

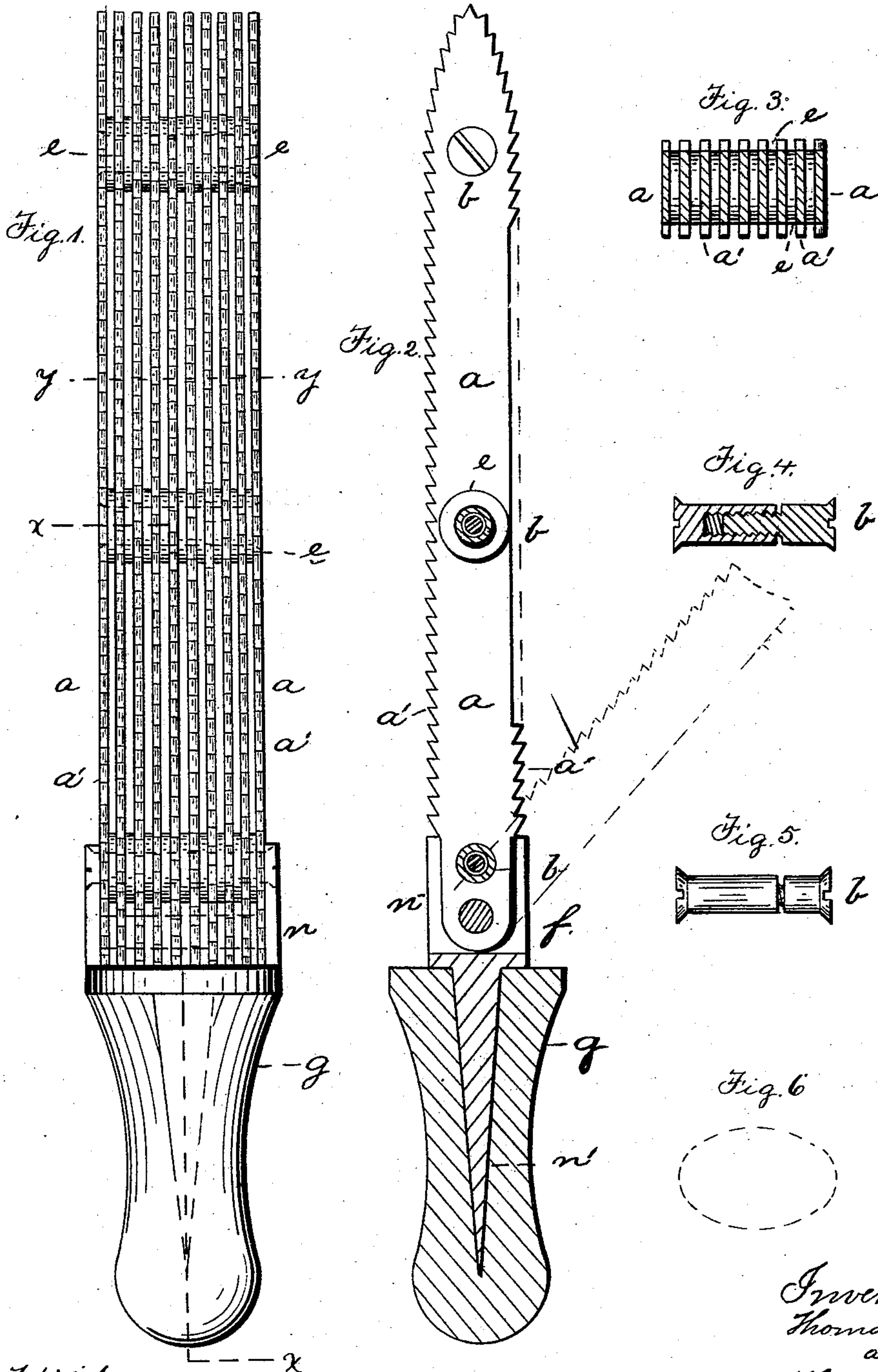
(No Model.)

T. JUDGE & T. CLAYTON.

RASP.

No. 324,389.

Patented Aug. 18, 1885.



Witnesses:
L. F. Brous.
Walter H. Calhoun

Inventors:
Thomas Judge
and
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by
attys.

UNITED STATES PATENT OFFICE.

THOMAS JUDGE AND THOMAS CLAYTON, OF PHILADELPHIA, PA., ASSIGN-
ORS OF ONE-THIRD TO HERBERT GLANVILLE, OF SAME PLACE.

RASP.

SPECIFICATION forming part of Letters Patent No. 324,389, dated August 18, 1885.

Application filed September 10, 1884. (No model.)

To all whom it may concern:

Be it known that we, THOMAS JUDGE and THOMAS CLAYTON, subjects of the Queen of Great Britain, residing at Philadelphia, in the county of Philidelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rasps, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has reference to improvements in rasps or rough files; and the invention consists in the construction of a rasp or rough file by bolting or otherwise securing together two or more parallel notched or serrated metallic strips or blades, having inter-
15 vening blank spaces between said parallel strips or blades.

In the accompanying drawings, Figure 1 is a face view of our improved rasp, shown provided with a handle. Fig. 2 is a partly sectional view on line *x x* of Fig. 1. Fig. 3 is a cross-section on line *y y* of Fig. 1, showing clearly the parallel arrangement of the strips or blades. Fig. 4 is a horizontal vertical section of one of the clamping-bolts. Fig. 5 is a side view of the same. The broken line, Fig. 6, illustrates in contour an oval form of rasp.

Similar letters refer to like parts.

In the drawings referred to, *a a* represent
30 blades or strips provided with notches or serrations *a'* in the form of saw-teeth. The blades *a a* are secured in position by male and female bolts *b b b*, and an intervening space is preserved between said blades by washers *e*. The
35 end portion of the rasp-blades *a*, upon which the handle *g* is secured, for a short distance is free from notches, and enters a clip, *n*, provided with a tang, *n'*, for holding the handle *g*.

A rivet or bolt, *f*, secures all of the blades
40 or strips *a* at the handle end of the rasp, and when the bolts *b b b* are withdrawn allows the

blades to swing in either direction, which feature is very essential when sharpening the rasp.

The notches or teeth *a'* may be placed upon each face of the rasp, as shown in Fig. 2, and of a different-sized notch or tooth, and the rasp can be made flat or oval, the oval form illustrated by Fig. 6 in broken lines.

The washers *e*, between each of the blades *a*, provide ample room for the clearance and escape of the dust when rasping or filing.

Rasps constructed in the manner shown are capable of cutting much faster than those heretofore in use, besides the ready removal
55 of any of the blades which may be rendered useless from any cause whatever, and the speedy manner in which the width of the rasp can be enlarged or reduced, recommends it as a simple, inexpensive, and useful tool.

We are aware that a rasp formed of a number of serrated plates which are bolted closely together is not new, and this we disclaim.

We claim as our invention--

1. In a rasp, the combination of a series of
65 blades having serrated edges, all of which blades are pivoted at their inner ends, so as to allow them to be opened for the purpose of being sharpened, substantially as shown.

2. In a rasp, the combination of a series of
70 serrated plates, the bolts *b*, and the washers *e*, which serve to separate the plates, substantially as described.

In testimony that we claim the foregoing as our invention we have subscribed our names
75 in the presence of witnesses.

THOMAS JUDGE.
THOMAS CLAYTON.

Witnesses:

W. B. HILT,
LEWIS F. BROUS,
WALTER W. CALMORE.