Dec. 24, 1946. J. L. CAFFREY 2,413,168

FOLDING SEAT

Filed Oct. 5, 1945 3 Sheets-Sheet 1

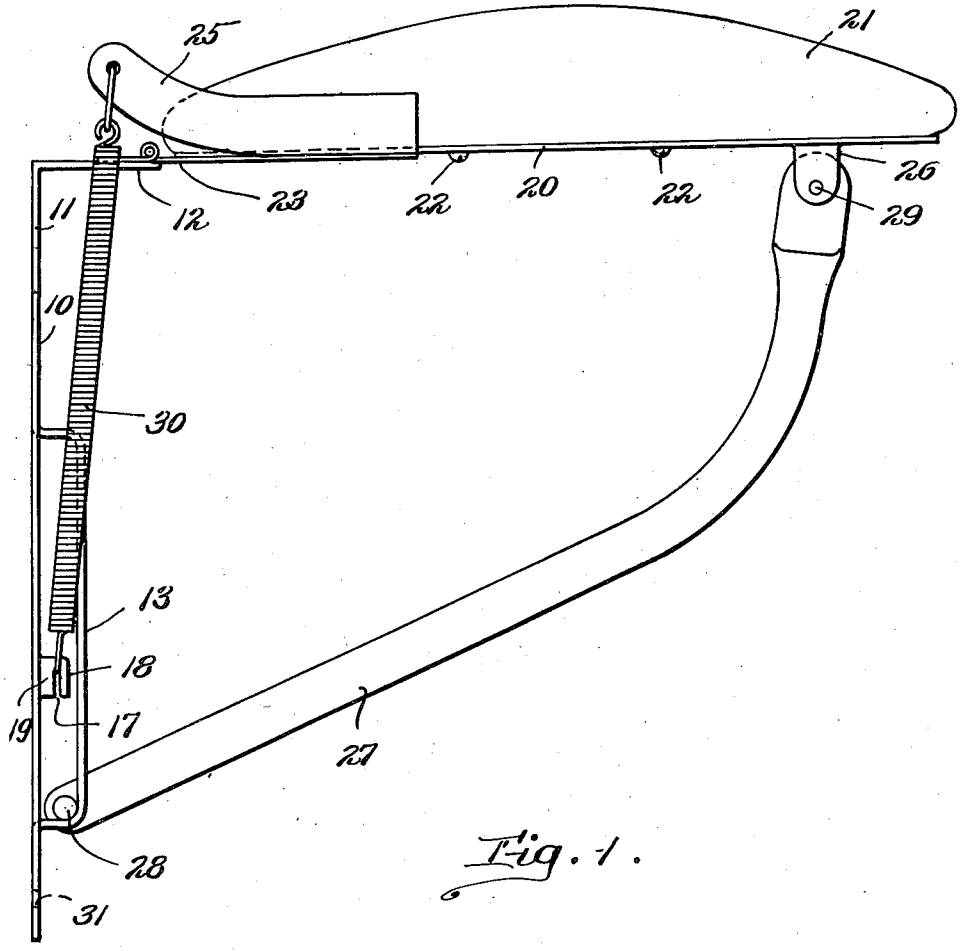


Fig. 1.

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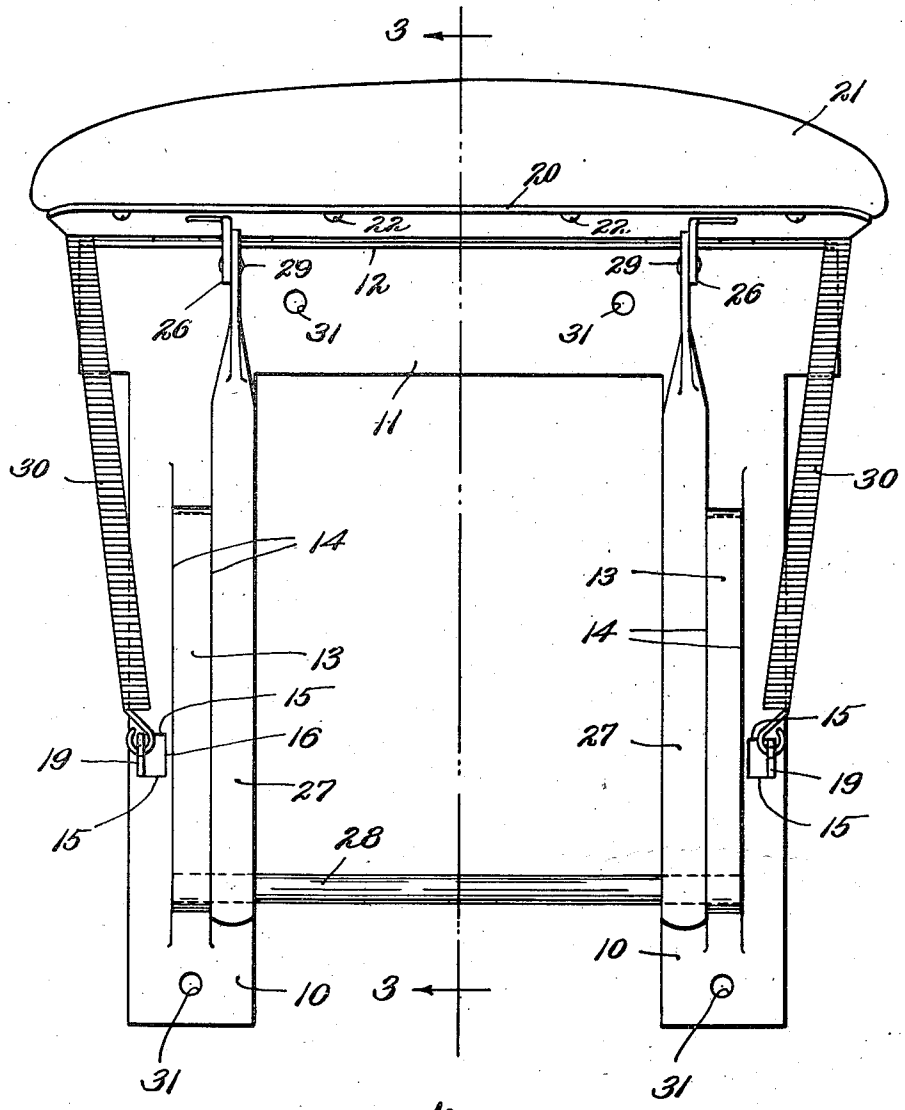


Fig. 2.

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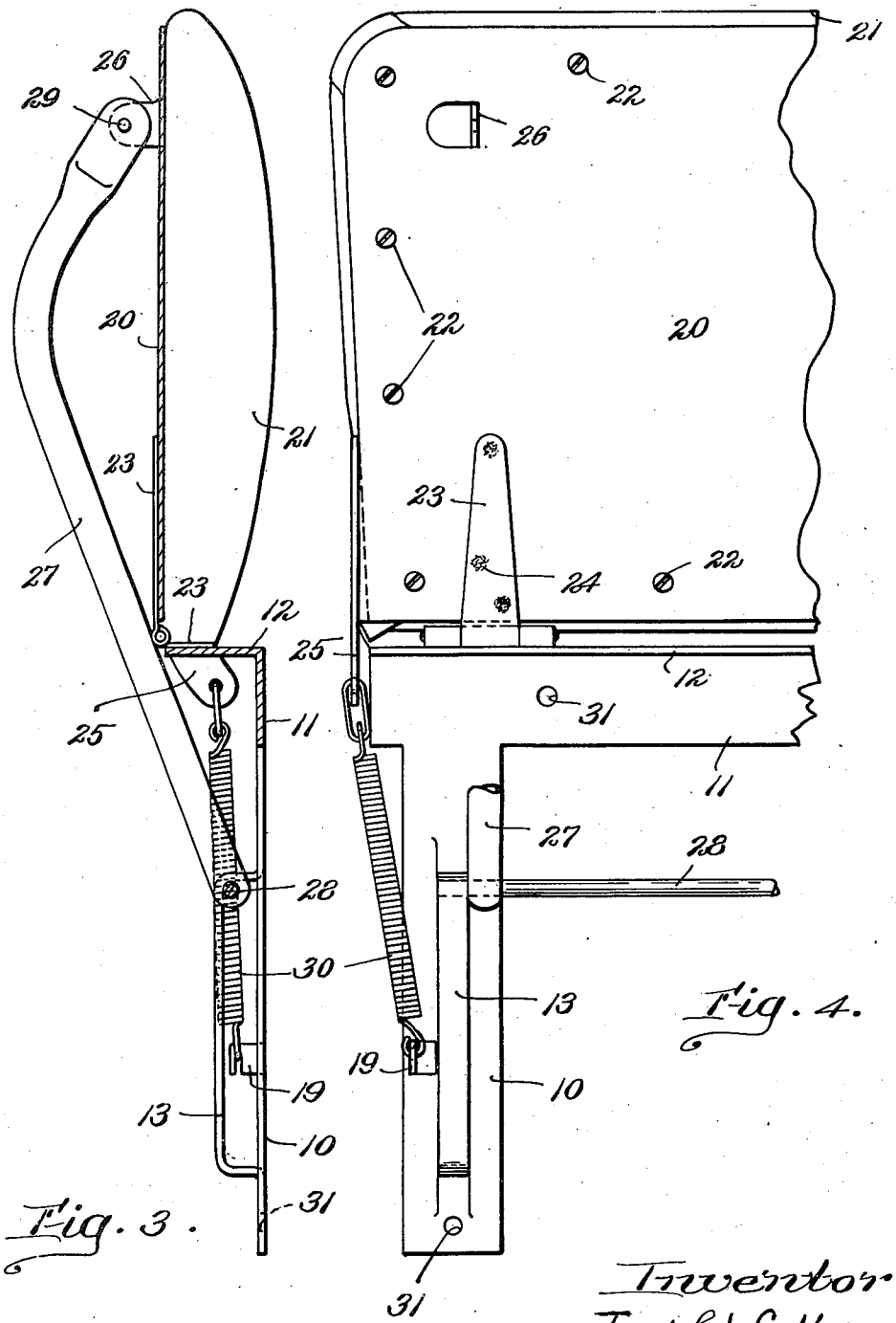


Fig. 3.

Fig. 4.

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Patented Dec. 24, 1946

2,413,168

UNITED STATES PATENT OFFICE

2,413,168

FOLDING SEAT

Joseph Leo Caffrey, Malden, Mass.

Application October 5, 1945, Serial No. 620,496

1 Claim. (Cl. 155—83)

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This invention relates to a folding seat particularly adapted for use in a shop or factory in which bench workers are employed, although it is capable of other uses.

The general object of the invention is the provision of a folding seat characterized by extreme simplicity and ruggedness in construction which may be manufactured very cheaply and will stand up under the rough usage to which seats of this sort are subjected.

Other objects will appear in the detailed description of the particular embodiment of the invention selected for illustration.

In the drawings,

Figure 1 is a side elevation of a folding seat embodying my invention, the seat being shown in lowered or operative position.

Fig. 2 is a front elevation.

Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Fig. 4 is a front elevation showing the seat in raised or inoperative position.

Referring to the drawings, 10, 10, are a pair of spaced leg members connected at their upper ends by a yoke piece 11 which terminates in a forwardly projecting plate 12 shown, in the present instance, as making a right angle with the plane of the legs and the yoke member.

Each leg member is provided with a strap spaced forwardly therefrom and extending throughout a portion of the length thereof, each said strap terminating near the lower end of the leg.

Preferably, the leg member structure is stamped out of a single plate of sheet metal and then pressed into the shape shown, the metal between the parallel cuts 14, 14, being pressed out of the plane of the plate to form the strap and the flange 12 being bent at right angles to the plate at the same time. Simultaneously with the making of the cuts 14, 14, each leg is cut through along the horizontal lines 15, 15, and the vertical line 16, and a portion of the metal bounded by said lines is punched out, as indicated at 17, to form the hook 18, Fig. 1. Preferably simultaneously with the pressing out of the straps 14, the metal bounded by the lines 15, 16, is pressed outwardly at right angles to the plane of the leg to form the clip 19.

It will be understood, however, that the leg member may be assembled from separate pieces secured together by spot welding or in any other suitable manner; that the yoke member 11 and flange 12 may be integral; that the legs may be rigidly secured thereto by bolts, rivets, or spot

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welding, and also that the straps and clip need not be integral with the legs.

The plate 20, to which is secured a seat 21 by screws 22, or in any other suitable manner, is connected to the forwardly projecting flange 12 by the hinge 23, and the straps of said hinge may be spot welded to the underside of the plate 20, as indicated at 24, Fig. 4, or in any other suitable manner, and to said flange.

The rearward ends of the plate 20 are provided with a pair of brackets 25 on the opposite sides thereof and said brackets preferably are curved to project upwardly and rearwardly when the seat is in lowered position (Fig. 1) and downwardly and rearwardly when the seat is in its vertical position (Fig. 3).

Preferably, the brackets 25 and the hinge members 26, 26, are integral with the plate 20 and are formed in one operation by cutting and stamping, although it will be understood that these members may be made separately from the plate 20 and secured thereto by electric welding, or in any other suitable manner.

A seat support member is provided for co-operation with the seat member and the leg member. In the present instance, the support member is shown as formed from two spaced arms 27, 27, which may be iron pipe of standard make, which are bored transversely near their lower ends to receive a cross piece 28, the ends of said cross piece projecting beyond the arms and being disposed between each leg and its strap whereby there is provided a track or guide for the lowermost portion of the support member during the movement of the seat from one to the other of its two positions. The upper ends of the arms 27 are shown as flattened, in the present instance, and pivotally connected or hinged, as indicated at 29, to the lugs 26, respectively.

Connected between the brackets 25 and the clips 19 are tension springs 30, the combined tension of said springs being sufficient to hold the seat member in its vertical or horizontal position, but insufficient to raise said member from its horizontal to its vertical position.

An operative desiring to use the seat, will move it from its vertical position to its horizontal or operative position by pressing forwardly and downwardly against the upper edge of the seat, such pressure being resisted by the somewhat strong tension of the springs 30. When the seat has been placed manually in horizontal position, the tension of said springs will retain it in such position, the direction of pull and the strength of the springs being effective for this purpose, but

the parts are so apportioned and positioned that the spring will not be effective to raise the seat from its horizontal position. The operative, having finished using the seat, will restore it manually to its vertical position, the direction of pull and the tension of the springs being sufficient to maintain it therein. Thus, the springs are always in a state of tension which is greater when the seat is in lowered than in raised position, but the weight of the seat and support member and the curvature of the brackets away from the pintle of the hinge 23 and the leverage exerted by the brackets are such that the seat is maintained in whichever of its two positions it is placed manually.

The seat may be attached to a work bench in a shop or factory by screws or bolts passing through the apertures 31, 31, in the leg member, in which case, the seat member will extend outwardly from the bench and the bench worker will straddle it, or it may be attached to the floor a suitable distance in front of the bench by means of angle irons, or other appropriate appliances, in which case, the seat member will extend forwardly toward the bench.

Among various advantages accruing from the use of my improved folding seat are economy of space and the provision of free aisles in front of the benches, which is especially desirable when the floors of the factory are being swept or cleaned.

If desired, the backs of the seats may be marked consecutively with the number of the employees occupying them, in which case, the personnel manager of a department, usually called the shop steward, can very easily list the absentees, by

walking down the aisle and observing the numbers on the unoccupied seats without being obliged to consult time clock records.

Having thus described an illustrative embodiment of my invention without, however, limiting the same thereto, what I claim and desire to secure by Letters Patent is:

A folding seat, comprising a pair of spaced leg members terminating at their upper ends in a forwardly projecting plate, a seat member hingedly connected to said plate at the forward edge thereof, said seat member having a pair of brackets on the opposite sides thereof near the rearward end of the same, said brackets projecting upwardly and rearwardly when the seat member is in its horizontal position and downwardly and rearwardly when said seat is in its vertical position, a swinging seat-support comprising a pair of spaced arms terminating in a cross piece at the lower ends thereof, the ends of said cross piece projecting beyond said arms, each said leg member having a strap spaced forwardly therefrom and extending throughout a portion of the length thereof, the projecting ends of said cross piece being disposed between said leg members and said straps, means pivotally connecting the upper ends of said arms to said seat member, and a pair of springs each connected between the lower portion of said leg members and the rearward end of said brackets, the tension of said springs being sufficient to hold the seat member in its vertical position but insufficient to raise said seat member from its horizontal to its vertical position.

JOSEPH LEO CAFFREY.