H. A. CROSSLEY.

KNIFE FOR STAVE JOINTING MACHINES.

No. 269,831. Patented Jan. 2, 1883.

Fig. 1.

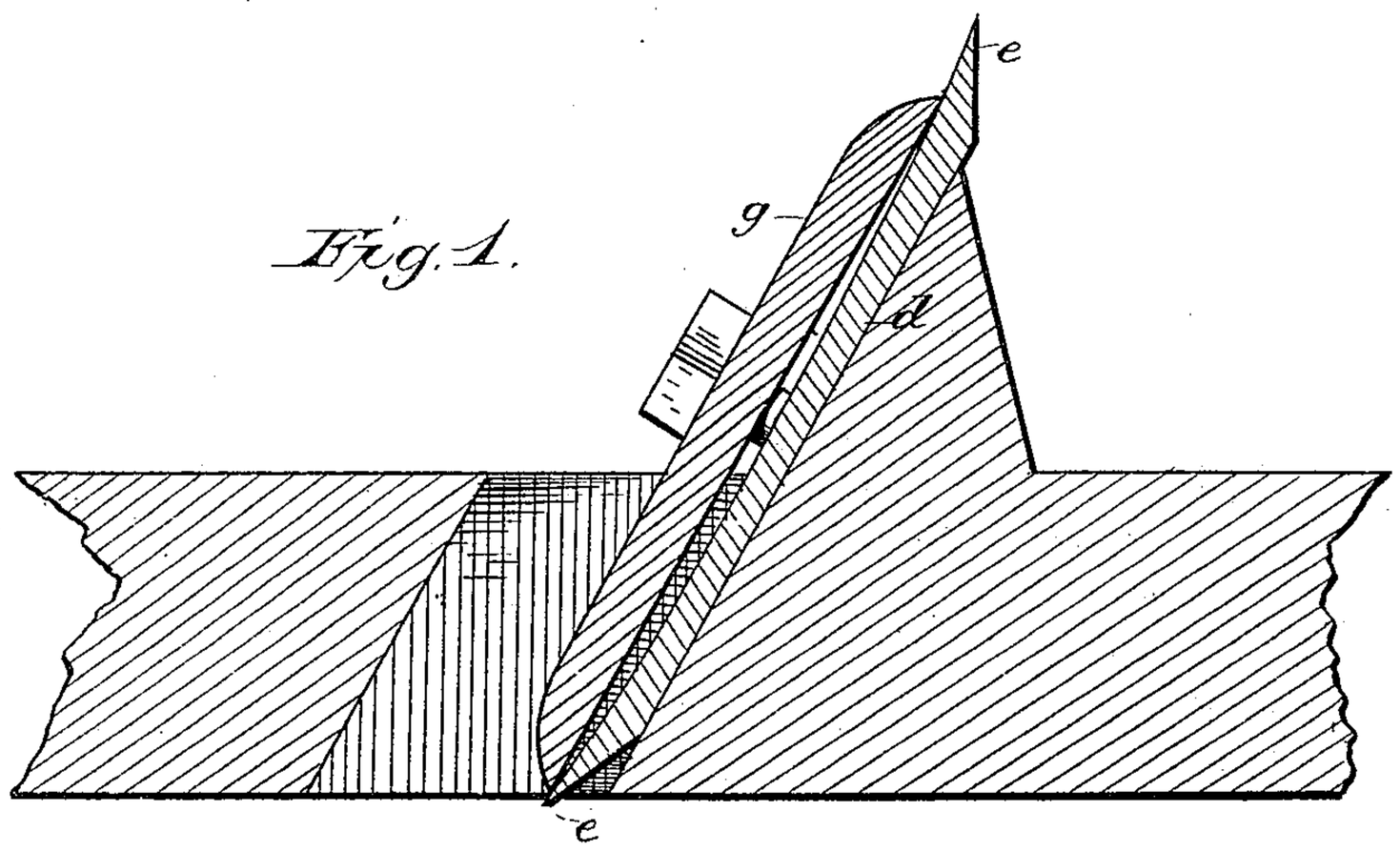


Fig 2

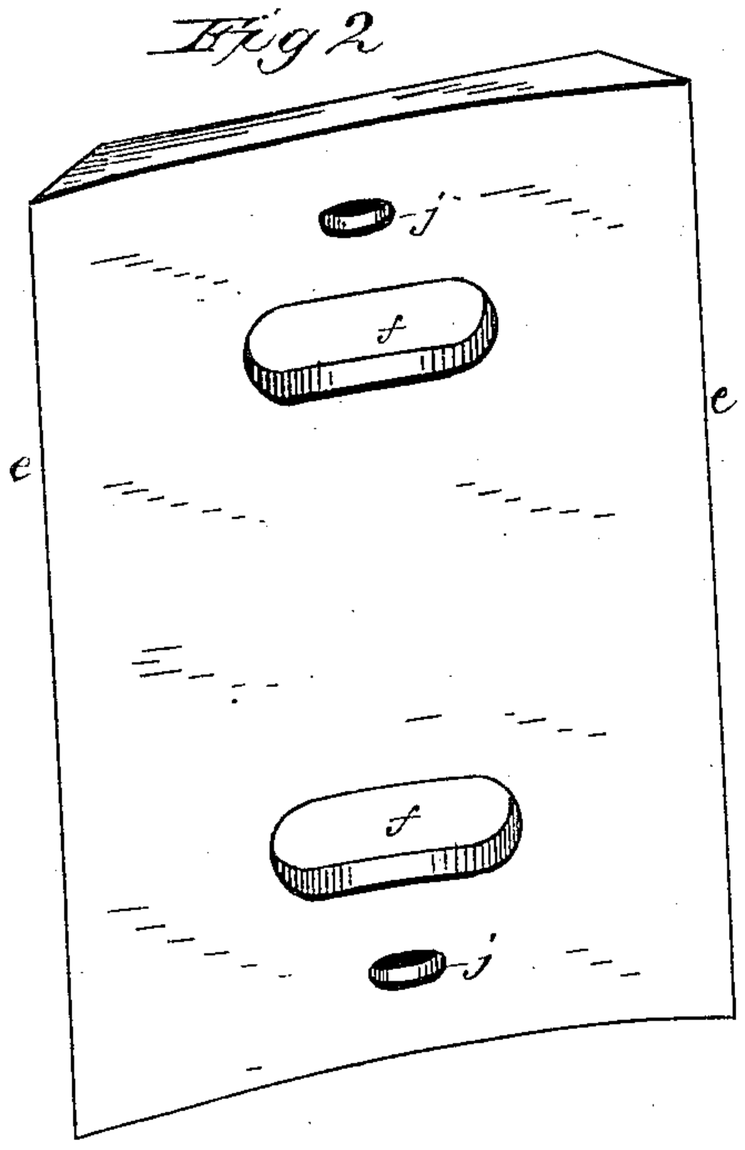
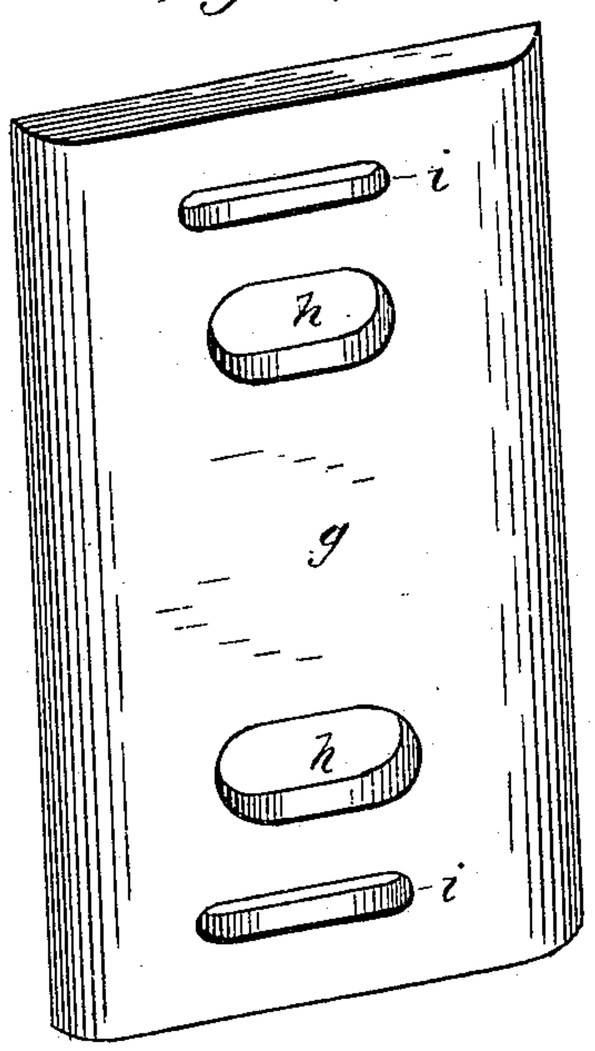


Fig. 3.



WITNESSES

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HARRY A. CROSSLEY, OF CLEVELAND, OHIO.

KNIFE FOR STAVE-JOINTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 269,831, dated January 2, 1883.

Application filed February 27, 1880.

To all whom it may concern:

Be it known that I, HARRY A. CROSSLEY, a citizen of the United States, and a resident of Cleveland, in the county of Cuyahoga, in the State of Ohio, have invented certain new and useful Improvements in Knives for Stave-Jointing and Kindred Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, illustrating the same and forming part of this specification.

Owing to the hard work to be done, the rapidity of revolution of the cutter-head, and the thickness of its stock, the knives employed in stave-jointing, heading, and kindred machines have necessarily been made of great width; but the active edge has formed only a small portion of the knife-stock, and there remained when the edge was exhausted a large proportion of good metal that had to be thrown aside. In this construction the cost for the body-metal has been all out of proportion to the utilization of that metal, and the necessarily frequent renewals have been made at a heavy expense to the consumer without any proportionate gain to the manufacturer. The frequent regrinding of the knives has also caused loss of time.

Now, it is the object of this invention to more fully utilize the knife-stock, obviate the loss of time incident to frequent regrinding, and to produce a knife that will wear twice as long as the old one, with but a slight increase in first cost, which increase is entirely offset by the increased durability and saving of material.

The invention consists in a knife for coopers' machinery, composed of a stock with cutting-edges on two of its sides, and adapted to be reversed when dulled or worn, and set or adjusted to position.

The invention also consists in a knife for coopers' machinery combined with a cap or shaving-breaker, and means to adjust and to hold the two together upon the tool stock or head, all as hereinafter specifically set forth and claimed.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a cross-section of part of the head of one of my stave-jointing machines with the knife and cap in position. Fig. 2 is a perspective view of my double-edged knife, and Fig. 3 is a perspective view of my cap.

In my improvement I employ a stock, *d*, of less width than the form heretofore used, and provided with cutting-edges *e e* on two of its opposite edges. These cutting-edges are of uniform construction. Instead of the edge-slots of the old form of knife, I provide my improved knife with internal slots, *f*, arranged about midway between the cutting-edges of the knife, so as to permit of the reversal of the knife when one of its edges becomes worn out. I prefer to dish the face of the knife, so that when the flat cap *g* is applied thereto its edges only will touch the knife, and hence such cap, upon the application of the bolts or other fastening, will bind upon the knife with some resilience, and thereby most firmly hold the knife in place.

The cap is provided with slots *h*, adapted to be aligned with the slots of the knife to receive the bolts used to fasten them to the head. The cap is also provided with other slots, *i i*, extending transversely thereof, and when the cap and knife are in place these slots overlie cavities *j j* in the face of the knife, the object thereof being to afford access to the knife by a punch or drift to set the knife.

When one edge of my improved knife is dulled the machine is only stopped long enough to reverse the knife and set its other edge, and the resharpening of dulled edges may be conveniently effected at odd times. My knife thus equals two of the ordinary knives in duration of use, and is equal to two sets of such knives in economy of use. Now, with my double-edged knife I save considerable in the first cost of stock; but while this is nearly offset in the cost of the extra edge, still the aggregate saving in the durability of the knife largely offsets these.

What I claim is—

1. The knife for coopers' machinery, composed of the transversely slotted and recessed stock *d*, having two cutting-edges, *e e*, and a slotted cap, and means to secure the two together and to a stock, whereby as one edge is worn or dulled the knife may be reversed and the other edge brought into position for use, substantially as specified.

2. The herein-described knife for coopers' machinery, provided with a concave face, com-

bined with and bound to place by a flat cap overlying and bolted down thereupon, substantially as specified.

3. The herein-described knife for coopers' machinery, provided with recesses *j j*, combined with an overlying cap, *g*, having transverse slots *i i*, and means to secure the two together and to a stock, substantially as and for the purpose specified.

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Witnesses:
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