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SWINGING COLLAPSIBLE AND VERTICALLY MOVABLE SEAT

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Fig. 1.

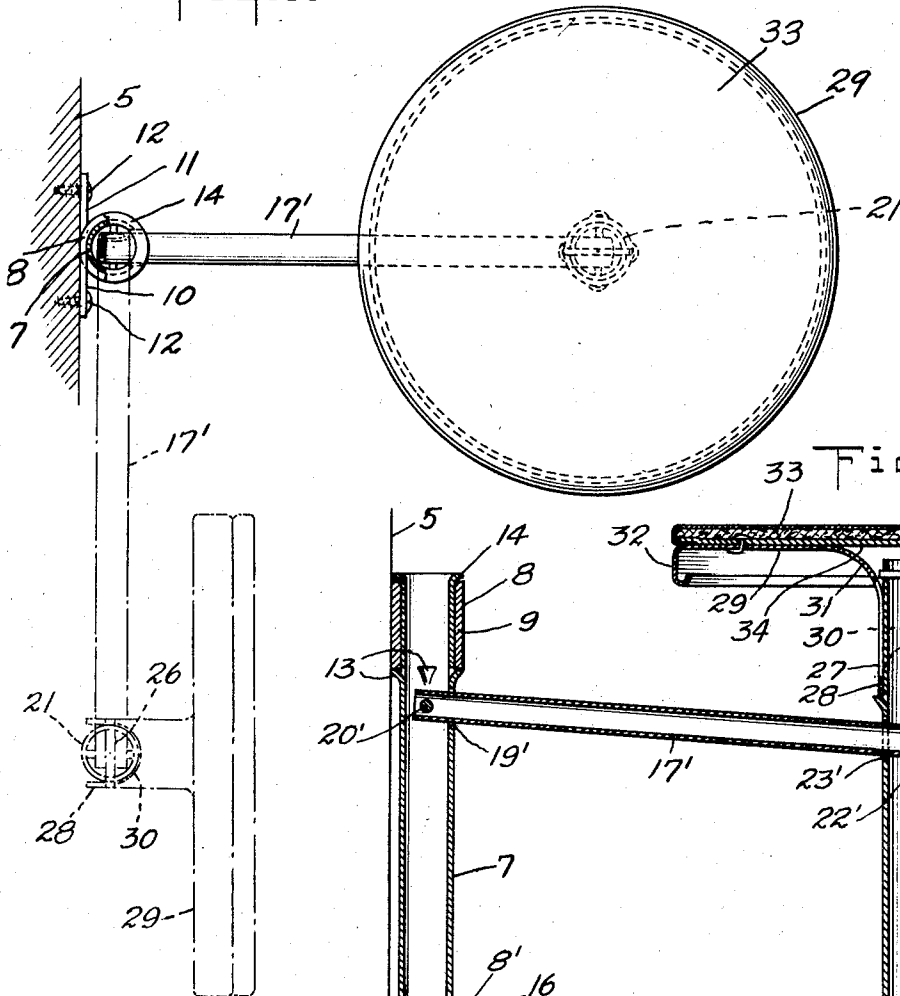
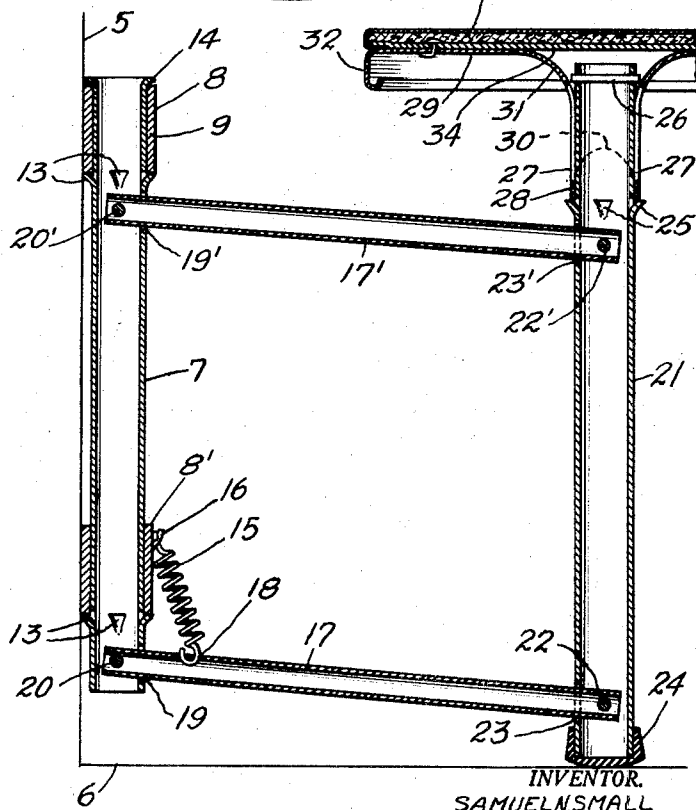


Fig. 2.



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SWINGING COLLAPSIBLE AND VERTICALLY
MOVABLE SEAT

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4 Claims. (Cl. 155—81)

This invention relates to what might be termed a serv-
ice seat or stool, which can be normally retained in a
raised and collapsed position with respect to a support
and, then, moved into an extended assembled position,
preparatory to the use thereof and, in such use, the same
is moved into engagement with a supporting surface to
take the load of the occupant of the seat, whereby, when
an occupant leaves the seat, the seat will automatically
move into a raised position with respect to the supporting
surface.

More particularly, the invention deals with a structure
of the character described which is economically pro-
duced, for the most part, from sheet metal tubing, pre-
sented a relatively light and also strong and durable
structure in the use thereof as provided particularly by
virtue of the vertical movability of the seat structure.

The novel features of the invention will be best under-
stood from the following description, when taken to-
gether with the accompanying drawing, in which certain
embodiments of the invention are disclosed and, in which,
the separate parts are designated by suitable reference
characters in each of the views and, in which:

Fig. 1 is a plan view of a seat structure, indicating its
mounting in connection with a support, with part of the
construction broken away and in section and also illus-
trating the seat structure in collapsed position with re-
spect to the support; and

Fig. 2 is a vertical section through the seat structure,
as seen in Fig. 1, diagrammatically illustrating a wall
and floor, in conjunction with which the seat structure is
employed.

In Fig. 1 of the drawing, I have shown at 5 part of a
wall structure in section, this wall structure also being
diagrammatically illustrated by the line 5 in Fig. 2 of
the drawing. In Fig. 2, line 6 indicates a floor or other
base support. The seat structure comprises a pivot post 7
of tubular structure mounted in connection with the support
or wall 5 by hinge brackets 8 and 8', these brackets being
generally of the same construction; thus, the brief descrip-
tion of the bracket 8 will apply to the bracket 8'.

The bracket 8 comprises a cylindrical bearing portion
9, having upper and lower diverging attaching plate por-
tions 10 and 11, note Fig. 1, through which suitable screws
or other fastenings 12 are passed in securing the hinge
bracket in position. The post 7 is mounted in the bear-
ings 9 of both brackets, the post 7 having outwardly
stamped circumferentially spaced lugs 13 for positioning
the column with respect to the brackets 8, 8', the upper
end of the column having an outwardly turned flange 14,
which retains the column and brackets in relationship to
each other, this latter being assisted by a coil spring 15,
one end of which is fixed to the bracket 8', as seen at
16, and the other end being coupled with a lower tubular
seat supporting rod 17, as seen at 18 in Fig. 2 of the
drawing.

Another generally similar seat supporting rod 17' is
employed at the upper part of the column and these rods
pass through openings 19, 19' in the post and are pivoted

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to the post, as seen at 20, 20', the openings 19, 19' being
such as to provide slight vertical movement of the tubular
rods 17, 17'.

The outer free ends of the rods 17, 17' are pivoted to
a seat supporting column 21, as seen at 22, 22', the rods
passing through openings 23, 23' in the column 21, simi-
lar to the openings 19, 19'. The lower end portion of
the column 21 has a rubber or other cup-shaped foot 24
for engaging the surface 6. The upper end portion of
the column 21 has circumferentially spaced outwardly
extending lugs 25, similar to the lugs 13.

Above the lugs 25, the end portion of the column 21
has a transverse pivot pin 26 which protrudes slightly be-
yond outer surfaces of the column to pass into opposed
elongated apertures 27 on a downwardly extending sleeve
portion 28 of a seat 29. At right angles to the elongated
apertures 27, the sleeve 28 is recessed at its lower end
portion, as indicated at 30, so as to clear the upper end
of the column 21 in swinging the seat into the collapsed
position shown in dot-dash lines in Fig. 1 of the drawing.

The lower end of the sleeve 28 normally rests upon
the lugs 25 when the seat is in operative position, as
shown in full lines in Fig. 2 of the drawing, and the
rounded portion 31 of the seat at the upper end of the
sleeve is so formed as to normally clear the ends of the
pivot pin 26, so that the seat is free to rotate on the
column 21. However, in collapsing the seat, the seat is
pulled upwardly, the pivot pin ends 26 then are brought
into registering position with the apertures 27 and, in
reaching the lower ends of the apertures, the seat 29 can
then be swung into the collapsed position shown in dot-
dash lines in Fig. 1, so as to assume a position parallel-
ing the wall 5 and disposed in close proximity thereto.

In reassembling the seat, the seat is first swung up-
wardly on the pivot 26 and, then, moved downwardly
over the column until the same is returned to the full
line position shown in Fig. 2 of the drawing.

The seat 29 has a depending and intumed peripheral
flange 32, as clearly noted in Fig. 2 of the drawing, and
fixed to the seat, in the construction shown, is a facing
pad of any suitable cushioning material, as indicated at
33, the latter being fixedly secured to the seat proper
through the medium of a supplemental seat member 34
which bridges the central open portion of the seat 29.

In the construction shown, the seat is in the form of a
stool seat, but this is by way of illustrating one adaptation
of my invention.

In Fig. 2 of the drawing, the entire seat structure is
shown in the extended operative position or, in other
words, a position in which an occupant is seated upon the
seat 29, so that the weight of the occupant moves the col-
umn 21 downwardly, so that the foot 24 engages the sur-
face 6. However, when the occupant leaves the seat, the
spring 15 will move the column 21 upwardly sufficiently
to clear the supporting surface 6, thus leaving the entire
assemblage free to swing over the surface 6 into any de-
sired use position, or into the collapsed position, as noted
in dot-dash lines in Fig. 1 of the drawing.

It will be apparent that the degree of upward move-
ment of the column 21 will be governed by the nature and
characteristics of the surface on which the seat structure is
used. If this surface should be carpeted, the movement
will be sufficient to clear the carpet in order to provide
the free swinging movement.

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

1. A seat structure of the character described, com-
prising a post, means comprising a pair of bearings for
mounting the post in connection with a vertical support,
a pair of rods having ends extending into and pivotally
mounted in the post, said rods extending radially from
the post in common vertical alinement, a tubular column,

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the outer ends of said rods extending into said column and pivotally mounted in connection therewith, means comprising a spring coupled with one of said bearings and one of said rods for normally supporting the column in raised position with respect to a horizontal surface, a seat, said seat having a sleeve rotatably mounted upon the upper end of the column, said sleeve having an upper flared portion, means checking downward movement of the seat on said column, the lower end of the column having a foot adapted to engage said horizontal surface as and when a load is applied to the seat, said spring serving to automatically raise the foot from said surface when the load is removed from the seat, the upper end of the column having a transverse pin with ends protruding beyond opposed surfaces thereof and normally projecting within the upper flared portion of the sleeve of the seat, the seat, in this position of the pin, being free for rotary movement on the column, and said pin ends engaging means on the sleeve in retaining the seat against upward displacement from said column.

2. A structure as defined in claim 1, wherein opposed side walls of said sleeve portion have elongated apertures to receive the protruding ends of said pin in moving the seat into collapsed position on the upper end of the column by drawing the seat upwardly on the column and swinging the same on said pin ends, and other opposed walls of the sleeve portion, at right angles to said elongated apertures, being recessed to clear the column in swinging the seat into collapsed position.

3. A seat structure of the character described, comprising a post, means comprising a pair of bearings for mounting the post in connection with a vertical support, a pair of rods having ends extending into and pivotally mounted in the post, said rods extending radially from the post in common vertical alignment, a tubular column, the outer ends of said rods extending into said column and pivotally mounted in connection therewith, means comprising a spring coupled with one of said bearings and one of said rods for normally supporting the column in raised position

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with respect to a horizontal surface, a seat, said seat having a sleeve rotatably mounted upon the upper end of the column, said sleeve having an upper flared portion, means checking downward movement of the seat on said column, the lower end of the column having a foot adapted to engage said horizontal surface as and when a load is applied to the seat, said spring serving to automatically raise the foot from said surface when the load is removed from the seat, interengaging means on the seat and column for movement of the seat longitudinally of the column and into collapsed position with respect to the column, said last named means comprising a pivot pin fixed to the column and operating in an elongated apertured portion on the sleeve of said seat, and recesses on opposed sides of the column, at right angles to said elongated apertured portion, to clear the column in swinging the seat into collapsed position.

4. A seat structure of the character described, comprising a seat, means comprising a rotatably supported post, a column and a pair of parallel rods pivoted to upper and lower end portions of the post and column for supporting said seat to swing horizontally through an arc of substantially 180° and for supporting said column to move vertically into and out of engagement with a horizontal support, spaced brackets for support of said post, means for rotatably, slidably and pivotally mounting the seat on said column, and a spring coupled with one of said brackets and one of said rods for moving and holding the column in spaced relation to the horizontal support when the seat is not in use.

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