

No. 705,509.

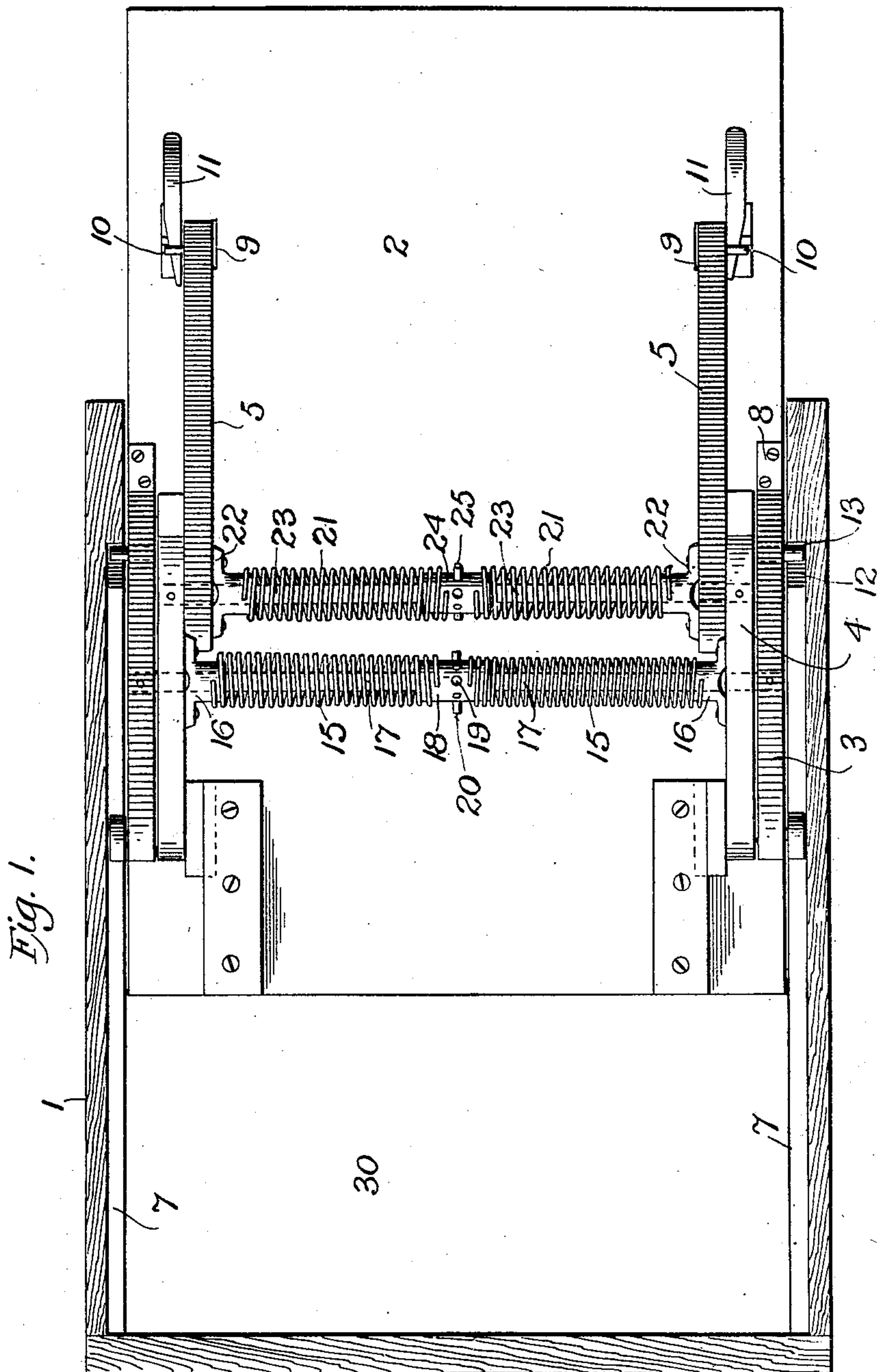
Patented July 22, 1902.

J. E. ANDERSON.
TYPE WRITER CABINET.

(Application filed July 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

James F. Duhamel
Rita Bradt

INVENTOR

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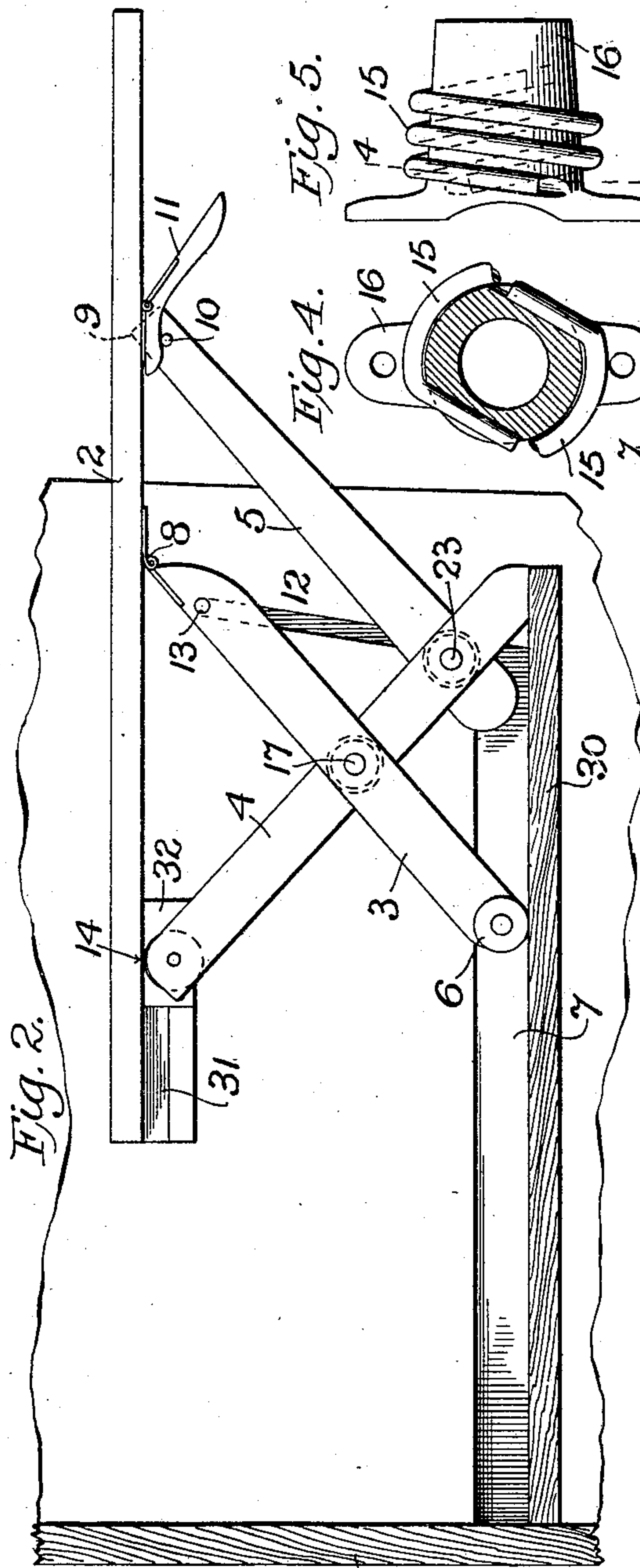
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Fig. 5.

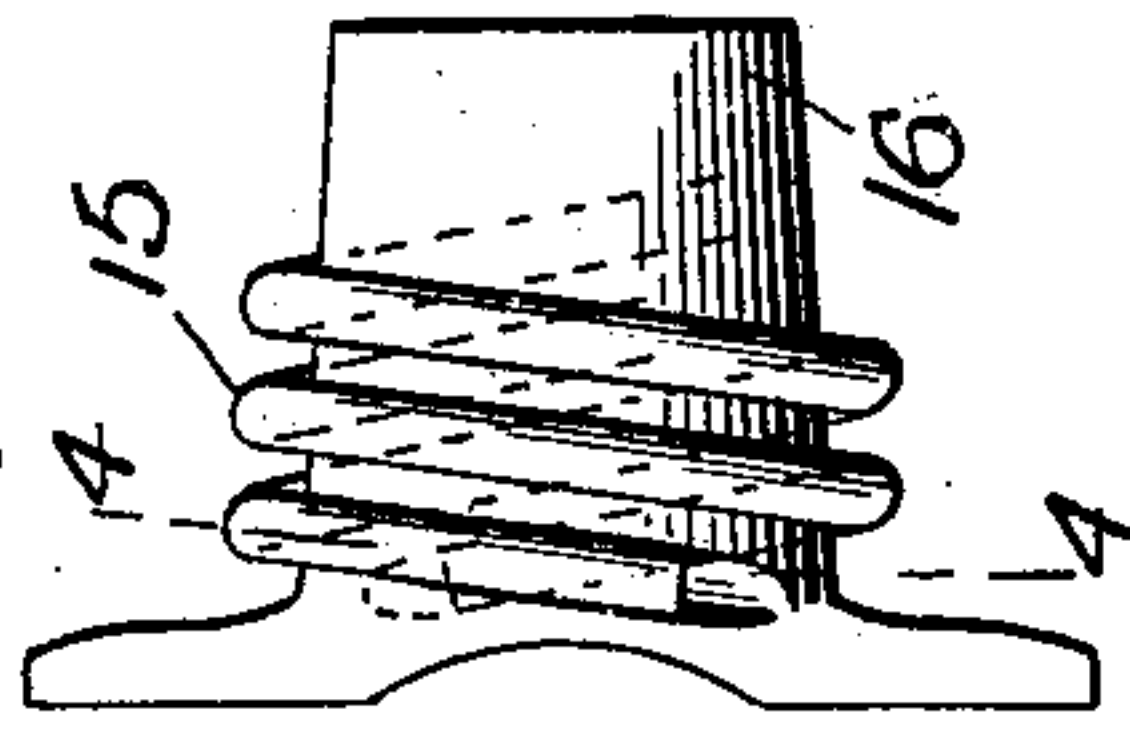


Fig. 4.

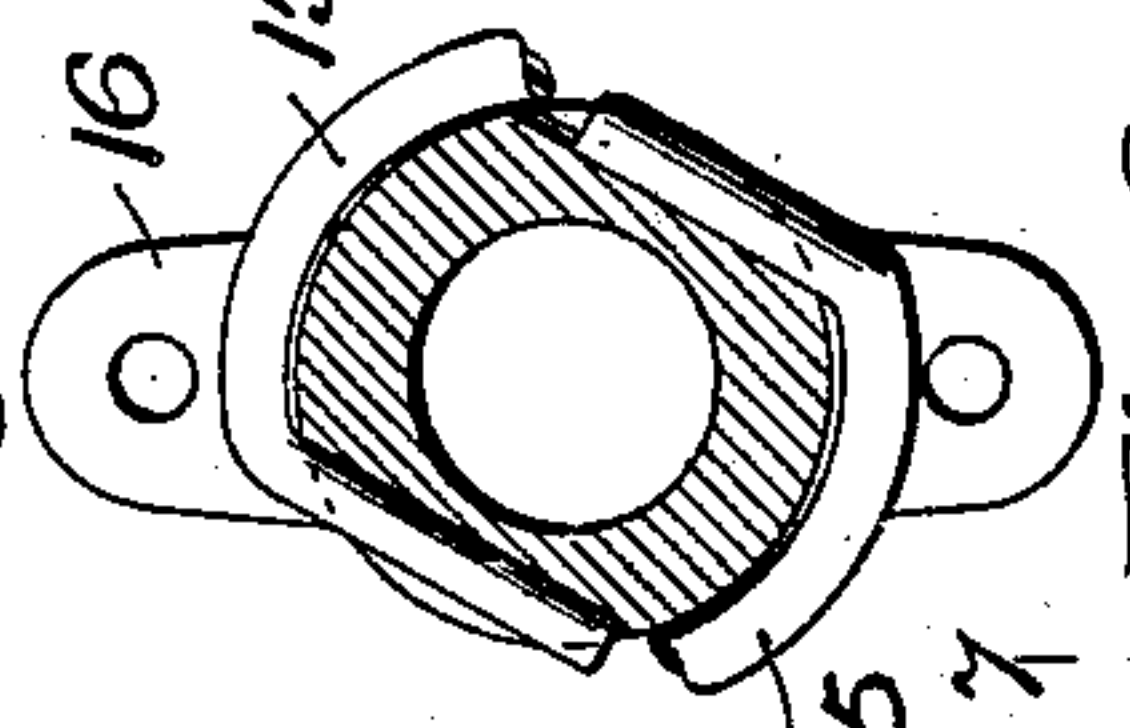


Fig. 6.

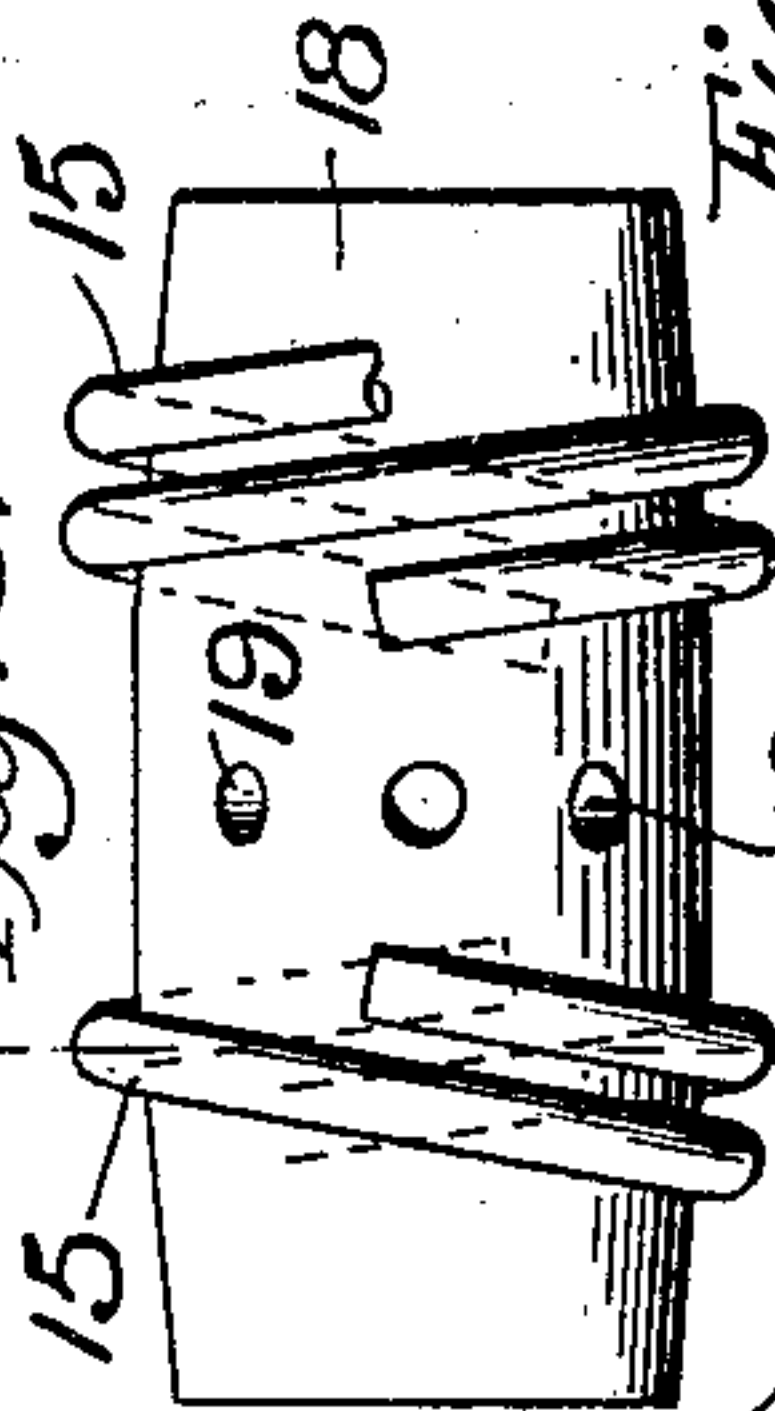


Fig. 7.

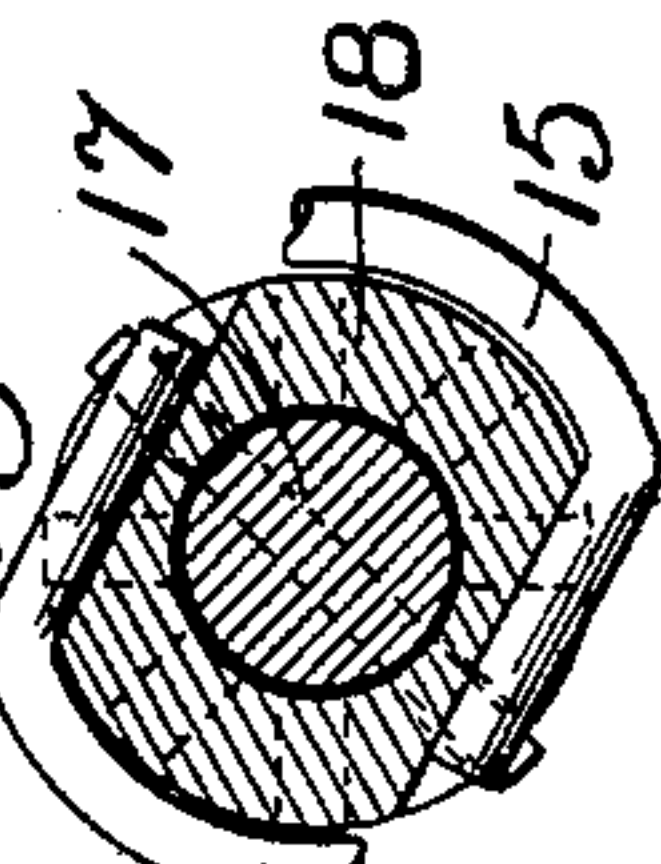
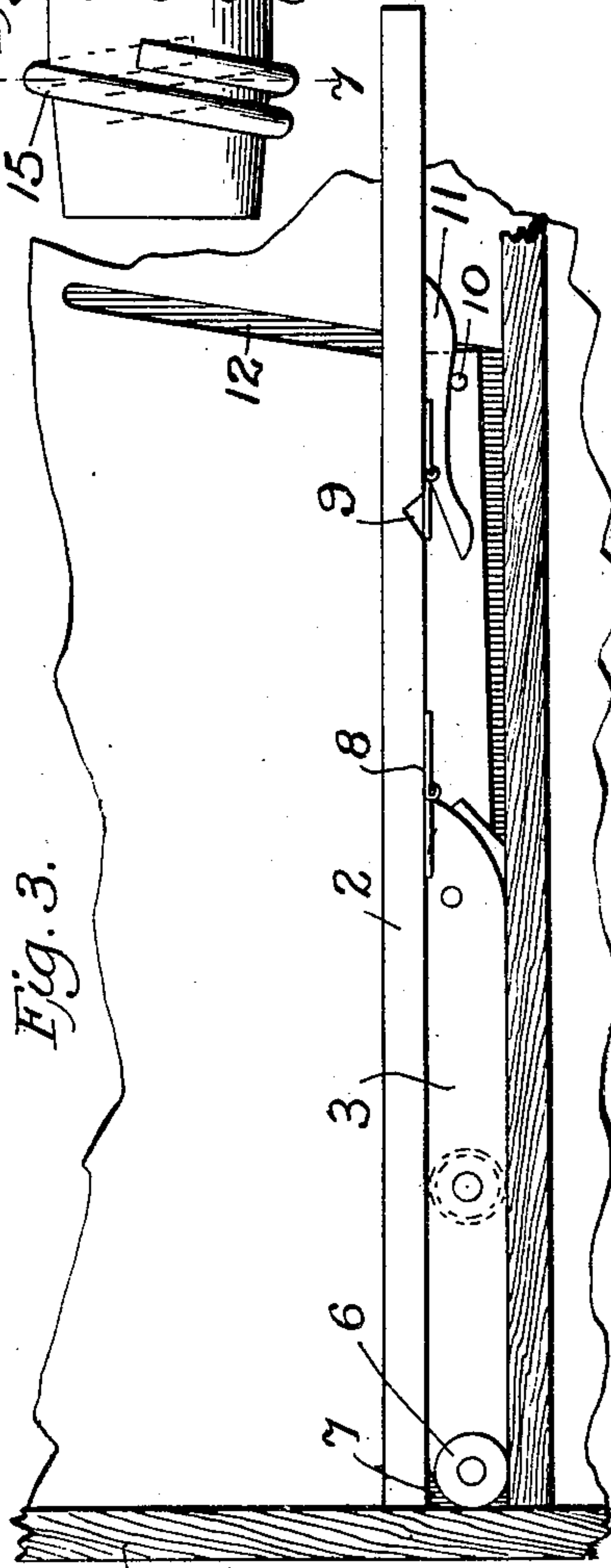


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN E. ANDERSON, OF MUSKEGON, MICHIGAN, ASSIGNOR OF ONE-HALF
TO UILRICH J. BEUMEE, OF MUSKEGON, MICHIGAN.

TYPE-WRITER CABINET.

SPECIFICATION forming part of Letters Patent No. 705,509, dated July 22, 1902.

Application filed July 8, 1901. Serial No. 67,485. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. ANDERSON, a citizen of the United States of America, and a resident of Muskegon, county of Muskegon, and State of Michigan, have invented certain new and useful Improvements in Type-Writer Desks, of which the following is a specification.

This invention has reference to various improvements in the construction of that class of office furniture commonly denominated "type-writer" desks, the object of which is to provide a desk construction wherein a type-writer may be conveniently arranged; and the special object of my present invention is to simplify, perfect, and cheapen the construction of a desk of this character and at the same time supply means for enabling the type-writer to be more easily withdrawn from the desk into a position for use and then retired into the desk after use.

The invention consists, essentially, in the construction, arrangement, and combination of the parts, substantially as will be herein after described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a bottom plan view of my improved type-writer desk, the desk-frame being shown in section. Fig. 2 is a sectional view of a portion of a type-writer desk, showing my improvements applied thereto, the desk being open and the machine-platform withdrawn. Fig. 3 is a similar view showing the desk closed and the machine-platform occupying the position it has when not in use. Fig. 4 is a detail cross-section on the line 4 4 of Fig. 5 of one of the castings that support the ends of the springs. Fig. 5 is a side view of the same and shows the spring enwrapping it. Fig. 6 is a side view of one of the central tightener-sleeves and shows the ends of the springs connected therewith. Fig. 7 is a detail cross-section on the line 7 7 of Fig. 6.

Similar numerals of reference designate corresponding parts throughout all the different figures of the drawings.

My invention being applicable to various kinds of desks does not require many changes in the desk construction in order to adapt it

for use therewith, and hence it was not necessary to show the detailed construction of the whole desk in the drawings, and I therefore only represented a portion of the frame of the desk at 1 in order that the arrangement therewith of my novel leverage and spring mechanism for lifting and operating the machine-platform 2 might be readily understood and the purposes and advantages of my improvements fully apprehended. It will be evident, therefore, that my improvements can be easily applied to various types of desks.

When the type-writer is not in use, it will rest within the desk, the latter being closed, so as to cover the machine, and at this time the machine-platform 2 will occupy the position shown in Fig. 3. When the type-writer is positioned for use, the platform or table 2 will be lifted to the proper height, as shown in Fig. 2, where it will be seen that said platform has been moved forward and upward from the inner position of Fig. 3, this movement being accomplished through the action of a set of levers, coöperating with which are springs that exercise sufficient power to provide substantially the lifting force required.

On each side of the desk—that is to say, at the left-hand edge and also at the right-hand edge of the machine table or platform 2—is arranged underneath the latter a set of levers 3, 4, and 5. Levers 3 and 4 are pivoted together at their middle point. Lever 5 is pivoted to lever 4 near its lower end and operates in front of lever 3. Lever 3 is provided at the lower end with a roller 6, which runs in a horizontal groove 7 in the side of the desk near to the stationary bed or platform 30. (See Figs. 2 and 3.) Lever 4 is provided at its upper end with a roller 14, which runs on the under side of the type-writer shelf or platform 2 in a groove 31 or by the side of a guide, as may be desired. Instead of the roller 14 a slide 32 may be employed, if desired, which slide will operate in the groove 31 or on the ledge that runs alongside of said groove. A slide may be substituted for the roller 6, if preferred. The upper end of the lever 3 is connected with the shelf 2 by means of a hinge 8. The levers 5, which we have seen to be pivoted to the levers 4 near the

lower end of the latter, are adapted at their upper forward ends to engage notches 9 on the under side of the shelf 2. The lower end of each lever 4 is free. The upper ends of levers 5 are disengaged when desired from the notches 9 by means of the levers 11, hinged to the under side of shelf 2 and acting against pin 10, projecting horizontally from lever 5. 12 designates a groove cut in a somewhat-inclined direction in each side of the desk and entered by horizontal pins 13, projecting from lever 3. Pin 13 runs in groove 12 during the operation of the leverage mechanism and serves to guide the motion of the lifting apparatus.

Between the levers 3 4 on one side of the desk and levers 3 4 on the other side is arranged a horizontal spring device consisting of two spiral springs 15 15, coiled in opposite directions to each other. They are connected at the middle of the desk to a rotary tightener-sleeve 18, having a series of perforations 19 and provided with a pin 20, by which the sleeve can be rotated and secured in any desired position. The sleeve is shown in enlarged detail in Fig. 6. The ends of the spring 15 may be secured to this sleeve in any desired way; but I preferably adopt the device indicated in Fig. 7, showing the sleeve 18 provided with flattened grooves engaged by bent ends of the wire constituting the spring. The other ends of the spring 15 engage hollow castings 16, which are rounded and provided with flattened grooves to allow the engagement of the springs therewith, said castings 16 being riveted, bolted, or otherwise firmly secured to the levers 4, it being noted that said levers 4 on each side are inner levers, while levers 3 are outer levers. A rod 17 extends between the two levers 3 3 and is fastened thereto at their middle points, said rod running through castings 16, the springs 15, and the tightener device 18, and being provided within the tightener-sleeve 18 with transverse perforations that are engageable by the pin 20 when it is desired to lock the sleeve to the rod 17 after having accomplished the rotary adjustment of said sleeve in tightening up the springs. From this it will be seen that the springs 15 15 can be made as loose or as tight as desired, and the tighter they are the more pressure they will apply to the levers at the sides, and consequently the more lifting power they will impart to the shelf 2 to help in raising the latter and carrying the machine thereon whenever it is desired to place the machine in position for use.

Between the forward levers 5 5 is a spring device similar to that of which we have just been speaking, except that although it consists of two springs 21 21, which are coiled in opposite directions to each other, yet these springs are so placed that the left end, say, of one spring 21 will coil in the same direction as the right spring 15 of the other spring device. This is indicated in Fig. 1. The spring device of which I am now speaking

has a central tightener-sleeve 24, provided with a locking-pin 25, and a central rod 23 runs through the springs and the tightener-sleeve, also through the levers 5 5, and engages and is attached to the levers 4 4, near their lower end, there being hollow castings 22, similar to castings 16, secured to the levers 5 for the purpose of receiving and carrying the ends of springs 21.

In use the springs are wound by means of the pins 20 and 25. These pins enable the tension of the springs to be so regulated as to counterbalance the weight of the load carried by the shelf or table 2, so that the typewriter can be raised or lowered with slight exertion. When the type-writer is in use, the levers occupy the relative positions indicated in Fig. 2. When it is not in use, the mechanism is folded together, as shown in Fig. 3, the shelf being lowered and pushed back into the desk. By varying the angles of the levers and the tension of the springs any position for any desired weight can be obtained. The tension of the springs serves to raise the levers, and if the tension is stronger than the weight on the shelf the levers would always be kept open.

Numerous changes in the exact construction, arrangement, and adaptability of the various parts may be obviously made without exceeding the proper scope of my present invention, and I therefore reserve the liberty of so varying and changing my device as the needs of different cases may require.

A preferable form of spring to use is one made of two wires twisted together in lieu of a single wire, for such a spring gives more power.

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

1. In a type-writer desk, the combination with the table, of lifting apparatus consisting essentially of interpivoted levers, and a tension device arranged horizontally between said levers and consisting essentially of reversely-coiled springs that apply their power against the levers, and means for regulating the tension of said springs.

2. In a type-writer desk, the combination with the table, of lifting means therefor comprising levers, springs coiled between said levers, and tightening devices for regulating the tension of the springs, consisting of a rotary sleeve to which the springs are connected and a rod passing through the springs and the sleeve, and means whereby the sleeve and rod are engaged.

3. In a type-writer desk, the combination with the table, of lifting means comprising interpivoted levers, spring devices between the levers for lifting the latter, and means for regulating the tension of the springs, consisting essentially of a rotary sleeve to which the springs are connected, together with a rod passing through the springs and the sleeve, and means for causing the sleeve to be en-

gaged with the rod, together with the levers for supporting the shelf after it has been raised.

4. In a type-writer desk, the combination
5 with the table, of interpivoted levers, one of which is hinged to the table and both of which have rollers, forengaging the desk-frame, tension-springs arranged horizontally between the levers, forward supporting-levers that en-
10 gage and uphold the shelf after it has been lifted, and disengaging devices for said supporting-levers.

5. The combination with the table, and in-
15 terpivoted levers arranged beneath it, of tension devices for said levers consisting of re-

versely-coiled springs, a central rotary sleeve to which said springs are connected, a rod running through the springs and the rotary sleeve and supported at its ends by attachment to the outer of the levers, and a pin 20 passing through a perforation in the sleeve and engaging the inner rod, substantially as described.

Signed at Muskegon, Michigan, this 27th day of June, 1901.

JOHN E. ANDERSON.

Witnesses:

DELIA PICHETTE,
WM. CARPENTER.