

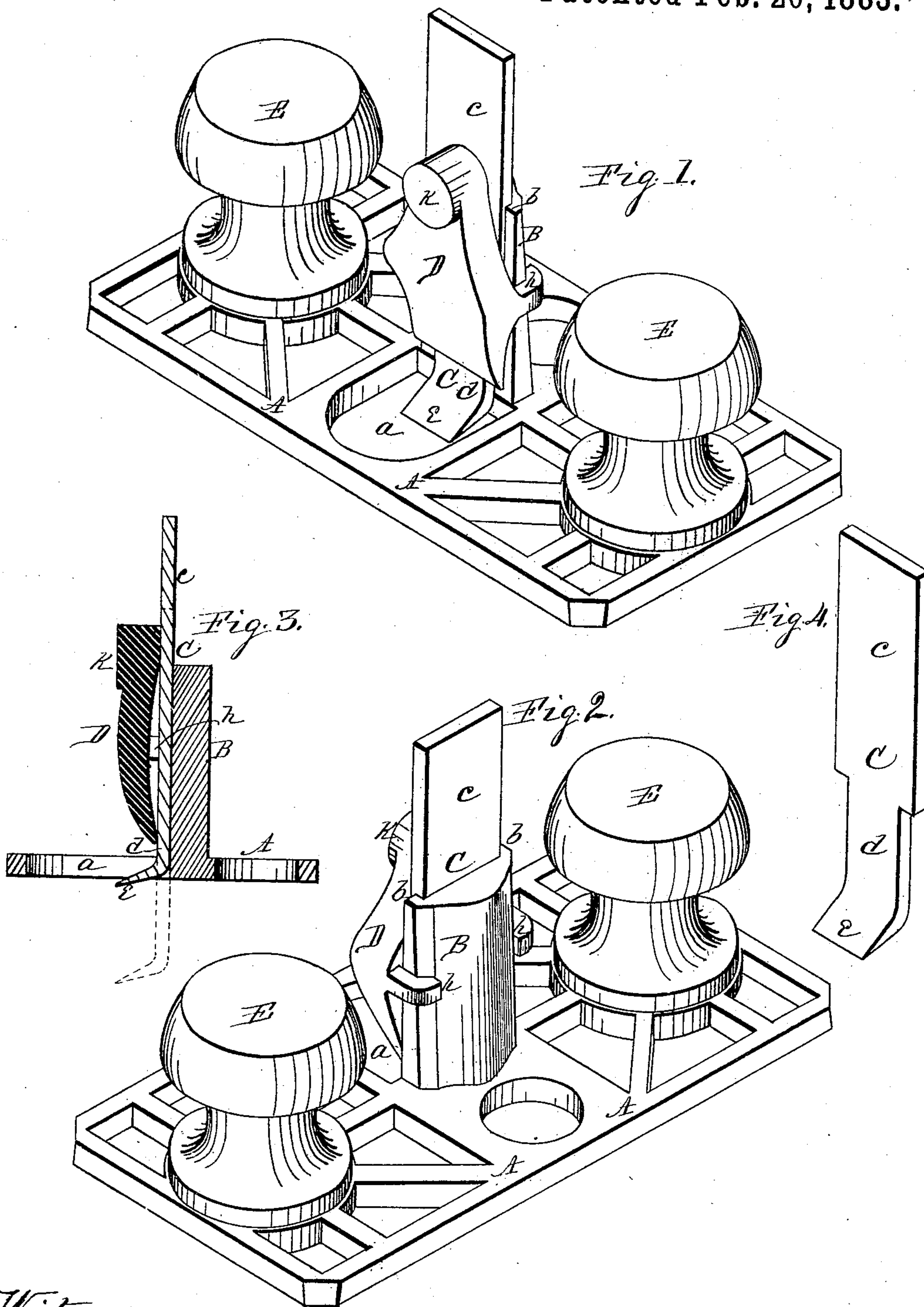
(No Model.)

H. L. TUPPER.

RECESS PLANE.

No. 272,801.

Patented Feb. 20, 1883.



Witnesses.
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RECESS-PLANE.

SPECIFICATION forming part of Letters Patent No. 272,801, dated February 20, 1883.

Application filed November 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, HARVEY L. TUPPER, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Recess-Plane, of which the following is a specification.

This invention relates to word-working tools; and its object is to produce a tool of plane form capable of use for leveling the bottom of the mortises, or of recessed or sunken surfaces in wood-work; and it consists of a suitable hand-tool in plane form, and in this instance having its stock portion produced in open-work, provided with a cutting-tool made vertically adjustable, and having its lower end cutting portion bent at a suitable angle to the vertical shank thereof, all of which, with other features, will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is a front isometrical representation of a recess-plane embodying my invention. Fig. 2 is a rear isometrical representation of my improved recess-plane. Fig. 3 is a central transverse vertical section, and Fig. 4 is an isometrical representation of the cutter.

In the figures, A represents the stock portion of my improved recess-plane, which in this instance is produced of cast-iron, preferably in open-work form, having a front central opening, *a*, to receive the cutter and to permit the cuttings to rise through the stock freely. The under face of this stock is produced in even plane form by planing, grinding, or by any of the usual methods of producing plane surfaces in metals, and its open-work form permits the operator to readily see its position on the work, and also gives greater strength with less material.

At B is represented a cutting-tool-supporting arm, which rises in a vertical position centrally from the upper face of the plane-stock in such position thereon that its front side will be in the same vertical plane with the rear edge of the central front opening, *a*. The front side of this tool-support is grooved to receive the shank of the tool, having its edge portion *b* project in front of its central portion to embrace the edge portion of the tool-shank. The outer edge portions, *b*, of this tool-support are of wedge form, having a greater depth

at their base than at their upper ends, as clearly represented in the drawings.

At C is represented a cutting-tool produced from suitable bar or plate material, having its shank portion *c* of proper width to enter the grooved face of the tool-support between the projecting edges *b* thereof, in a manner to be capable of a vertical adjustment therein. The lower portion, *d*, of this cutting-tool is of a proper width for the purpose for which it is designed, but may be of any width within the capacity of a plane to adapt it to the use or purpose required.

The extreme lower end, *e*, of these cutters are bent at such an angle relatively with the shank thereof that when fitted with a cutting-edge and placed in the plane its lower face will be slightly inclined to the face of the plane in such a manner as to produce a proper cutting-lead relatively therewith.

At D is represented a tool-holder having its inner face slightly curved in the direction of its length in such a manner that its ends will engage the front face of the vertical shank of the cutting-tool.

At *h* are represented hook-arms springing from the sides of the central portion of the tool-holder D in such a manner as to embrace the wedge-formed edge portions *b* of the tool-support B in such a manner that when the holder is forced or driven downward, the hook-arms descending, the wedge-formed portions *b* of the tool-support will operate to clamp the cutter to the support in a manner to hold it firmly. The upper end of this tool-holder is provided on its front face with a projection, *k*, by means of which, with the use of a hammer, the holder may be disengaged from the support for the purpose of removing, applying, or adjusting the cutters.

At E are represented knob-formed handles fixed to the end portions of the plane-stock rising from its upper face in position and of proper size to enable an operator to use the plane and manage and control its movements.

In the use of my improved recess-plane a cutting-tool of the proper width is selected and placed in the plane, adjusted to the proper depth, and fixed in position by means of the holder. The operator then takes hold of the plane by the knob-handle and places it in position on the work, and forces it in the proper

direction to cause the cutter to remove the surplus wood and reduce the recessed portion to a uniform depth having a plane surface.

By means of my improved recess-plane, depressions, and recessed or sunken surfaces of all varieties within the capacity of the plane, may readily be reduced to an even surface of uniform depth.

In the foregoing I have described my improved recess-plane stock as being provided with a vertical cutter-support grooved to receive a cutting-tool, which construction I prefer; but it is evident that the cutter-support may be inclined and still be within the scope of my invention.

I claim as my invention—

1. In a recess-plane, the tool-supporting arm having its edges produced in wedge form, and provided with the groove on its inner face to receive the cutting-tool, in combination with the tool-holder adapted to engage the wedge-formed portions of the supporting-arm in such manner as to clamp and hold the cutting-tool between the adjacent faces of said arm and holder, substantially as described.

2. The combination, with the supporting-arm having its edges produced in wedge form, and provided with the groove on its inner face to receive the cutting-tool, of the cutting-tool and a tool-holder adapted to engage the wedge-formed portions of the supporting-arm in such manner as to clamp and hold the cutting-tool between the adjacent faces of said arm and holder, substantially as described.

3. The herein-described recess-plane, consisting of the stock provided with a tool-support grooved to receive a cutting-tool and fitted with wedge-formed edges, a cutting-tool having its shank fitted to enter the groove of the tool-support, and its cutting end bent at an angle with its shank, and a tool-holder fitted to engage the cutter and the wedge-formed edges of the tool-support, these several parts constructed and arranged to operate substantially as and for the purpose set forth.

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Witnesses:

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