A. VAN HAAGEN.

Improvement in Planing-Machines.

No. 128,190. Patented June 18, 1872.

FIG. 1.

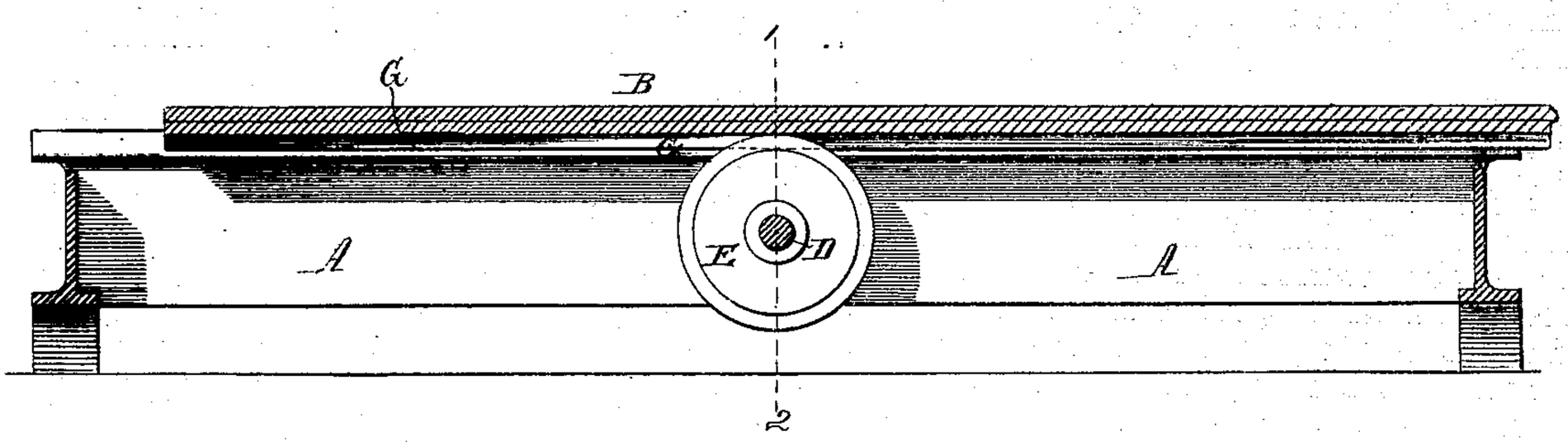


FIG. 2.

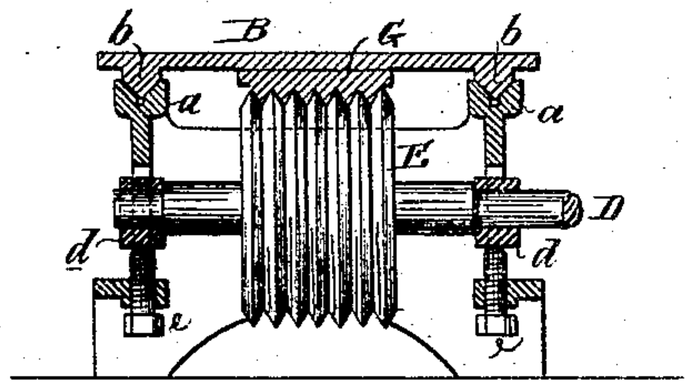
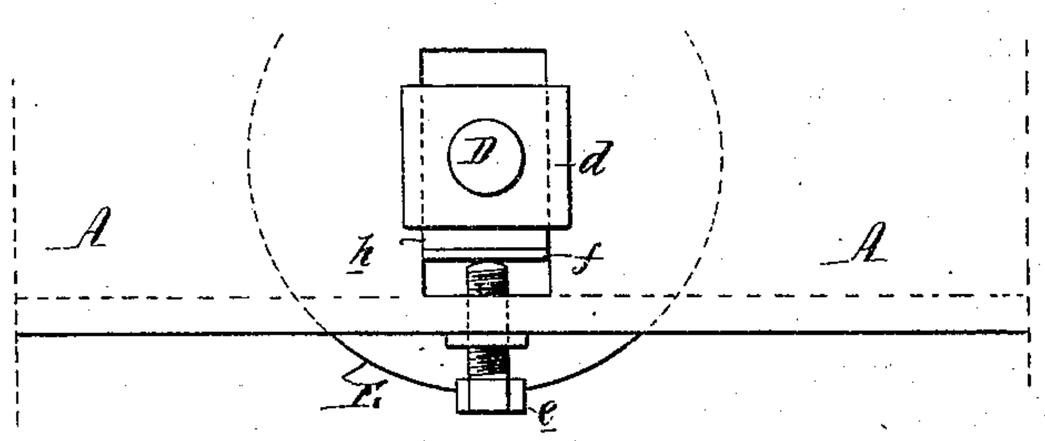


FIG. 3.



WITNESSES { Wm A. Vogel
Harry Smith

A. Van Haagen
by his Attys
Howson and Sons

128,190

UNITED STATES PATENT OFFICE.

ANTHONY VAN HAAGEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND CLAUS VAN HAAGEN, OF SAME PLACE.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. 128,190, dated June 18, 1872.

Specification describing an Improvement in Planing-Machines, invented by ANTHONY VAN HAAGEN, of Philadelphia, Pennsylvania.

Improvement in Planing-Machines.

My invention relates to mechanism for operating the reciprocating bed of a planing-machine; and consists of the combination, substantially as described hereafter, of a friction-wheel and a bar adapted to the same with the bed and base of a planing-machine, the object of my invention being simplicity in construction and a steady and determined movement of the bed.

In the drawing, Figure 1 is a vertical section of sufficient of a planing machine to illustrate my invention; Fig. 2, a transverse section on the line 1-2, Fig. 1; and Fig. 3, a side view of one of the bearings of the driving-shaft drawn to an enlarged scale.

The base A of the planing-machine is of the usual construction, and has at the top the well-known V-shaped grooves *a* for the reception of the correspondingly-shaped ribs *b* on the under side of the traversing-bed B. D is a shaft the journals of which are adapted to bearings or boxes *d* made vertically adjustable, to a limited extent, in openings in the base A, or in any suitable guides attached to the base, the vertical position of each bearing being determined, in the present instance, by a set-screw, *e*, as shown in Fig. 3. It is preferable for the bearings to be so arranged that they can yield to a very slight extent, and this end may be attained by placing between the bottom of each bearing and a plate, *f*, against which the adjusting-screw *e* bears, a thin strip, *h*, of rubber or other material possessing a slight elasticity. To the shaft D is secured the friction-wheel E, on the periphery of which are formed any desired number of annular V-shaped ribs, adapted to correspondingly-shaped grooves in a bar, G, which is secured to the under side of the bed B, and extends from end to end of the same, or nearly so.

After many tests I have found that this rotating friction-wheel will operate the bed with as much certainty as an ordinary cog-wheel adapted to a rack beneath the bed, and that comparatively little pressure of the ribs of the wheel in the grooves of the bar is required for insuring a proper action of the wheel.

A prominent advantage of my invention is the steady continuous movement imparted to the bed—a movement which insures smooth and uniform planing, and which cannot be obtained by the ordinary cog-wheel and rack. The movement of the bed is, in fact, as decided and uniform as that obtained by the screw sometimes used for operating the beds of planing-machines. The friction-wheel, however, is not so costly nor so liable to wear as the screw and its nut. In fact, the friction-wheel improves in its action after being in use for some time.

It will be understood that the motion of the shaft D and its friction-wheel must be reversed in order to impart the desired reciprocating motion to the bed; but it has not been deemed necessary to illustrate or describe either the driving-gear or reversing mechanism, as devices used for this purpose in other planing-machines may be employed in the present instance.

I claim as my invention—

The combination, substantially as described, of the friction-wheel E and bar G, adapted to the same, with the base and bed of a planing-machine.

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

ANTHONY VAN HAAGEN.

Witnesses:

WM. A. STEEL,

HARRY SMITH.