C. JELLINEK AND D. STERN.

CHAIR.

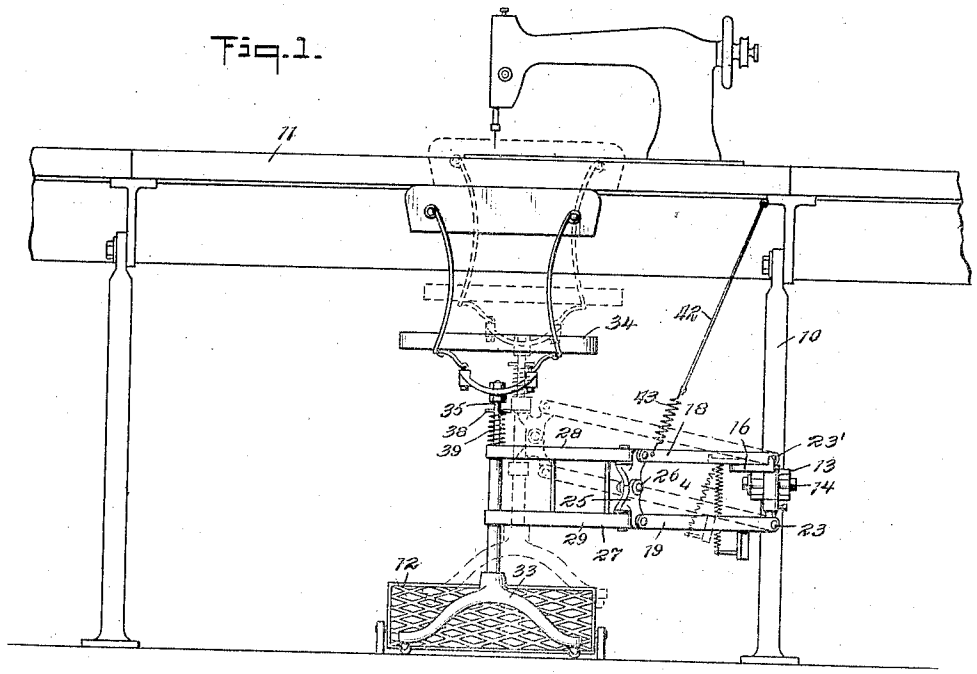
APPLICATION FILED AUG. 9, 1919.

1,379,263.

Patented May 24, 1921.

2 SHEETS—SHEET 1.

Fig. 1.



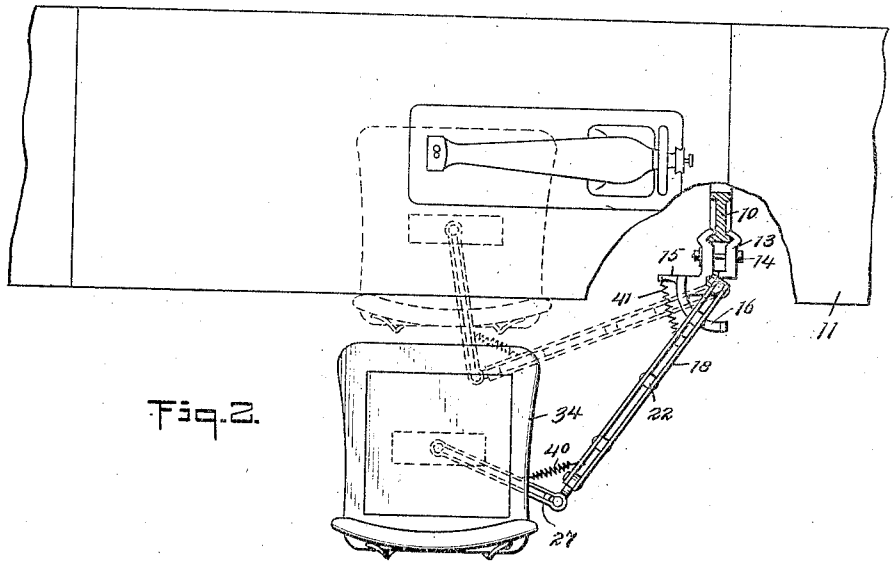


Fig. 2.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3.

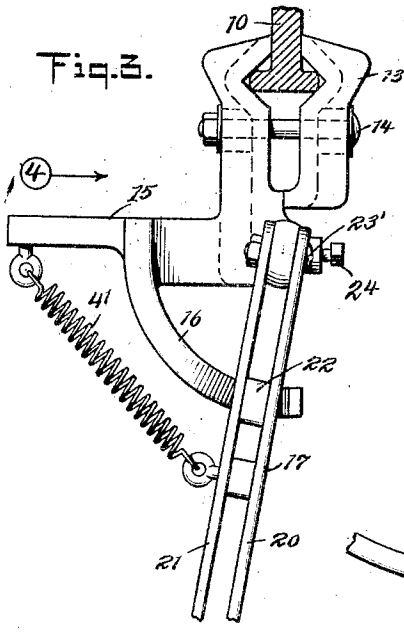


Fig. 4.

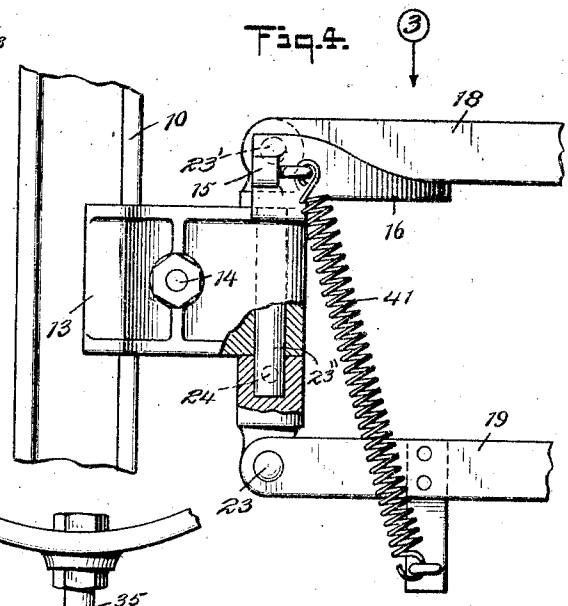


Fig. 5.

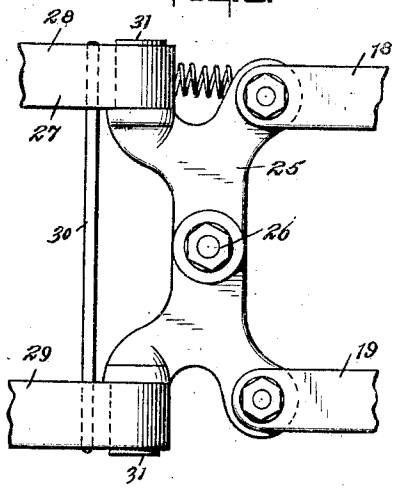
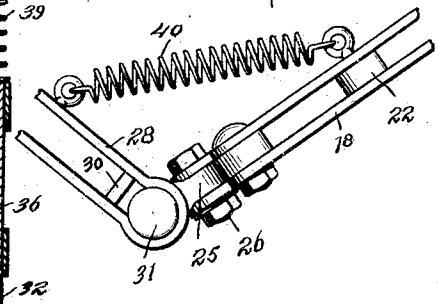


Fig. 6.



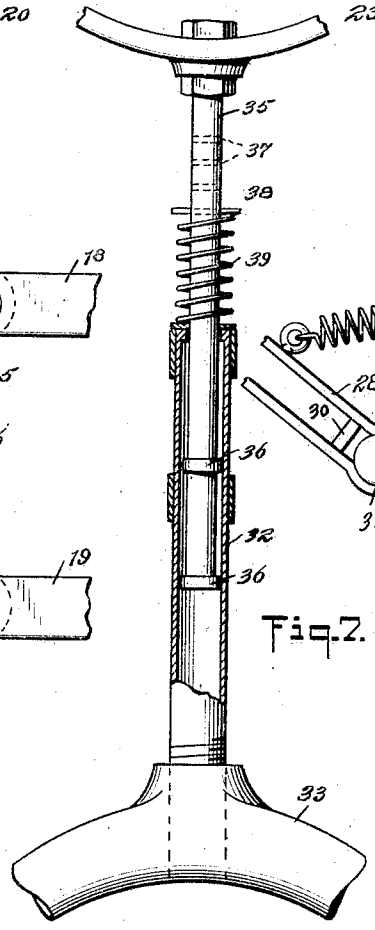


Fig. 7.

WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES JELLINEK AND DAVID STERN, OF NEW YORK, N. Y.

CHAIR.

1,379,263. Specification of Letters Patent. Patented May 24, 1921.

Application filed August 9, 1919. Serial No. 316,305.

To all whom it may concern:

Be it known that we, CHARLES JELLINEK and DAVID STERN, citizens of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

Our invention relates in general to a swinging chair for use in connection with sewing machines, counters and like places where it is desired to move the chair from an inoperative position in an out of the way place into an operative seating position, and particularly relates to such a device designed to be mounted on a sewing machine stand or other support normally subjected to vibratory movement.

In factory plants it is quite usual to mount lines of sewing machines on long work benches with just sufficient space between the succeeding benches to acccommodate the operators when properly seated at their respective sewing machines. It is desirable in such plants to provide a type of seat so arranged that in case of a panic the seats will be automatically removed from the aisle and disposed in an out of the way position beneath the benches when relieved of the weight of the operators. There is an available space below the work bench and above the control pedal of the machine in which the seat can be conveniently stored, and accordingly one of the objects of the invention is to provide a simple form of seat support which can be moved quickly and easily from its operative supporting position into this available space. A refinement of this improvement contemplates the designing of a chair support which can be attached to the standard forms of bench supports and which can be made of such small compass as to be accommodated in the space above suggested but which can be readily withdrawn from this space and located so as to dispose the operator in any desired position relative to the sewing machine adjacent the seat.

These space limitations imposed upon the structure necessitate an organization of parts which can be collapsed sufficiently to accommodate the same in the suggested space and at the same time provide a relatively long reach beyond the support.

A further object of the invention is to provide a construction of the type outlined and in which the weight of the person occupying the seat will be transmitted vertically and directly to the floor independently of connections with the support so as to minimize the transmission of vibration from the machine parts to the operator.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawings and in part will be more fully set forth in the following particular description of one form of mechanism embodying our invention; and the invention also consists in certain new and novel features of construction and combination of parts hereinafter set forth and claimed.

Referring to the accompanying drawings:—

Figure 1 is a view in front elevation showing in full lines a preferred embodiment of our invention with the seat in supporting position and attached to a conventional form of sewing machine bench. This figure also shows in dotted lines the inoperative position of the parts when folded in an out of the way position under the sewing machine bench:

Fig. 2 is a plan view looking down upon the device shown in Fig. 1 with parts of the machine bench broken away to show details of the mounting of the bracket support;

Fig. 3 is an enlarged plan view of the bracket support shown in Fig. 2 looking down upon the disclosure shown in Fig. 4 as indicated by the numbered arrow;

Fig. 4 is a view in side elevation of the device shown in Fig. 3 looking at the same from the left hand side as indicated by the numbered arrows;

Fig. 5 is an enlarged detailed view in side elevation of the X-connection between the numbers of the parallel motion shown in Fig. 1;

Fig. 6 is a plan view looking down upon the detail shown in Fig. 5; and

Fig. 7 is a vertical sectional view taken through the chair supporting member shown in Fig. 1.

In the following description and in the claims, parts will be identified by specific names for convenience of expression but

they are intended to be as generic in their application to similar parts as the art will permit.

In the accompanying drawings the chair is shown in the form of an attachment designed to be supported from some suitable part 10 of a work bench or framework of a sewing machine or other suitable article of furniture. In this disclosure the member 10 is shown to be an upright I-beam which when considered as part of a sewing machine construction is subjected to the vibrations and jars incidental to the running of such machines. There is also disclosed in Fig. 1 the conventional form of machine supporting work-table 11 and foot control press pedal 12, all as is usual in such constructions.

The chair constituting the subject-matter of this disclosure may be considered as an attachment. This attachment includes a bracket supporting member 13 herein shown particularly in Fig. 3 to be in the form of a two-jawed clamp containing the forward flange of the member 10 and securely and rigidly fixed thereto by means of a through bolt 14. One of the members is provided with a lateral extension 15 from which projects a curved and vertically disposed cam 16 concentrically disposed with reference to the vertical axis of movement of a chair supporting bracket 17.

The bracket 17 comprises two vertically spaced apart arms 18 and 19 which arms are each formed of two parallel metal strips 20 and 21 fastened together along their lengths by spacing blocks 22 so as to provide a light rigid construction.

The lower arm 19 is pivotally connected to the supporting member 13 by means of a pivotal connection 23 which permits vertical movement of the arm 19 and the upper arm 18 is similarly connected pivotally to the supporting member 13 by means of a bolt 23′ which is passed vertically through the member 13 and into the connection 23″ to which it is demountably affixed by means of a set screw 24. The outer ends of the arms 18 and 19 are pivotally connected in spaced apart relation by means of an X-connection 25 so that the arms 18, 19 and connection 25 coact to provide a parallel motion. This construction is designed to maintain the X-connection vertically disposed and with a freedom of movement both horizontally and vertically in both directions about the supporting member 13. This X-connection is preferably made in two parts with the parts fastened together by means of a through bolt 26 which arrangement is designed to facilitate the mounting of the same in position pivotally engaging a swinging arm 27 forming a continuation or extension of the bracket. This swinging arm is formed of an upper member 28 and a lower member 29 fastened together by connecting rods 30 and each pivotally connected to vertically disposed bearings 31 constituting the forward sides of the X-connection 25. Like the bracket, both members of this extending arm 27 are formed of parallel strips of metal fastened together in spaced apart relation.

The free end of the swinging arm 27 is pivotally connected to an upstanding tubular member 32, the lower end of which is provided with wide-spreading legs 33 designed to engage the floor and thus support the weight of the person occupying the seat 34. This seat is mounted upon an adjustable rod 35 telescoping into the top of the tubular member 32 and guided therein by spacing collars 36. The rod 35 is provided with a series of pin openings 37 designed to accommodate a pin 38, between which pin and the top of the member 32 is positioned a chair supporting and cushioning spring 39.

Another spring 40 has its opposite ends connected to the swinging arm and to the elevating bracket, across the inner angle formed by these two members as shown in Fig. 5, and normally acting upon the swinging arm to move the chair supporting member toward the supporting member 13 and into the space beneath the table as previously suggested and as shown in dotted lines in Fig. 2. A bracket swinging and elevating spring 41 extends between the extension 15 of the supporting member and the elevating bracket, normally acting upon the bracket to swing the same inwardly toward the machine so as to cause the bracket to rise up the incline provided by the cam 16 and thus move the chair and its supporting parts from the lowered position shown in full lines into the elevated position shown in dotted lines in Fig. 1.

If desired, a rod 42 has its upper end pivoted to and depends from the work-table 11 and a spring 43 fixed to the lower end of the rod normally acts on the arm 18 to raise the same into its dotted line position beneath the table as shown in Fig. 1.

In operation, assuming that the chair is in its normal position beneath the work-table 11, the user pulls the chair forwardly and against the tension of the springs 40 and 41 until the seat is over the position relative to the machine in which the operator desires to be seated. Pressure upon the seat as by sitting thereon, is transmitted through the spring 39, places the same under tension, and acts through the tubular member 32 to lower the legs 33 into engagement with the floor as shown in full lines in Fig. 1. At this time it will be noted that the person occupying the seat is supported directly from the floor and is not affected by any vibratory movement inherent in the supporting member 10. Vibratory movement of the member 10 in any

direction will be taken up by the flexible connections provided by the elevating bracket and any such vibratory movement cannot be felt by the person occupying the seat.

It is obvious that the seat may be advanced along the front of the work-table to either the right or left of the position shown in Fig. 2 and by rotating the support 35 the front edge of the seat may be alined with the work table or in any angular position with reference to this edge. When pressure is removed from the seat the coiled spring 39 reacts to elevate the seat 34 to any desired distance depending upon the positioning of the pin 38, thus insuring the proper position of the seat when finally rotated into its out of the way position. The spring 40 acts on the swinging arm to shift the same inwardly thus reducing the angle illustrated in Fig. 6 and moving the seat into its proper position to clear any other object beneath the work-table and before the spring 40 has had time to swing the elevating bracket into its folded position. The spring 41 acts directly on the swinging bracket to move the same toward the sewing machine table and at the same time causes this bracket to ride up the cam 16 thus directing the elevated seat into its out of the way position and over a previously defined path so as to clear any obstacles present.

By means of a device of this character it is possible for the operator at the seat to jump up therefrom and feel assured that the seat will move promptly and quickly over the present path and into the space provided for the same beneath the work-table. At the same time it is possible to pull the chair from beneath the machine and to position the same in any location within the limits of the space inscribed by the elevating bracket and swinging arm when distended in alinement.

Devices of this kind, when installed in factory work, are subjected to hard usage so that the invention also features an open-work construction possessing a strength sufficient to resist distortion during use and at the same time minimizes the amount of material and workmanship necessary to construct such a strong article. By suitably adjusting the tension or length of the several springs, the sequence of movements of the several parts may be so timed as to insure the clearance of any obstacles disposed in the path of movement of the seat when moving into its inoperative position. The parallel motion type of bracket disclosed insures the maintenance of the seat in vertical position while permitting vertical and horizontal movement thereof and this construction also contributes to the rigidity and strength of the bracket as a whole.

While we have shown and described, and have pointed out in the annexed claims, certain novel features of our invention, it will be understood that various omissions, substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention.

Having thus described our invention, we claim:—

1. In a device of the class described, the combination of a bracket supporting member provided with an elevating cam, a chair elevating bracket pivoted for horizontal movement about a vertical axis and movable vertically in its swinging movement across said cam, said bracket formed of two vertically spaced arms with one end of each pivotally connected to the supporting member, an X-connection pivotally coupling the free ends of said arms, a swinging chair supporting arm pivoted to said X-coupling for horizontal movement relative thereto and a spring acting on said supporting arm and said bracket to swing the arm toward the supporting member.

2. In a device of the class described, the combination of a bracket supporting member provided with an elevating cam, a chair elevating bracket pivoted for horizontal movement about a vertical axis and movable vertically in its swinging movement across said cam, said bracket formed of two vertically spaced arms with one end of each pivotally connected to the supporting member, an X-connection pivotally coupling the free ends of said arms, a swinging chair supporting arm pivoted to said X-coupling for horizontal movement relative thereto, a ground engaging member carried by said swinging arm and a seat mounted on said ground engaging member whereby weight on the seat is transmitted directly to the ground independently of the elevating bracket.

3. In a device of the class described, the combination of a bracket supporting member, a seat supporting bracket pivotally connected to said member, means including a cam acting on said bracket for simultaneously elevating and swinging said seat from an operative into an inoperative position, a seat, resilient supporting means disposed between the seat and said bracket and means for maintaining said seat in normal vertical position.

4. In a device of the class described, a supporting member, means supported from said member for moving the chair either to an inward inoperative position or to an outward operative position, said means causing said chair to have a parallel bodily movement upwardly as it is moved inwardly.

5. In a device of the class described, a support, a chair, means for normally supporting the chair in an inwardly raised po-

sition, said supporting means being constructed and arranged to give the chair a bodily parallel movement downwardly as the chair is moved outwardly.

6. The combination of a support, a chair mounted for movement about said support, and co-acting means between the support and the chair for causing said chair to have an inward and upward movement, said means including a parallel motion connnection.

Signed at New York city, in the county of New York and State of New York, this 3rd day of July, 1919.

CHARLES JELLINEK.
DAVID STERN.