

W. G. KLEINFELDER.
 PLANER.
 APPLICATION FILED NOV. 18, 1907.

945,958.

Patented Jan. 11, 1910.

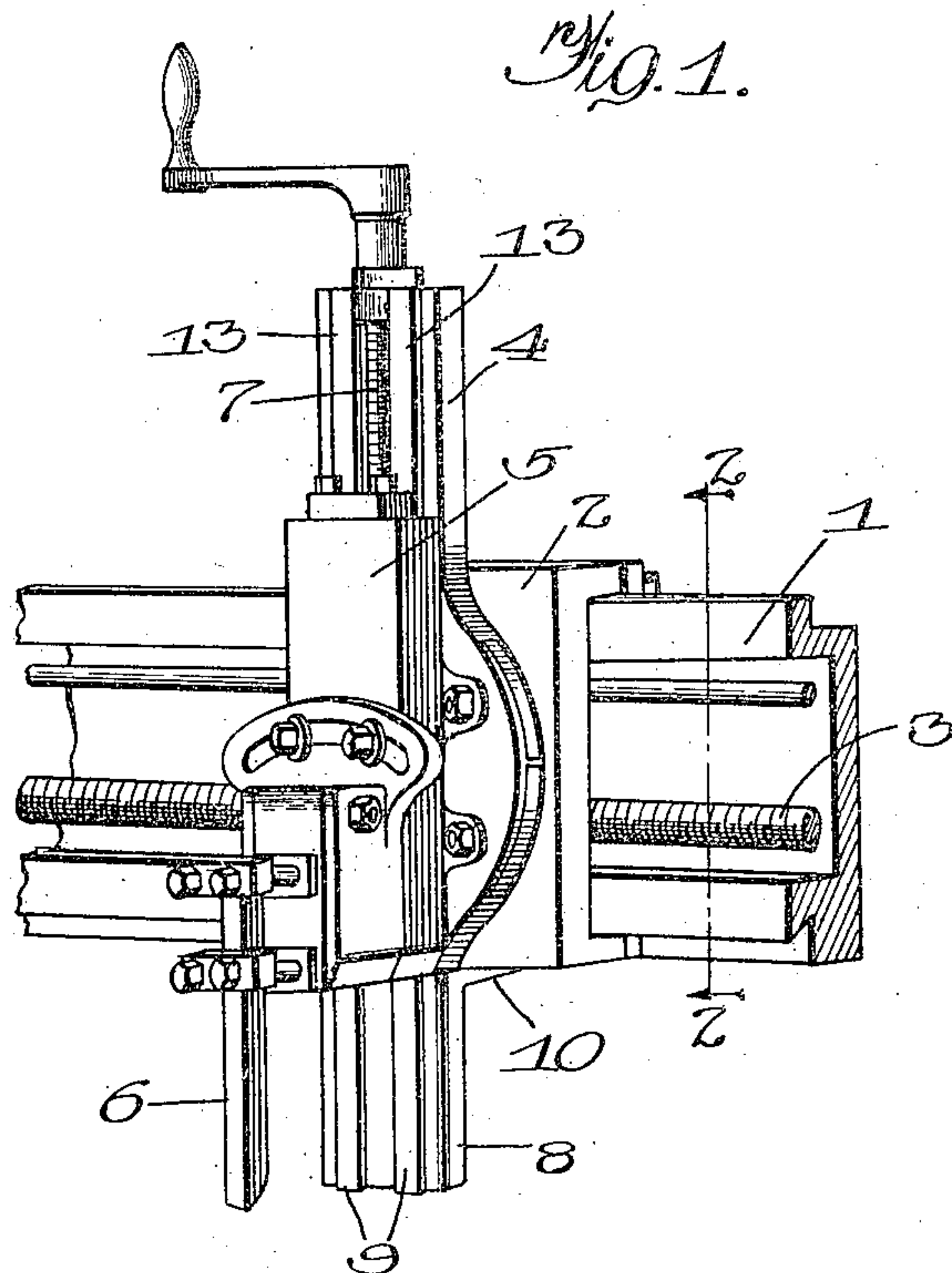


Fig. 3.

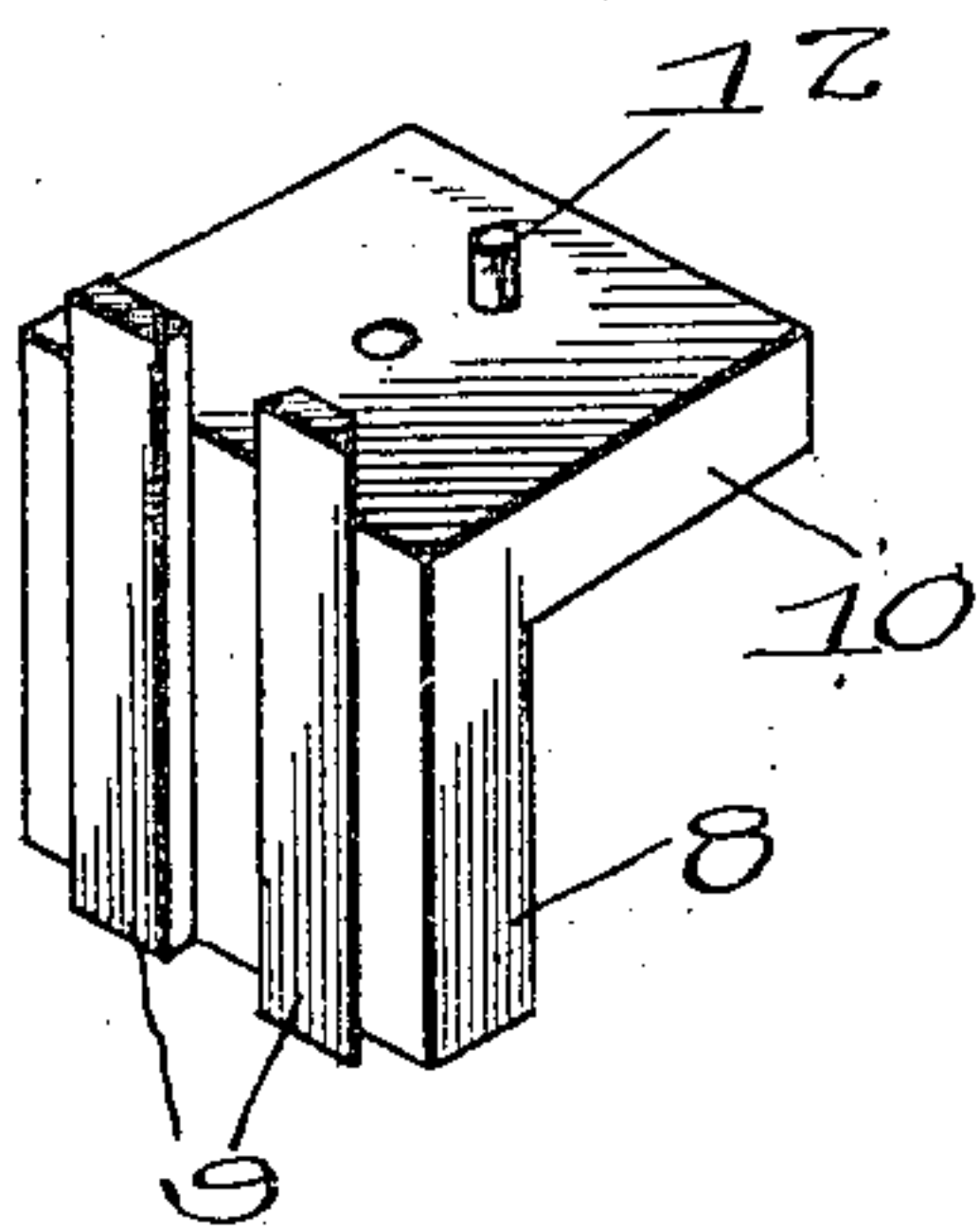
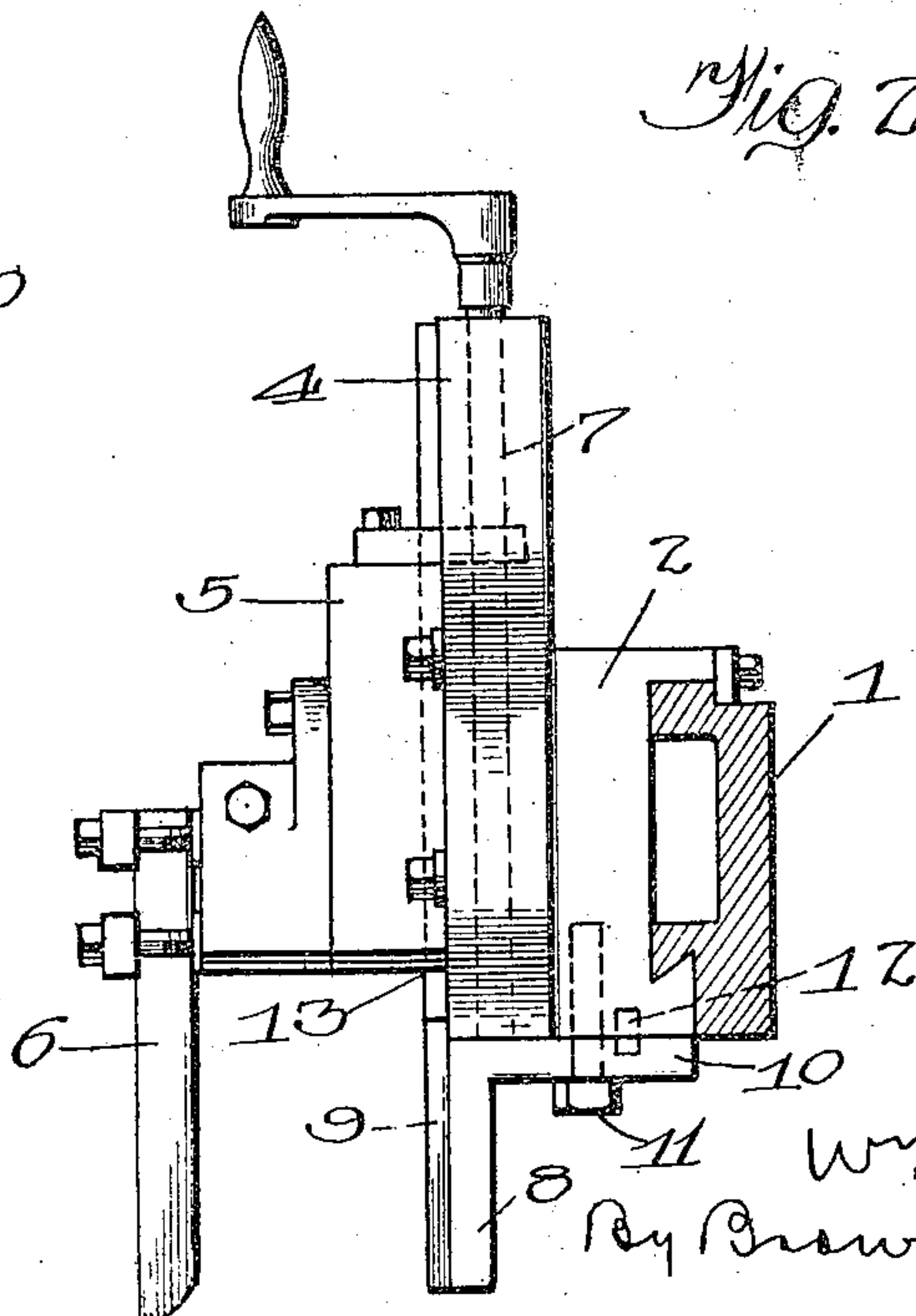


Fig. 2.



Witnesses:
J. D. Perry
G. V. Donatus Jr.

Inventor:
Wm. G. Kleinfelder
By Brown & Hopkins atty

UNITED STATES PATENT OFFICE.

WILLIAM G. KLEINFELDER, OF CHICAGO, ILLINOIS.

PLANER.

945,958.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed November 18, 1907. Serial No. 402,668.

To all whom it may concern:

Be it known that I, WILLIAM G. KLEINFELDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Planers, of which the following is a full, clear, and exact specification.

This invention relates more particularly to improvements in the means for holding the tool or tools during the operation of planers.

In many forms of planers, the tool is supported by a rail or way upon which the tool carriage slides, and carries a head in which the tool is clamped and which itself is provided with a way whereby the head may slide or move in a direction transverse to the said rail. In many forms of work, as for example, forms having channels or depressions, the bottoms of which are required to be planed, the presence of the projecting portions of the work prevents the rail from being positioned close to the surface to be planed, and this necessitates the tool head being projected considerably below or beyond the rail, in order that the tool may reach the surface to be operated on. This of course deprives the head of a large percentage of its support upon the tool carriage, and often results, where the projection is extreme, in breaking the head or wrenching it loose from its way on the carriage.

My invention is designed to avoid these difficulties, and it has for its primary object to provide improved and simple means whereby the tool head will be adequately braced where it projects beyond the carriage or the way for the head on the carriage.

With a view to the attainment of these ends and the accomplishment of certain other objects which will hereinafter appear, the invention consists in the features of novelty which will now be described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings—Figure 1 is a perspective view of a portion of a planing machine provided with this invention, and Fig. 2 is a transverse section thereof on the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of the way extension.

1 is a rail or guide-way for the tool carriage, which may be horizontal or vertical, according to the style of planer on which it

is to be employed. In this exemplification of the invention, however, it is shown in a horizontal position. The carriage before referred to is shown at 2, and is arranged to slide back and forth upon the rail or way 1, and is controlled during its movement by a screw 3, as usual, and 4 is the way mounted upon the carriage 2 transversely thereof for holding the guiding tool head 5, which may be of the usual or any suitable construction, provided with means for clamping the tool, which is shown at 6, the tool head being controlled in its movements perpendicular, or at an angle, to the rail 1 by the usual feed screw 7, or other suitable means, which serves to lower the head 5, when necessary, in a manner to cause it to project below the lower end of the way 4 and carriage 2.

It is quite evident that when the work is of such form as to require the head 5 to be lowered a considerable distance below the lower end of the way 4 in order that the tool might reach the surface to be planed, the great leverage exerted against the tool head, thus deprived of the major part of its support on the carriage, is often sufficient to wrench the carriage loose or break it. To remedy this, I provide the carriage with an extension 8, which carries a section 9 of the tool head way 4, and which is arranged in direct alinement therewith when the extension 8 is in place, so that as the tool head is lowered it will slide against the extension 8 and way 9 and be adequately supported and braced thereby. This extension should preferably, but not necessarily, be readily removable, so that when the work requiring its presence is finished, it may be quickly laid aside if its presence would interfere with the work next to be done. I therefore prefer to provide the extension with a foot piece or flange 10, which rests against the under side of the carriage 2, and is removably held in place by a cap screw or other suitable means 11 passing therethrough and screwed into the bottom of the carriage, 12 being a dowel-pin serving to hold the extension against rotary movement on the cap screw, and also serving as a means of positioning it accurately with reference to the way 4. The front side of the extension 9, however, may, if desired, be provided with a flange or lip 13 projecting upwardly and partially overlapping the face of the carriage 2, the way section 9 on the extension 8 being also continued upwardly above the upper face of the

flange 10 to meet the lower end of the way 4 and to form therewith a continuing way.

In order that the invention may be understood by those skilled in the art, the details of an exemplification thereof have been thus specifically described, but

What I claim is:

1. In a device for the purpose described, the combination of means for holding the tool, a support upon which said means travels for feeding the tool, and a detachable extension for said support adapted to receive the tool holding means.

2. In a device for the purpose described, the combination of means for holding a tool, a tool carriage embodying means on which the first said means travels for feeding the tool, and an extension upon which said tool supporting means slides beyond the carriage, removably secured to the carriage.

3. In a device for the purpose described, the combination of a tool carriage, a tool head slidably mounted upon the carriage, and an extension removably secured to the

carriage and having a flange or lip overlapping the face of the carriage, said extension having its face arranged in the plane of movement of the tool head and adapted to support and brace the same when projecting beyond the carriage.

4. In a device for the purpose described, the combination of a tool carriage, a tool head slidably mounted thereon, an extension arranged in the plane of movement of the tool head and adapted to be overlapped by the same when the tool head projects beyond the carriage, said extension having a flange arranged at an angle thereto removably attached to the carriage.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 16th day of November, A. D. 1907.

WM. G. KLEINFELDER.

Witnesses:

FRANCIS A. HOPKINS,
CHAS. H. SEEM.