

(No Model.)

# J. STRACHAN. HINGE.

No. 375,394.

Patented Dec. 27, 1887.

Fig. 1, 4

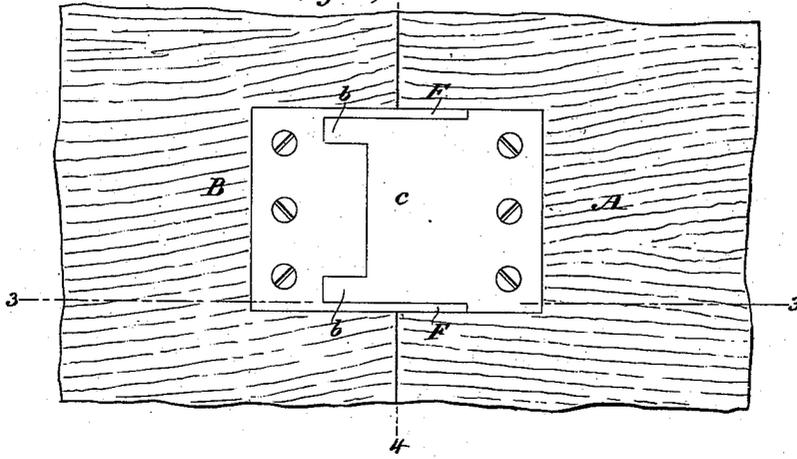


Fig. 2,

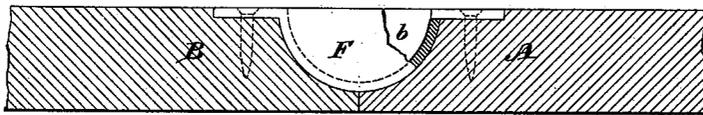


Fig. 3,

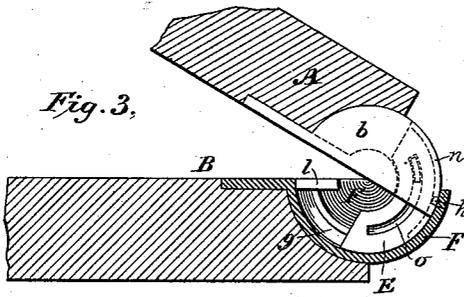


Fig. 4,

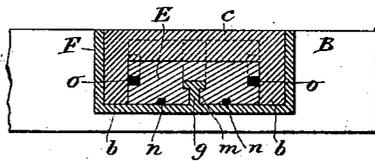


Fig. 5,

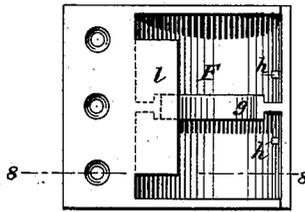


Fig. 6,

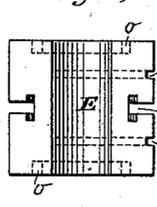


Fig. 7,

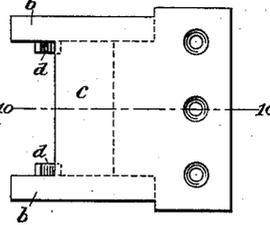


Fig. 8,



Fig. 9,

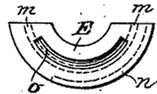
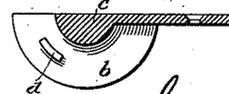


Fig. 10,



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH STRACHAN, OF BROOKLYN, NEW YORK.

## HINGE.

SPECIFICATION forming part of Letters Patent No. 375,394, dated December 27, 1887.

Application filed June 18, 1887. Serial No. 241,731. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH STRACHAN, a citizen of the United States, residing in Brooklyn, county of Kings, State of New York, have invented a new and useful Improvement in Hinges; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is to provide a flush hinge in which there will be no projecting parts above the lid or hinged portion when it is closed and in which the parts of the hinge will move easily upon one another and not be liable to get out of order.

My invention is shown in the accompanying drawings, in which Figure 1 is a top view of my hinge. Fig. 2 is a side view with a part broken away. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 1, showing the hinge nearly open. Fig. 4 is a vertical sectional view on the line 4 4 of Fig. 1. Figs. 5, 6, 7, 8, 9, and 10 are detail views of the various parts of the hinge, Figs. 8 and 10 being sectional views on the lines 8 8 and 10 10 of Figs. 5 and 7, respectively.

Referring to the drawings, A is the part of the hinge to be fastened to the lid or object which is to be mounted on the hinge.

B is the part of the hinge connected with the fixed part to which the hinge is attached. Fastened to the under side of the part B is a semicircular box, F, adapted to receive the movable parts of the hinge. Inside of the box is placed the track *g*, which I prefer to construct of a central upright member with two flanges at its top. Attached to the under side of the part A are the slides *b b*, which I prefer to make semicircular, in the manner shown. Between these slides, *b b* I prefer to have a connecting portion, *c*, also semicircular in shape, for the purposes hereinafter mentioned.

E is the connecting-slide by means of which the parts A and B are held together in operative position. This connecting-slide E is provided with a groove, *m*, to receive the track *g* and enable the connecting-slide to move upon the track. The connecting-slide is so shaped or curved that it will move freely and easily

in the box F on the track *g*. This connecting-slide is also provided with slots *n n*, which do not extend the entire length of the slide. Stop-pins *h h*, fastened to the box F, project into these slots *n n*, so that the connecting-slide is prevented from being drawn out of the box F. The slides *b b* are connected with the connecting-slide E by means of the dentals *d d*, fixed in the slides *b b*, and the slots *o o*, in which the dentals *d d* work. The slots *o o* do not extend the entire length of the connecting-slide. From the fixed part B a projecting portion, *l*, extends over the end of the track *g*, in order to prevent the connecting-slide E from being drawn out of the box F at that end. The projecting portion *l* fills up a recess in the adjoining end of the part A, which recess is necessary to permit the connecting-slide E to pass the end of the part A when the hinge is opened.

In operating the hinge, when the lid is raised the slides *b b* are moved in the box F and are controlled in their motion by the dentals *d d*, which move in the grooves *o o*. When the part A has been raised and the slides *b b* moved some distance, the dentals *d d* will strike against the ends of the slots *o o*, and the connecting-slide E will then be moved on the track *g* until the part A is turned entirely back and rests flatly on top of the part B, as shown approximately in Fig. 3. In reversing the motion of the hinge the part A is raised from its position on the part B, causing the connecting-slide E to move back on the track *g*. When the inner end of the connecting-slide E strikes the projecting portion or arm *l*, its motion is arrested, and the slides *b b* then move on the connecting-slide by means of the dentals *d d* and slots *o o* until the lid is closed. The stop-pins *h h*, projecting into the slots *n n*, prevent the connecting-slide E from being drawn out of the box F.

I prefer to connect the slides *b b* with the circular portion *c*, as this enables the slides *b b* to move more easily and smoothly on the connecting-slide E.

Thus when my hinge is closed the parts A and B are flush with each other and have no projection from their upper surface. When the hinge is opened, the lid or part A will rest flatly and evenly on top of the part B.

The operation of my hinge is simple. It is

not liable to get out of order, as its working parts are protected by the box F, and it is inexpensive.

5 What I claim as new, and desire to secure by Letters Patent, is—

10 1. A flush hinge, substantially as shown and described, consisting of an outer semicircular box attached to the fixed object and projecting therefrom, a connecting-slide shaped to fit the interior of the box and adapted to move upon its inner surface, and a semicircular slide attached to the lid, shaped to fit the interior of the connecting-slide, and adapted to move upon its inner surface, and dentals for holding said parts together and limiting their motion.

15 2. A hinge, substantially as shown and described, consisting of the circular slide connected with the lid or object to be hinged, the

circular connecting-slide provided with a series of grooves, the dentals projecting from the first slide and working in grooves in the second slide, the fixed circular box in which the slides move, and the track and the top pins attached to said box and projecting into grooves in the second slide, so as to hold it in its position and limit its motion.

3. A hinge consisting of the part A, the slides *b*, the dentals *d*, the connecting grooved slide E, the box F, the track *g*, the stop-pins *h*, the fixed part B, and the projecting portion *l*, substantially as shown and described.

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Witnesses:

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