

A. H. CLARK.  
CHAIR.  
APPLICATION FILED DEC. 2, 1907.

920,542.

Patented May 4, 1909.  
3 SHEETS—SHEET 1.

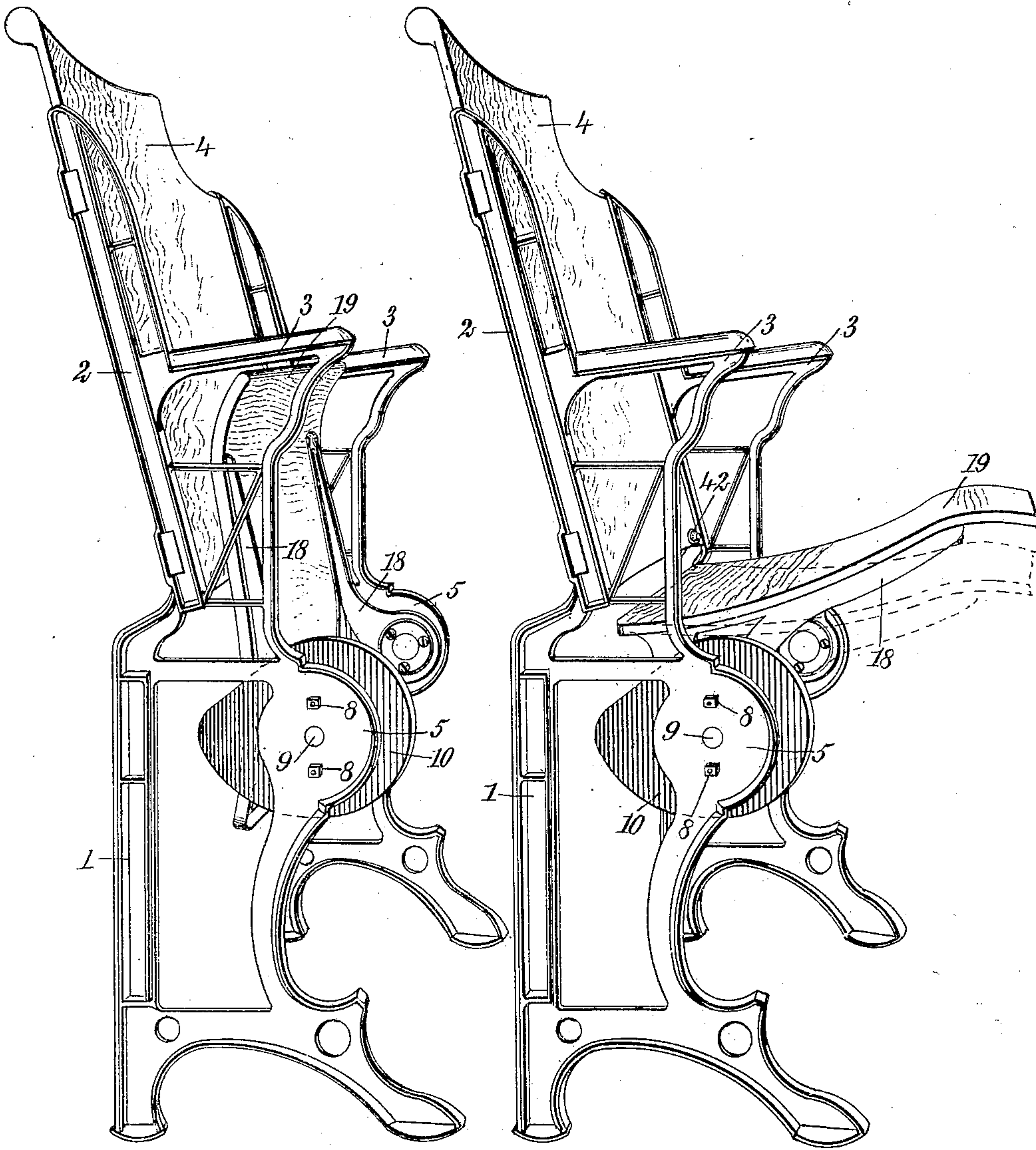


Fig. 1.

Fig. 2.

WITNESSES  
*Ben. Joffe*  
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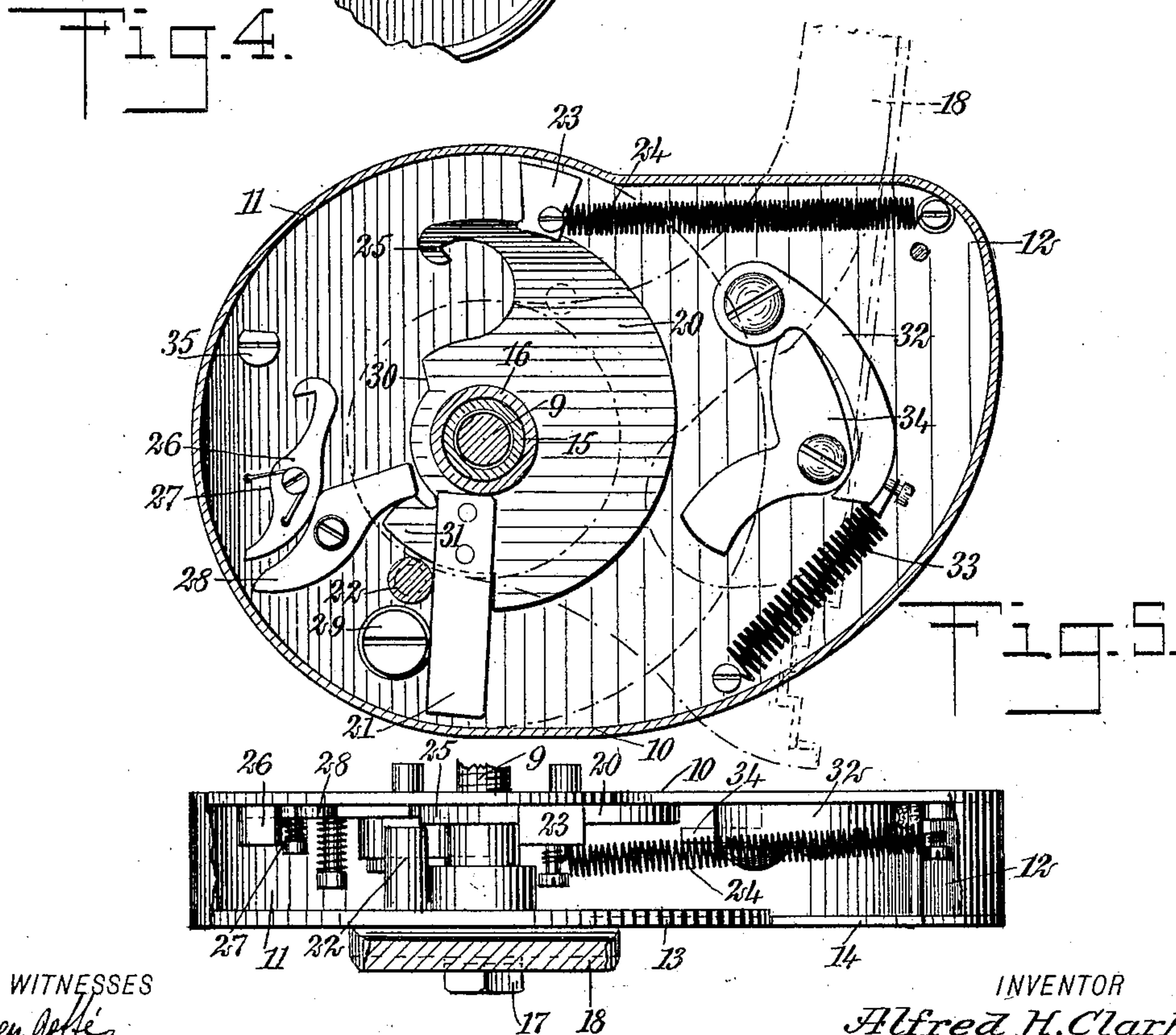
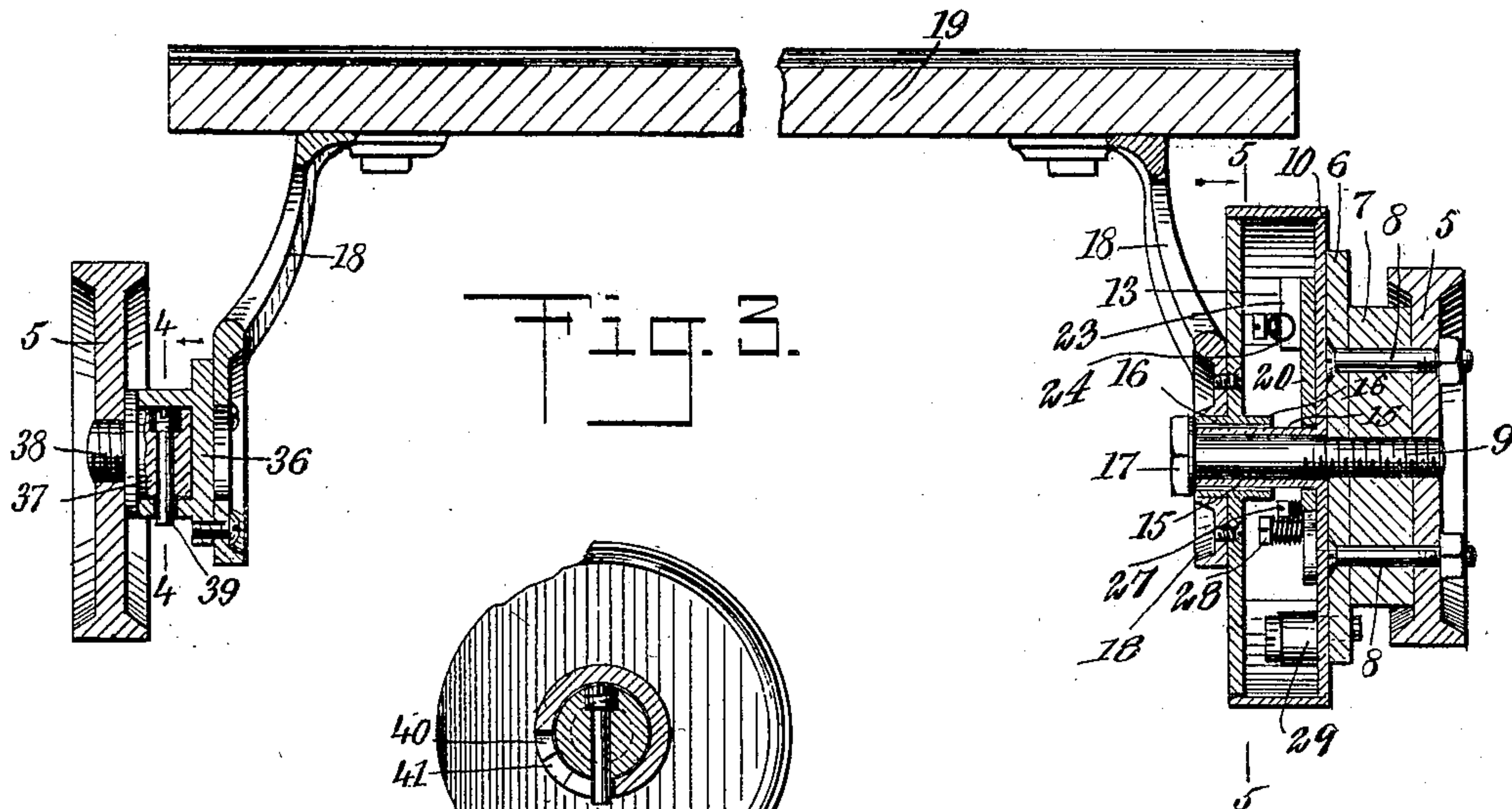
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3 SHEETS—SHEET 3.

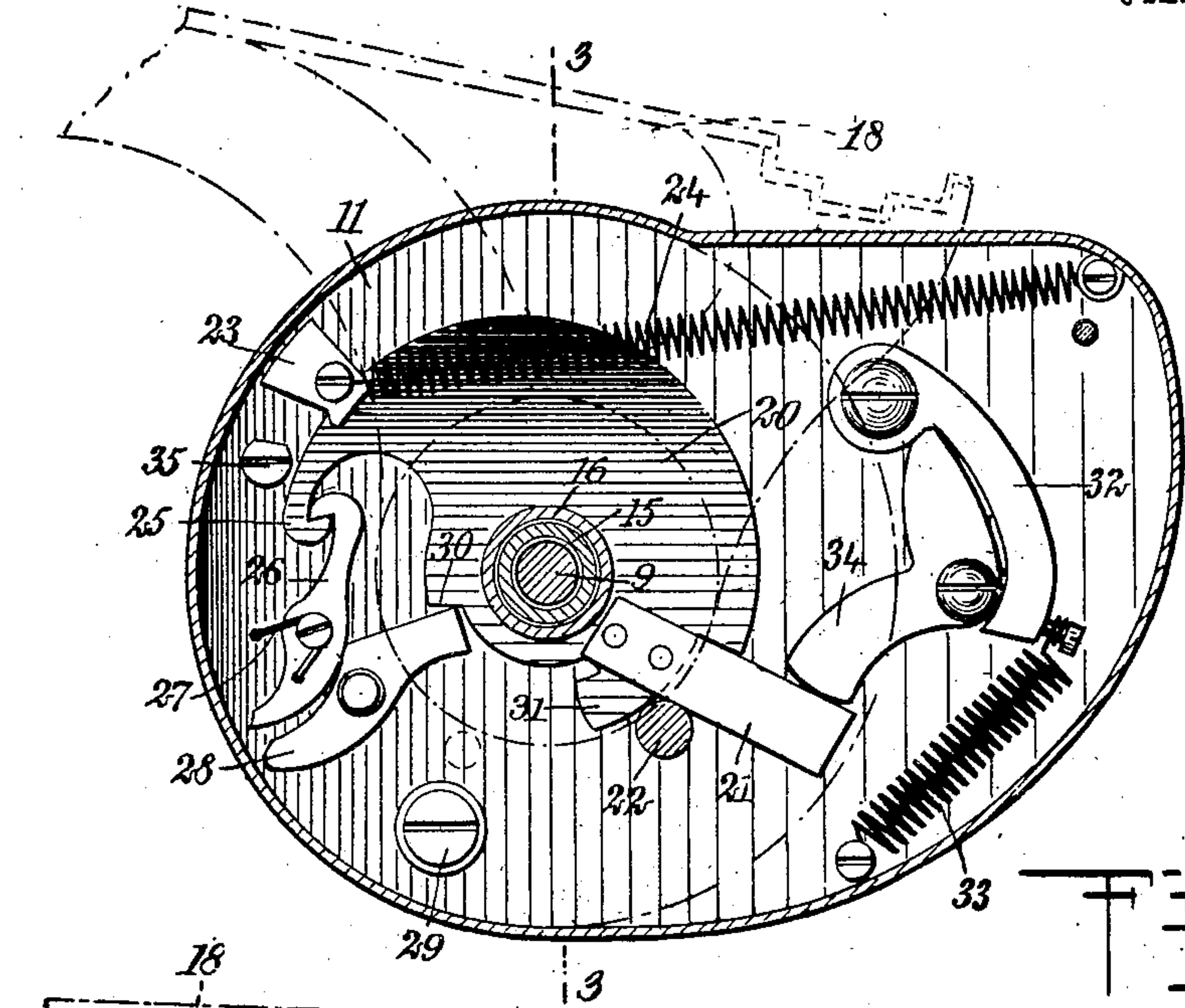


Fig. 7.

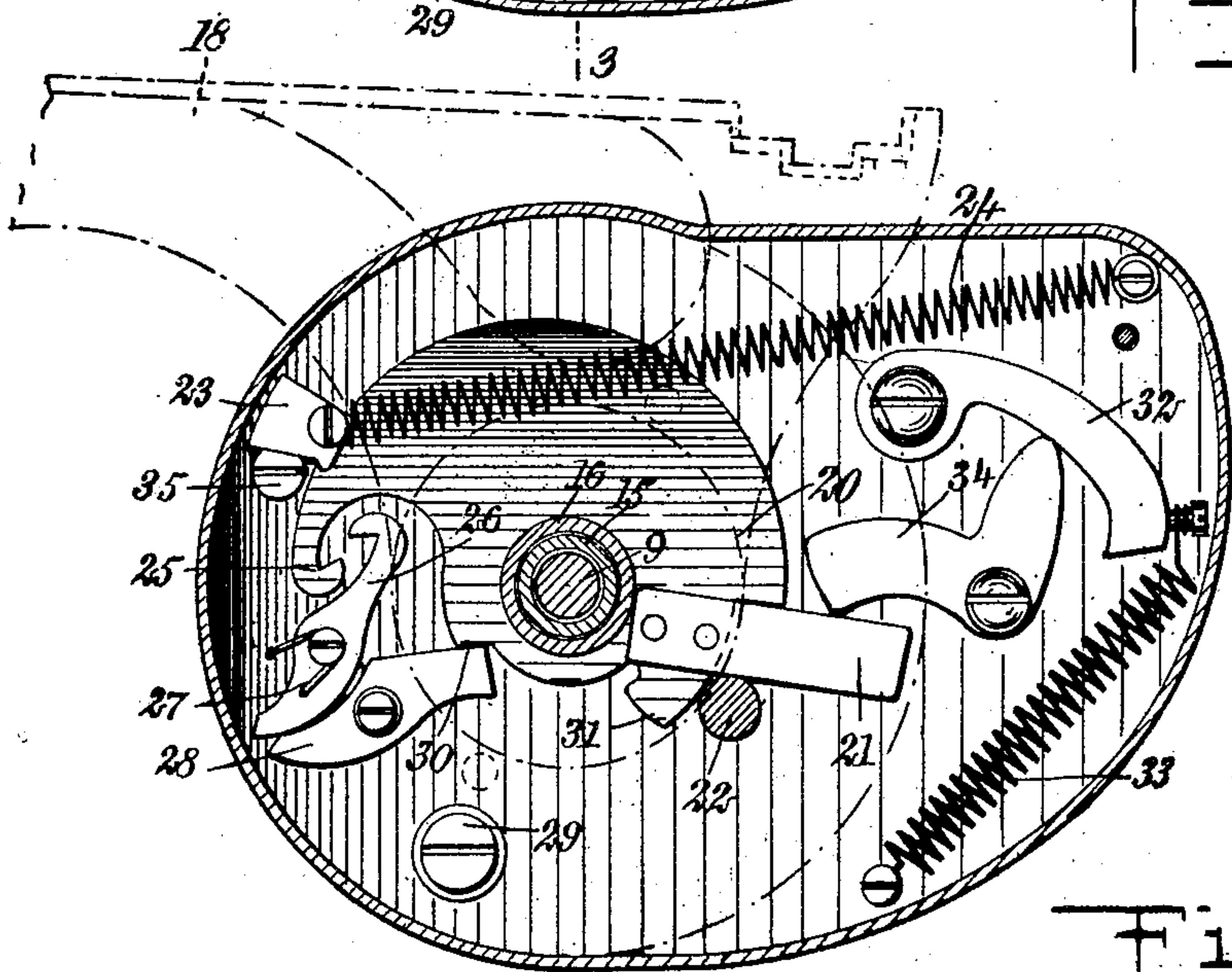
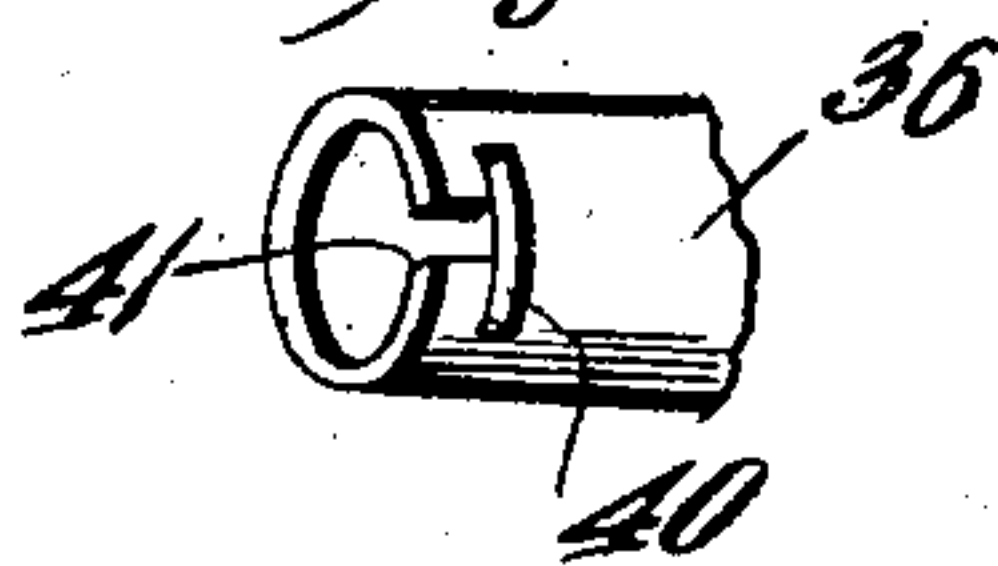


Fig. 8.

Fig. 9.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ALFRED H. CLARK, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO FREDERICK W. CLARK.

## CHAIR.

No. 920,542.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed December 2, 1907. Serial No. 404,696.

*To all whom it may concern:*

Be it known that I, ALFRED H. CLARK, a subject of the King of Great Britain, and a resident of Denver, in the county of Denver and State of Colorado, have invented a new and Improved Chair, of which the following is a full, clear, and exact description.

This invention relates to chairs, and more particularly to chairs or seats for theaters and the like.

An object of the invention is to provide a simple, artistic and inexpensive chair having a movable seat which is normally held in an elevated position and which can be easily depressed for use.

A further object of the invention is to provide a chair having a movable seat normally held in an elevated position, and which can be depressed, locked in a partially depressed position and released from this partially depressed position by a further movement of the seat.

A still further object of the invention is to provide a chair having a movable seat which is resiliently held in a normally elevated position, which can be locked in a partially depressed position, and which can be released from this partially depressed position by a further movement, depressing it so that when the user seats himself upon the chair his weight releases the seat from the locked position and permits it to swing into its normal elevated position when the user rises from the seat.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view of the chair showing the seat in the normal elevated position; Fig. 2 is a similar view showing the seat partially depressed and locked in that position, and further showing the seat in a fully depressed position in dotted outline; Fig. 3 is an enlarged transverse section on the line 3—3 of Fig. 7 showing means for mounting the seat upon the chair standards; Fig. 4 is an enlarged transverse section on the line 4—4 of Fig. 3; Fig. 5 is an enlarged longitudinal section of the seat-controlling mechanism on the line 5—5 of Fig. 3; Fig. 6 is a

plan view of the seat-controlling mechanism showing parts broken away; Fig. 7 is a view similar to Fig. 5 showing certain of the parts in different position; Fig. 8 is a similar view showing the parts in still other positions; and Fig. 9 is a perspective view of a detail.

Before proceeding to a more detailed explanation of my invention it should be understood that while the same is particularly useful in connection with theaters, concert halls, auditoriums and the like, it can be advantageously employed wherever it is necessary to provide chairs with movable seats which can be swung into inoperative position. For instance, the chair of my invention can be used in schoolrooms, offices and similar institutions.

The seat of the chair is normally held in an elevated position by means of suitable resilient controlling mechanism, and must be manually or otherwise depressed before the chair can be used. By swinging the seat downward a certain distance and into a partially depressed position the locking mechanism becomes operative, and holds the seat in this partially depressed position so that the user of the chair can place himself easily upon the seat. The imposed weight of the user at once moves the seat farther downward into a fully depressed position, and this further movement automatically releases the locking mechanism so that when the user rises from the chair the seat automatically returns to its normal elevated position.

Referring more particularly to the drawings, I provide chair standards 1, which may be of any preferred or common form and have back uprights 2 and arms 3. Between the uprights 2 is mounted the back 4 of the chair. It will be understood that the details of the construction of the chair constitute no part of my invention, the essential features of which lie in the means for controlling and operating the chair-seat as will appear more clearly hereinafter. At the front, each of the chair standards 1 has a rounded cheek 5. One of the cheeks 5 has rigidly secured thereto a plate 6 and a spacing block 7 between the plate 6 and the cheek 5, by means of bolts 8. Threaded openings are formed in the plate, the block and the cheek, and are adapted to receive a corresponding threaded bolt 9. A casing is rigidly secured in any convenient manner upon the plate 7, and consists of a circular



portion 11 and a laterally extended portion 12. A disk 13 is movably arranged within the wall of the circular portion 11 of the casing and adjacent to a cover 14, rigidly secured at the wall of the extended portion of the casing and cut away circularly to receive the disk 13. A sleeve 15 is rigid with the casing and receives the bolt 9. A second sleeve 16 is rigid with the disk 13 and is arranged upon the sleeve 15 and is movable with respect thereto. The head 17 of the bolt 9 seats at the outer edges of the sleeves 15 and 16, as is shown most clearly in Fig. 3. A seat carrier 18, is rigidly secured to the disk 13 by means of screws or in any other suitable manner, and serves to support the seat 19 at one side thereof. A similar carrier 18 supports the opposite side of the seat.

A member 20, is movably arranged within the casing 10, and is revolvably mounted upon the sleeve 15. The member 20 has a rigid finger 21, extending laterally therebeyond and adapted to be engaged by an inward projection 22 of the disk 13. The member 20 has a peripheral bracket 23, to which is secured one end of a helical spring 24, the opposite end of which is rigidly fastened to the back of the casing. The spring 24 holds the member 20 in a normal position. Near the edge of the member 20 is formed a hook 25, adapted to engage a dog 26, pivoted within the casing and held in position by means of a spring 27. When the member 20 is rotated against the tension of the spring 24 until the hook 25 engages the dog, the member will be locked against return rotation, by the dog. The spring 27 holds the dog so that the hook 25 can slip into operative engagement therewith. A lever 28, is pivotally mounted within the casing and controls the dog 26 as will appear more clearly hereinafter. The casing is provided with a stop 29, adapted to be engaged by the member 20 and limiting the movement imparted thereto by the spring 24.

A shoulder 30 is formed at an edge of the member 20, and is arranged to engage the lever 28 when the member has been rotated a certain distance, and the lever is thereby actuated to engage the dog 26 and throw the same out of position, thus permitting the return rotation of the member 20. A second shoulder 31 of the member 20, serves to displace the lever 28 to permit the dog 26 to assume a position such that it is operative when engaged by the hook 25. The shoulder 31 engages the lever 28 as the member approaches the normal position shown in Fig. 5.

By the engagement of the finger 21 with the projection 22, the seat 19 is returned to an elevated position and is held in an elevated position by means of the member 20 and the spring 24. When the seat is depressed a certain distance, the member 20 is rotated into a position of engagement with the dog 26, and is held in this partially de-

pressed position by the latter. When the user of the chair imposes his weight upon the seat the same is depressed still farther, and this further movement swings the shoulder 30 of the member 20 into engagement with the lever 28, thereby rendering the dog 20 operative. Consequently, when the user rises from the chair, the spring 24 is free to return the seat to its elevated position without hindrance on the part of the dog 26. As the member and consequently the seat, reach the elevated position, the shoulder 31 engages the lever and displaces it so that the spring 27 returns the dog 26 to its normal position.

An arm 32, is pivoted within the extended portion of the casing and has secured at the end thereof the extremity of a spring 33, the opposite extremity of which is fastened to the back of the casing. The arm 32 is curved, and constitutes a cam which cooperates with a pivoted cam lever 34. The latter is engaged by the finger 21 when the member 20 is moving from its partially depressed to its fully depressed position. During this movement the finger swings the lever 34 about its pivot, so that it slidably engages the arm 32 to displace the same against the tension of the spring 30. The latter thus aids in returning the seat to its elevated position when the weight of the user is removed from the seat. A stop 35, rigidly arranged within the casing, is adapted to be engaged by the bracket 23 of the member 20, thereby to limit the downward movement of the chair seat.

The seat carrier 18, opposite to the actuating mechanism, has rigidly secured thereto a socket 36, adapted to co-act with a stud 37, secured by means of a threaded shank 38, in a correspondingly threaded opening of the cheek 5. The stud 37 has a transverse projecting screw pin 39, the extending end of which is slidably arranged in a slot 40, of the socket 36. A lateral opening 41, permits the entrance of the screw pin into the socket. Thus the socket is rotatable relatively with respect to the stud and is held in position upon the same by means of the screw pin 39.

The seat 4 has buffers 42, preferably of some resilient material such as rubber, to resist the impact of the seat against the chair back and to deaden the sound of the same.

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

1. A chair, comprising standards, a movable seat carried by said standards, a member resiliently held in a normal position and controlling said seat to hold the same in a normal elevated position, a dog adapted to lock said member against a return movement when the same is rotated into a position such that the seat is partially depressed,



means operable by said member when the same is further rotated to release said dog, a stop for limiting the rotation of said member, and means on said member for returning said dog to an operative position when said member returns to its normal position.

2. A chair, comprising standards, a seat pivotally mounted upon said standards a member resiliently held in a normal position and controlling said seat to hold the same in a normal elevated position, a pivoted dog resiliently held in a normal position, said member being formed to engage said dog when said member is rotated into a position such that the seat is partially depressed, said dog serving to lock said member against return rotation, means operable by said member when the same is further rotated to release said dog, a stop for limiting the rotation of said member, means on said member for returning said dog to an operative position when said member returns to its normal position, and resilient means for assisting the return of said member to its normal position.

3. A chair, comprising standards, a seat pivotally mounted upon said standards, a casing upon one of said standards, a member mounted to rotate within said casing, a stud rigid with said seat and extending into said casing to be engaged by said member, resilient means for resisting the rotation of said member, a dog adapted to lock said member against a return movement when the same is rotated into a position such that the seat is partially depressed, a lever operable by said member when the same is further rotated to displace said dog to release the same from said member, said member being adapted to engage said lever to return said dog to an operative position when said member returns to its normal position.

4. A chair, comprising standards, a seat pivoted between said standards, a casing carried by one of said standards, a member resiliently pivoted within said casing, a stud rigid with said seat and engaging said member, a spring holding said member in a normal position such that said seat is elevated, a pivoted dog with said casing, said member having a portion formed to engage said dog to lock said member against a return rotation when said member is rotated into a position such that the seat is partially depressed,

a lever controlling said dog, said member being formed to engage said lever to displace said dog when said member is further rotated, said member being further formed to engage said lever to return said dog to an operative position when said member returns to its normal position, and resilient means for assisting the return of said member to its normal position.

5. A chair, comprising standards, a seat pivoted between said standards, a member resiliently held in a normal position and controlling said seat, a dog adapted to lock said member against a return movement when the same is rotated into a position such that the seat is partially depressed, means operable by said member when the same is further rotated to release said dog, means on said member for returning said dog to an operative position when said member returns to its normal position, a second member adapted to be operated by said first member, a cam arm adapted to be displaced by said second member, and resilient means for resisting the movement of said cam arm.

6. In a chair, standards, and a seat pivotally mounted upon one of said standards, the other of said standards having a projection provided with a laterally extending pin, said seat having a socket adapted to receive said projection pivotally to mount said seat thereupon, said socket having a slot in the side thereof, said slot having an opening intermediate its ends to permit said pin to enter said slot.

7. In a chair, standards, a seat pivotally mounted upon one of said standards, the other of said standards having a cheek provided with a stud, said stud having a laterally projecting pin, said seat having a seat carrier, and a socket rigid with said seat carrier and formed to receive said stud, said socket having in the side thereof a slot extended intermediate its ends to the edge of said socket, whereby said pin can enter said slot.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED H. CLARK.

Witnesses:

ALBERT L. VOGL,  
CARLE WHITEHEAD.