F. M. SWARTZ.

PIN.

APPLICATION FILED APR. 11, 1908.

915,901.

Patented Mar. 23, 1909.

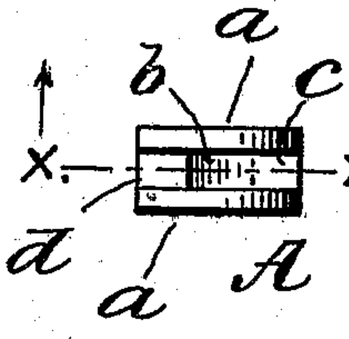

FIG. 1.

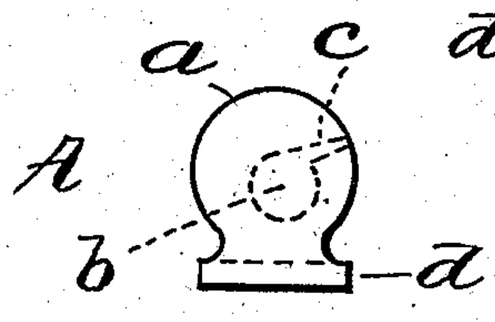

FIG. 2.

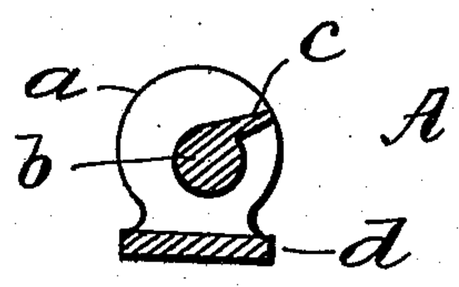

FIG. 4.

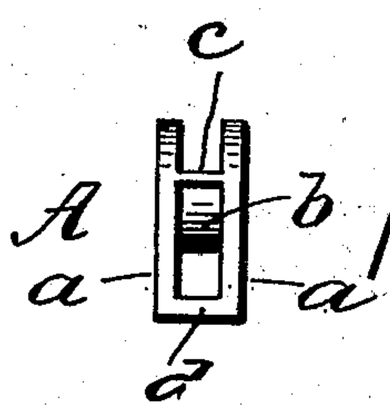

FIG. 3.

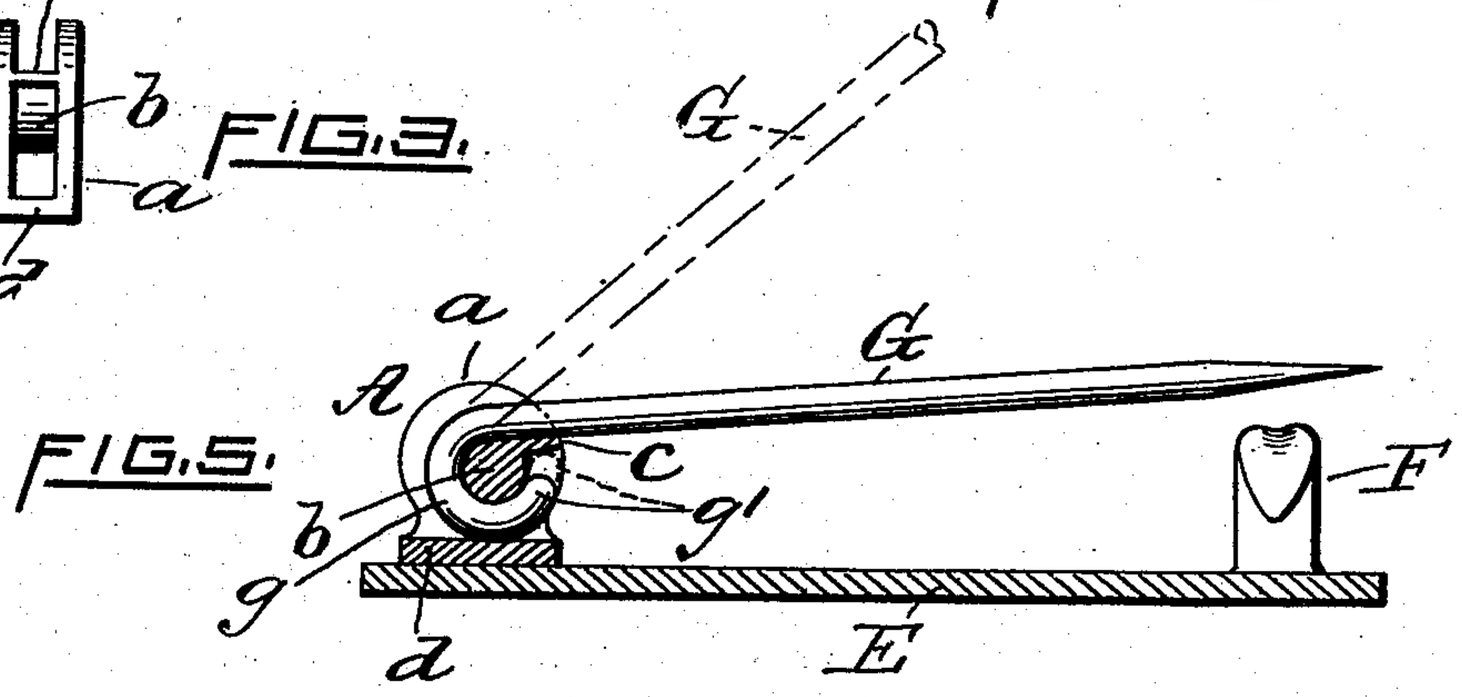

FIG. 5.

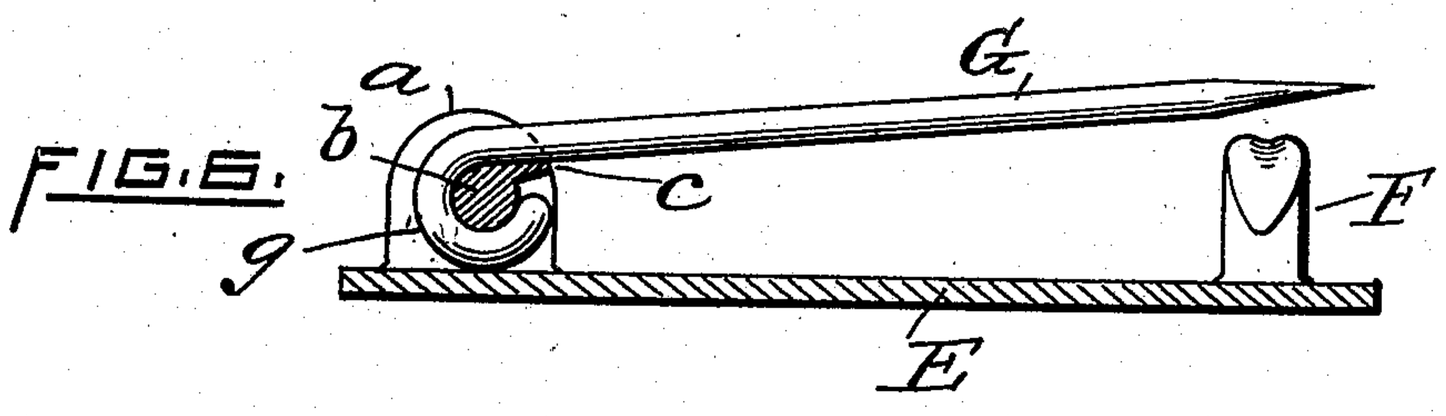

FIG. 6.

WITNESSES.

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UNITED STATES PATENT OFFICE.

FRED M. SWARTZ, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE ALPHA JEWELRY COMPANY, A CORPORATION OF RHODE ISLAND.

PIN.

No. 915,901. Specification of Letters Patent. Patented March 23, 1909.

Application filed April 11, 1908. Serial No. 426,446.

To all whom it may concern:

Be it known that I, FRED M. SWARTZ, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Pins, of which the following is a specification.

My invention relates to improvements in pins, particularly to the joint portions thereof, and has for its essential objects, strength, durability, simplicity, a minimum of parts, inexpensiveness of construction, facility of assemblage and operation, control of the tongue travel, and rigidity of the pivot member.

To the above ends essentially my invention consists in the novel construction and combination of parts hereinafter described and illustrated in the accompanying drawings, which constitute a part of this specification, wherein,

Figures 1, 2 and 3, are plan, side, and front elevations respectively of the joint member. Fig. 4, a section on line *x x* of Fig. 1. Fig. 5, a side elevation of a complete pin, showing the joint in longitudinal section, and indicating in broken lines the pin tongue in extreme open position, and Fig. 6, a like elevation of the pin showing in section the modified form of joint.

Like reference characters indicate like parts throughout the views.

My novel joint, A, comprises two vertically disposed parallel guide plates, *a*, connected at their intermediate portions by a cross bar, *b*, preferably integral with one or both plates to insure against accidental axial movement of the bar. In this instance, the bar is substantially cylindrical. Extending forwardly from the front side or portion of the bar, *b*, intermediate the plates, is a projection, *c*, slightly inclined upwardly. The lower ends of the plates, *a*, are connected by a base or integral base plate, *d*. For the purposes of strength and cheapness, it is preferable that all the described parts of the joint be made out of a single piece of material.

In Fig. 5 is shown the joint, A, fixed by solder or otherwise to a pin body, E, carrying the usual catch, F. The pin tongue member comprises a pointed shaft, G, provided with an open circular loop, *g*, upon its end which serves as a head, and loosely engages the rod or bearing, *b*, upon which it is pivoted. The free upwardly directed end, *g'*, of the loop, *g*, travels upwardly toward the projection, *c*, when the shaft, G, is moved rearwardly, which projection serves as a stop to the excessive backward travel of the shaft when the loop end contacts with its lower face. This position is shown in broken lines in Fig. 5. The upper face of the projection, *c*, forms a stop and bearing for the shaft, G, in its downward travel. The location of the projection is such that its end supports the shaft at a slight inclination with relation to the catch, F, as shown in Figs. 5 and 6, thereby affording the desired spring tension of the shaft when engaged with the catch. The plates, *a*, guide the shaft in its travel.

If desired, and at the sacrifice of some strength, the base, *d*, of the joint member may be omitted, as shown in Fig. 6, where the pin body, E, itself serves as a base in actual use.

What I claim is,

1. A pin-joint comprising two parallel guide plates, a rod connecting the plates, and a projection upon the side of the rod.

2. A pin-joint comprising two parallel guide plates, a rod connecting the guide plates and integral with the guide plates, and a projection upon the side of the rod.

3. A pin-joint comprising two upright guide plates, a rod connecting the plates, and an inclined projection upon the rod.

4. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and means upon the bar coöperating with the loop for limiting the travel of the shaft.

5. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and means upon the bar in the path of the loop for limiting the travel of the shaft.

6. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and means upon the bar in the path of the shaft for limiting the travel of the shaft.

7. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and

a single means upon the bar for limiting the travel of the shaft in both directions.

8. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and means upon the bar in the path of the shaft for tensioning the shaft.

9. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and a projection upon the bar in the path of the loop.

10. In an article of the class described, the combination with a pin shaft provided with a loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and a projection upon the bar in the path of the shaft.

11. In an article of the class described, the combination with a pin shaft provided with an open loop, of a bar upon which the loop is pivotally mounted, guide plates upon the bar, and a projection upon the bar extending into the opening of the loop.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRED M. SWARTZ.

Witnesses:

HORATIO E. BELLOWS,

JOSEPH E. BURNS.