E. J. RAVERTY.

OPEN SIDE PLANER.

APPLICATION FILED FEB. 6, 1911.

1,128,187. Patented Feb. 9, 1915.

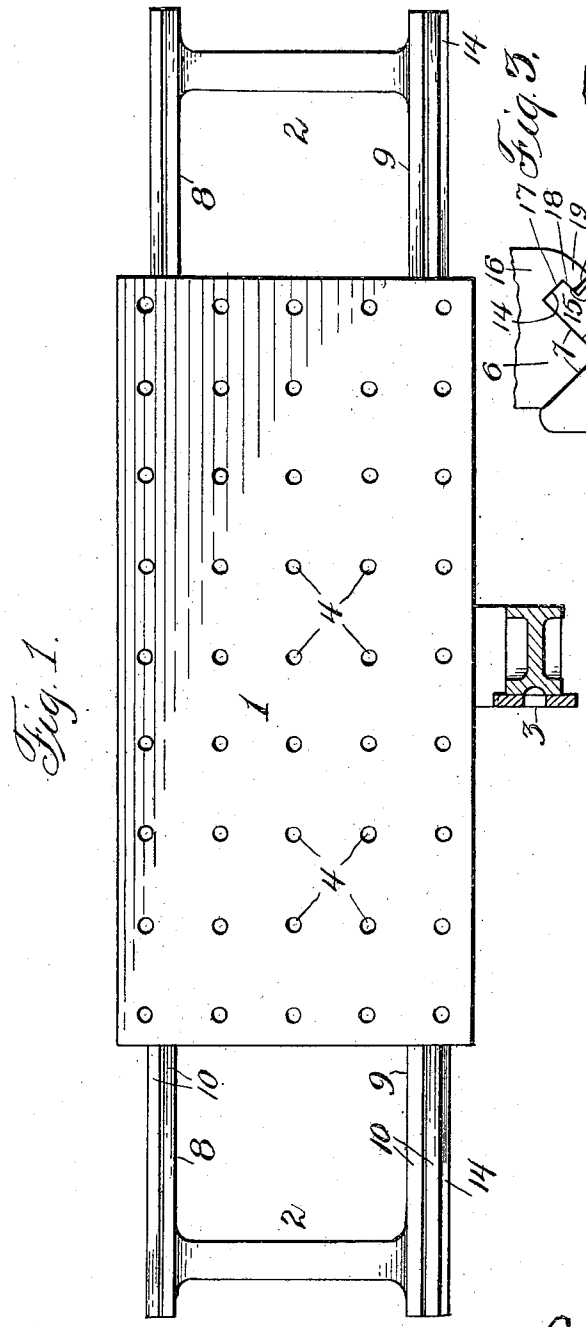


Fig. 1.

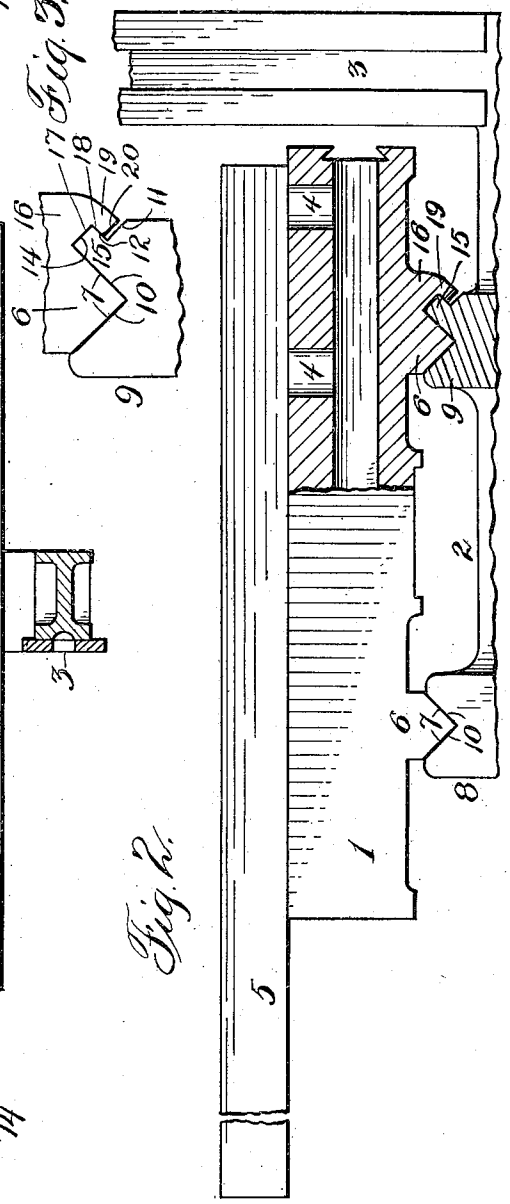


Fig. 2.

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD J. RAVERTY, OF NEW ALBANY, INDIANA, ASSIGNOR TO THE NEW ALBANY MANUFACTURING COMPANY, OF NEW ALBANY, INDIANA, A CORPORATION OF INDIANA.

OPEN-SIDE PLANER.

1,128,187. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed February 6, 1911. Serial No. 606,824.

To all whom it may concern:

Be it known that I, EDWARD J. RAVERTY, a citizen of the United States, residing at New Albany, in the county of Floyd and State of Indiana, have invented new and useful Improvements in Open-Side Planers, of which the following is a specification.

This invention relates to certain new and useful improvements in platens for planing machines, of which the following is a full, clear and exact description.

More particularly, the invention relates to platens for stone, metal and other planing machines, of the type commonly known in the art as open-side planers.

The object of the invention is to construct the bed and platen ways in such manner that the platen will not only be prevented from having a side movement due to the pressure of the tool, but will be prevented from lifting or tilting when overloaded on its open side, as from overhanging work.

Reference will be had to the accompanying drawing forming a part of this specification and wherein like numerals of reference designate corresponding parts throughout the several views, in which:

Figure 1, is a top plan view of the platen and bed of a planing machine, parts being broken away in section, Fig. 2, is an enlarged end view in elevation thereof, and showing parts broken away in section, and Fig. 3, is an enlarged detail view in elevation.

Reference numeral 1 designates the platen, 2 the bed, and 3 the superstructure of a planing machine. The platen is provided at intervals in its upper surface with holes 4, which are adapted to receive work securing devices, (not shown,) the work being indicated by numeral 5, and illustrated only in Fig. 2. On the under face of the platen, are provided parallel guide-ribs 6 having oppositely inclined faces 7, and in the upper faces of the parallel tracks 8 and 9, which tracks form a part of the bed 2, are provided guide-ways or grooves having similarly inclined faces 10. The inclined face portions 7 of the guide ribs are received in the grooves or ways and slidingly engage the said inclined faces 10 thereof.

It often happens, when work is being planed or operated upon under great lateral pressure from the tool, particularly in open-side planers, that the platen has a tendency to also move laterally due to such tool pressure causing the said inclined faces 7 to ride up on the inclined faces 10. It also happens, when the platen is overloaded on one side, particularly in open-side planers where the work often overhangs the outer or open side of the platen, that the inner side of the platen will have a tendency to raise; *i. e.*, the overhanging work will have a tendency to cause the platen to rock on track 8, thereby causing the other or inner end to lift and the inner rib 6 to leave the trackway 9. To prevent these undesirable movements of the platen, the inner track 9, which is on the closed side of the planer, is provided in its side wall or face with a longitudinal substantially V-shaped groove comprising inclined faces 11 and 12, the face 12 being substantially parallel with one of the inclined faces 10 of the track ways. The terminals of the said one face 10 and the face 12 are connected by an outer face 14 which extends at right angles to both of said faces, thereby providing an angularly disposed lateral rib or flange 15.

On the under face of the platen and on the inner side of the inner guide rib 6, is provided a depending flange 16, which is longitudinally grooved to provide oppositely inclined faces 17 and 18 and an angularly or laterally disposed flange or rib 19, which latter terminates in an inclined face 20. The faces 12 and 14 are fitted on the faces 18 and 17 respectively, and the faces 11 and 20, which are parallel, are slightly spaced from each other. Obviously, the arrangement described and illustrated could be reversed, whereby the ribs 6 and 16 instead of being on the platen would be on the inner track 9, and the track groove and rib 15 on the platen.

In operation, should the outer side of the platen be overloaded, as from overhanging work, the inner rib 6 cannot raise from the

groove or way of the track 9, as the face 18 of the rib or flange 19 engaging the face 12 of the rib 15 will arrest such movement. Should the tool pressure on the work be excessive, assuming, of course, that the tool is located on the closed side of the planer and is exerting pressure from that side, lateral movement of the platen toward the open side of the machine cannot take place owing to the faces 17 and 18 engaging the faces 14 and 12 respectively and thereby preventing the inclined faces 7 of the ribs 6 from riding up the inclined faces 10 of the tracks 8 and 9.

It will be noted that the track-ways are free from key-ways or grooves, and that such grooves as are involved, are so concealed as to prevent them from becoming receptacles for the deposit of dust, grit, etc., to the serious injury of the machine.

The invention is not restricted to any particular type of planing machine; nor is its location restricted to the closed side of the planing machine, as it may be applied to either or both sides of said ribs or tracks, or to either or both of said ribs or tracks.

Having fully described the invention, what is claimed as new and useful and desired to be secured by Letters Patent is:—

1. In an open-side planer, the combination of two relatively movable members respectively constituting a platen and a bed, one of said members having opposite the open side of the planer a longitudinally extending rib and a flange, said rib and flange being spaced apart, and the other of said members having spaced grooves which are disposed in surfaces thereof arranged at an angle to each other and respectively receive the rib and flange of the first mentioned member, said other member also having between its said grooves a part which is received by the space between the rib and flange of said first-mentioned member.

2. In an open-side planer, the combination of two relatively-movable members respectively constituting a platen and a bed, one of said members having opposite the open side of the planer an approximately V-shaped rib and a flange, the free end of said flange being spaced from said rib and having converging surfaces extending toward the same, the other of said members having surfaces arranged at an angle to each other and provided with approximately V-shaped grooves which respectively receive said rib and flange, the portion of the second-mentioned member arranged between its said grooves being received by the space between the rib and flange of the first-mentioned member.

3. In an open-side planer, a bed having at opposite sides of its upper surface longitudinally extending grooves of approximately V-form, the side of said bed opposite the open side of the planer having a groove of approximately V-form and the portion of the bed between the mouths of said grooves having a beveled surface from one groove to the other, combined with a platen having approximately V-shaped ribs which are slidably fitted to the first-mentioned grooves of the bed, the under surface of said platen having a depending flange the inner surface of whose free end is approximately V-shaped and is received by the groove in the side of the bed, said platen having between said flange and the adjacent rib a space whose inner wall is inclined from the base of the rib to said inner surface of the flange, said space receiving the portion of the bed between said grooves.

4. An open-side planer comprising a bed having at one side thereof a standard for supporting the superstructure of the planer, a platen slidably mounted upon said bed, and a flange carried by the platen and engaging beneath a portion of said bed at an angle other than a right angle upon that side of the bed adjacent said standard.

5. An open-side planer comprising a bed having a pair of spaced, grooved tracks and a superstructure supporting standard at one side of said bed, a platen comprising ribs disposed upon said grooved tracks, the outermost face of that track adjacent the standard having a groove formed therein, and a flange carried by the platen and engaging in said groove at an angle other than a right angle.

6. In an open-side planer, the combination of two relatively movable members respectively constituting a platen and a bed, said members having substantially V-shaped slidably engaging surfaces constituting cooperating guiding portions, one of said members also having a groove at the terminal of one of its said surfaces, said groove forming a projecting section, and the other member having a projection and a lateral groove, said projection and lateral groove respectively engaging the groove and projecting section of the first-mentioned member.

7. An open-side planer comprising a bed member, a platen member and a super-structure supporting standard at one side of the bed member, the platen and bed members having substantially V-shaped slidably engaged surfaces constituting coöperating guiding elements, one of said members having a substantially V-shaped groove at the terminal of one of its guiding surfaces, said groove forming a projecting section and said projecting section having a face which is outwardly inclined from the adjacent side of the groove, and the other member having a projection and a substantially V-shaped lateral groove, the said projection and lat-

eral groove respectively engaging the groove and projecting section of the first member, whereby interlocking flanges which engage each other at other than a right angle are formed, said interlocking flanges being disposed at the side opposite the open side of the planer.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD J. RAVERTY.

Witnesses:
CHAS. VAN DUSEN,
R. H. BAILEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."