

No Model.)

J. KNIGHT.
POWER BEVELING SHEARS.

No. 414,225.

Patented Nov. 5, 1889.

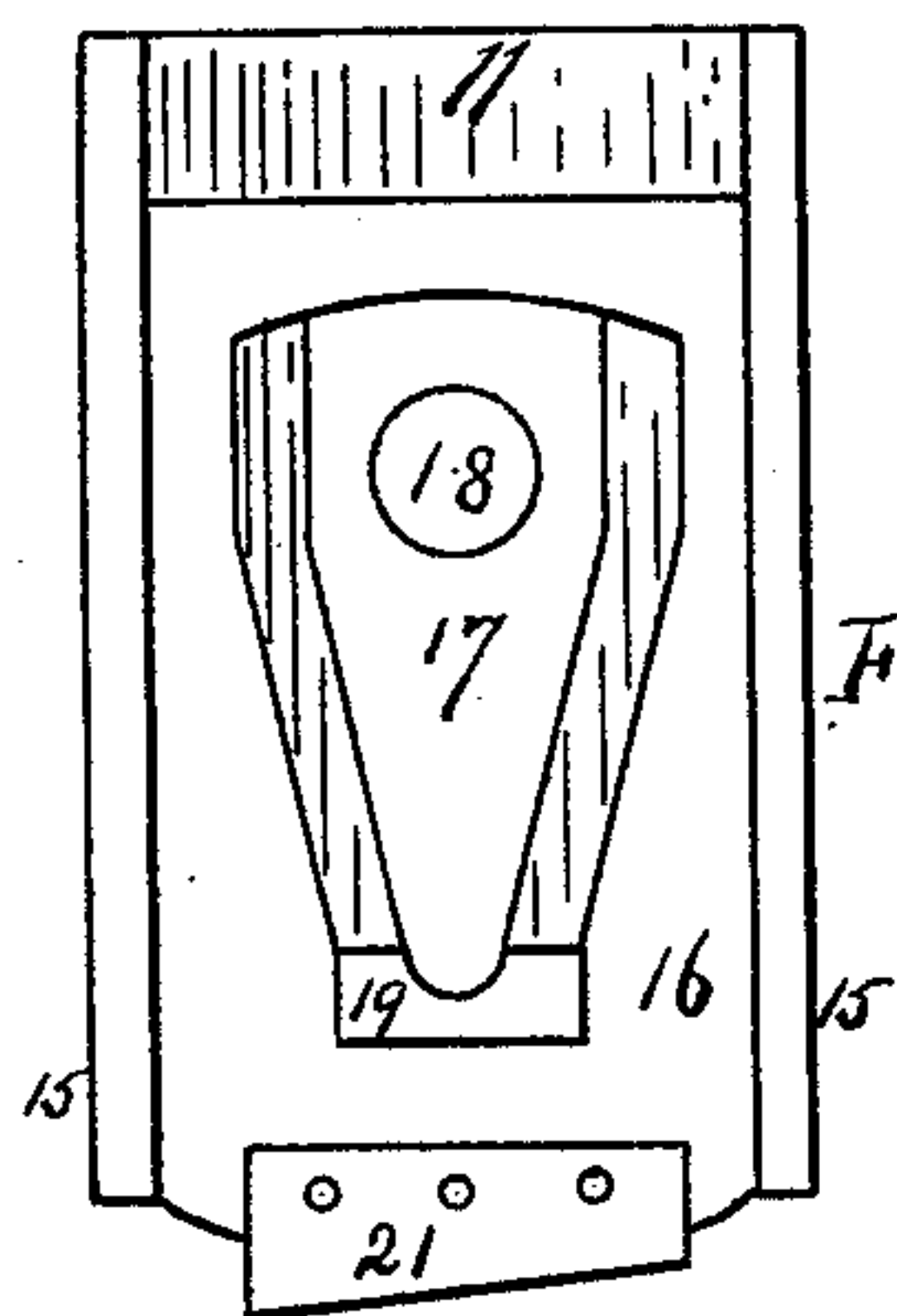
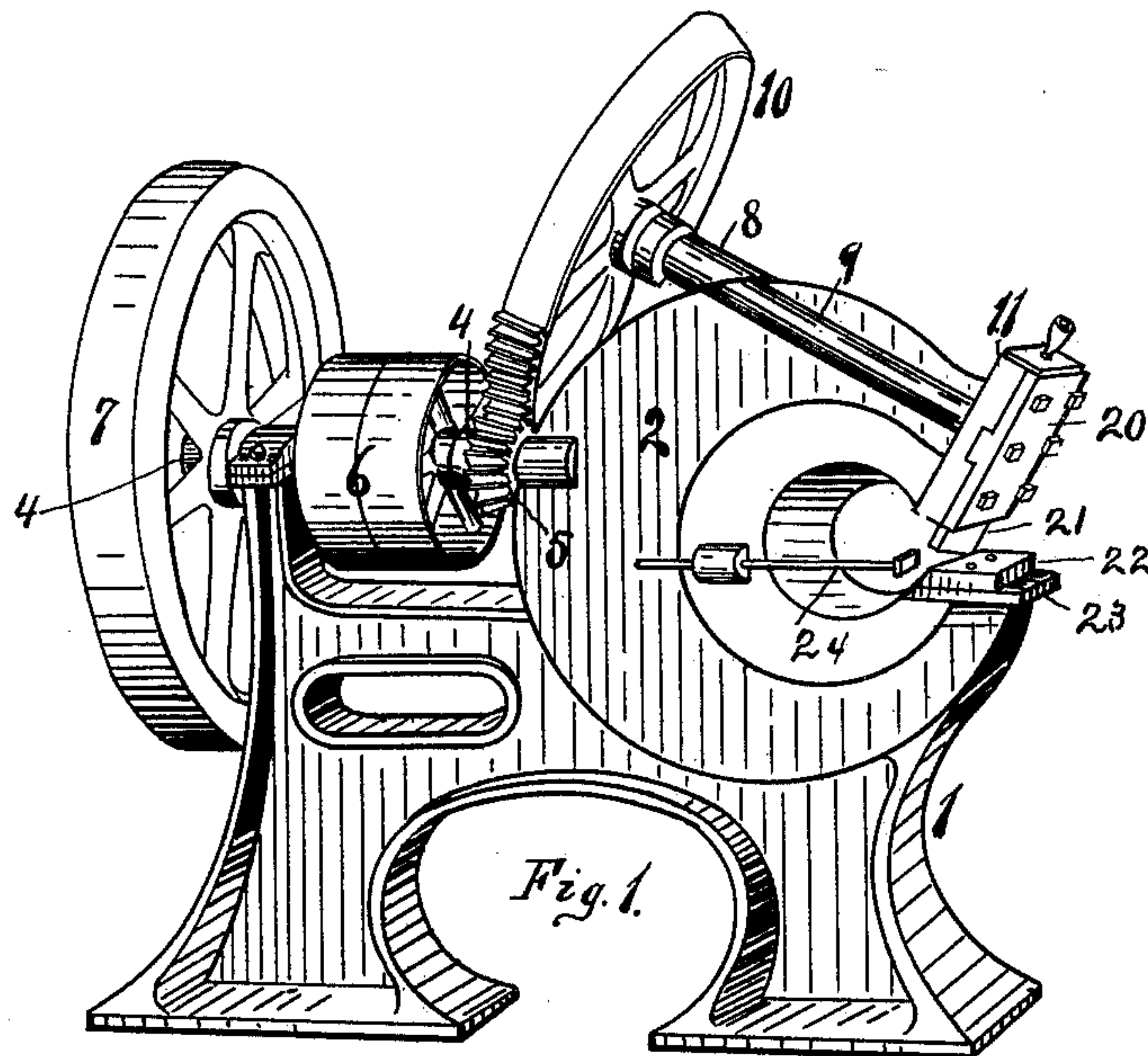


Fig. 2.

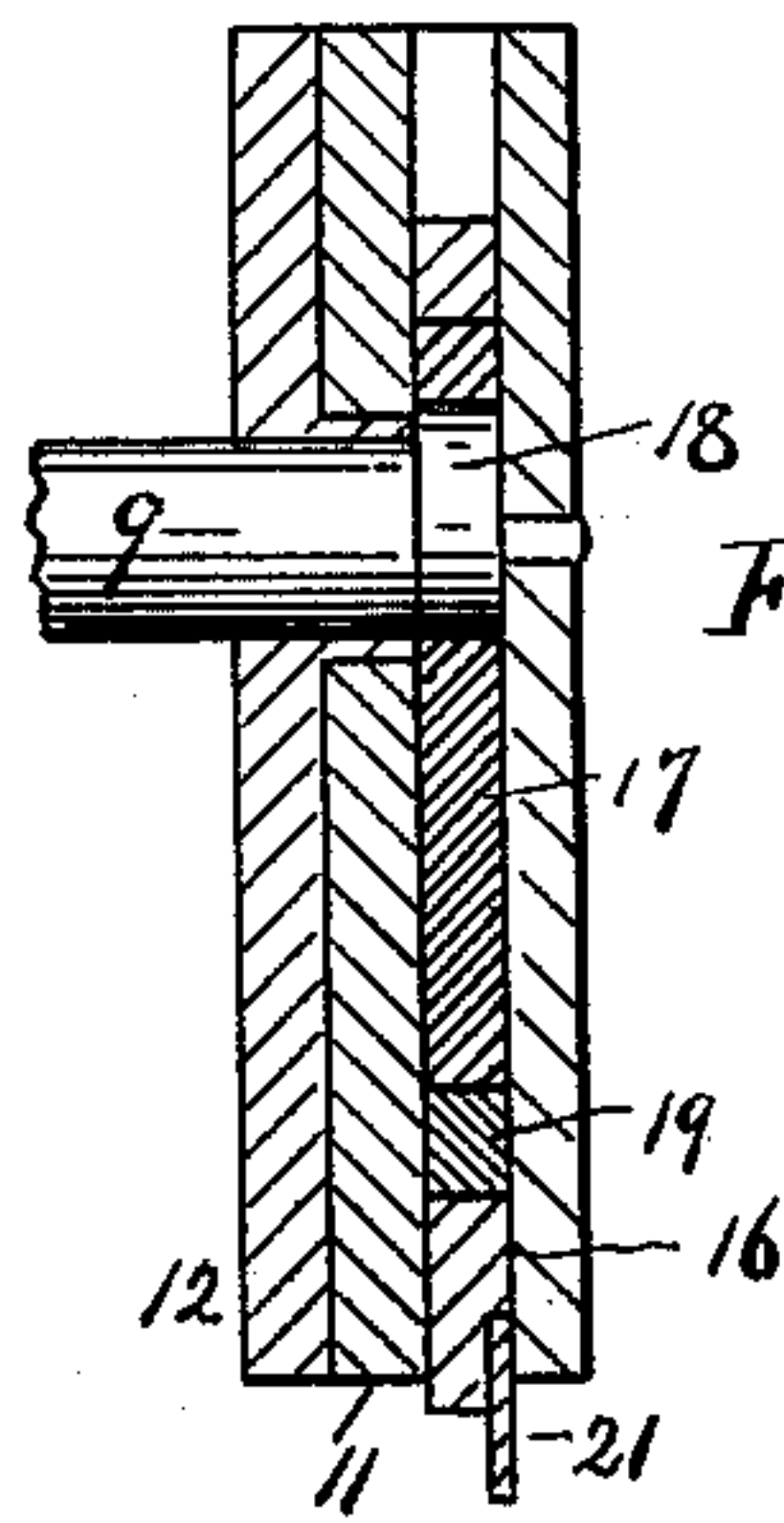


Fig. 3.

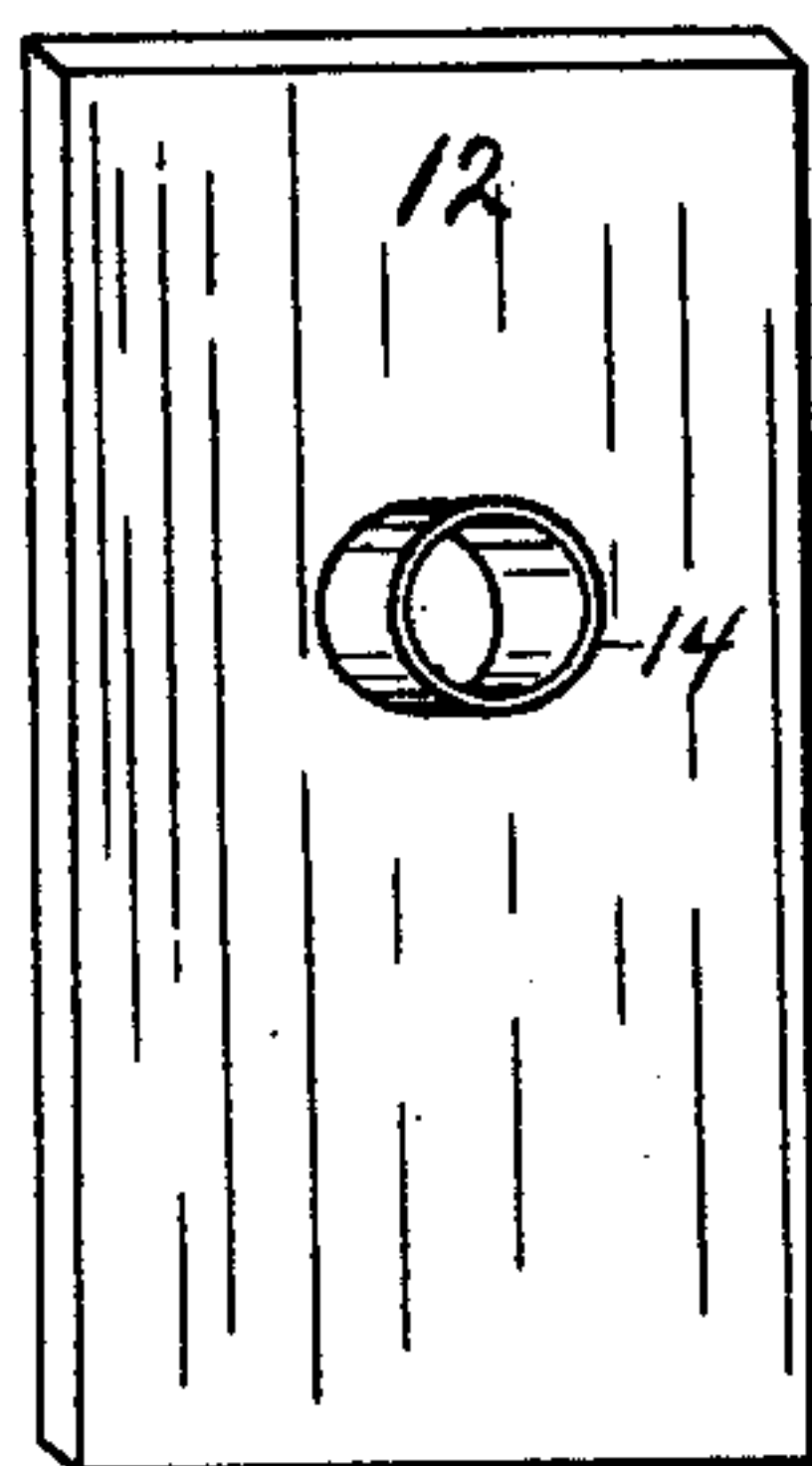


Fig. 4.

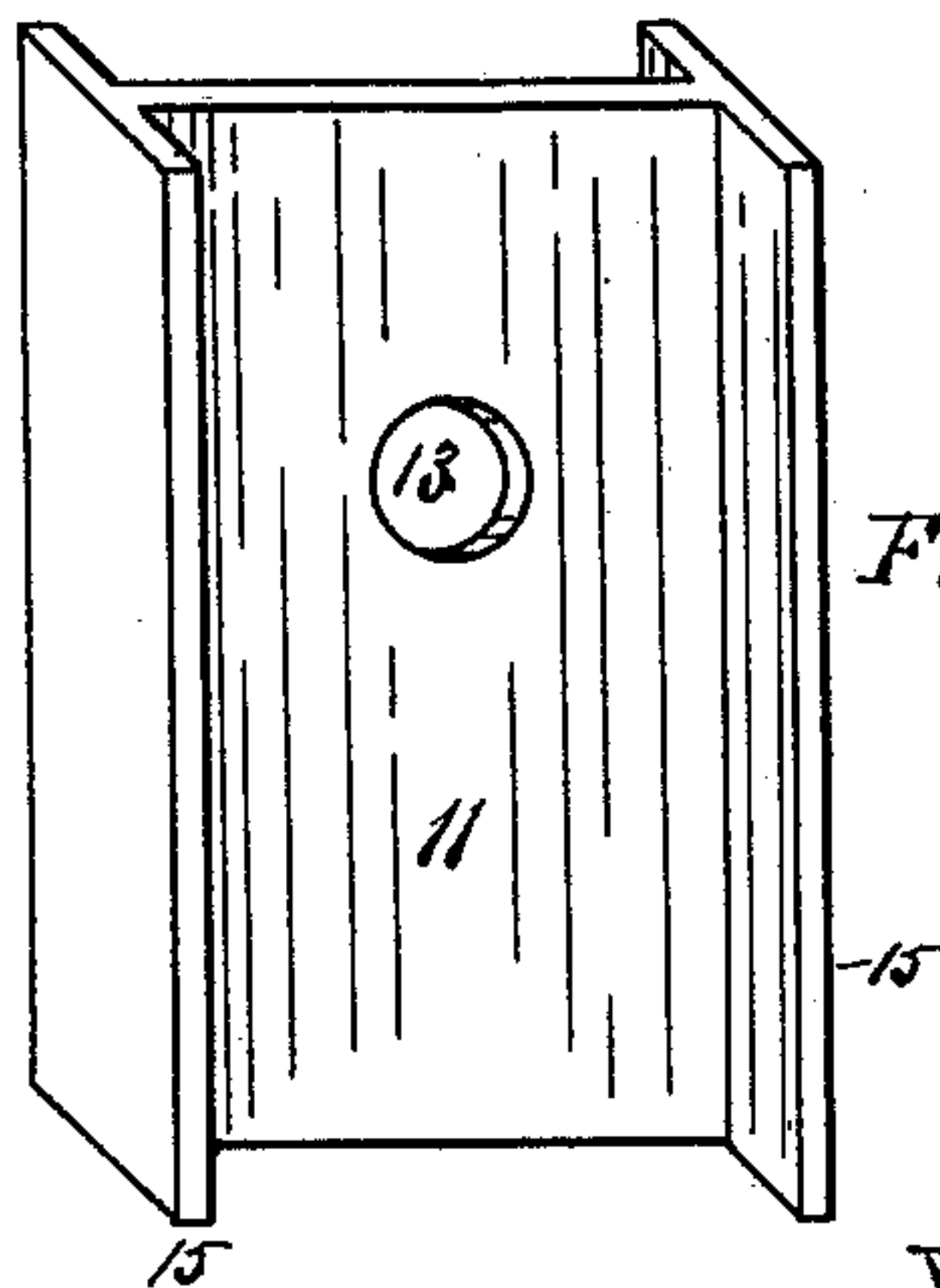


Fig. 5.

Attest:
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UNITED STATES PATENT OFFICE.

JACOB KNIGHT, OF CLEVELAND, OHIO.

POWER BEVELING-SHEARS.

SPECIFICATION forming part of Letters Patent No. 414,225, dated November 5, 1889.

Application filed June 21, 1889. Serial No. 315,084. (No model.)

To all whom it may concern:

Be it known that I, JACOB KNIGHT, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Power Beveling-Shears, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in power beveling-shears.

The object of the invention is to construct a machine especially adapted for beveling the edges of boiler-plates, and which shall make a clean smooth cut.

To this end the invention consists in the construction and relative arrangement of a stationary horizontal shear and an inclined reciprocating shear, in the arrangement of mechanism for operating the reciprocating shear-blade, and in the peculiar construction, arrangement, and combinations of the various parts, all as more fully hereinafter set forth and claimed.

Figure 1 is a perspective view of my improved machine. Fig. 2 is an elevation of the inclined head and plunger with the cap removed. Fig. 3 is a vertical section on the line $x x$, Fig. 2, with the cap in place, and also showing the relative position of the operating-cam. Fig. 4 is a perspective view of the false head detached, and Fig. 5 is a similar view of the double-flanged removable head.

In the accompanying drawings, which form a part of this specification, 1 represents a suitable bed-frame, which carries and supports the operating parts of my device, and which has formed integrally therewith the C-shaped head 2, provided with the throat 3.

Journaled in proper bearings or boxes at the rear part of the machine is the main driving-shaft 4, and upon this shaft are secured the bevel-gear 5, the pulleys 6, and the fly-wheel 7.

Upon the top of the C-shaped head is formed a suitable box-bearing 8, which receives the inclined shaft 9, the forward end

of which projects through and finds bearings in the false head 12, which latter forms an integral part of the C-shaped head, and the face of which is at right angles to the axial center of the shaft 9. The rear end of this shaft carries a crown gear-wheel 10, which meshes with the bevel-gear 5 upon the main shaft 4.

11 represents a double-flanged head, which is designed to be rigidly secured upon the false head 12, its shaft-opening 13 fitting upon the collar 14, which projects from the face of said false head. Between the guide-flanges 15 of the head 11 the plunger 16 reciprocates. The body of this plunger is cut out to receive the cam-yoke 17, which engages with a cam 18 upon the shaft 9 and rests upon a gag-block 19, these various parts being retained within the head by the cap 20. To the lower end of the plunger is secured the movable shear-blade 21.

22 represents the stationary shear-blade, which is rigidly secured upon the bed 23.

24 is an adjustable gage.

It will be observed that, the shaft 9 being located upon an acute angle to the main shaft, the travel of the plunger and its attached shear-blade must be in a line at right angles to the axial center of the inclined shaft and at an acute angle to the horizontal stationary blade, and hence it must follow that boiler-plate, being held down upon the stationary shear, is cut upon a bevel.

The operation of machines of this character being so well understood by the skilled mechanic, it is not deemed necessary to enter into further description thereof.

What I claim as my invention is—

1. In a machine for the purpose described, and as a means for actuating the reciprocating shear-blade thereof, the inclined shaft 9, carrying cam 18, in combination with the double-flanged head 11, false head 12, collar 14, plunger 16, cam-yoke 17, and gag-block 19, as specified.

2. In a machine of the character described, the combination of the bed-frame 1, provided with a C-shaped head 2, the shaft 4, gear 5, plunger 6, inclined shaft 9, crown-wheel 10,

double-flanged head 11, false head 12, collar
14, plunger 16, cam-yoke 17, cam 18, gag-
block 19, movable shear-blade 21, and sta-
tionary shear-blade 22, the parts being con-
5 structed, arranged, and operating in the man-
ner and for the purpose described.

In testimony whereof I affix my signature,

in presence of two witnesses, this 5th day of
June, 1889.

JACOB KNIGHT.

Witnesses:

H. S. SPRAGUE,
GEO. A. GROOT.