No. 664,688. Patented Dec. 25, 1900.

J. SUESS.

PLANER CHUCK.

(Application filed July 23, 1900.)

(No Model.)

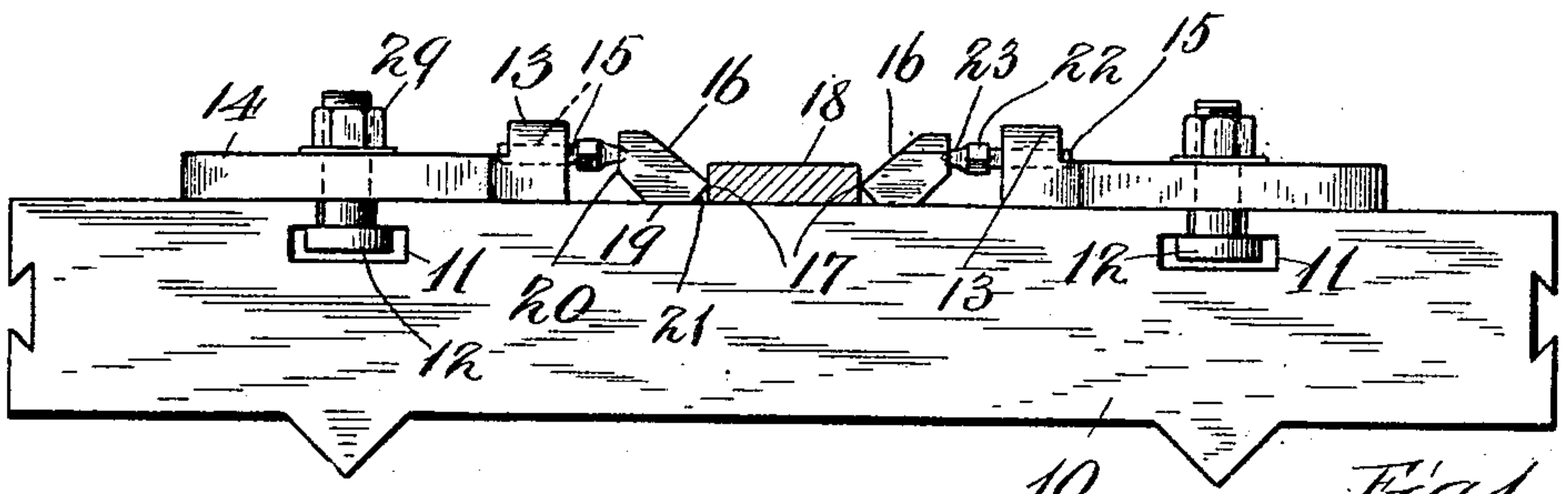
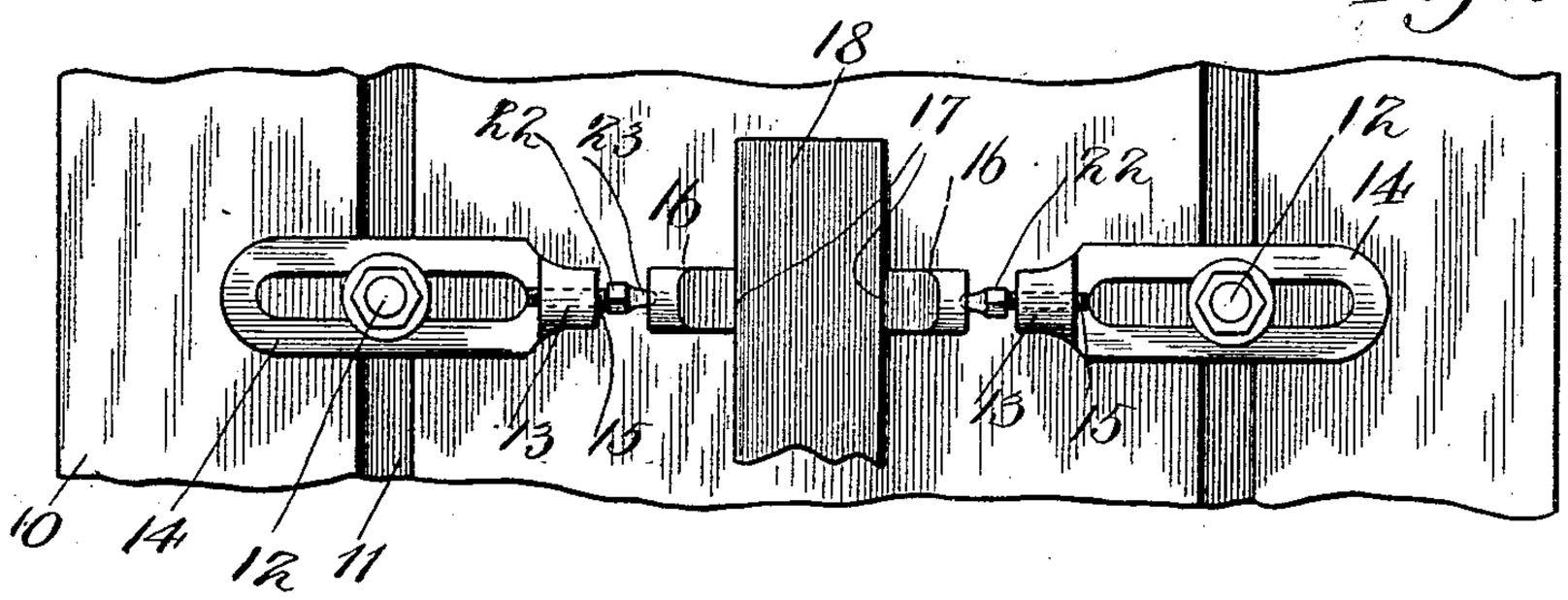


Fig 1

Fig 2



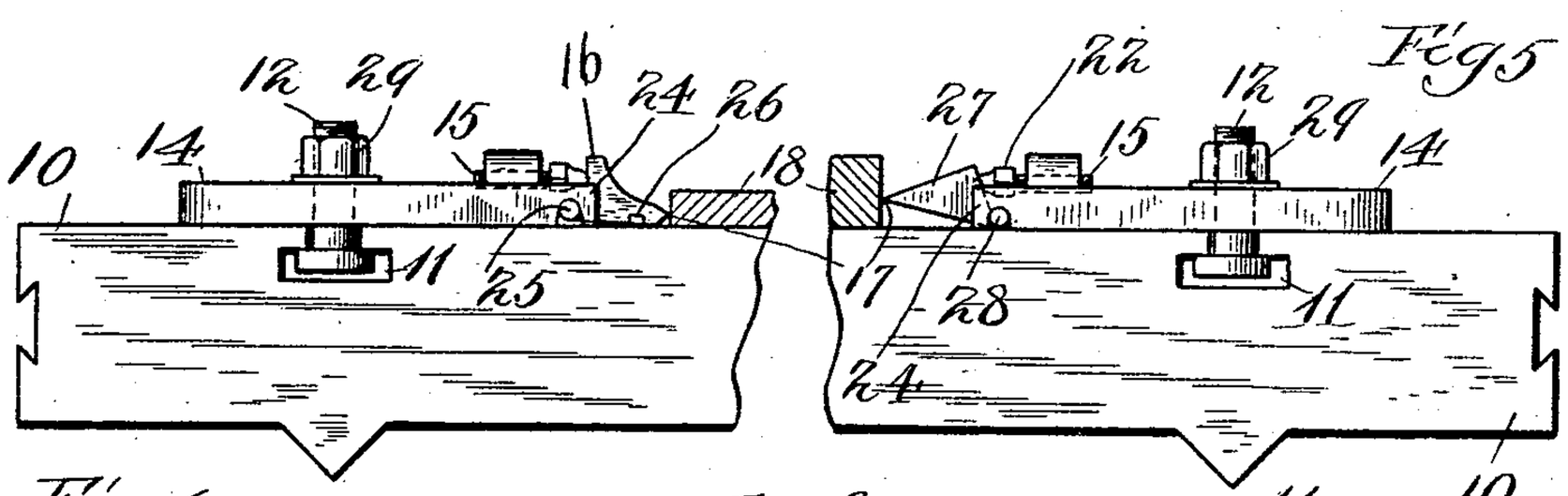


Fig 5

Fig 3.

Fig 6

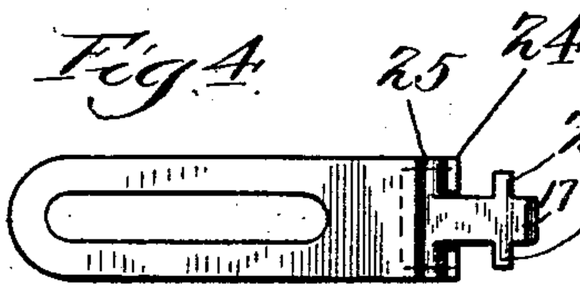
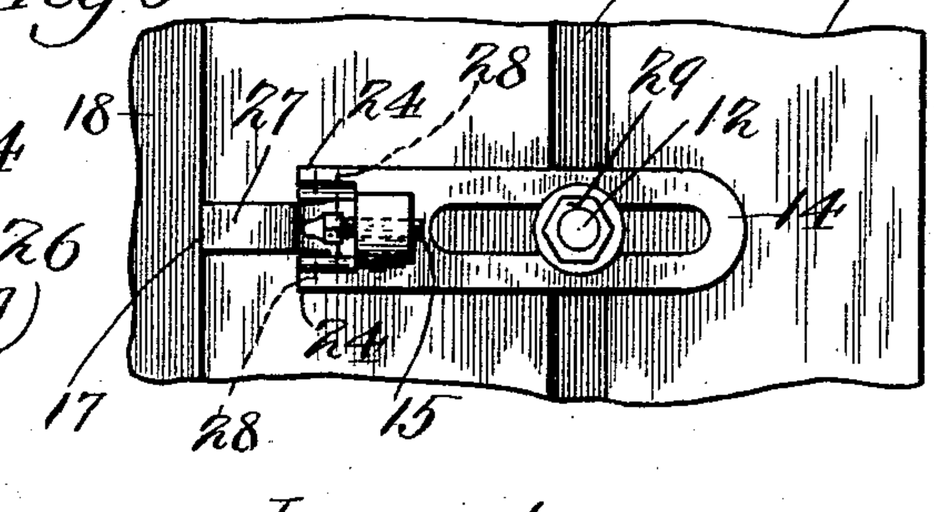


Fig 4.



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UNITED STATES PATENT OFFICE.

JACOB SUESS, OF CHICAGO, ILLINOIS.

PLANER-CHUCK.

SPECIFICATION forming part of Letters Patent No. 664,688, dated December 25, 1900.

Application filed July 23, 1900. Serial No. 24,491. (No model.)

To all whom it may concern:

Be it known that I, JACOB SUESS, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Planer-Chucks, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to devices for use in connection with metal-planers and adapted to secure the work to be operated upon to the platen of the planer; and its object is to increase the efficiency and general utility of devices of this character.

The invention consists in the construction hereinafter described and which is illustrated in the accompanying drawings, in which—

Figure 1 shows a cross-section of a planer-bed with a piece of work resting thereupon, a pair of the improved clutches being shown in side elevation. Fig. 2 is a detail plan view of the same. Fig. 3 is a detail sectional view of the platen and side elevation of one of the clutches, showing a modified form of construction. Fig. 4 is a bottom plan view of the clutch shown in Fig. 3; and Figs. 5 and 6 are respectively a side elevation and plan view of a further modification of the clutch, portions of the platen and work being shown in cross-section and plan.

At 10 there is represented a portion of an ordinary platen of a metal-planing machine, the same being provided with the usual T-grooves 11 11, within which are fitted the T-bolts 12 12, by means of which the clutches are secured in any position to which they may be adjusted.

At 18 is shown a piece of work secured to the platen.

The improved clutch comprises a screw-head 13, having a slotted body portion 14, through which the threaded end of the securing-bolt 12 may project, a threaded pressure-bolt 15, projecting forwardly from the screw-head 13, and a tilting dog 16, having a sharp edge 17 for biting into the metal to be secured, a flat bottom 19, upon which it may rest upon the platen, and a vertical rearward face 20, against which the nose 23 of the pressure-bolt 15 may bear. The rearward face 20 of the dog is provided with a shallow recess to receive the nose 23 of the pressure-bolt, and the point of application of the latter to the dog is at a greater elevation than the sharp edge 17, which engages the work, so that as the pressure-bolt is turned forwardly by the application of a wrench to its squared head 22 the dog 16 tends to tilt upon the forward edge 21 of its flattened bottom 19 as a fulcrum, thereby not only forcing the piece of work 18 against the opposing clutch, but also bearing it down upon the bed of the platen.

The head 22 of the pressure-bolt 15 is located in front of the screw-head 13 in order that it may not cut off any of the slot in the body portion 14, and thereby restrict the range of adjustment upon the bolt 12. A further advantage in thus locating the bolt-head is found also in the fact that a wrench may be more conveniently applied to it.

By flattening the bottom of the dog, as shown in Fig. 1, the latter may be more conveniently used, as it may be placed in position adjacent to the work to be secured and will rest there without further attention until the screw-head is properly adjusted and secured and the pressure-bolt brought to bear upon it.

If desired, the dog may be connected with the screw-head, so as to be adjusted therewith. To this end the screw-head is provided with forwardly-projecting lugs 24, recessed across their lower faces to receive trunnions 25, formed upon the dog 16 and at its heel, as shown in Figs. 3 and 4. The recesses for these trunnions should be sufficiently large to admit of some play, so that the dog may be tilted by the pressure of the screw-bolt 15. Should the dog be made of less width than the throat of the T-slots 11 11, it is preferably provided with laterally-projecting feet 26 of sufficient length to span these slots, so that the clutch may, if desired, be longitudinally disposed upon the platen.

A further modification is shown in Figs. 5 and 6, in which there is shown a dog 27 without the flat bottom and provided with trunnions 28, engaging recesses in the under faces of forwardly-projecting lugs 24 of the screw-head and forming the fulcrum upon which the dog tilts when pressure is applied to force it against the work.

In use when the detached dog of Figs. 1 and 2 is used it is first placed in proximity to the work to be secured. The screw-head is now adjusted to position so that the nose 23 of the screw-bolt 15 will bear against the rearward face 20 of the dog, the bolt being turned back, and the head is now secured by means of the nut 29, applied to the bolt 12. The bolt 15 now being turned forward, the edge 17 of the dog bites into the work and securely binds it to the platen.

If either of the forms of construction shown in Figs. 3 to 6 is followed, the dog is applied to the work as the screw-head is adjusted, and after the nut 29 has been turned down the bolt 15 is advanced so that the dog grips the work.

I claim as my invention—

1. In a clutch for metal-planers, in combination, a screw-head adapted to be secured to the planer-platen, a pressure-bolt projecting forwardly from the screw-head, and a tilting dog having a sharp edge for engaging the work to be secured and a rearward face adapted to receive the pressure of the screw-bolt at a point out of line with the sharp edge, whereby the pressure of the bolt tends to tilt the dog.

2. In a clutch for metal-planers, in combination, a screw-head adapted to be secured to the planer-platen, a pressure-bolt projecting forwardly from the screw-head, and a tilting dog having a flattened bottom and a sharp edge for engaging the work to be secured and a rearward face adapted to receive the pressure of the screw-bolt at a point more remote from the flattened bottom than is the sharp edge.

3. In a clutch for metal-planers, in combination, a screw-head adapted to be secured to the planer-platen, a pressure-bolt projecting forwardly from the screw-head and having a polygonal head at its outer end, and a tilting dog having a sharp edge for engaging the work to be secured and a rearward face adapted to receive the pressure of the screw-bolt.

4. In a clutch for metal-planers, in combination, a screw-head having its body longitudinally slotted to adjustably receive an attaching-bolt whereby it may be secured to the planer-platen, a pressure-bolt projecting forwardly from the screw-head, and a tilting dog having a sharp edge for engaging the work to be secured and a flattened rearward face adapted to receive the pressure of the screw-bolt.

5. In a clutch for metal-planers, in combination, a screw-head adapted to be secured to the planer-platen, a pressure-bolt projecting forwardly from the screw-head, a tilting dog having a sharp edge for engaging the work to be secured and a flattened rearward face adapted to receive the pressure of the screw-bolt, and having trunnions for detachably engaging the screw-head.

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