No. 684,171. Patented Oct. 8, 1901.

L. BERGER.

RASP.

(Application filed Mar. 15, 1901.)

(No Model.)

Fig. 1.

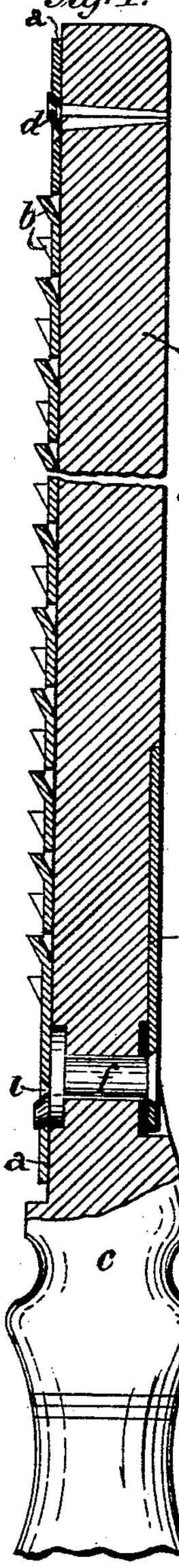

Fig. 3.

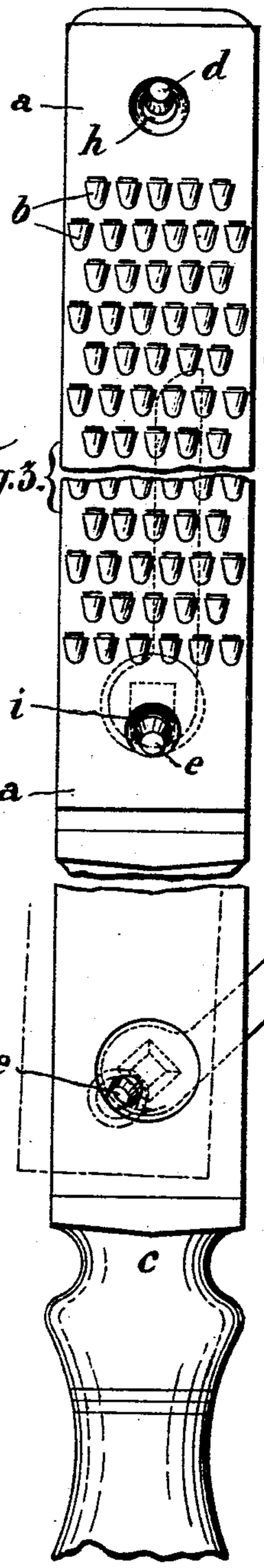

Fig. 2.

Fig. 4.

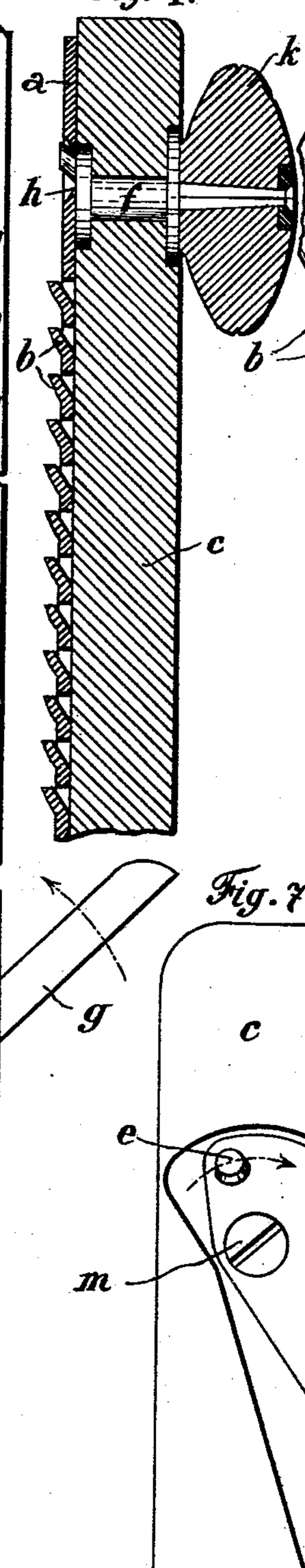

Fig. 5.

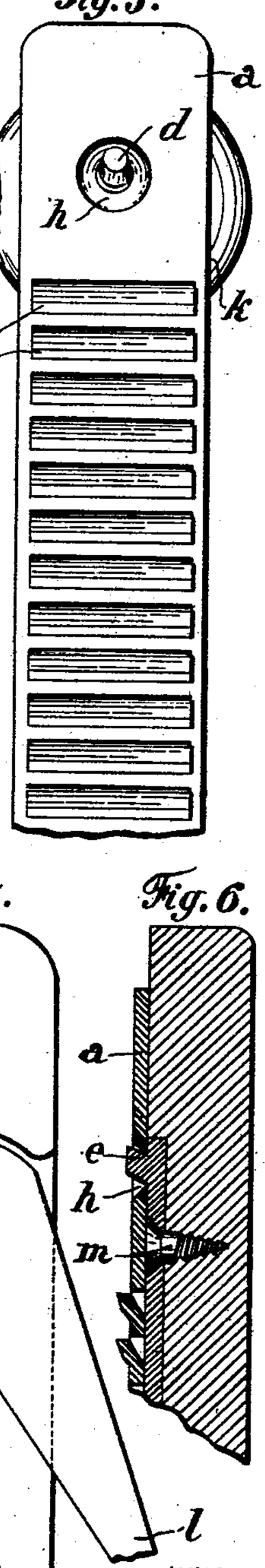

Fig. 7.

Fig. 6.

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RASP.

SPECIFICATION forming part of Letters Patent No. 684,171, dated October 8, 1901.

Application filed March 15, 1901. Serial No. 51,249. (No model.)

To all whom it may concern:

Be it known that I, LOUIS BERGER, merchant, a citizen of the Republic of Switzerland, residing at Lausanne, Switzerland, have invented certain new and useful Improvements in Rasps, of which the following is a specification.

The invention relates to certain improvements in rasps of that class in which a solid and rigid back piece of suitable material is combined with a thin rasp-blade adapted to be removed therefrom when it is desired to replace or change the cutting-surface, according to the nature of the work to be done or when the said rasp-blade is worn out; and the invention consists of the combination, with a rasp-blade provided with two holes, of a fixed projection at the one end of the solid and rigid back piece and of a projection fixed eccentrically to a rotative device (for instance, a shaft or pivoted lever) provided at the other end of the said solid and rigid back piece.

The invention further comprises a new construction of rasp-blades intended to be fixed to the said back piece, said construction consisting in providing the said blades with suitable sharp-edged projections formed each of a stamped-out and suitably-bent-up portion of the said blade.

In the accompanying drawings, which form a part of the present application for patent, Figure 1 is a longitudinal section of one construction embodying the invention. Fig. 2 is a front view of a portion of the back piece of the rasp shown in Fig. 1 before the rasp-blade has been put in place, the latter being shown in dotted lines in position for being locked. Fig. 3 is a front view of the rasp shown in Fig. 1. Fig. 4 is a longitudinal section of another construction embodying the invention, and Fig. 5 is a front view of the same. Fig. 6 is a longitudinal section of a further modification of the invention, and Fig. 7 is a front view of the corresponding back piece before the rasp-blade has been put on.

In the several figures of the drawings the same letters of reference refer to the same parts.

a is the rasp-blade, formed of a suitable sheet of steel and provided with sharp-edged projections *b*, each formed of a stamped-out portion of the said blade bent up so as to form the cutting edges of the rasp-blade. The form and configuration of each such sharp-edged projections may vary according to the work to be done. Figs. 1 to 3 show one form of such projections, and Figs. 4 to 6 show another form of same. The thin rasp-blade is provided at each end with a suitable hole *h* and *i*, respectively, into one of which engages a projection *d*, fixed to one end of the solid and rigid back piece *c*, while the other one is intended to receive the projection *e*, fixed eccentrically to a rotative device provided at the other end of said back piece. In Figs. 1 to 3 the said rotative device is formed of a stem or shaft *f*, to which is fixed on the one hand the eccentrical pin or projection *e* and on the other hand the lever *g*, which may be rocked from the position shown in Fig. 2 into the position shown by dotted lines in Fig. 3. It will easily be seen that when in the first of these positions the eccentrical pin or projection *e* allows the blade *a* to be engaged over both projections *d* and *e* notwithstanding the inclined position of the same, but that when thrown from the position of Fig. 2 into that of Fig. 3 the inclined pin *e* will engage the lower edge of the hole *i* of blade *a* and firmly fix the latter to the back piece *c*.

In Figs. 4 and 5 rotative shaft *f*, bearing the eccentrical pin *e*, is provided with a handle or button *k* instead of being provided with a lever *g*; but it works exactly in the same manner as in the first construction shown. Again, in Figs. 6 and 7 the rotative device is formed of a lever *l*, pivoted to the solid and rigid back piece *c* by means of a pivot-screw *m* and bearing the eccentrical pin or projection *e*. This device also works in exactly the same manner as the one already described.

Having thus fully described my invention, I claim—

1. In rasps of that class in which a solid and rigid back piece of suitable material is combined with a thin rasp-blade adapted to be removed therefrom, the combination of a rasp-blade having one hole at each of its ends with a solid and rigid back piece having at one of its ends a fixed projection intended

to engage one of the said holes and at its other end a rotative device having an eccentrical projection intended to engage the other of the said holes, substantially as shown and described.

2. In rasps of that class in which a solid and rigid back piece of suitable material is combined with a thin rasp-blade adapted to be removed therefrom, the combination of a rasp-blade having one hole at each of its ends with a solid and rigid back piece having at one of its ends a fixed inclined projection *d* intended to engage one of the said holes and at its other end a rotative shaft *f* having an eccentrical inclined projection *e* intended to engage the other of the said holes, substantially as shown and described.

3. In rasps of that class in which a solid and rigid back piece of suitable material is combined with a thin rasp-blade adapted to be removed therefrom, the combination of a rasp-blade having one hole at each of its ends with a solid and rigid back piece having at one of its ends a fixed projection *d* intended to engage one of the said holes and at its other end a rotative lever *l* having an eccentrical projection *e* intended to engage the other of the said holes, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LOUIS BERGER.

Witnesses:

E. IMER-SCHNEIDER,

TH. IMER.