W. L. FISCHER.

PLANE.

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910,807.

Patented Jan. 26, 1909.

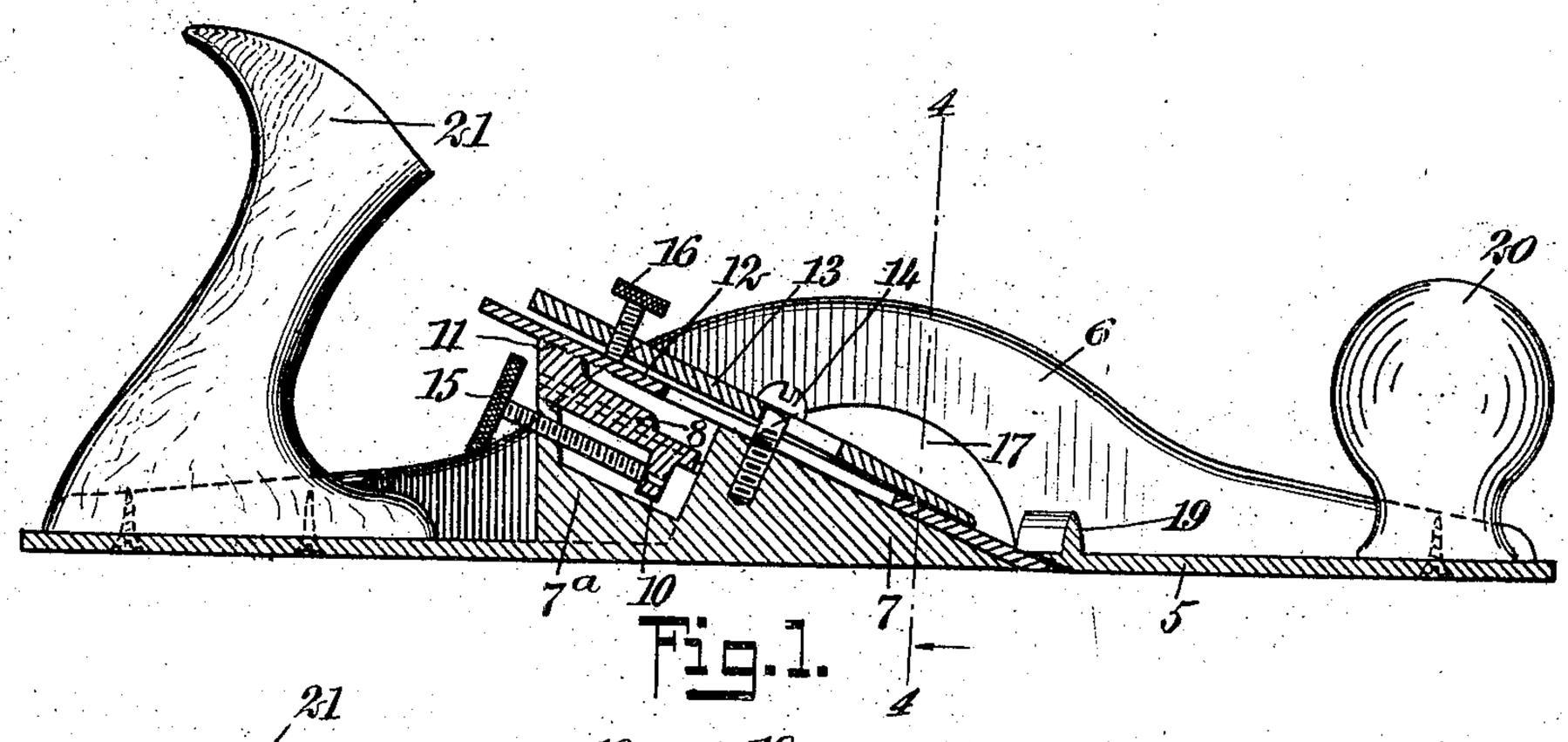

Fig. 1.

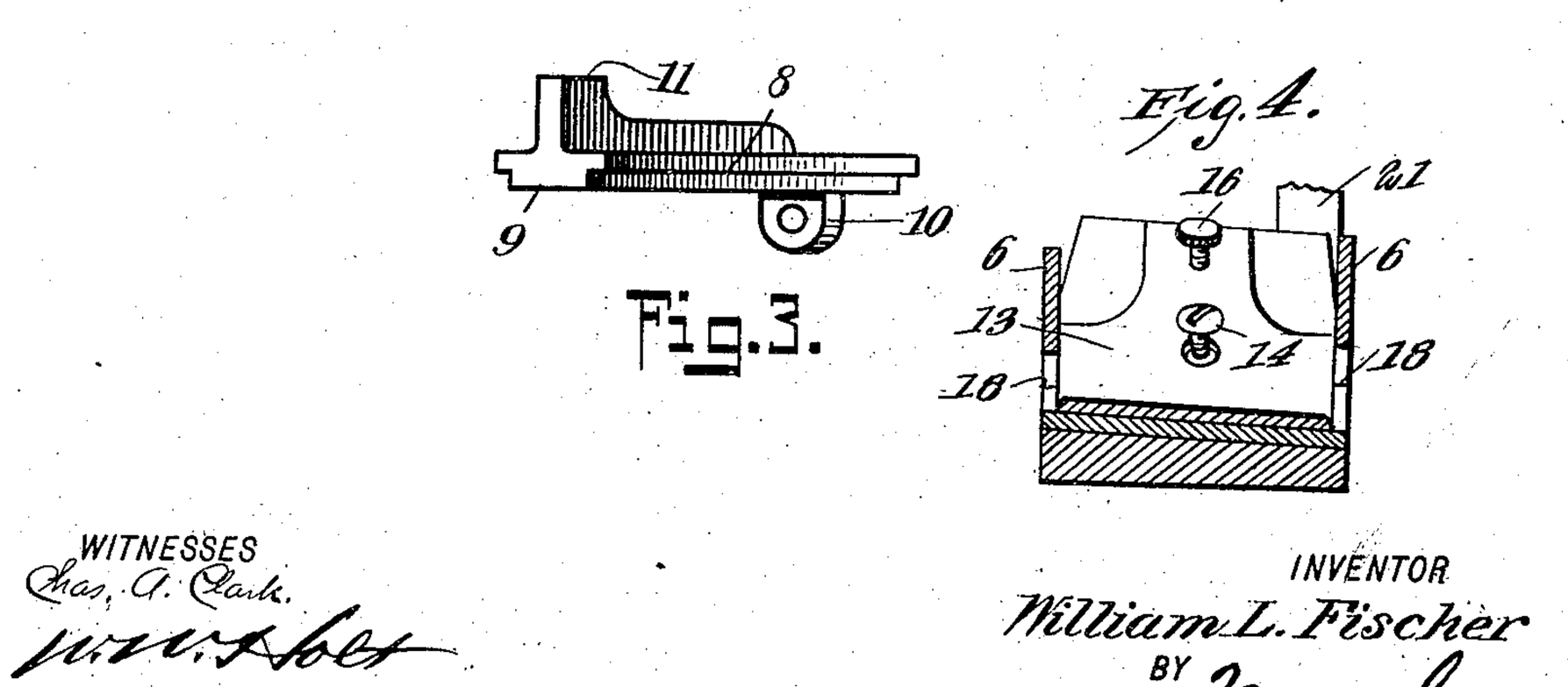

Fig. 2.

Fig. 3.

Fig. 4.

WITNESSES

Chas. A. Clark.

INVENTOR

William L. Fischer

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM L. FISCHER, OF OROVILLE, CALIFORNIA.

PLANE.

No. 910,807. Specification of Letters Patent. Patented Jan. 26, 1909.

Application filed September 13, 1907. Serial No. 392,804.

To all whom it may concern:

Be it known that I, WILLIAM L. FISCHER, a citizen of the United States, and a resident of Oroville, in the county of Butte and State of California, have invented new and useful Improvements in Planes, of which the following is a full, clear and exact description.

This invention has reference to improvements in planes of the character ordinarily known as jack planes, the purpose of which is to provide a construction capable of making a smooth cut extending the full width of the plane, with the least possible effort on the part of the user.

The plane also embodies a feature of construction which makes it easy for the cutting edge of the blade to be set parallel to the plane-base; and other features of construction which especially adapt the plane for rabbeting and planing floors.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical longitudinal section substantially on the line 1—1 of Fig. 2 through the preferred form of my invention; Fig. 2 is a plan of the same; Fig. 3 is a perspective view of the details of construction; and Fig. 4 is a cross-section on the line 4—4 of Fig. 1.

My improved plane as preferably constructed includes a body composed of a metal base-plate 5 having the usual integral side flanges 6 and a frog 7, the latter being constructed with a recessed rear extension 7^a of reduced-width, over which is slidably received a bridge-piece 8, shown in detail in Fig. 3. This bridge-piece is rabbeted at opposite edges on its under face to provide a tongue 9 which fits within the recess of the extended portion of the frog and prevents the bridge from sidewise displacement.

The bridge-piece is further provided with an apertured lug 10 extending from its under face, and a longitudinal central rib 11 on its upper face, said rib being provided with serrations adapted to engage with corresponding serrations formed on the under face of the plane blade 12.

The blade 12 is longitudinally slotted, as shown in Fig. 1, as is also a shoe 13 for receiving the body of a guide-screw 14, the latter operating to direct the blade lineally when the bridge-piece is adjusted; this last-named adjustment being accomplished by an adjusting screw 15 threaded through the rear end of the extension 7^a and received into the lug 10. For holding and locking the blade in adjusted position, a set-screw 16 is threaded through the shoe 13 and presses on the blade directly over or near the serrated portion of the rib 11, thus securely retaining these parts against any relative movement.

As shown, the throat of the plane which receives the cutting edge of the blade, like said cutting edge is diagonally arranged and extends entirely across the base-plate, which construction makes it possible for a smooth clean cut to be taken equal to the entire width of the plane with the least possible effort on the part of the user. This construction of the cutting edge of the blade and of the throat obviously also makes it necessary to laterally incline the upper face of the frog on which the blade is seated in order that the cutting edge of the blade will be parallel to the throat and base of the plane. The two parts of the plane body which are thus divided by the throat are rigidly connected together at the widened arched portion of the flanges 6, the latter being provided with openings 17 into which the sides of the blade extend.

The upper portion of the plane blade, as shown in Fig. 2, is of reduced width, which provides shoulders 18 adapted to be brought into contact with the edges of the openings 17 in setting the diagonal cutting edge of the blade parallel to the base-plate 5; this last-named plate preferably having a rib 19 on its upper face parallel to the throat of the plane, which operates to expel the shavings as they are produced.

For working the plane I provide a knob 20 and a handle 21 which are respectively attached to the forward and rearward portions of the base-plate at one side thereof, which especially adapts the plane for deep rabbeting.

The handle 21, as it will be observed from Fig. 2, also inclines to, or overhangs, that side of the plane adjacent to which it is arranged, which operates to carry the knuckles of the hand by which the handle is grasped, sufficiently to one side to escape contact with base-boards, etc. in planing floors and the like.

The invention as shown and described while being the preferred practical embodi-

ment of my improved plane, is obviously susceptible of modifications falling within the scope of the claims annexed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A plane comprising a body composed of a base-plate having side flanges provided with openings, a blade projecting into said openings having a cutting edge, and shoulders, the said shoulders operating when in contact with the edges of the openings to arrange said cutting edge parallel to the base-plate, and means for advancing and retracting the blade to and from the base-plate without varying its parallelism thereto.

2. A plane comprising a body composed of a base-plate having a frog provided with integral side flanges, the said frog being constructed with a rear recessed extension of reduced width, a bridge-piece slidable over the recess of the extension, having a lug and a rib on its bottom and top faces, respectively, a slotted blade seated on the frog, a slotted shoe seated on the blade, a guide-screw passing through the slots of the shoe and blade and threaded into the frog, an adjusting screw threaded through the rear end of the reduced extension of the frog and connected with the lug of the bridge-piece, and a set-screw threaded through the shoe operable to force the blade into contact with the rib of the bridge-piece and lock the blade in adjusted position.

3. A plane comprising a body having a frog, a member slidable on the frog having an adjusting screw, a blade seated on the frog having a longitudinal slot, a shoe seated on the blade, a guide-screw passing through the shoe and the slot of the blade and threaded into the frog, and a screw threaded through the shoe and bearing on the blade for forcing the blade into contact with said member whereby the blade and member will move together upon the adjustment of the screw.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM L. FISCHER.

Witnesses:

EDWARD P. HECK,

W. D. EISNER.