

No. 786,693.

PATENTED APR. 4, 1905.

N. B. STONE.
CONVERTIBLE SOFA AND TABLE.
APPLICATION FILED OCT. 28, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

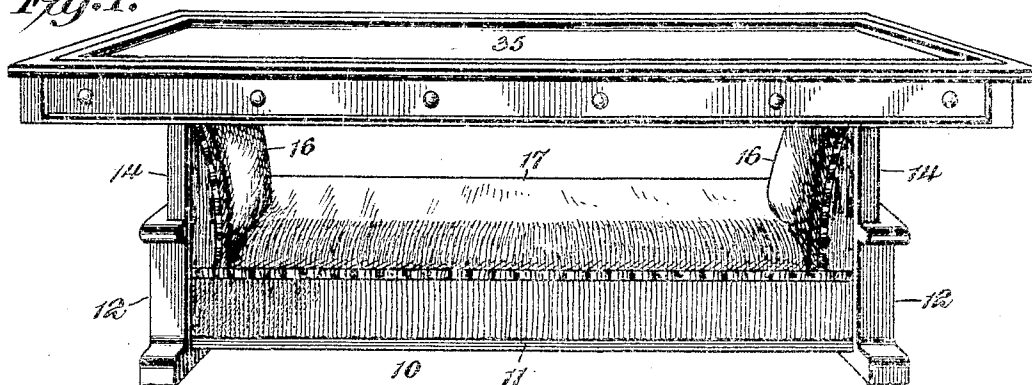
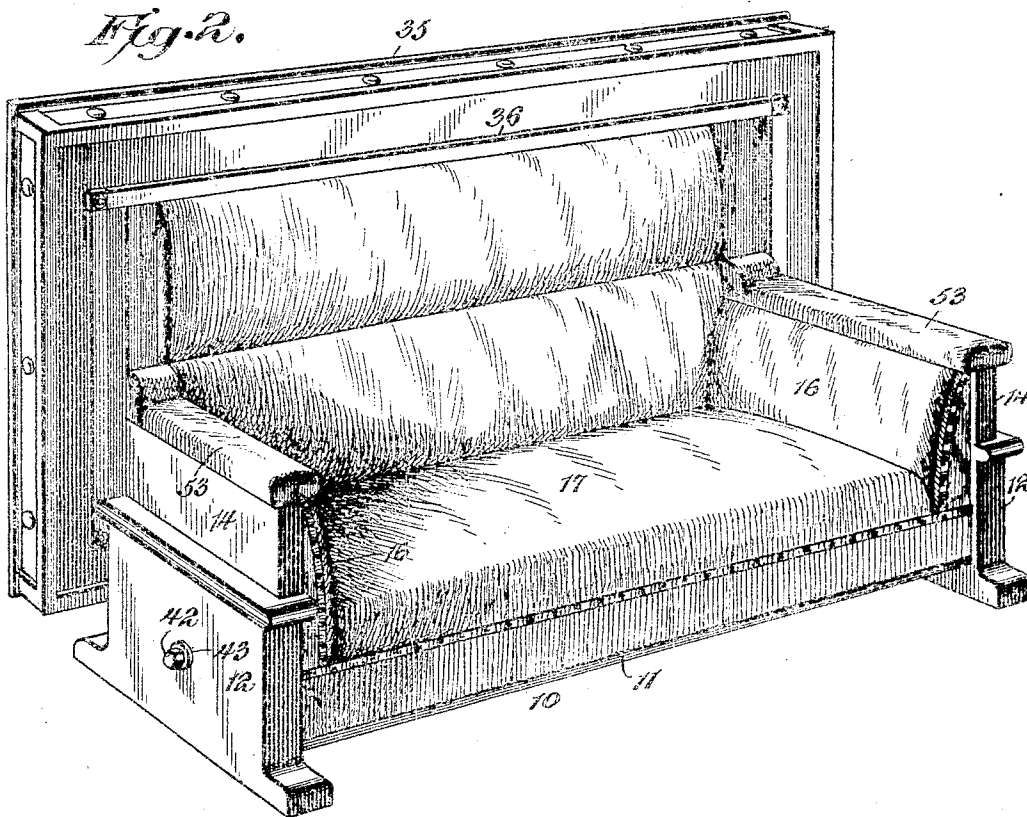


Fig. 2.



Nathaniel B. Stone, Inventor,

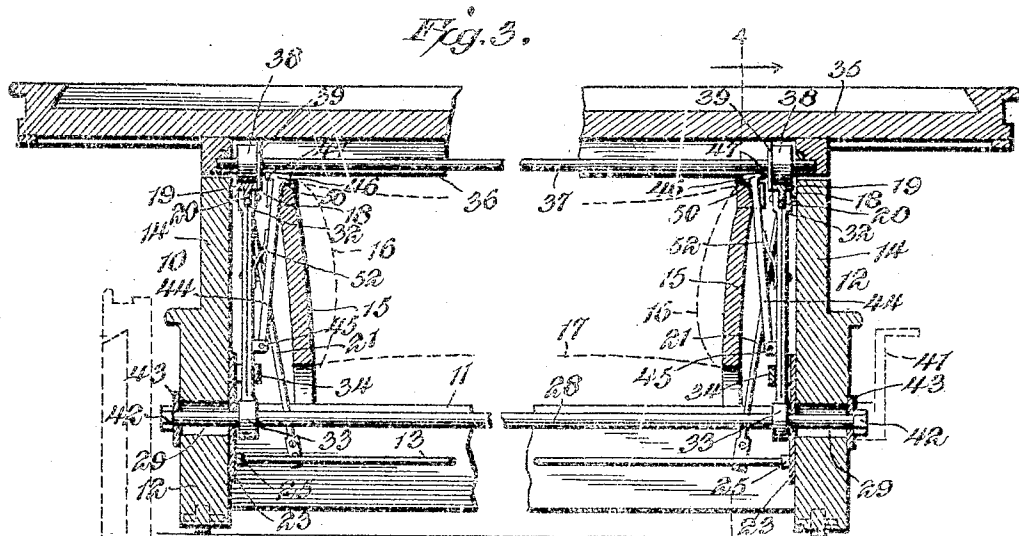
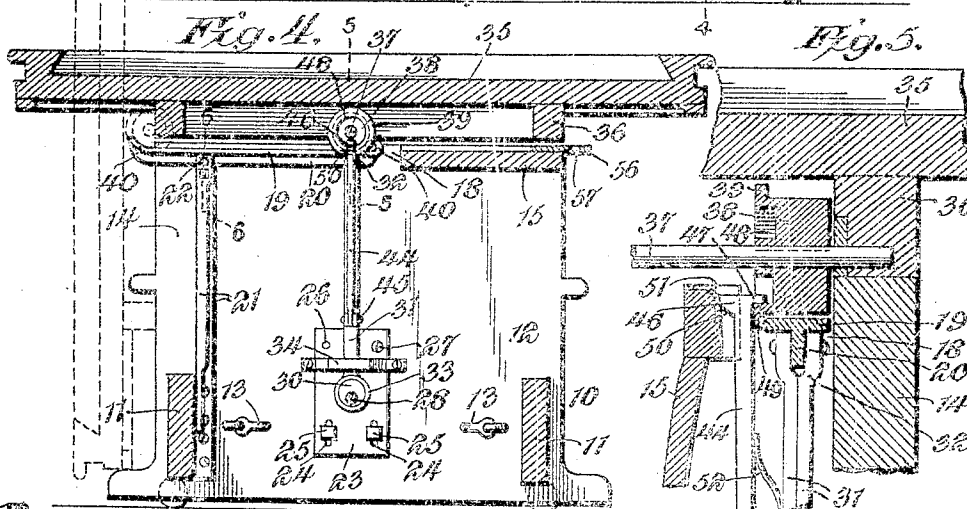
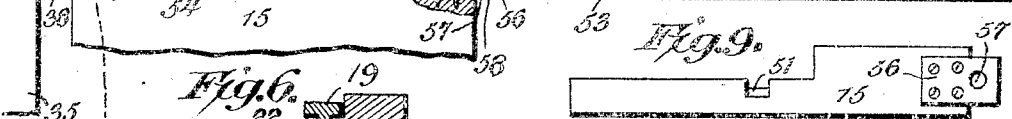
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2 SHEETS—SHEET 2.



Nathaniel B. Stone, Inventor,

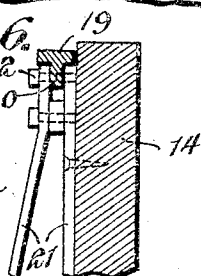
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UNITED STATES PATENT OFFICE.

NATHANIEL B. STONE, OF OUTLOOK, WASHINGTON.

CONVERTIBLE SOFA AND TABLE.

SPECIFICATION forming part of Letters Patent No. 786,693, dated April 4, 1905.

Application filed October 28, 1904. Serial No. 230,399.

To all whom it may concern:

Be it known that I, NATHANIEL B. STONE, a citizen of the United States, residing at Outlook, in the county of Yakima and State of Washington, have invented a new and useful Convertible Sofa and Table, of which the following is a specification.

This invention relates more particularly to that type of combined sofa and table illustrated in a patent granted me on July 26, 1904, and numbered 766,072, though there are certain features undoubtedly useful in other analogous structures.

One of the principal objects is to provide means for positively locking the table member rigidly to the base member when the article of furniture is converted into a table, thus making the structure perfectly solid and firm.

A further object is to improve the mechanism employed in furniture of this sort, greatly simplifying the same and making it more easily operable, less liable to derangement, and less exposed, so that whether employed as a sofa or as a table it may be made to constitute an artistic piece of furniture.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the article of furniture when employed as a table. Fig. 2 is a perspective view of the same when converted into a sofa. Fig. 3 is a longitudinal sectional view through the structure. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 3. Fig. 5 is a detail sectional view on an enlarged scale and taken on the line 5 5 of Fig. 4. Fig. 6 is a detail sectional view on the line 6 6 of Fig. 4. Fig. 7 is a cross-sectional view through the upper portion of one of the arms, showing the cap in place. Fig. 8 is a bottom plan view of said cap. Fig. 9 is a plan view of a portion of the arm.

Similar reference-numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated a base member 10 is employed, consisting of a frame having side bars 11 and end supports in the form of arms 12, the whole being braced by longi-

tudinal rods 13. The arm-supports 12 are in the form of casings comprising outer and inner walls 14 and 15, the latter being suitably upholstered, as shown at 16. Said arms extend above the side bars, and between them is placed a seat 17, resting on said side bars. The arms 12 have openings 18 in their tops, and arranged longitudinally in said openings are tracks 19, preferably formed of T-shaped angle-iron having flat upper surfaces and depending flanges 20. These tracks are pivotally supported between their ends by any suitable means—as, for instance, bars 21, one of which is secured to the inner side of each of the outer walls, the others being fastened at their lower ends to the rear side plate 11. The pivots 22 for the tracks pass through the upper ends of the bars 21 and through the depending flanges 20 of said tracks.

Means are employed for raising and lowering the tracks, said means being preferably constructed as follows: Bearing-plates 23 are located upon the inner sides of the outer frame-walls 14 and are vertically adjustable thereon, being provided in their lower ends with slots 24, receiving holding-bolts 25, the upper ends of said plates also having openings 26, adapted to receive one or more screws 27. An actuating-shaft 28, extending longitudinally through the base member below the upper edges of the side bars 11 is journaled in the bearing-plates and passes through openings 29, formed in the end walls 14, said openings being of sufficient size to permit the vertical adjustment of the shaft with the plates. Cams 30 are carried by the shaft, said cams being preferably small enough to pass through the openings 29 and being rigidly affixed to the shaft. Elevating-rods 31 are pivoted at their upper ends to the front ends of the tracks 19, being preferably bifurcated, as shown at 32, and embracing the depending flanges. The lower ends of these rods have circular bearing-openings 33, that snugly receive the cams. Guiding-straps 34 are secured over the bearing-plates 23 and extending about the elevating-rods serve to permit their lateral movement with the cams upon the rotation of the shaft and prevent the de-

tachment of said rods from the cams. It will thus be evident that by turning the shaft the front ends of the tracks will be raised and lowered.

5 In connection with the base member there is employed a table member comprising a top 35, preferably in the form of a pool or billiard table and having an angular depending flange 36. In the end portions of this flange
10 is journaled a shaft 37, extending longitudinally beneath the table-top and arranged centrally thereof, said shaft having wheels or rollers 38, rigidly fixed thereto and operating on the tracks 19, the rollers having annular retaining-flanges 39. The movement of these
15 rollers on the track is limited by stops 40, formed by upturning the ends of said tracks. The table member is thus adapted to be placed in an upright position behind the base member when the rollers are at the rear ends of the tracks in rear of their pivotal supports, said table member swinging directly upon the shaft and rollers. At the same time it may be readily swung to a substantially horizontal
25 position and placed centrally over the base member, the tracks being elevated. When in this latter position, as shown in Fig. 4, the said table member can be firmly set upon the base member by rotating the shaft 28, so that the tracks are depressed, thus permitting the
30 end portions of the flange 36 to rest flat upon the supporting-arms. This movement of the shaft is preferably secured by means of a crank-arm, (indicated in dotted lines in Fig. 3 and designated 41,) which crank-arm is provided with a suitable socket to receive angular and preferably ornamental heads 42, located on the ends of the shaft outside of the ends of the base member. Suitable washers 43 are
40 interposed between the heads and adjacent arm portions to cover the openings 29.

For the purpose of rigidly securing the table member on the base member when the former is in operative position thereover
45 locking devices are employed consisting in the present embodiment of shanks 44, pivotally connected at their lower ends and, as shown at 45, to the inner sides of the elevating-rods 31. The upper ends of these shanks
50 have transversely-disposed heads 46, terminating in outer teeth 47, that are arranged to engage in sockets 48, formed in the inner sides of the wheels 38, said sockets thus forming flanges 49, with which the said teeth will
55 interlock. The inner sides of the heads are provided with under inclined portions 50, and located in the paths of movement of said inclined portions are inclined ways 51, formed in the upper portions of the inner walls 15 of the frame, said ways slidably receiving the
60 shanks 44. Springs 52, interposed between the elevating-rods 31 and shanks, serve to urge said shanks outwardly away from the wheels. With this structure it will be apparent that when the table member is run to

a position over the base member the sockets 48 of the wheels will be in line with the teeth 47 of the locking devices, and when the tracks are depressed the said locking devices will move downwardly with them. The inclined portions 50 thereupon will ride down the inclined ways 51, and the locking devices will be positively moved in an outward direction and into interlocking engagement with the wheels. Furthermore, as illustrated in
70 Fig. 5, the tracks are preferably arranged to move away from the wheels after the end portions of the flange 36 rest upon the arm. This serves to draw the locking devices downwardly, so as to place strain thereon, and thus more securely bind the table-top. At the same time the inner portions of the heads ride down past the inclined portions of the ways, so that the said locking devices are positively held in their operative positions.
85

When the article of furniture is to be used as a sofa, the table member is of course moved to its upright position in rear of the base member, as shown in Fig. 2, and in order to cover the tracks and at the same time form
90 a cushioned arm cap-pieces 53 are employed, which rest directly on the flat tops of the arms and have longitudinally-disposed recesses 54 in their under sides that receive the tracks, said recesses being preferably made
95 deeper at their rear ends, as shown at 55, to receive the rollers. For the purpose of fastening these caps in place socket-pieces 56 are carried by the front upper corners of the arms, the sockets 57 thereof being arranged to receive headed studs 58, located at the upper front ends of the caps. When these caps are placed in position, their rear ends bind snugly against the under side or front side of the table member, this binding engagement serving to throw the headed studs 58
100 forward, so that they will interlock with the socket members. In this structure the mechanism for operating the table member is very simple, can be easily actuated, is not exposed, and is not liable to derangement. The detachable caps necessary to cover the arms are simple, readily positioned, and yet are securely held in place. The locking means is important, as it prevents any danger of the
105 table-top being accidentally moved or displaced when in use; but at the same time when the table-top is unlocked it may be lifted bodily from the base member without interference.
120

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood
125 that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.
130

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

1. In an article of furniture of the class described, the combination with a base member, of a track pivotally supported on the base member and carrying upstanding stops at its opposite ends, means mounted on the base member for raising and lowering the track, and a table member having a roller running on the track between the stops, said table member swinging on the roller from an upright to a substantially horizontal position.

2. In an article of furniture of the class described, the combination with a base member having supports, of a track pivotally supported on the base member, and having upstanding stops at its ends, a shaft journaled in the base member and having a cam, an elevating-rod pivoted at its upper end to the track and having at its lower end a circular seat to receive the cam, and a table member having a roller running on the track between the stops, said table member being arranged to rest on the support when over the same and the track depressed, and swinging on the roller from an upright to a substantially horizontal position.

3. In an article of furniture of the class described, the combination with a base member having upright supporting-arms at its ends, of spaced tracks pivotally supported between their ends on the base member, said tracks having their extremities upturned forming stops, a shaft journaled longitudinally of the base member and having spaced cams, elevating-rods pivoted at their upper ends to the inner ends of the tracks and having their lower ends surrounding the cams, and a table member having rollers disposed at substantially its longitudinal center, said rollers running on the tracks, the table member swinging on said rollers from an upright to a substantially horizontal position and being adapted to rest on the arm-supports when disposed over the base member with the tracks depressed.

4. In an article of furniture of the class described, the combination with a base member, of a track pivotally supported on the base member, a vertically-adjustable bearing mounted on the base member, a shaft journaled in the bearing, an eccentric connection between the shaft and the track for elevating and lowering the latter upon the rotation of the shaft, and a table member having a roller running on the track, said table member swinging between an upright position at the rear of the base member and a substantially horizontal position over the same.

5. In an article of furniture of the class described, the combination with a base member having spaced supporting-arms, of tracks pivotally supported on said arms, vertically-adjustable bearing-plates secured to the arms, a shaft journaled in said plates and vertically

adjustable therewith, cams carried by the shaft, elevating-rods coacting with the cams and pivoted to the tracks, a table member, and rollers carried by the table member and operating in the tracks, said table member being arranged to rest upon the supporting-arms when disposed over the base member with the tracks depressed and being furthermore arranged to swing to an upright position behind said member.

6. In an article of furniture of the class described, the combination with a base member having a supporting portion provided with an opening, of a track located in said opening, a table member movable on the track, a cap-piece arranged to fit upon the supporting portion and cover the opening and track, and means for detachably connecting the cap-piece to the supporting portion.

7. In an article of furniture of the class described, the combination with a base member having a supporting-arm provided with an opening, of a vertically-movable track located in said opening, a table movable on the track, a cap-piece arranged to fit upon the supporting-arm and cover the opening and track, said cap having a recess in its under side to receive the track, and means for detachably connecting the cap-piece to the supporting portion.

8. In an article of furniture of the class described, the combination with a base member having a supporting-arm, of a track associated with the arm, a table member movable on the track, a cap for covering the track, and means for detachably connecting the cap to the arm, said means comprising detachably-interlocking headed stud and socket-piece elements, one of which is carried by the arm, the other being carried by the cap.

9. In an article of furniture of the class described, the combination with a base member having a supporting-arm and an opening in its upper side, of a track located in said opening, a top member having a roller running on said track, said top member being movable to an upright position behind the base member and to a substantially horizontal position thereupon, a socket-piece carried by the arm member and located at the front end of the same, and a cap arranged to cover the top of the arm and having a depending stud that engages in the socket of said piece, said cap fitting snugly against the top member when the same is in its upright position.

10. In an article of furniture of the class described, the combination with a base member, of a table member movable between an upright position behind the base member and a position upon the same, means for raising and lowering the table member upon the base member, and locking means for the table member, said raising and lowering means constituting means for operating said locking means.

11. In an article of furniture of the class described, the combination with a base member, of a track located thereon, means for raising and lowering the track, a table member movable on the track, a locking device for securing the table member to the base member, and means for automatically effecting the movement of the locking device upon the movement of the track.
12. In an article of furniture of the class described, the combination with a base member, of a track located thereon, means for raising and lowering the track, a table member movable on the track, and a locking device for the table member secured to and movable with said raising and lowering means, and means whereby said device engages the table member when the track is lowered and is disengaged therefrom the same when the track is raised.
13. In an article of furniture of the class described, the combination with a base member, of a movable track located thereon, means for raising and lowering the track, a table member movable upon the track, a locking device mounted on one member for locking the table member to the base member, and means for moving the locking device into engagement with the table member when the track is lowered.
14. In an article of furniture of the class described, the combination with a base member, of a movable track located thereon, means for raising and lowering the track, a table member movable upon the track, a device mounted on one member for locking the table member to the base member, and means for moving the locking device out of engagement with the table member when the tracks are raised.
15. In an article of furniture of the class described, the combination with a base member, of a movable track located thereon, means for raising and lowering the track, a table member movable upon the track, a device mounted on one member for locking the table member to the base member, means for effecting the positive movement of the locking device into engagement with the table member when the track is lowered, and a spring for disengaging the locking device from the table member when the track is raised.
16. In an article of furniture of the class described, the combination with a base member, of a track located thereon, a table member having a wheel running on the track, said wheel being provided with a flange, and a locking device movably mounted on the base member and movable into interlocking engagement with the flange of the wheel to secure said wheel against movement on the track and thereby fasten the table member to the base member.
17. In an article of furniture of the class described, the combination with a base member, of a table member movably mounted thereon, a locking device carried by the base member and arranged to engage the table member, said device including a vertically-movable shank having an inclined portion, and means for moving the locking device into engagement with the table member, said means including an inclined way located in the path of movement of the inclined portion of the shank.
18. In an article of furniture of the class described, the combination with a base member, of a track pivotally supported thereon, an eccentric device journaled upon the base member, a connection between the eccentric and track, a table member movably mounted on the track, a swinging locking device pivoted to the connection and being movable into engagement with the table member, and means located in the path of movement of the locking device to swing the same into such engagement.
19. In an article of furniture of the class described, the combination with a base member, of a track pivoted thereon, a shaft journaled on the base member and having a cam, a rod connection between the cam and track, a table member having a roller movable on the track, said roller being provided with a flange, a shank pivoted to the rod connection and having a tooth at one side that is movable into interlocking engagement with the flange of the wheel, a spring for urging the shank in one direction, and means located in the path of movement of the upper end of said shank for swinging the same in an opposite direction when said shank moves downwardly.
20. In an article of furniture of the class described, the combination with a base member, of a table member movable between an upright position at one side of the base member and a position upon the same, relatively movable supporting elements respectively carried by the members, one of said elements moving upon the other during the movement of said table member between its said positions, and means mounted on one member and engaging said element of the other member to secure said table member upon the base member.
21. In an article of furniture of the class described, the combination with a base member, of a table member movable between an upright position at one side of the base member and a position upon the same, a supporting element carried by the table member and movable on the base member during the movement of said table member between its positions, and means mounted on the base member and engaging the said element of the table member to secure said table member upon the base member.
22. In an article of furniture of the class described, the combination with a base member, of a table member movable between an upright position at one side of the base member and a position upon the same, a track sup-

ported on the base member and movable in an upright direction, a roller carried by the table member and operating on the track, means for raising and lowering the track, and a lock carried by the base member and arranged to engage the roller to secure said table member against movement on the base member.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

NATHANIEL B. STONE.

Witnesses:

JOHN H. SIGGERS,
B. G. FOSTER.