

(No Model.)

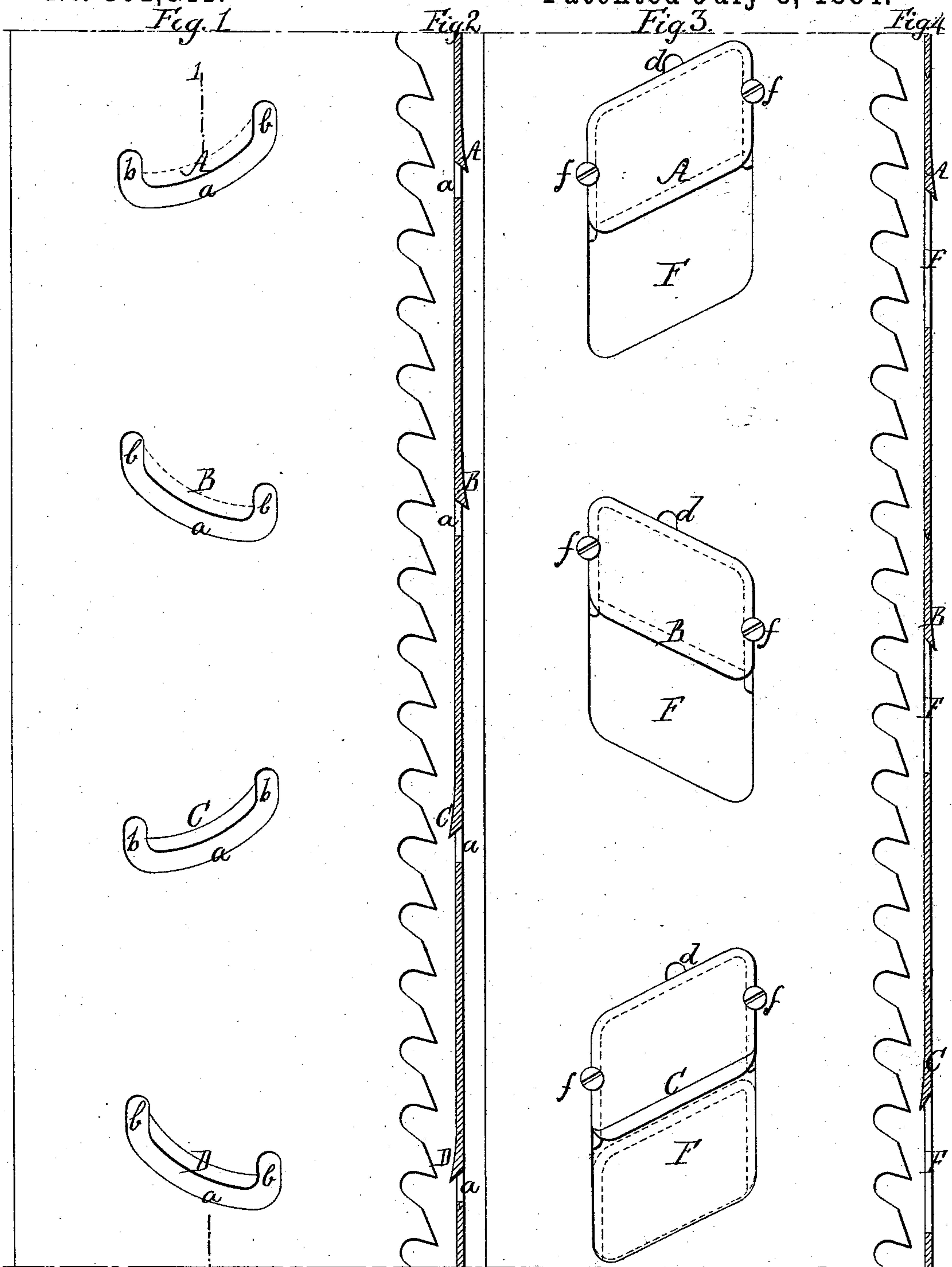
2 Sheets—Sheet 1.

F. A. TROEMÉ-BECKER.

SAW.

No. 301,841.

Patented July 8, 1884.



Witnesses  
Albert Popkins.  
George F. Downing.

Inventor  
Felix Alphonse Troémé-Becker  
by his Attorneys  
Howston and Co.

(No Model.)

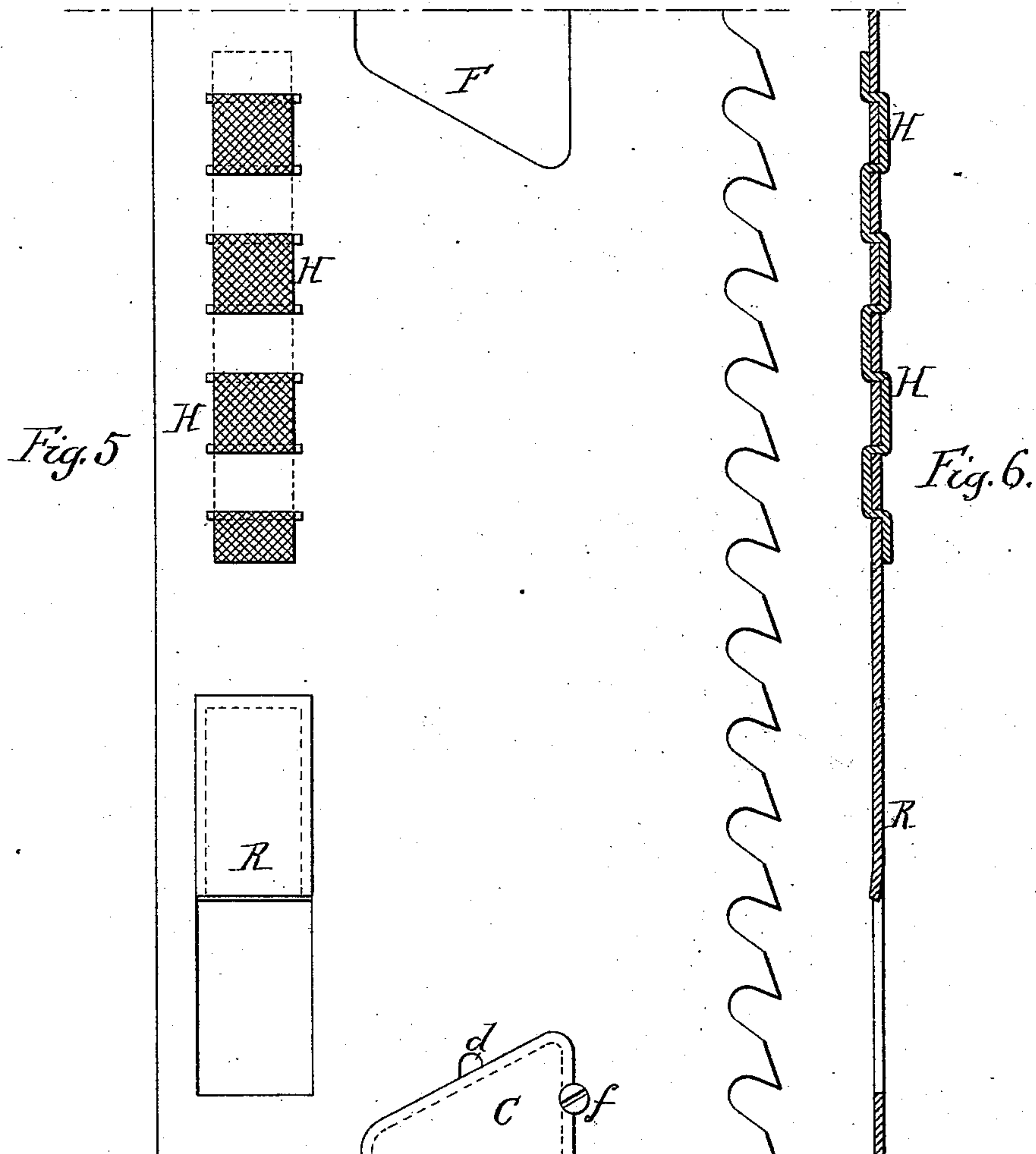
2 Sheets—Sheet 2.

F. A. TROEMÉ-BECKER.

SAW.

No. 301,841.

Patented July 8, 1884.



Witnesses.  
Albert Pophins.  
George F. Downing.

Inventor  
Felix Alphonse Troemé-Becker  
by his Attorneys  
Horton and Sons



# UNITED STATES PATENT OFFICE.

FELIX ALPHONSE TROEMÉ-BECKER, OF SAINT-QUENTIN, AISNE, FRANCE.

## SAW.

SPECIFICATION forming part of Letters Patent No. 301,841, dated July 8, 1884.

Application filed July 25, 1883. (No model.) Patented in France June 7, 1883, No. 155,908; in Belgium June 22, 1883, No. 61,785; in England June 26, 1883, No. 3,174, and October 30, 1883, No. 5,157, and in Germany June 30, 1883, No. 25,917.

*To all whom it may concern:*

Be it known that I, FELIX ALPHONSE TROEMÉ-BECKER, a citizen of the Republic of France, and a resident of Saint-Quentin, Aisne, France, have invented certain Improvements in Saws, of which the following is a specification.

My invention relates to that class of saws which are provided with cutters and other devices for planing and dressing the walls of the saw-kerf as the material is being cut by the saw; and my invention consists, mainly, in an improved construction or arrangement of these attachments, as more fully described and claimed hereinafter.

In the accompanying drawings, Figure 1 is a side view of sufficient of a saw-blade to illustrate the main features of my invention. Fig. 2 is a longitudinal section on the line 1 and 2, Fig. 1. Fig. 3 is a side view, and Fig. 4 a longitudinal section, of a modification; and Fig. 5 is a side view, and Fig. 6 a longitudinal section, of another modification.

The saw and its teeth may be of any usual form, and the saw itself either straight or circular, those shown in the drawings being straight. In the body of the blade, and at equal distances from the cutting-edge, are provided planing-cutters with inclined cutting-edges, the inclines of the two or more cutters which are for dressing the same side being in opposite directions, in order to produce a smooth surface on the wood. In the construction shown in Fig. 2 these cutters are formed out of the metal of the body of the saw, diagonal curved slots *a* alternately in opposite directions being provided with enlarged ends *b b*. The convex edges of these slots between the enlarged ends are formed with beveled cutters, projecting slightly to one side or the other of the blade, as shown in Fig. 2, the "set" being merely sufficient to remove an extremely thin shaving just sufficient to clean off the marks of the saw-teeth. The cutters are so set that their points adjacent to the ends *b b* do not overlap in the cutting and form ridges. There are four of these planes shown in Figs. 1 and 2, A, B, C, and D,

the first two being adapted to cut on one side of the kerf, and the other two on the other side; or they may be arranged alternately, if preferred, so long as care is taken to have the two which cut on the same side inclined in opposite directions to obtain the desired smooth cut irrespective of the grain of wood. This arrangement of making the plane-irons out of the metal of the saw-blade is more especially suited for soft woods.

For hard woods I prefer to employ separate detachable cutters, as shown in Figs. 3 and 4, openings *F* in the form of rhomboids (alternately reversed) being formed in the saw-blade. The rear edge of each opening and the adjoining sides are provided with V-shaped guides, and the corresponding edges of the detachable cutter are V-grooved to fit the guides, so that when the cutter (say *C*) has been inserted in the opening *F*, as indicated by dotted lines in the lower part of Fig. 3, it can be moved longitudinally of the saw-blade into place. It is prevented from moving laterally by the V-guides, and can be retained from slipping out longitudinally by being tightly fitted, or by copper rivets *f f*, inserted in countersunk openings formed by corresponding notches in the edges of the opening and of the inserted cutter. When it is desired to withdraw a cutter, the rivets, if used, are removed and the cutter forced outward by inserting a suitable tool in an opening, *d*, behind the cutter. In this construction, as in that illustrated in Figs. 1 and 2, the cutting-edges of the cutters are inclined in opposite directions.

In addition to the planing-tools described I may make use of a scraping or polishing tool, *R*, to follow the planers, and also a polishing skin or leather or sand-paper, *H*, which I interweave through slits in the saw-blade behind the cutters, as shown in Figs. 5 and 6, to obtain a more smooth and polished surface.

I claim as my invention—

1. A saw having a series of planing-tools formed on or inserted in the body of the saw-blade, and at equal distances from the cutting-edge of the saw, two or more of said tools for

5 dressing each side of the kerf having their cutting-edges inclined in opposite directions, substantially as described.

2. A saw having planing-tools formed on or inserted in the body of the blade to dress each side of the kerf, with a polishing-strip, H, interwoven through slots in the blade behind the planing-tools, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FELIX ALPHONSE TROEMÉ-BECKER.

Witnesses:

ALFRED COIXY,  
ROBT. M. HOOPER.