operation, said shoulder also providing increased thickness of metal at the cutting-edge D, so that a sufficient extent of said edge is presented at the side of the saw for planing purposes. By forming the sides inclined the

pressure against the bit during the operation is distributed over a larger surface of the saw than it would be were the sides parallel.

It will be seen that when the saw is in service the bits C advance against the cut edges of the wood and plane the same, the throats E receiving the shavings and clearing themselves when they emerge from the wood, the operation of sawing and planing thus being effectively accomplished.

As the recesses B are not open at the periphery of the body of the saw, the latter is not broken and weakened at the periphery, nor liable to buckle, it being noticed that the contiguous sides of the recesses and the planer-bit are inclined, forming dovetailed joints, by which the bits tighten themselves in the recesses when in use.

I am aware that it is not new to insert in an opening in saw-blades planer-bits formed with guides, whereby the said bits may be held in said openings while in operation; but I am not aware that such bits have been formed until by me, as shown herein, having an enlarged or shouldered portion, as herein described, whereby the cutting-edge is strengthened, as set forth.

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

1. A saw having an aperture near its periphery and grooves in the edges of said aperture parallel to the plane of the sides of the saw, in combination with a planer-bit having a tongue fitting in said groove and provided with a cutting-edge formed upon a thickened portion, with a flat outer face projecting beyond the side of the saw, all substantially as described.

2. A wood-saw having an opening therein, with a groove in its walls parallel to the plane of the sides of the saw, and provided with a planer-bit having inclined edges, as described, a tongue adapted to work in said groove, and an enlarged portion with a flat upper surface, all substantially as and for the purpose set forth.

HOWARD F. BURKHARDT.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.