Oct. 19, 1965 W. E. NORDMARK 3,212,816

CHAIR DESK

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FIG. 1

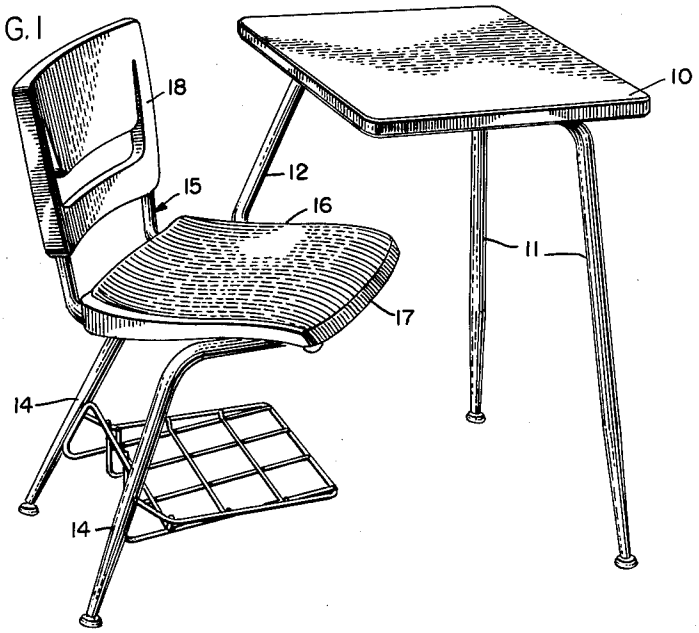
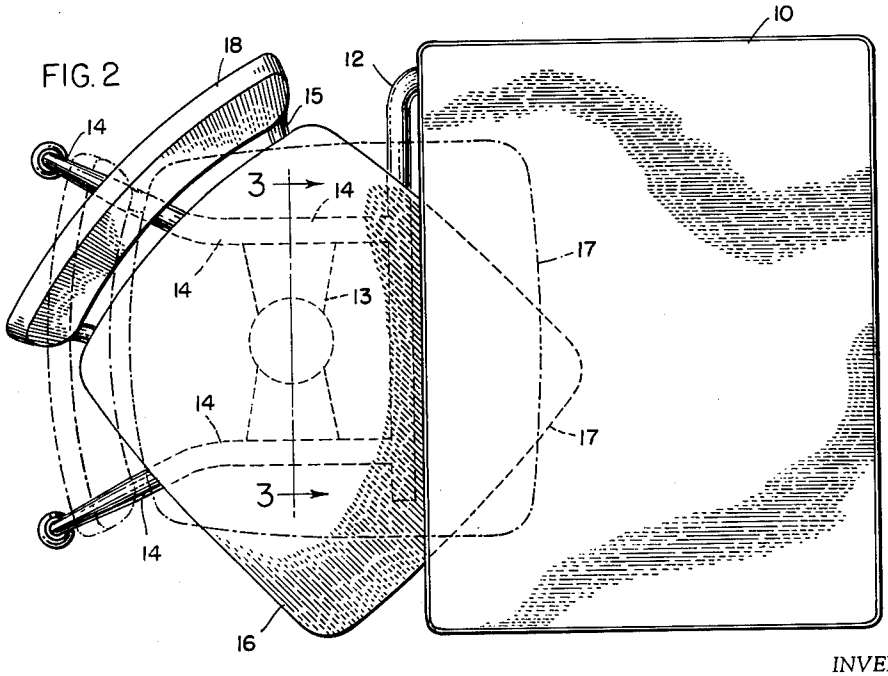



FIG. 2




INVENTOR:

WALTER E. NORDMARK

WITNESS

Harry S. Brown Jr.

Dawson, Tilton, Fallon Lungmus & Alexander

ATTORNEYS

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FIG. 3

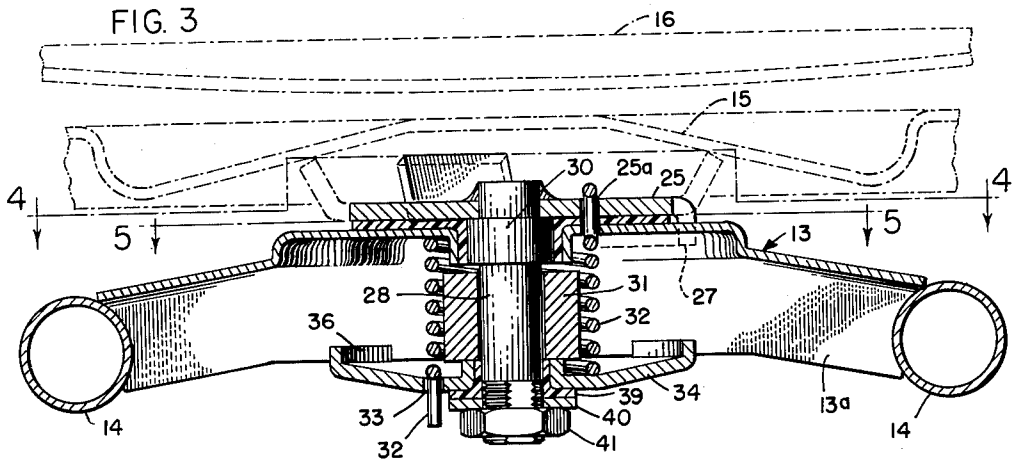



FIG. 4

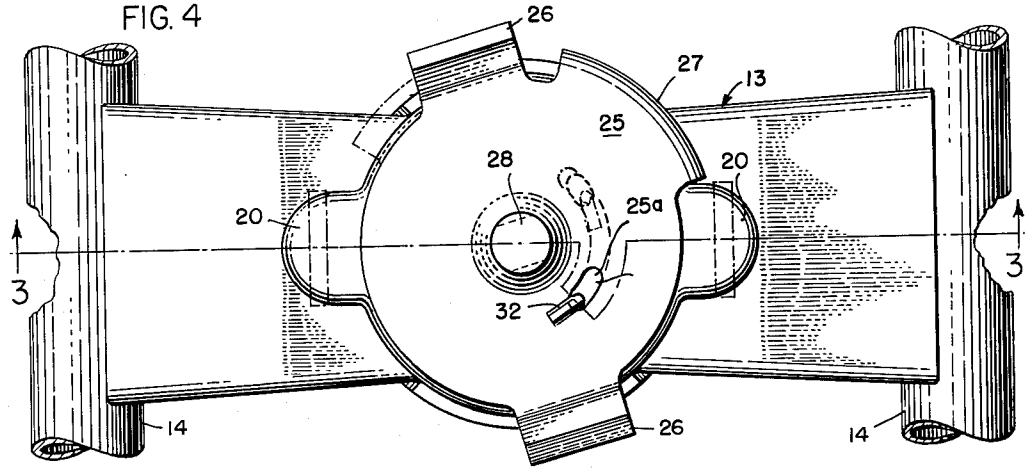
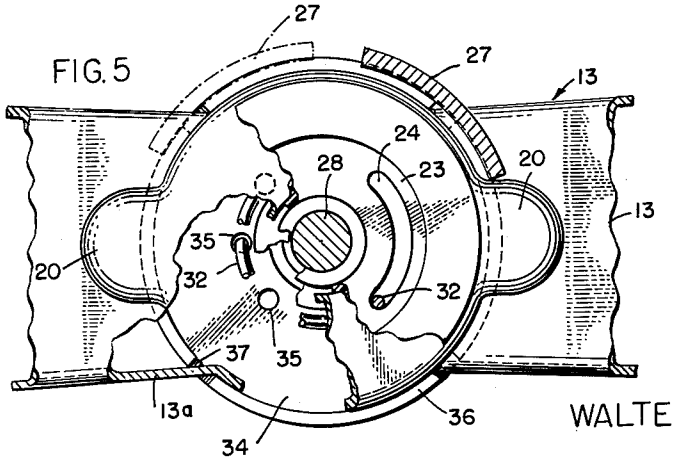



FIG. 5




INVENTOR:
WALTER E. NORDMARK

WITNESS
Harry S. Brown Jr.

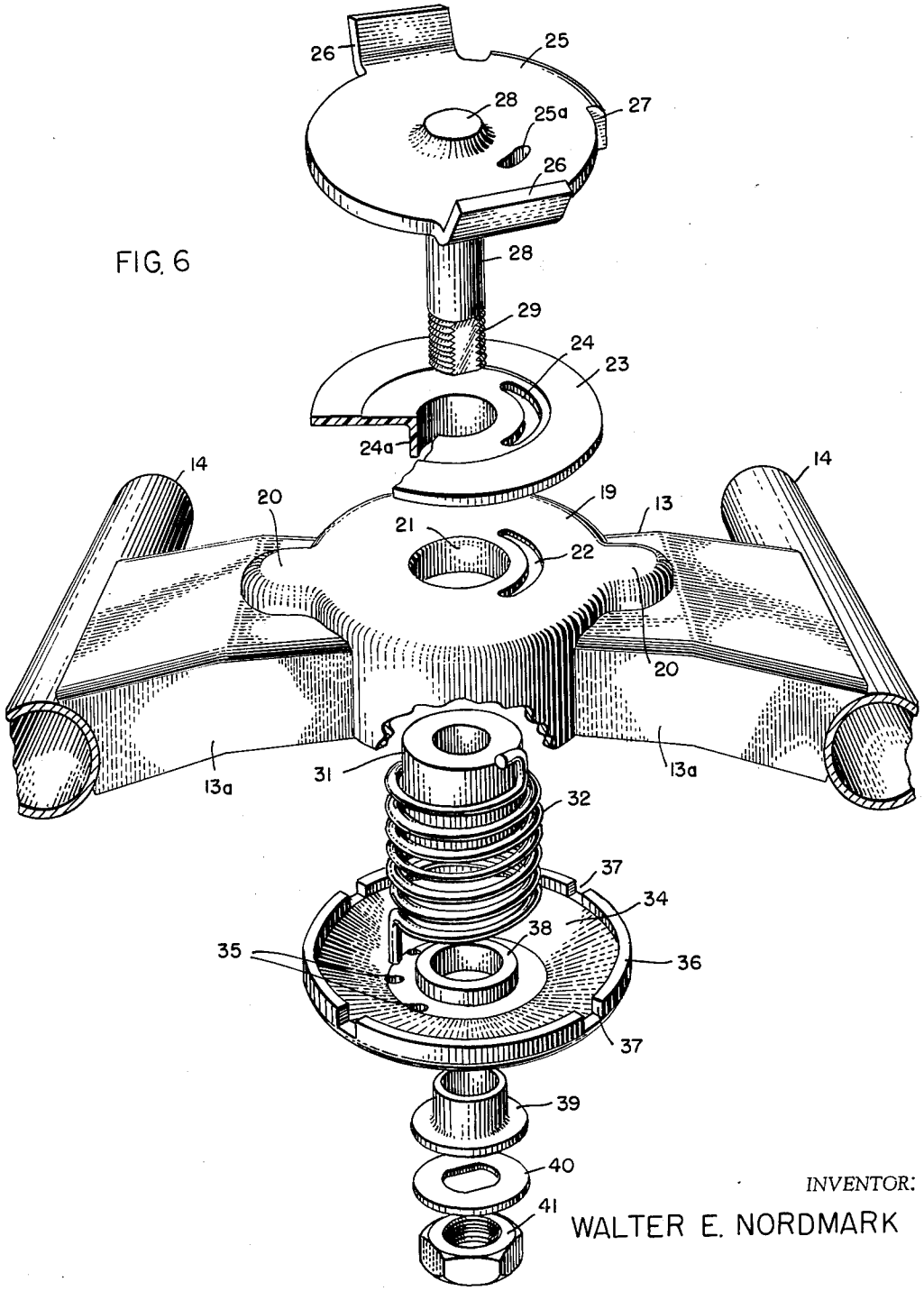
Dawson, Tilton, Fallon, Lungmus & Alexander
ATTORNEYS

Oct. 19, 1965 W. E. NORDMARK 3,212,816

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FIG. 6




INVENTOR:
WALTER E. NORDMARK

WITNESS
Harry S. Brown Jr.

Dawson, Tilton, Fallon, Lungmus & Alexander
ATTORNEYS

United States Patent Office

3,212,816

Patented Oct. 19, 1965



3,212,816

# CHAIR DESK

Walter E. Nordmark, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Filed May 8, 1964, Ser. No. 366,082
4 Claims. (Cl. 297—170)

This invention relates to a chair desk and more particularly to a chair structure in which the chair or seat portion is swivelly mounted upon a base and is normally urged outwardly and laterally but which is readily moved to a straight or aligned position when the seat is occupied.

An object of the invention is to provide a seat base in alignment with a fixed member such as a desk, etc., and a seat or chair pivotally mounted upon the base for movement such as to bring the front of the seat towards said member or laterally on it, together with yieldable means for biasing the seat normally in an outwardly inclined position with respect to the member. Another object is to provide in combination with a desk a seat swivelly mounted on a base together with means for urging the front of the seat in an outward and lateral direction for ready accessibility; said seat, however, when occupied moving ino a position aligned with the desk. Yet another object is to provide novel seat and base structure in combination with means for yieldably biasing the seat in a direction outwardly of its normal position when occupied. Other specific objects and advantages will appear as the specification proceeds.

The invention is shown, in an illustrated embodiment, by the accompanying drawings, in which—

FIGURE 1 is a perspective view of a chair desk embodying my invention; FIGURE 2, a top plan view of the structure shown in FIGURE 1, the chair being shown in solid lines in its outwardly turned position and in dotted lines for the occupied position; FIGURE 3, a vertical sectional detail view of the seat base structure, the section being taken as indicated at line 3—3 of FIGURE 4 and the seat being shown in phantom lines in the occupied position; FIGURE 4, a broken top plan view, the view being taken as indicated at line 4—4 of FIGURE 3; FIGURE 5, a broken top plan view taken as indicated at line 5—5 of FIGURE 3 and with a portion of the structure broken away; and FIGURE 6, a broken part sectional view in perspective showing the swivel mechanism in separated relation and in the unoccupied position of the structure.

In the illustration given particularly in FIGURES 1 and 2, **10** designates a desk or table provided with legs **11** and with a chair support member **12** extending downwardly and forwardly of a seat base **13**. Tubular members **14** are welded to the member **12** as shown in FIGURE 2 and the members **13** terminate in downwardly extending legs. In this structure, the forward legs **11** and the downwardly turned rear legs **14** provide a support for the combined desk and chair.

A seat or chair frame **15** is swivelly supported upon the base frame **13** and the frame carries a seat member **16** having a front portion **17**, and the vertically extending portion of the frame **15** supports a seat back **18**.

In my chair desk structure, I provide a swivel support for the chair frame **15** which normally turns the front portion **17** of the seat **16** in an outwardly turned position as illustrated best in FIGURES 1 and 2, and in this position the chair is readily accessible. At the same time, the support mechanism yields readily to allow the chair to be moved to the occupied position illustrated in dotted lines in FIGURE 2. The swivel support mechanism and the biasing means will now be described.



In the illustration given in FIGURES 3 to 6 inclusive, the seat base **13** extends between the tubular members **14** and is welded thereto. A raised central portion **19** provides the abutment members **20** and provides also the centrally depending collar **21**. The raised portion is also provided with an arcuate slot **22**. Mounted upon the raised portion **19** is a top bearing **23** which may be formed of nylon or other suitable material and the bearing is also provided with a slot **24** and a depending sleeve **24–*a***, as shown best in FIGURE 6. Above the top bearing **23** is a seat support member **25** provided with support legs **26** and a depending swivel stop **27**. Welded to the member **25** is a center pin **28** having a threaded and flattened lower end portion **29**.

In the assembled position shown best in FIGURE 3, the center pin **28** is provided with a supporting collar **30** below plate **25** and a spring stabilizer **31** encloses the center pin **28** below collar **30**. A torsion spring **32** extends about member **31** and has its lower end portion extending through an opening **33** in the swivel cup **34**. The upper portion of the spring **32** extends through the slot **22** of the base **13**, slot **24** of the bearing **23**, and slot **25–*a*** of the plate **25**.

The swivel cup **34**, as shown best in FIGURE 6, is provided with spaced openings **35** to permit adjustment of the spring so as to bring the seat to any desired outwardly turned angle. Also, the swivel cup is provided with a raised peripheral flange **36** provided with spaced notches **37** adapted to receive the downwardly turned walls **13–*a*** of the seat base **13**. This permits the swivel cup to be adjusted by turning it 90° at a time.

The swivel cup is also provided with an upwardly turned collar **38** receiving the neck portion of the bearing **39**, which may also be formed of nylon or other suitable material. Below the member **39** is a swivel washer **40**, and a swivel nut **41** engages the lower threaded end portion **29** of center pin **28**.

*Operation*

In the operation of the structure, the seat base **13** is fixed, being supported by the legs **14** and through the tubular member **12** by the desk **10** and its legs **11**. The seat or chair frame **15** is carried by the rotatable plate **25** mounted on center pin **28**. The torsion spring **32** is adjusted so as to swing the plate **25** and thereby seat **16** normally to the outwardly turned position shown best in FIGURES 1 and 2. Such an outwardly turned position provides a substantial clearance between the seat **16** and the table **10** and thus allows the user to move comfortably into the seat without striking the table and the seat is then swung without effort to the position aligned with the table, as shown in dotted lines in FIGURE 2. While the swivel mechanism may be arranged to give any desired degree of movement, I prefer to have the seat swivel about 90°; namely about 75° to the right and about 15° to the left of center from the aligned position shown in dotted lines in FIGURE 2. The swivel stop **27** which engages the raised abutment portions **20** of base **13** may be formed in any desired length to vary the degree of rotational movement. Further, as above described, the outwardly turned position of the seat may be controlled by rotating the lower end of the spring in one or the other of the openings **35**.

In the use of the chair desk, as for example by a student in school, it is desired to have the seat close to the desk so that the student will sit in an upright position close to the desk for effective writing and reading, etc. However, in the usual seat arrangement for accomplishing this purpose, it is found that the space between the seat and the desk is close and there is a problem both in getting seated and in getting out of the seat. With the new structure in which the seat normally is turned outwardly, as

illustrated in FIGURES 1 and 2, the seat and seat back are opened so that the student can comfortably be seated before swinging the chair into the close position beside the desk. Similarly, the student can swing the seat readily to the right so as to open the passage for leaving the seat.

While in the foregoing specification I have set forth a specific structure in considerable detail for the purpose of illustrating embodiments of my invention, it will be understood that such detail or details may be varied widely by those skilled in the art without departing from the spirit of my invention.

I claim:

1. In a swivel chair structure, a seat base equipped with a swivel cup having a raised rim provided with spaced slots, said base having side flanges adapted to releasably engage said slots for the adjustment of said base flanges with respect to said cup, a plate mounted on said base equipped with a depending center pin, a seat carried by said plate, and a torsion spring fixed to said cup at one end and at its other end to said plate.

2. The structure of claim 1 in which said swivel cup is provided with spaced adjustment openings adapted to receive the lower end of said torsion spring.

3. In a chair desk, a desk member supported by legs, a seat base joined to said desk member and also supported by legs, said seat base being aligned with said desk and in relatively close spaced relation thereto, a seat swivelled on said base and equipped with an upwardly-extending seat back extending above said desk whereby said back may be moved to a position facing said desk and to a position adjacent one end of said desk, and spring means normally holding said seat outwardly with the back thereof adjacent one end of said desk but yielding to permit movement of said seat and back into position facing said desk.



4. The structure of claim 3 in which said seat back is concave in shape throughout the width thereof.


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FRANK B. SHERRY, *Primary Examiner.*