

G. MELDAU.
 SLIDING DOOR MOUNTING.
 APPLICATION FILED MAY 21, 1913.

1,069,277.

Patented Aug. 5, 1913.

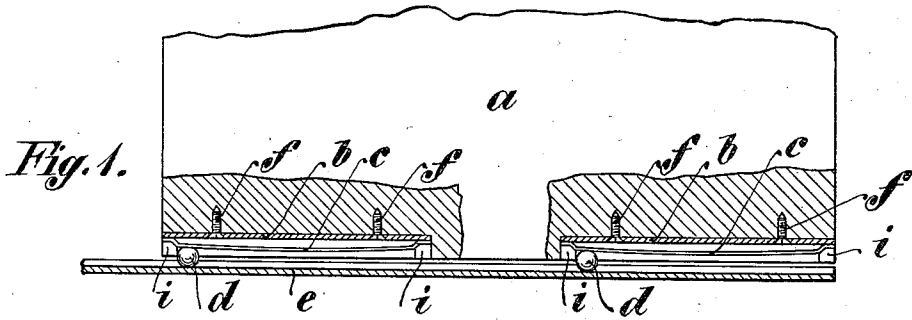


Fig. 2.

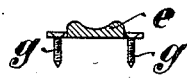


Fig. 3.



Fig. 4.

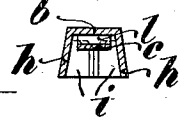


Fig. 5.

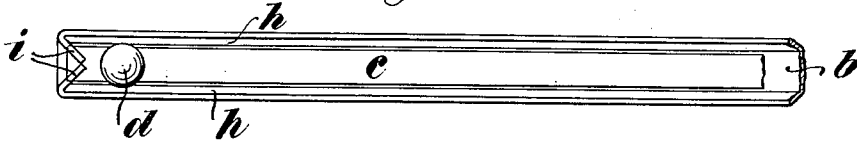
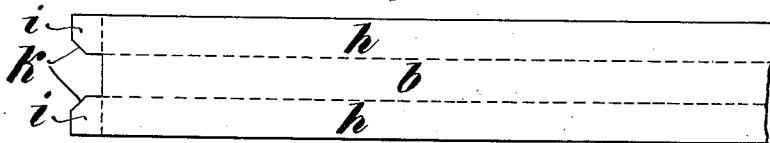


Fig. 6.



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UNITED STATES PATENT OFFICE.

GUSTAV MELDAU, OF COLOGNE, GERMANY.

SLIDING-DOOR MOUNTING.

1,069,277.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GUSTAV MELDAU, a subject of the King of Prussia, and residing at Cologne-on-the-Rhine, in the Province of the Rhine, Kingdom of Prussia, German Empire, have invented a certain new and useful Sliding-Door Mounting, of which the following is a specification.

The invention relates to mountings for sliding doors and the like and makes use of a device in the lower edge of the door, comprising channels opening downward and which are about one fourth of the length of the movement of the door. These channels are adapted to receive a bearing ball upon which the door is to run. The invention also uses the arrangement of a leaf spring mounted in each of the channels serving to operate on the bearing ball from above as a brake.

The accompanying drawings show an example of construction according to the invention.

Figure 1 is a view on a small scale partly in vertical section of the lower edge of a door formed according to this invention. Fig. 2 is a cross section of the rail upon which the bearing balls run. Figs. 3 and 4 are longitudinal and cross section respectively of the bearing arrangement on a large scale. Fig. 5 is a view of the device from below, while Fig. 6 illustrates diagrammatically the formation of the bearing channel in the construction illustrated.

In the lower edge of the door *a*, the two ball channels *b* which are open at their lower sides are inserted and fixed by screws. A spring *c* is mounted along the whole length of each channel *b* and is only supported at its two ends. When the door is pushed sidewise the ball *d* runs to and fro in the channel *b* under the spring *c* upon the grooved rail *e* fixed to the floor underneath the door. The channels are fixed to the wood of the door by screws *f* and the grooved rails *e* are fastened to the bottom by screws *g*.

The ball channels *b* are trapezoidal in cross section so that their side walls *h* slope away from their tops *b* and thus diverge toward the open lower sides. The space between the two walls at the top of the channel is so designed that the greatest horizontal diameter of the ball *d* is within the channel so that the ball is guided in the chan-

nel on the inside of the sloping walls *h* close to the lower longitudinal edges thereof and is thus prevented from escaping. The spring *c* within the channel presses elastically downward upon the ball along the whole of its path and therefore the ball cannot grind between the two walls nor stick fast, but instead runs freely and easily.

The spring must be mounted at its ends so that it is free and elastic at all points at which the ball presses against it. For that reason, the ends of the spring extend slightly farther outward beyond the projections for limiting the path of the ball. The projections must therefore be arranged a little inside the ends of the channel; the projections can obviously be made as desired, for example, they may be small pins driven in or screwed into the top or side walls of the channels or they may be formed as projections or tongues bent or pressed inward from the walls. The end of the spring suitably shaped for example bent over can be simply inserted under such a tongue on the top of the channel or under a projecting pin standing out in the channel.

In the drawing a special simple arrangement is illustrated. Fig. 6 shows a blank of a channel made from sheet iron. The walls *h* are formed by bending up the side strips along the dotted lines. The ends of this blank are stamped out to form two ears *i*, with sloping corners *k*, on the inward edges of the ears, as is shown in Fig. 6. The ears *i* are folded up along the cross dotted lines of Fig. 6, and also bent slightly inward, as shown in Figs. 3 and 5. The opposing blunt ends of the ears form an angle projecting from the end into the channel, against the point of which, serving as a stop, the ball *d* strikes.

The sloping corners of the ears being bent into the channel leave a space of suitable breadth and height, into which the bent end *l*, of the spring *c* may be inserted, between the projections *i*, and the top of the channel, as seen in Fig. 3.

Having now described my invention, what I claim and desire to secure by Letters Patent, is—

A sliding door mounting comprising a recess extending upward from the lower edge of the door, a channel with side walls diverging downwardly in said recess, a bearing ball in said channel, ears on said chan-

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nel forming ball stops, a downwardly curved
leaf spring extending lengthwise of said
channel and in the upper part thereof to
control the movement of the ball, and means
5 to secure the ends of said spring at the ends
of said channels.

In testimony, whereof I have signed my

name to, this specification in the presence of
two subscribing witnesses.

GUSTAV MELDAU.

Witnesses:

LOUIS VANDORY,
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