

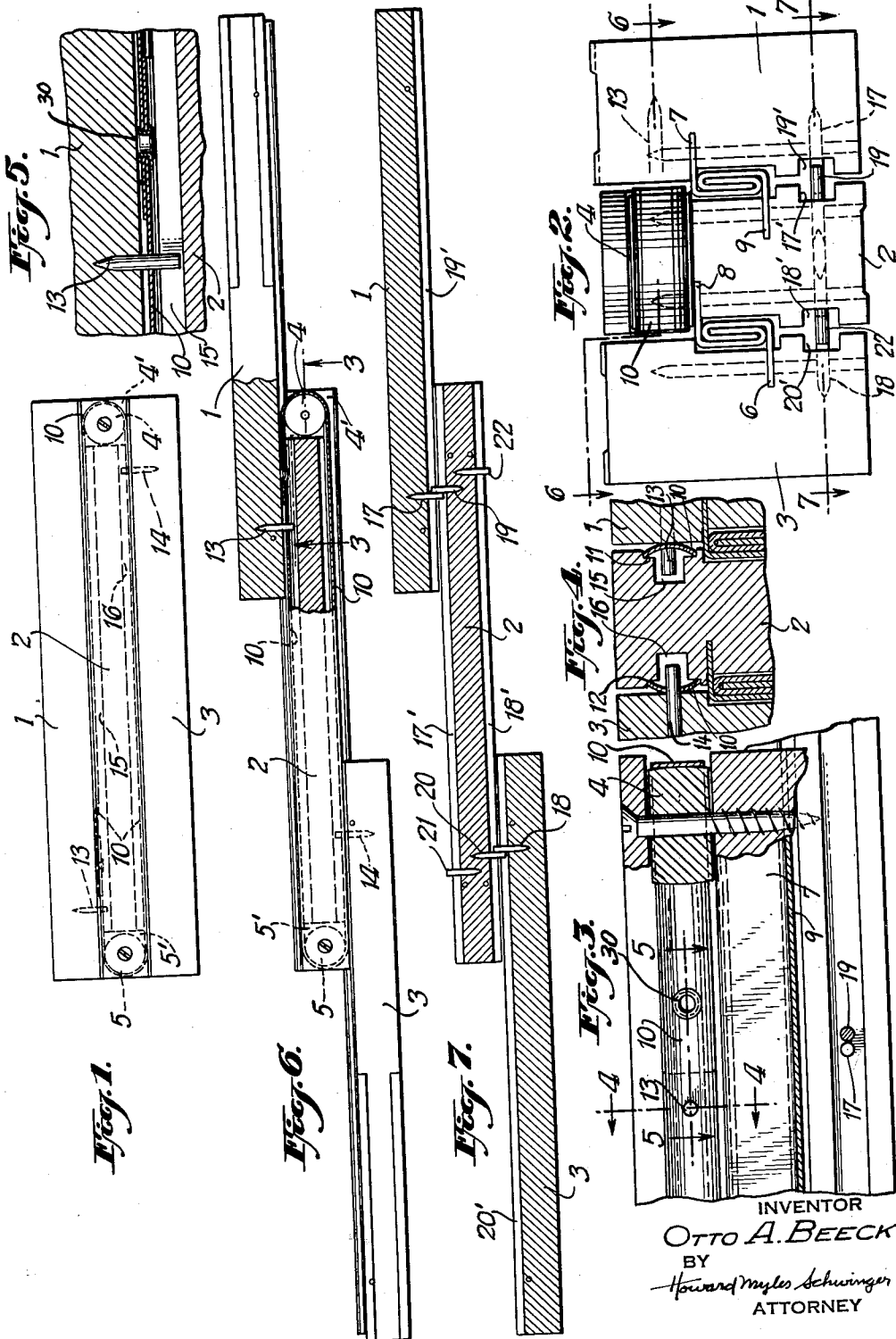
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BAND CONTROLLED EXTENSION SLIDE

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## BAND CONTROLLED EXTENSION SLIDE

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1 Claim. (Cl. 308-3.8)

This invention relates generally to extension slides with particular reference to an extension slide which permits of the simultaneous control of the top sections of an extension table so that said sections can be simultaneously opened and closed and otherwise controlled from either end of the table.

This application is a continuation-in-part of United States patent application Serial Number 825,273 filed July 6, 1959, now abandoned.

Although the advantages of an extension table wherein the permanent table top sections are coordinated to move simultaneously are readily apparent, the slides heretofore proposed to effectuate this have not been satisfactory.

When gearing is incorporated in the slide, a rack and pinion for example, the effective length of the slide is reduced by half for all practical purposes. Moreover, with gearing, be it rack and pinion, chain and sprocket and the like, the fine feel of custom wooden furniture is lost. Additionally, gearing presents an unsatisfactory cost picture.

Although a belt and pulley arrangement for obtaining the desired simultaneous control would seem superior to the use of gearing in several important respects, here too existing proposals have been seriously deficient, particularly in the choice of the belt and the arrangement and structure of the component parts of such a system.

It is therefore amongst the primary objects of the present invention to provide a novel belt arrangement in an extension slide by means of which improved results are obtained.

It is another important object of the present invention to provide a simple, highly efficient and smooth operating slide which permits of the simultaneous control of, for example, the movable table top sections of an extension table.

It is yet another important object of the present invention to provide an improved table slide of the above class which retains the traditional feel of a fine wooden extension table by the elimination of gearing, sprockets, chains and the like.

How these and other objects are accomplished and new results are obtained, will be apparent from what is described in the following specification, particularly pointed out in the claim, and illustrated in the accompanying drawing wherein:

FIG. 1 is a top view of an extension slide in accordance with the present invention, in retracted position,

FIG. 2 is an end view of the slide of FIG. 1,

FIG. 3 is a longitudinal sectional view taken on line 3-3 of FIG. 6, in the direction of the arrows,

FIG. 4 is a transverse sectional view of the upper portion of the slide taken on line 4-4 of FIG. 3, in the direction of the arrows,

FIG. 5 is a sectional view of a portion of the slide taken on line 5-5 of FIG. 3,

FIG. 6 is a top view of the projected slide, partly in section, taken on line 6-6 of FIG. 2, and

FIG. 7 is a longitudinal sectional view of the projected slide taken on line 7-7 of FIG. 2, in the direction of the arrows.

In the drawing wherein a preferred embodiment of the invention is shown, numerals 1 to 3 designate three juxtapositioned wooden beams forming a slide for use with a table that has two permanent top sections, one of which is attached to slide member 1 and the other to slide member 3, the table in question having one or more supplemental top sections adapted to be laid between the per-

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manent sections when the slide is partly or fully extended. The table and its top sections are not illustrated since it does not form a part of the present invention, being mentioned by way of example rather than limitation.

Slide members 1 and 3 are slidably connected to center member 2 by pairs of interlaced guide rails numbered 6, 8 and 7, 9, in the manner which I have disclosed in United States Letters Patent Number 2,683,068. The invention, of course, may be applied to slides which are slidably connected in a different manner and is not restricted merely to three beam slides. In fact, the present invention may be applicable whenever it is desired to have simultaneous control of any two longitudinally related, projectable and retractable members which cooperate to achieve a unitary result.

As has been heretofore stated, it is of advantage to have lateral members 1 and 3 simultaneously controlled and coordinated if this can be accomplished without any impairment in the operation of the slide.

This is accomplished, in accordance with one form of the invention, by longitudinally mounting a band of metallic tape 10 of tempered steel about center member 2, which is longitudinally grooved, as at 15 and 16, to receive the same, and thereafter linking member 1 and 3 to said band to thereby interconnect and coordinate the lateral members. The tension on band 10, when mounted on member 2 as aforesaid, is such that the band may be freely moved around member 2 and yet reliably maintained in position thereon.

Pulleys or roller bodies 4 and 5 are rotatably mounted at the ends of center beam 2 to reduce resistance against the movement of the band. The pulleys may be positioned above or below the aforementioned guide rails. Suitable recesses 4' and 5' are provided at the ends of beam 2 to house the pulleys.

As will be realized, the metallic band is of sufficient flexibility to be readily looped around the roller. The tape material from which the band is made presents a curved cross-sectional profile, which shape is retained after the band is mounted on the slide as may be seen in FIG. 4. By using such a tape, undesired buckling of the band during the operation of the slide is avoided.

The band bearing surfaces of the pulleys, as may be seen in the drawing, are convexed. It has been found that the convexing of the pulleys insures that the metallic band will reliably stay in position thereon. It will be noted that the normally curved metallic band flattens out as it passes around the pulleys and over their convexed bearing surfaces.

Lateral beams 1 and 3 are operatively interconnected with band 10 as follows: Pins 13 and 14, anchored in beams 1 and 3, respectively, each extend through an aperture formed in the band, and further extend, respectively, into grooves 15 and 16 which run along the sides of the center member, as aforesaid. If slide member 1 is pulled to the right into the extended position shown in FIG. 6, band 10 is moved clockwise by pin 13 and pushes pin 14. Consequently slide member 3 is pushed to the left. It will be noted that the walls of grooves 15 and 16 are recessed at 11 and 12 to accommodate the curve of the tape, as shown in FIG. 4.

In accordance with the present invention, the slide is provided with stops to limit the movement of its lateral components in either direction. In the embodiment shown in the drawing this is carried out by six relatively sturdy, longitudinally aligned pins which extend from the slide members into the interspace therebetween and beyond. Longitudinal grooves 17' and 19', 18' and 20' are provided in the faces of the slide members which form the interspaces into which the aforementioned pins extend so that the pins, by riding in said grooves, will not interfere with the operation of the slide.

Pins 17 and 18 ride with lateral members 1 and 3 respectively and are rearwardly positioned thereon. On one side of the central slide, pin 17 is free to travel between pins 19 and 21, located at opposite ends thereof, while correspondingly, on the other side of the central slide, pin 18 is free to travel between pins 20 and 22, also located at opposite ends of the central slide.

Bands in accordance with the present invention are made from strips of the above described metallic tape. An individual band is formed by joining together the ends of a strip by spot welding, riveting as shown at 30 in FIG. 5, or by other suitable means.

Although the invention has been quite thoroughly described, it should be understood that it is not confined to the particular form or use herein shown, the same being merely illustrative, and that the invention may be carried out in other ways without departing from the spirit thereof, and therefore, the right is broadly claimed to employ all equivalent instrumentalities coming within the scope of the appended claim and by means of which the objects of the invention are attained and new results are accomplished, as it should be obvious that the particular embodiment herein shown and described is only one of the many that can be employed to attain these objects and accomplish these results.

What is claimed as new and desired to be secured by Letters Patent is:

A slide comprising a central support member, slide

components slidably affixed to opposite sides of said central member for movement longitudinally thereof, a roller body mounted at each end of said center member, a flexible metallic band mounted on said rollers for movement around said center member, the band bearing surfaces of said roller bodies being of convex configuration, said metallic band being arcuate between said rollers and maintained substantially flat thereupon, each slide component being interconnected with said band by a pin extended from said slide component through an aperture in said band whereby said slide components are coordinated for simultaneous extension and retraction.

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