J. B. SINDERSON.

SLIDEWAY CONSTRUCTION.

APPLICATION FILED SEPT. 9, 1913.

1,128,274. Patented Feb. 9, 1915.

Fig. 1.

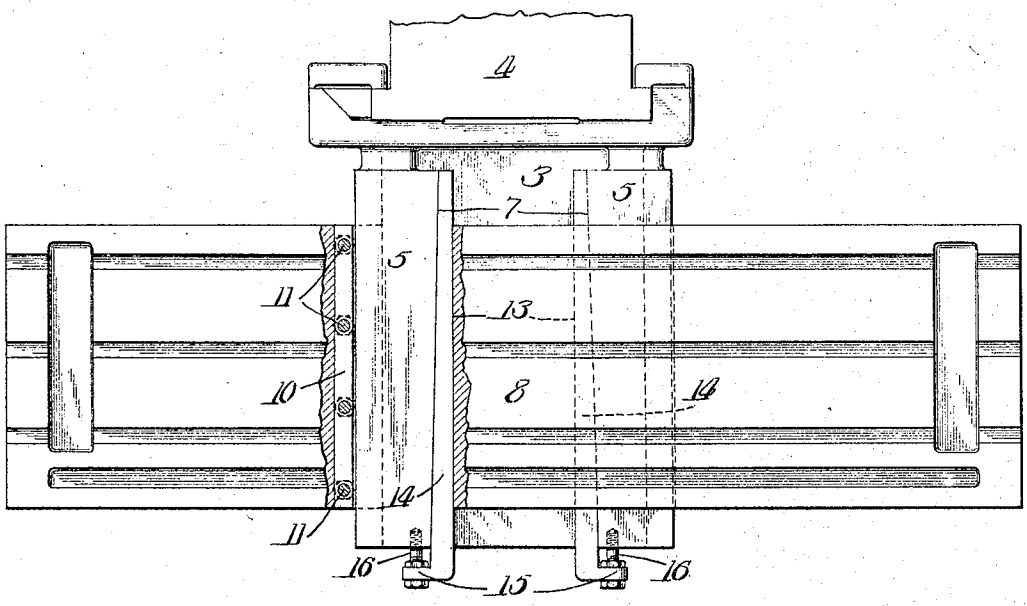
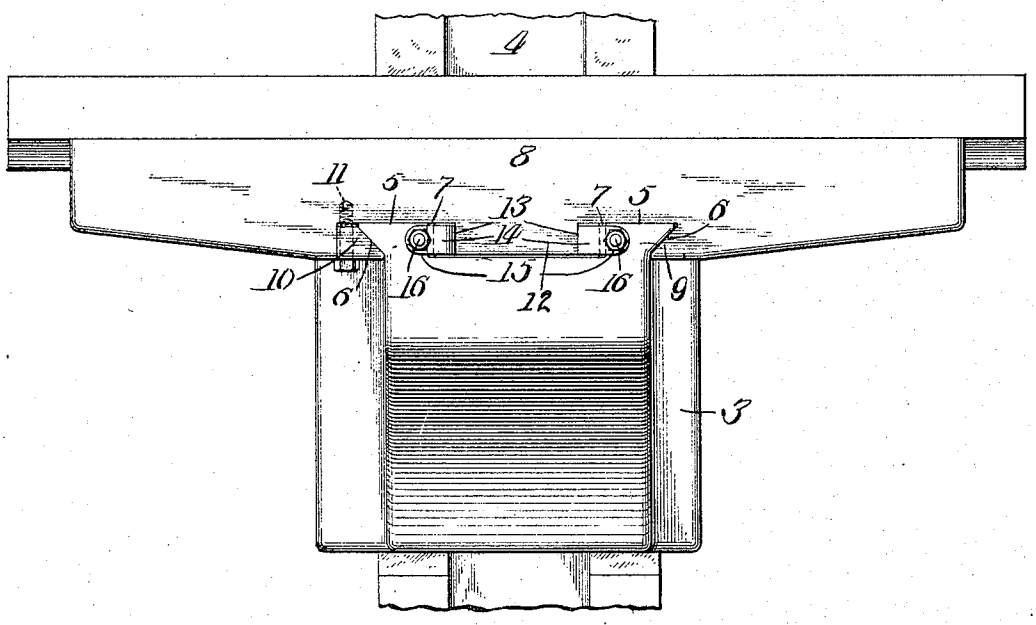


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN B. SINDERSON, OF ROCKFORD, ILLINOIS, ASSIGNOR TO THE INGERSOLL MILLING MACHINE COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

SLIDEWAY CONSTRUCTION.

1,128,274. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed September 9, 1913. Serial No. 788,866.

To all whom it may concern:

Be it known that I, JOHN B. SINDERSON, a citizen of the United States, residing at Rockford, in the county of Winnebago and the State of Illinois, have invented certain new and useful Improvements in Slideway Construction, of which the following is a specification.

This invention relates to the mounting of movable carriages or tables upon slideways such as are used variously in machine construction.

In machine construction slideways are generally formed integral with a base or bed member, have parallel bearing edges which are either straight or beveled, and mounted movable longitudinally upon the slideways is a carriage or work holding table which is held thereupon by gibs. In slideways where the parallel or beveled edges are close together the portion intermediate said edges will commonly be formed solid, that is, the bed member will extend at substantially the height of said edges, from one edge to the other. In this construction one or more adjustable gibs are used to take up wear between the carriage and slideways or to lock the two together. In this simple form of carriage and slideways the side gibs answer their purpose efficiently. But in cases where slideways are used where their parallel edges are spaced apart to any extent, the metal between them is cut away for structural purposes, or where each slideway is carried spaced apart upon individual leg members, then the application of side gibs to the outer edges of the slideways will exert a strain upon the slideways tending to force them together which results in their bearing faces being thrown out of true and thereby resulting in defective and inefficient bearing of the movable carriage upon the slideways.

It is the object of my invention to overcome this defective bearing feature and for the purpose I utilize in combination with an adjustable side gib, two longitudinally tapered gibs located intermediate the inner sides of said parallel edge members and the outer sides of a portion of the carriage disposed between said edge members, these two gibs being adjustable to take up wear and thus form a rigid carriage mounting adapted to resist lateral strains to the slideways.

In the accompanying drawings: Figure 1 is a plan view of a table mounted slidable upon a bed member, a portion thereof being broken away to show a tapered gib. Fig. 2 is a front elevational view of Fig. 1.

The slidable table as here illustrated is such as employed in work holding tables used with milling machines but it is obvious that this form of carriage mounting may be put to use in various machine construction.

A bed member 3 is mounted slidable vertically upon the frame member 4 and carries horizontally two parallel beveled edge slideways having straight surfaces 5 and beveled surfaces 6, the slideways being spaced apart raised from the bed member 3 and having inner vertical edges 7 tapered longitudinally. Mounted slidable upon said slideways is the table 8, said table having a depending beveled edge 9 engaging the beveled edge 6, and is held upon the slideway by the side beveled gib 10 which is held in position and is adjustable to take up wear by the bolts 11. The table has a ledge portion 12 depending intermediate the slideways, the ledge having parallel vertical faces 13. Longitudinally tapered gibs 14 are disposed between faces 7 and 13 and are each formed with an offset head 15 through which bolts 16 extend, these bolts being held fixed in the ends of the slideways and have nuts thereon adjacent each side of the heads 15.

It will be seen that by tightening up bolts 11 the gib 10 takes up any wear between the table and slideways, and where there is an intervening space between said slideways, that tightening of said gib together with lateral thrust, would result in a tensional strain upon the slideways to throw them out of a true working contact with the table. By means of the depending ledge portion of the table and the beveled gibs, these gibs may be adjusted to take up all wear at the sides of said ledge and to maintain rigid bearing faces for the table, such as will give a very substantial support to the table and will obviate lateral strains tending to impinge the bearing faces thereof.

I claim as my invention:

1. The combination of two slideways spaced apart having longitudinal parallel and tapered faces, a member mounted slidable upon the slideways, and longitudinally

tapered gibs having their tapered faces in contact with the tapered faces of the slideways and having bearing contact with said slidable member.

2. A slideway construction comprising two slideways spaced apart with their outer edges parallel and their inner edges longitudinally tapered, the outer edges forming ways upon which a member is adapted to slide and the inner edges forming adjustment faces with which longitudinally tapered gibs are adapted to contact to take up wear between the slideways and slidable member.

3. A slideway construction comprising two slideways spaced apart with their outer edges parallel and beveled and their inner edges longitudinally tapered, the outer edges forming ways upon which a member is adapted to slide and to be held from transverse displacement, and the inner edges forming adjustment faces with which longitudinally tapered gibs are adapted to contact to take up wear between the slideways and slidable member.

4. The combination of two slideways spaced apart having parallel outer edges and longitudinally tapered inner edges, a member mounted slidable upon the slideways and having a parallel edged portion disposed between said spaced slideways, and two longitudinally tapered gibs disposed intermediate the inner sides of the slideways and the edges of said parallel edged portion, the gibs adapted to be adjusted longitudinally to take up wear between the slideways and slidable member.

5. The combination of two slideways spaced apart having parallel outer edges and one of their inner edges being tapered longitudinally, a member slidable upon the slideways and having a portion disposed between said spaced slideways, a gib located between one of said parallel outer edges and the slideway member, and a longitudinally tapered gib located between said tapered edge of a slideway and an edge of said portion disposed between the slideways.

6. The combination of two slideways spaced apart, a member mounted slidable upon the slideways, an adjustable gib disposed between an outer edge of a slideway and said member to take up wear between said slideway and member, and means disposed intermediate said spaced slideways and coöperating with the slidable member for maintaining said slideways in a fixed relation relatively to adjustments of said gib.

7. The combination of two slideways spaced apart, a member mounted slidable upon the slideways, an adjustable gib disposed between an outer edge of a slideway and said member to take up wear between said slideway and member, and means including a beveled gib disposed intermediate said spaced slideways, coöperating with the slidable member and adapted to maintain said slideways in a fixed relation relatively to adjustments of said gib.

8. In a slideway construction, the combination of a bed member having a slideway formed with longitudinal faces one of which is non-parallel with the slideway, a table member slidably mounted upon the slideway and having parallel bearing faces, and a member having two non-parallel faces and mounted intermediate said non-parallel slideway face and a table member bearing face, forming bearing for the latter.

9. In a slideway construction, the combination of a bed member having a slideway, a table member slidably mounted thereon, and a member included in the bearing of said members, being tapered longitudinally laterally of the slideway and movable longitudinally to take up lateral play between said members.

10. In a slideway construction, the combination of a slideway, a table member slidably mounted thereon, and a member included in the slideway bearing and being tapered longitudinally laterally thereof and movable longitudinally to take up lateral play between the members, and means for maintaining said tapered member in a set position and for adjusting the same longitudinally to different set positions.

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

JOHN B. SINDERSON.

Witnesses:
E. D. E. N. Behel,
John F. McCanna, Jr.