

No. 611,933.

Patented Oct. 4, 1898.

A. PETERSON.
FURNITURE JOINT.

(Application filed June 13, 1898.)

(No Model.)

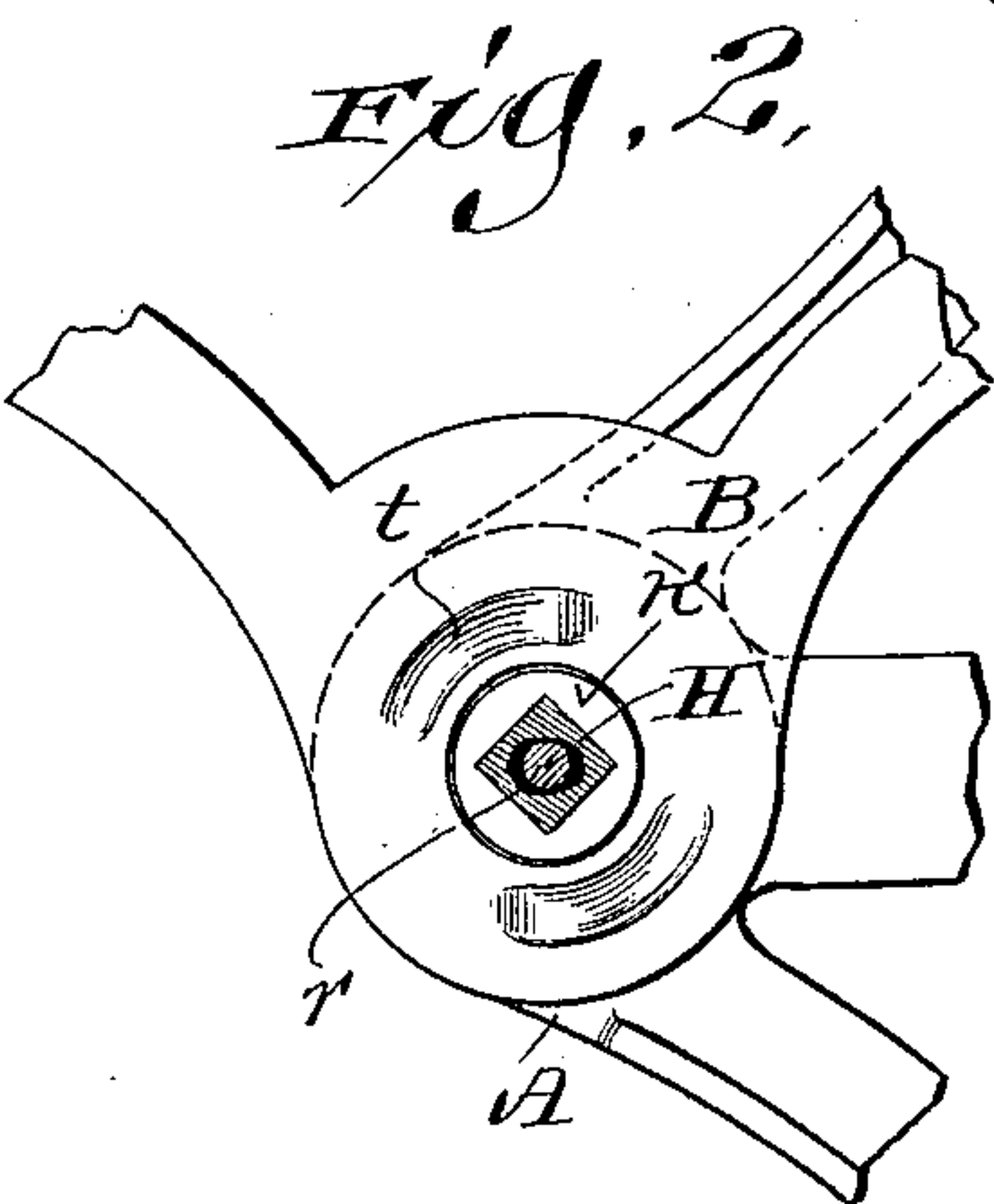
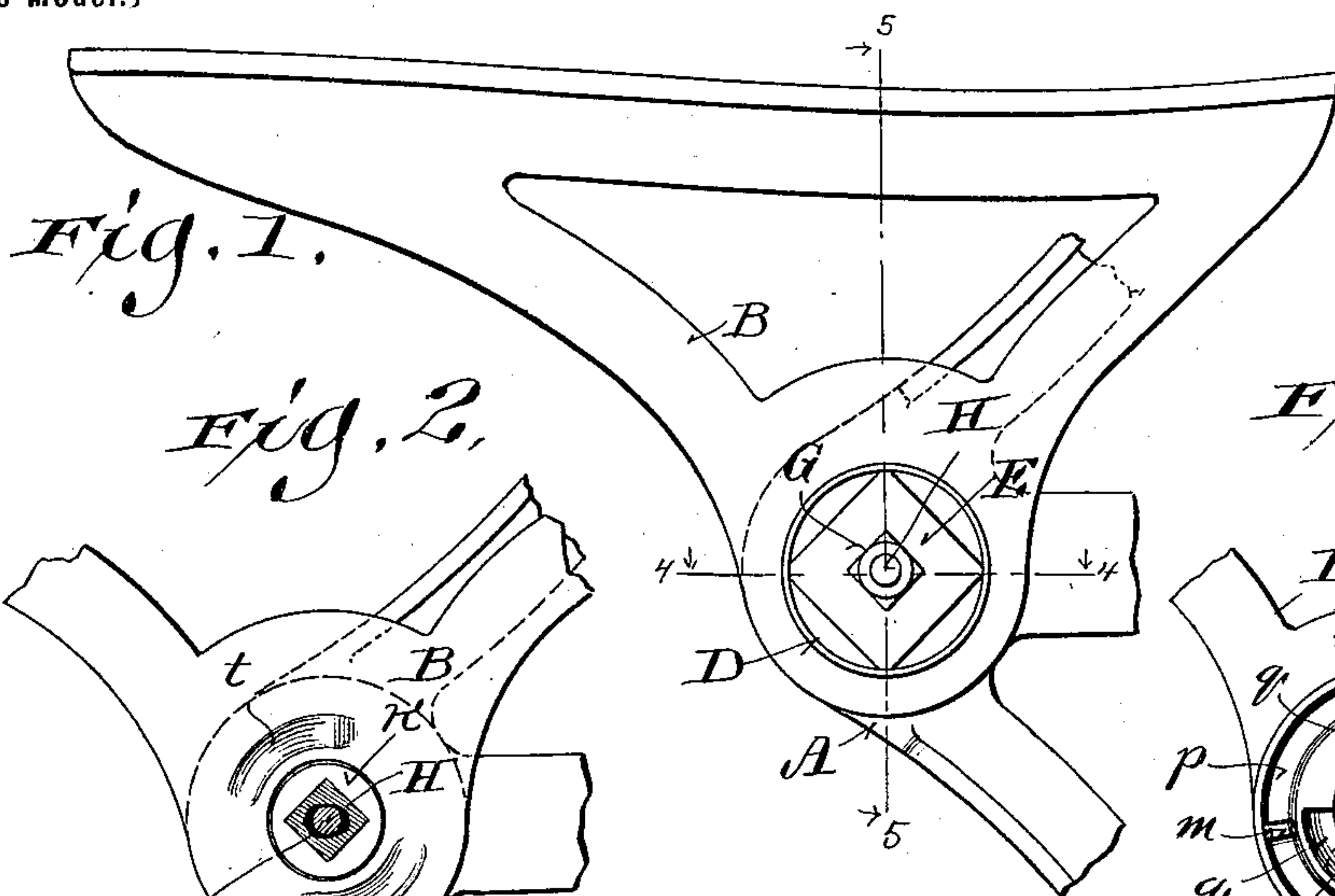


Fig. 3.

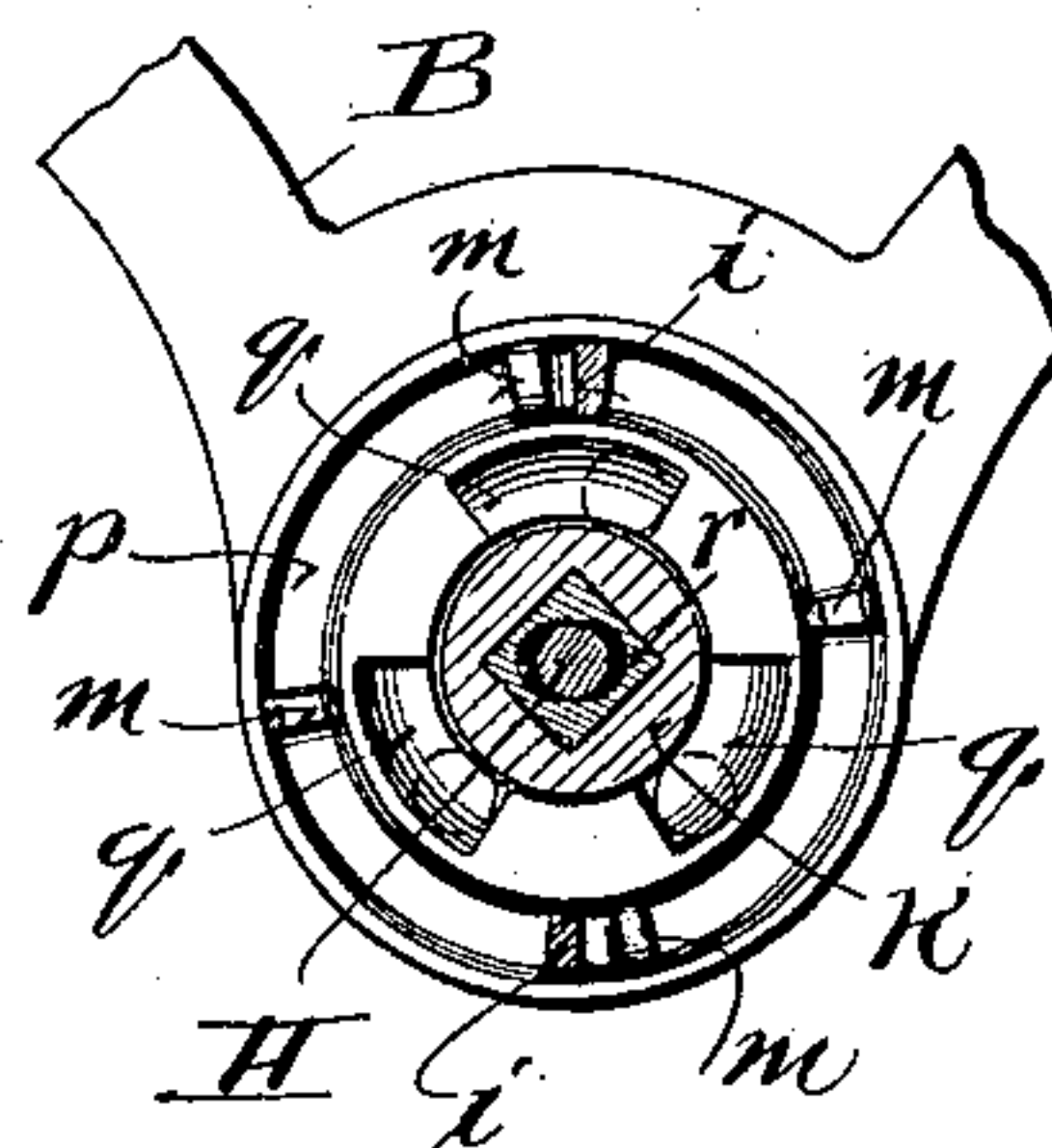


Fig. 4.

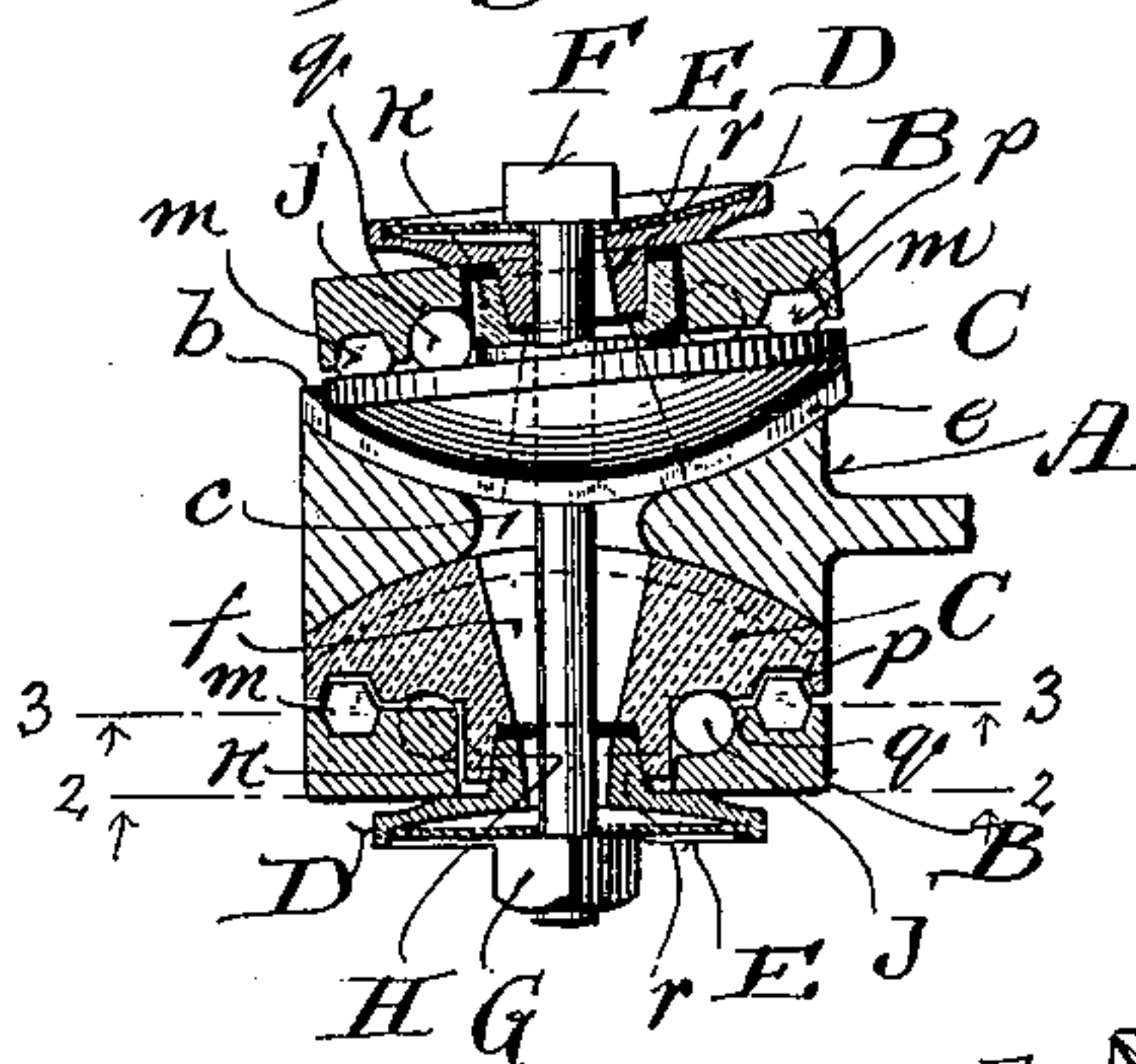


Fig. 6.

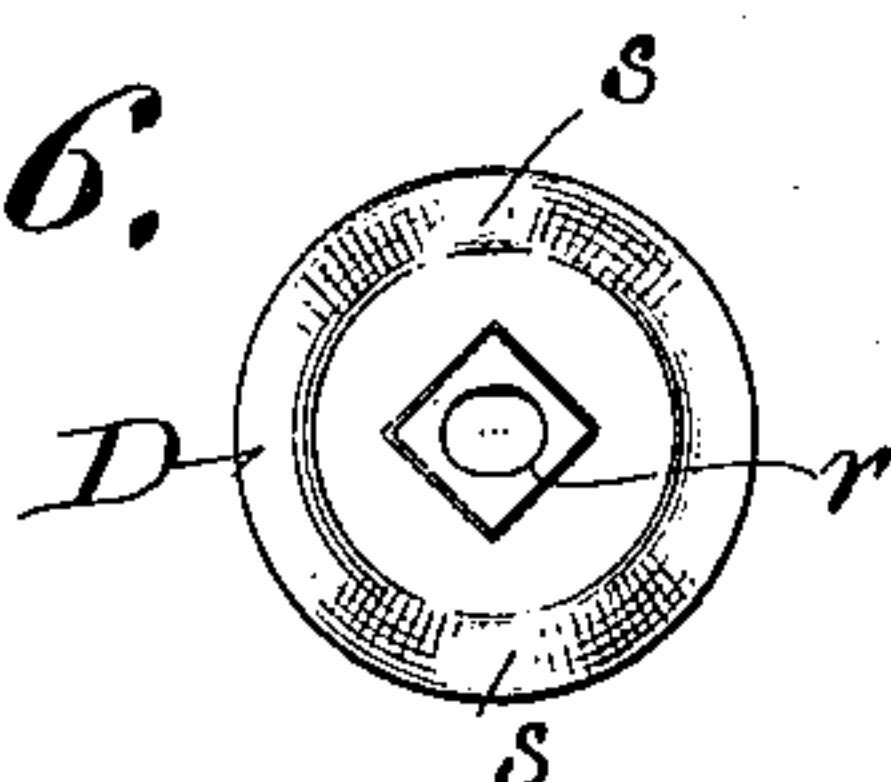


Fig. 7.

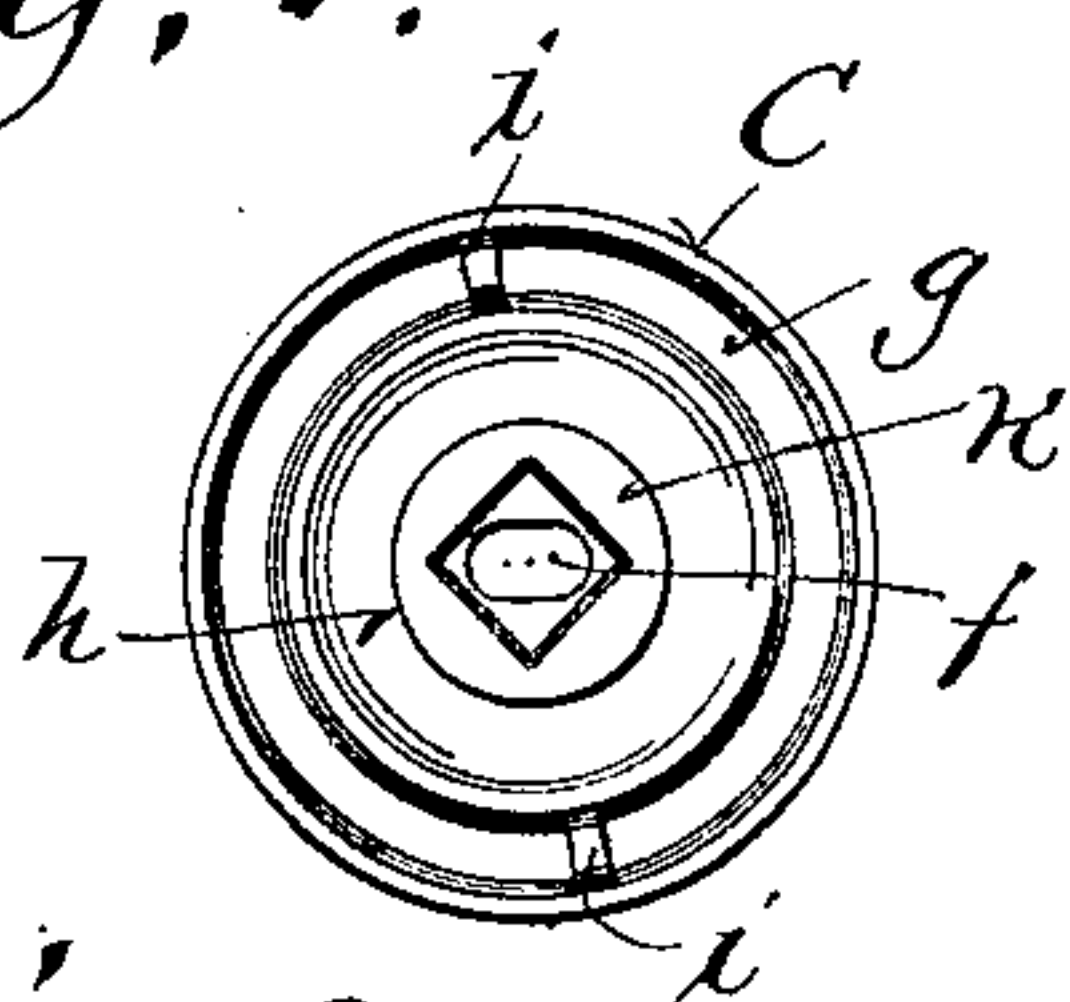


Fig. 8.

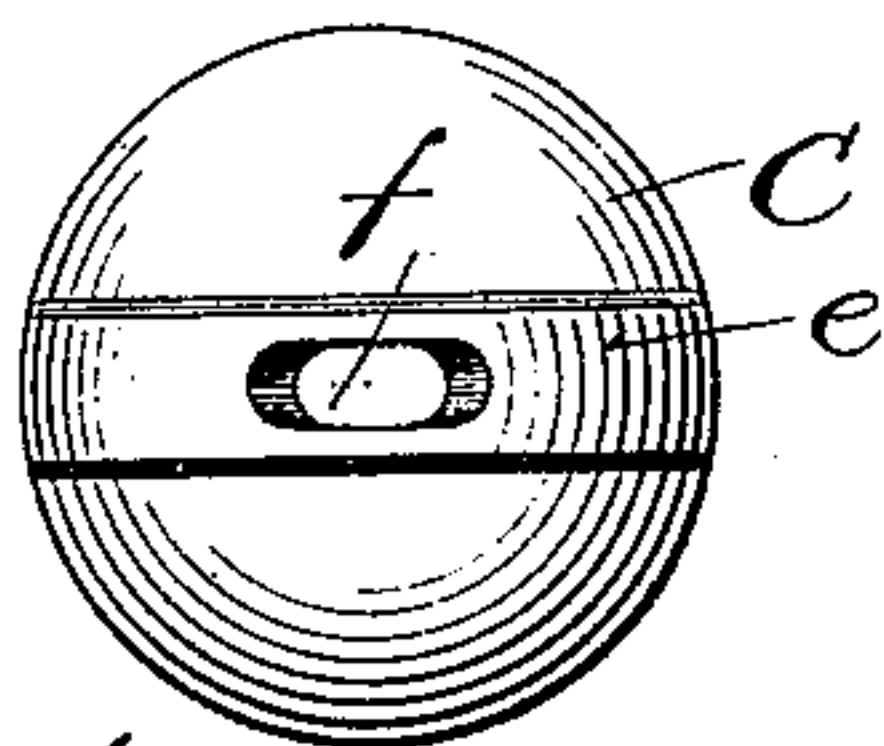


Fig. 5.

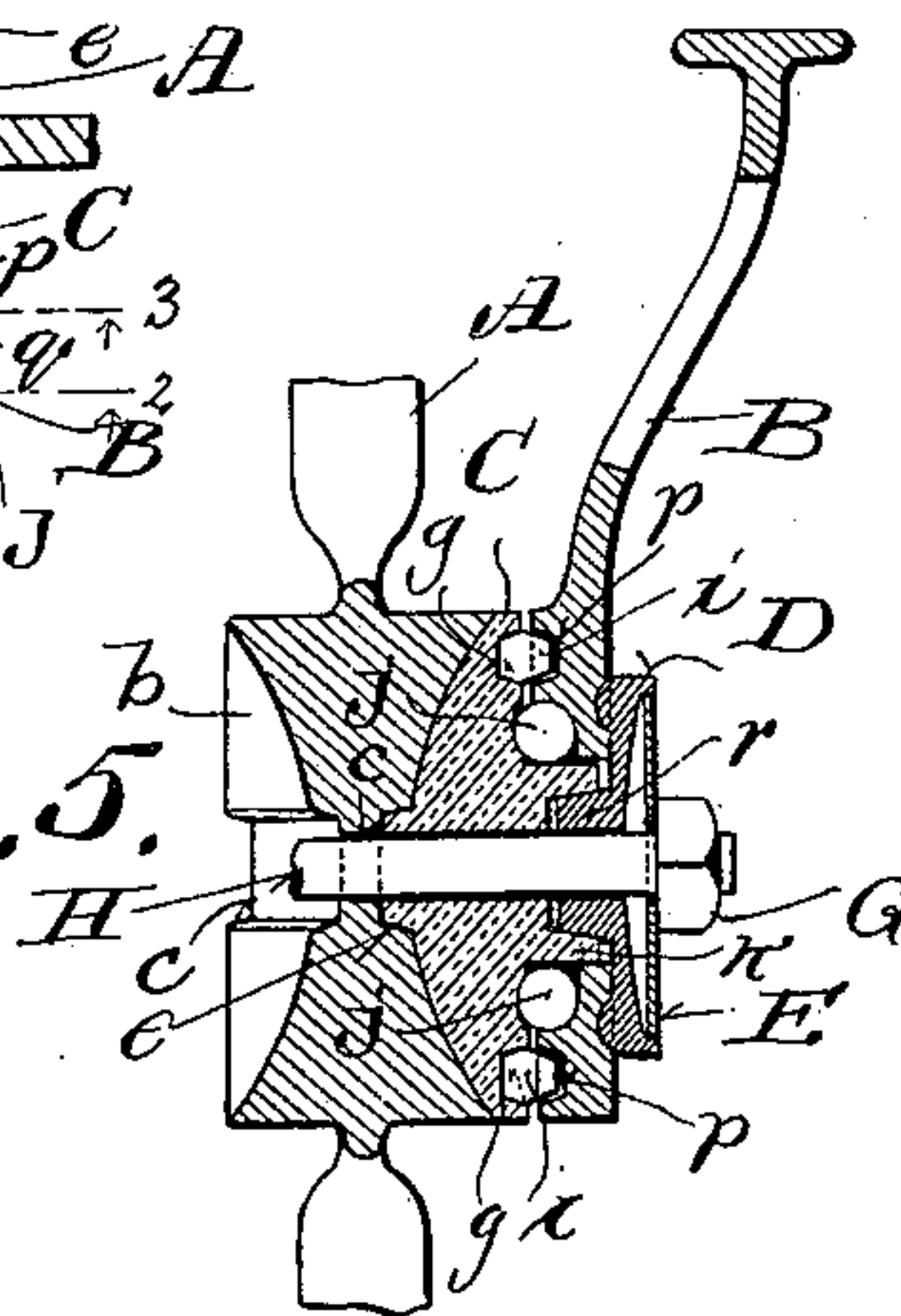
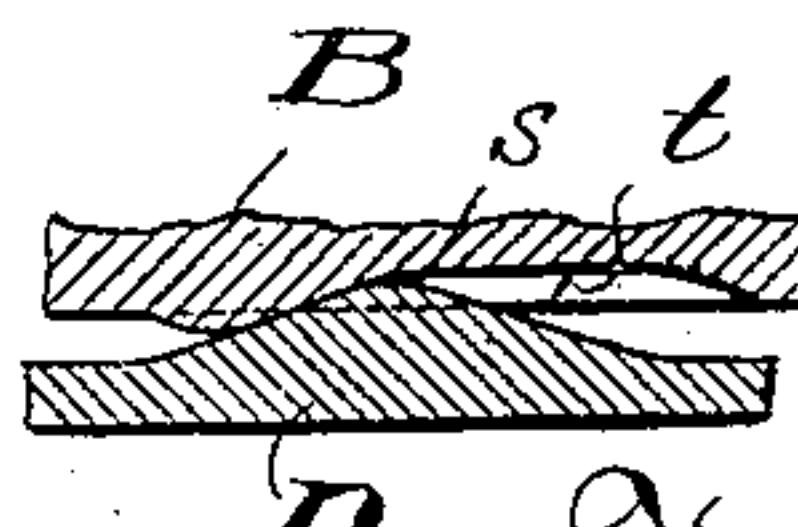


Fig. 9.



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UNITED STATES PATENT OFFICE.

ANTON PETERSON, OF RACINE, WISCONSIN.

FURNITURE-JOINT.

SPECIFICATION forming part of Letters Patent No. 611,933, dated October 4, 1898.

Application filed June 13, 1898. Serial No. 688,304. (No model.)

To all whom it may concern:

Be it known that I, ANTON PETERSON, a citizen of the United States, and a resident of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Furniture-Joints; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide theater and other auditorium chairs with simple, economical, noiseless wedge-check and preferably ball-bearing seat-hinge joints adjustable to the radii of curves upon which said chairs may be set. Therefore said invention consists in certain peculiarities of construction and combination of parts, hereinafter particularly described with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a side elevation of a seat-bracket and a portion of a standard-arm of an auditorium-chair connected by a hinge-joint in accordance with my invention; Fig. 2, a similar view, partly in section, on the plane indicated by line 2 2 in the fourth figure; Fig. 3, a detail elevation, partly in section, on the plane indicated by line 3 3 in the succeeding figure; Fig. 4, a horizontal section indicated by line 4 4 in the first figure; Fig. 5, a vertical transverse section indicated by line 5 5 in said first figure; Figs. 6, 7, and 8, detail elevations of parts embodied in my invention; and Fig. 9, a diagram illustrating a projection of curved wedging-surfaces of hinge-joint members.

Referring by letter to the drawings, A represents an arm of a standard, and B a seat-bracket, both constituting parts of an auditorium-chair, these parts being of cast metal, as is usual in the art to which my invention relates. The standard-arm herein shown is one of those designed for use in connection with a bracket of each of two seats, and each side of said arm is provided with a transversely-grooved circular concavity *b*, the web of metal between the grooves of the concavities being transversely slotted, as best shown at *c* in Fig. 4.

Engaging each concavity of the standard-arm is the corresponding convexity *d* of a circular block C, having a transverse rib *e*, that fits loosely in the groove of said concavity,

this block being provided with a transverse center slot *f*, that registers with the one in said arm. The block C has its practically flat outer face provided with concentric annular grooves *g h*, the first of these grooves being interrupted by a pair of annular lugs *i*, diametrically opposite each other. The groove *h* constitutes a track for antifriction-balls *j* and surrounds a central hub *k* of block C, this hub having an annular recess open to the slot *f* aforesaid.

The groove *g* of each block C is engaged by lugs *m* at quarter-circle intervals of an annular groove *p* in the lower rounded extremity of a seat-bracket, and between pairs of these lugs the lugs *i* of said block have engagement with said seat-bracket groove. Hence the seat-bracket itself is limited to rotary movement up or down on an arc of ninety degrees, said bracket being herein shown full down. The grooved face of the lower extremity of the seat-bracket is also shown provided with recesses *q* at intervals of a circle, and each of these recesses is engaged by one of the balls *j* aforesaid.

A circular aperture in each seat-bracket is engaged by the hub *k* of a block C, and fitting the angular recess in this hub is a corresponding angular projection *r* central of the inner surface of a disk D, that is also provided with a pair of inner curved wedge elevations *s* diametrically opposite each other. These wedge elevations of the disk engage corresponding recesses *t* in the adjacent outer face of a seat-bracket, each of said disk elevations being inclined in opposite directions. The outer face of each disk is preferably concave within an annular flange, and set in the concavity is a spring washer-plate E, that opposes the head F or nut G of a bolt H, that extends through central disk apertures and the several registering slots of the blocks C and standard-arm A, with which said blocks are engaged in the manner above specified.

From the foregoing it will be understood that each seat-bracket has pivotal movement on the hub *k* of a block C and wedges on the elevations *s* of a disk D at about the time its movement in either direction is completed to thereby prevent banging, and the balls *j* in the arrangement specified operate to lessen friction.

The seat-standards being set on curves, the blocks C of the hinge-joints are adjusted in their standard-arm sockets to conform to the radii of said curves, this being an important 5 feature of my invention.

In practice the standard-arms at the ends of seat-rows or those of a single seat may be devoid of outside transversely-grooved concavities for adjustable pivot-blocks, as no 10 necessity for the same exists, and the finish may be improved by their omission.

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

15 1. A furniture-joint comprising a standard-arm provided with a transversely grooved and slotted circular concavity constituting a socket, a circular block having a ribbed convex face fitting the grooved concave socket 20 and another practically flat face provided with a central hub and an annular groove interrupted by two lugs diametrically opposite each other, said block being slotted through its rib to register with the arm-slot and hav- 25 ing its hub provided with an angular recess open to the slots, a seat-bracket extremity having a hub-fitting aperture and provided with an annular groove interrupted by lugs at quarter-circle intervals that engage the an- 30 nular groove in the aforesaid block, each lug of this block being arranged between a pair of those pertaining to the seat-bracket extremity, a disk having an angular projection fitting the recess in the block-hub, wedge 35 elevations on the disk engaging corresponding recesses in said seat-bracket extremity, a bolt engaging the registering slots and a central disk aperture, and a nut run on the bolt.

40 2. A furniture-joint comprising a standard-arm provided with a transversely grooved and slotted circular concavity constituting a socket, a block having a ribbed convex face fitting the grooved concave socket and an- 45 other practically flat face provided with a central hub and an annular groove interrupted by two lugs diametrically opposite each other, said block being slotted through its rib to reg- 50 ister with the arm-slot and having its hub provided with an angular recess open to the slots, a seat-bracket extremity having a hub-fitting aperture, recesses at intervals of a circle, and an annular groove interrupted by lugs at quarter-circle intervals that engage 55 the annular groove in the aforesaid block; each lug of this block being arranged be- tween a pair of those pertaining to the seat- bracket extremity, antifriction-balls engag-

ing the recesses of said seat-bracket extremity and a track surrounding the block-hub, a disk having an angular projection fitting 60 the recess in said block-hub, wedge elevations on the disk engaging corresponding recesses in said seat-bracket extremity, a bolt engaging the registering slots and a central disk aperture, and a nut run on the bolt. 65

3. A furniture-joint comprising a standard-arm provided with a transversely grooved and slotted circular concavity constituting a socket, a circular block having a ribbed convex face fitting the grooved concave socket, 70 and another practically flat face provided with a central angularly-recessed hub and an annular groove that is interrupted by two diametrically opposite lugs, said block being slotted through its rib to register with the 75 arm-slot, a seat-bracket extremity having a hub-fitting aperture and provided with an annular groove interrupted by lugs at quarter-circle intervals that engage the annular groove in the aforesaid block, each lug of this 80 block being arranged between a pair of those pertaining to the seat-bracket extremity, a disk having an angular projection fitting the recessed block-hub, wedge elevations on the disk engaging corresponding recesses in said 85 seat-bracket extremity, a bolt engaging the registering slots and a central disk aperture, a nut on the bolt, and a spring washer-plate intermediate of the bolt head or nut and a concavity in said disk. 90

4. A furniture-joint comprising a standard-arm, a block having laterally-adjustable connection with said arm, a seat-bracket hav- 95 ing an extremity thereof in pivotal connection with the block, means for limiting pivotal movement of the seat-bracket, and other means for maintaining said block and seat-bracket in working position.

5. A furniture-joint comprising a standard-arm, a block having laterally-adjustable 100 connection with said arm, a seat-bracket having an extremity thereof in pivotal connection with the block, means for limiting pivotal movement of the seat-bracket, and a wedge-disk in stationary opposition to said 105 seat-bracket.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in the presence of two witnesses.

ANTON PETERSON.

Witnesses:

GEO. W. CARR,
CARL MILLER.