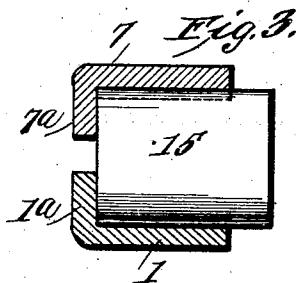
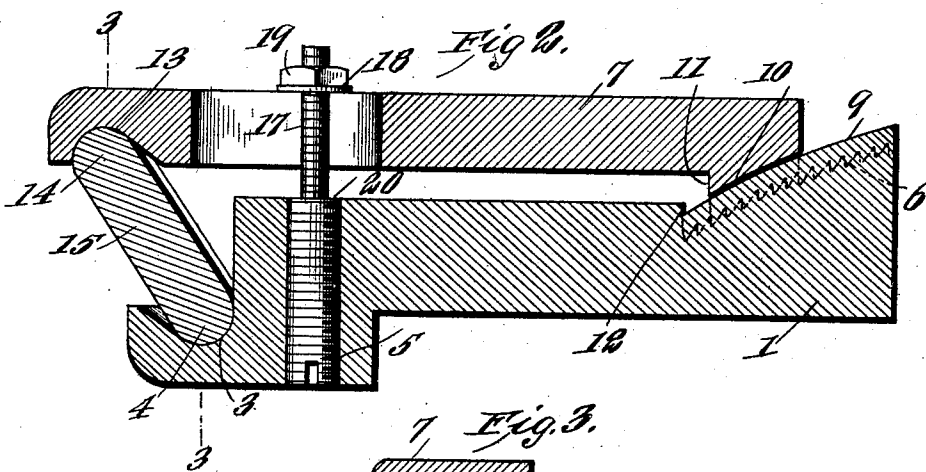
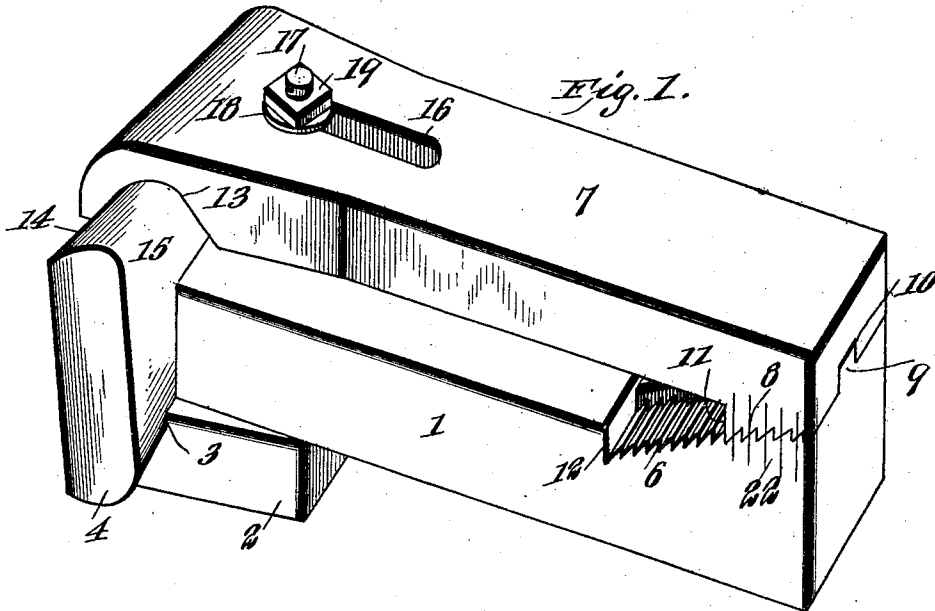


J. H. JONES.
TOOL HOLDER.

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932,286.

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TOOL-HOLDER.

932,286.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. JONES, a citizen of the United States, residing at Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification.

This invention relates to certain new and useful improvements in tool holders, and is designed to be used more especially in a machine known as a planing planer, for planing the edges of metal plates. As is well known, the edges of such plates are required to be planed at different angles, and the present invention has for its objects among others, to provide a simple, cheap and efficient form of holder that can be readily adjusted to set the tool or cutter from a right angle to an angle of forty-five degrees or more. In this class of work, the cutter or tool must be kept clear on the side next to the surface being planed, and for this reason it has been difficult to devise a holder that will do the work satisfactorily.

The tools now employed are generally made of one solid piece of square steel, right and left hand, and, of necessity, there must be two for each angle for the reason that they are not adjustable. What is known as "alloy," or "high speed steel" is mostly used for making the planer tools, and being very hard and brittle is liable to break in such a way as to spoil the whole tool, which is expensive. I construct my holder of "carbon," or "common tool steel" making only the cutter of the expensive "high speed steel" so if it breaks the loss is small and the cutter may be readily replaced. These planer tools need frequent grinding, and as now made the whole tool has to be taken from the machine, but by my invention the holder remains in the machine, it being only necessary to loosen the fastening to slip the cutter out. Thus there is a great saving of expensive stock, and also of time in making and grinding the tools. I provide a scale to indicate the bevel or angle, so that if it is desired to set the cutter at any angle, it may be readily attained by bringing the scale lines to correspond.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention in its preferred form is

clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view showing my improved device. Fig. 2 is a substantially central vertical longitudinal section through the same. Fig. 3 is a vertical cross section on the line 3—3 of Fig. 2.

Like numerals of reference indicate like parts in the different views.

Referring to the drawings 1 designates the shank having at one end the downward extension 2 to give increased strength at such point and upon its upper face it is provided with a rounded groove 3 for receiving the adjacent edge of the tool or cutter which is correspondingly rounded, as seen at 4. This thickened part is provided with a screw-threaded opening 5 for the reception of the adjusting screw soon to be described. The opposite end of the shank is provided with a ratchet face, as seen at 6, which in this instance is shown as being curved, with the curvature the same as that described by the jaw in going from a right angle to the other extreme, the teeth of the ratchet being straight on the back side with the inclined or beveled sides on the side next to the cutter. These teeth may be made finer or coarser as may be desired to give finer or not so fine adjustment.

7 is the upper jaw having the toothed portion 8 for engagement with the ratchet teeth of the lower jaw. In the present instance, I have shown the lower jaw as provided centrally with an upwardly disposed rib 9 which moves in a groove 10 in the under face of the upper jaw so as to keep the upper and lower members in perfect parallelism during all of their movements.

The forward face of the toothed portion of the upper jaw is formed with a vertical shoulder 11 for engagement with a shoulder 12 on the lower jaw to limit the movement of the upper jaw toward the cutter. The opposite end of the upper jaw is provided with a rounded groove 13 to receive the correspondingly rounded end 14 of the tool or cutter 15, as seen best in Fig. 2. The shank of the upper jaw adjacent said rounded groove is provided with an elongated slot 16 through which passes the upper end of the screw 17, a washer 18 being preferably employed beneath the nut 19 for an obvious

purpose. The lower end of this screw engages in the screw-threaded opening 5 of the thickened portion 2 of the lower jaw-shank, as seen best in Fig. 2. This screw or bolt has a shoulder or collar 20 beneath the upper shank and is intended to follow the upper shank as it is raised or lowered. This screw or bolt also is designed to take a portion of the strain from the tool or cutter as well as from the ratchet, in addition to holding the parts together when removed from the machine in which it is used.

As seen best in Fig. 3, a wall 1^a, 7^a about three-eighths inches in thickness is left at the end of the grooves to prevent the cutter from being pushed through the jaws. The shank 1 of the lower jaw of the holder is designed to go into the machine up to the shoulder 21 formed by the thickened part, and the lower jaw may be dropped down or made straight, according to the make of machine with which it is to be used. The form shown is designed to fit one make of machine that is now in use.

The rounded edges of the cutter and the rounded grooves in the jaws of the holder in which the same are fitted enable it to tip as the upper shank is moved along, so that the cutter may be readily adjusted to any desired bevel and securely held in such adjusted position.

On the side of the jaws I provide a scale, as seen at 22, so that it may be readily determined how much movement it is necessary to give to the upper jaw to give the cutter the desired bevel or angle. By moving the upper jaw, so that the scale lines correspond, the proper angle is obtained.

From the above it will be seen that I have devised a very simple and efficient form of tool holder, and while the structural embodiment of my invention as hereinbefore described is what I at the present time consider preferable, it is evident that the same is subject to changes, variations and modifications in form, proportions and other details, and I therefore do not wish to be restricted to the exact construction hereinbefore disclosed, but reserve the right to make such changes,

variations and modifications as come properly within the scope of the protection prayed.

What I claim as new is:—

1. A tool holder comprising adjustably connected jaws having interengaging teeth at one end and at the other end provided with rounded grooves to receive the rounded edges of a tool.

2. A tool holder comprising adjustably connected jaws having interengaging teeth at one end and at the other end provided with rounded grooves to receive the rounded edges of a tool, said teeth being formed on the arc of a circle.

3. A tool holder comprising adjustably connected jaws having interengaging teeth at one end and at the other end provided with rounded grooves to receive the rounded edges of a tool, and cooperating shoulders for keeping the jaws parallel.

4. A tool holder comprising jaws having at one end interengaging teeth and rounded grooves at the other end, and a threaded bolt held in the shank of one jaw and passed through an elongated slot in the shank of the other jaw, said bolt arranged to hold the jaws together.

5. A tool holder comprising jaws having at one end interengaging teeth and rounded grooves at the other end, and a threaded bolt held in the shank of one jaw and passed through an elongated slot in the shank of the other jaw, the toothed portions of the jaws having cooperating shoulders, the same adapted to keep the jaws parallel.

6. A tool holder comprising relatively adjustable jaws and constructed to hold a tool to insure the change of angle of the latter by adjustment of the jaws, said jaws having interengaging toothed portions, and said toothed portions having cooperating shoulders to keep the same parallel.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. JONES.

Witnesses:

JENNIE E. OSGOOD,
ERNEST FOSS.