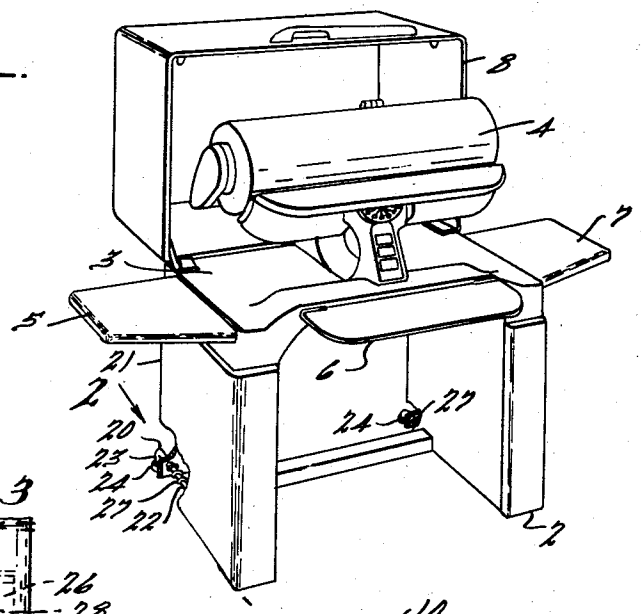
Oct. 7, 1958 H. A. SPERLICH 2,854,785

CABINET STABILIZER

Filed March 19, 1954

Fig. 1.



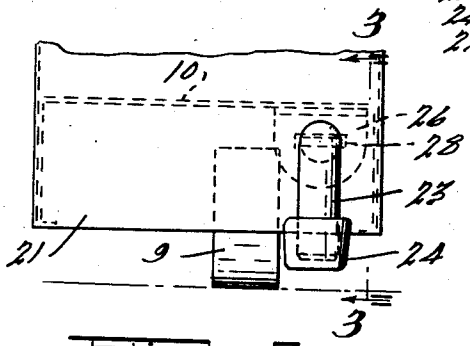


Fig. 2.

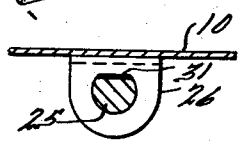


Fig. 4.

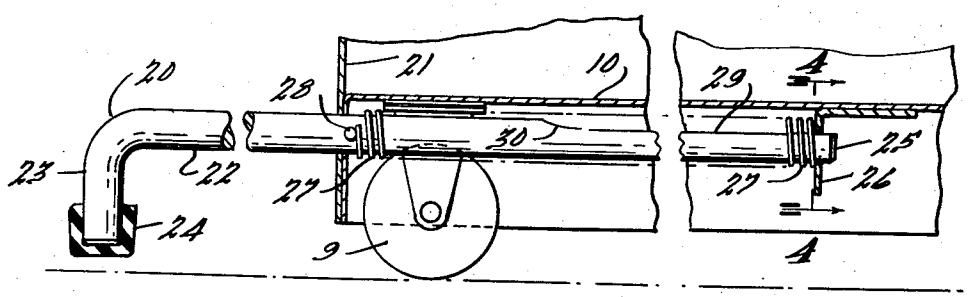


Fig. 3.

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CABINET STABILIZER

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8 Claims. (Cl. 45—137)

The present invention relates generally to the stabilization of free-standing cabinet-style furniture. The invention has specific reference to the stabilization of cabinet-style ironers of the type wherein the top is hinged so as to be laid back for access to the rolls.

It is a problem to design home-type furniture and cabinet-style appliances so as to be possessed of satisfactory stability, yet which fit into the decor of the smaller rooms of modern homes and are otherwise artistically and aesthetically proportioned according to the dictates of style and design. Also, ironers, sewing machines, dish washing machines, and the like need be enclosed in cabinets because these machines now are used in multi-purpose rooms such as kitchens, recreation rooms, utility rooms and the like, and it is necessary to fit the cabinet into spaces between already existing counters and other items of built-in furniture. The size and proportions of the cabinet thus are arbitrarily set irrespective of the inherent stability needs of the piece. Because of the complete enclosure, cabinets must be hinged, folded, or the entire interior mechanism arranged to slide or swing out to permit access to the working parts of the appliance. With roll type ironers this has necessitated a cabinet having a heavy, hinged top portion which is swung or laid back before use.

It is a principal object of this invention, therefore, to provide a simple concealed stabilizer for free-standing furniture cabinets having outwardly-extending tops, cabinet sections, or outwardly slidable mechanisms. A more specific object is to provide a hinged-top ironer cabinet which is sufficiently stable for modern use yet which is of satisfactory portability to be usable any place in the home.

Still other objects and advantages will be apparent to those skilled in the art upon referring to the following description and the accompanying drawing, in which:

Figure 1 is a perspective view of a cabinet-style ironer, with portions of one leg broken away to show the location and details of mounting of the stabilizer of this invention;

Figure 2 is an end elevation of the lower portion of the ironer leg, the figure being viewed in the direction of the arrow "2" shown in Fig. 1;

Figure 3 is a side elevation in section of the lower portion of the ironer leg of Fig. 1, the figure being viewed in the direction of the arrows 3—3 in Fig. 2; and

Figure 4 is a front view of the supporting bracket shown in Figs. 2 and 3, the figure being viewed as a section taken in the direction of the arrows 4—4 shown in Fig. 3.

The cabinet to which the stabilizer of this invention is applied is shown in Fig. 1 to be a cabinet-style ironer, which ironer comprises two bench-style or box-style hollow legs 1, 2 supporting a platform or work table 3 on which is mounted a roll-type ironer mechanism, indicated generally by the numeral 4. In this machine the work table extensions 5, 6, and 7 fold up to permit the hinged top 8 to be lowered over the entire assembly. The hinged top 8 is necessarily deep and, since it usually is fabricated of porcelain or enamel-coated sheet steel, is of appreciable weight. In designing this machine, the depth of the legs 1, 2 was restricted in order to make the cabinet fit snugly against the wall without extending beyond the depth of standard cabinets and the like. The height of the machine was designed to permit the use of the top surface of the closed cabinet as a work table or extension of an ordinary kitchen cabinet. Thus, the cabinet is somewhat too shallow for its height when the cabinet is open. This machine is mounted on four small casters 9, 9 attached to a channel-like bottom member 10 (as shown in Figs. 2 and 3) so as to enable the operator easily to roll the machine forward away from the wall to obtain room to swing back the cabinet top 8 and expose the ironer mechanism 4. Without the stabilizer of this invention, the heavy cabinet top 8 tends to raise the front casters off the floor and make the machine somewhat unstable.

However, when provided with the spring-loaded, self-extending automatic stabilizer, shown generally in Fig. 1, and more specifically in Figs. 2 and 3, the weight of the folded-back top 8 is effectively supported and tipping is prevented. As shown in Figs. 1 and 2, the stabilizer comprises an arm 20, in this illustration L-shaped (see Fig. 3), located in the lower corner of the back wall 21 of each of the legs 1, 2 with the front portion of the long end or shank 22 passing through a supporting hole in the wall 21 and the short end or bumper-rest portion (see Fig. 2) 23 pointing downwardly. On the lower end of the bumper-rest 23 there is provided a non-staining or non-marring, non-skid tip 24 of rubber or other cushioning material. The length of the bumper-rest portion 23 is such that it normally does not contact the floor when the cabinet top 8 is in the closed position. In order to do this the tip 24 in the ironer illustrated is about 0.25" off the floor when the cabinet is closed. The length of the shank 22 likewise is dependent on the weight and dimensions of the cabinet. Both of these dimensions, it will be appreciated, may be varied considerably to suit the circumstances of use so that in any case, when the cabinet is in the open position, an almost imperceptible backward tipping of the machine (without the front casters necessarily leaving the floor) will bring the bumper-rest portion 23 of the arm 20 into contact with the floor and enable it to take up unsupported weight.

Referring now to Figs. 2 and 3, the arm 20 is located with its shank 22 slidably mounted through a hole in the wall 21 and its inward or rearward end 25 slidably supported in an angle bracket 26 attached to the bottom leg channel 10 inside the hollow leg 1. A compression spring 23 is spirally wound around the shank 22 so as to bear on one end against a pin 28 projecting on both sides of the shank. The pin 28 is located to form a stop at an intermediate point in the shank 22 determined by the length of outward extension desired in the arm 20. The other end of the spring 27 bears against the flat surface of the angle bracket 26.

As shown most clearly in Figs. 3 and 4, the upper surface 29 of the inner end 25 of the shank 22 is ground flat for a portion of its length with a curved or feathered taper at 30, the exact location of the taper being selected depending on the distance of inward travel desired in the arm 20. As shown most clearly in Fig. 4, the angle bracket 26 has a hole 31 of a similar segmental circular shape and which is proportioned to enable it to cooperate with the curved taper portion 30 of the shank 22 to act as a frictional stop limiting inward travel of the arm 20. Thus the arm 20 is normally extended, with the pin 28 contacting the leg wall 21, when it is free to respond to the urging of the compression spring 27. It will also be seen that this arm 20 is free to slide into the leg 1 when the cabinet is pushed into an obstacle such

as a wall or other piece of furniture, damage to the leg wall **21** by contact thereof with the bumper-rest **23** being prevented by the taper ground friction stop **30**. The length of the downwardly extending bumper-rest portion **23** and the overall length of the shank **22** is easily determined for any cabinet, as is the location of the stabilizer itself and its pin and friction stops, by a simple calculation of opposed forces operating through the distance of the extended portion of the arm **20**.

In use, the ironer illustrated is first pulled forward, away from the wall or other piece of furniture, in order to make room behind it to fold back the cabinet top **8**. When this is done the arm **20** automatically extends itself. After the top **8** is folded back the rubber tip **24** touches the floor and the machine is prevented from rocking or tipping over. After use, the operator folds the top **8** down again and pushes the machine back in its former place, the arm **20** being pushed into the cabinet leg by contact with any obstacle such as the wall or any other piece of furniture. The stabilizer thus is concealed in normal use and does not interfere with the portability of the machine nor does it prevent the operator from storing the machine against a wall or back-to-back against another piece of furniture.

It is obvious that more than one leg of the ironer illustrated could be provided with one of these stabilizing arms and that any other type of completely-enclosed style of cabinet-type of ironer could be provided with one or more of these stabilizers located anywhere in the lower edge of its back wall. It is also to be understood that cabinets of still other types could be provided with these stabilizers.

While it will be apparent that the preferred embodiment of the invention herein disclosed is well calculated to fulfill the objects above stated, it will be appreciated that the invention is susceptible to modification, variation, and change without departing from the proper scope or fair meaning of the subjoined claims.

What is claimed is:

1. A stabilizer for a furniture cabinet comprising an arm having a shank portion and a bumper-rest portion engageable with the surface on which said cabinet is supported, the said shank portion of said arm being slidably mounted in a shank-receiving aperture in a lower edge of an outer wall of said cabinet, spring means operatively associated with said arm for normally extending the arm to a position in which the bumper-rest portion is adjacent to but not normally in contact with the floor, the said shank portion thereof also being free to move back through said aperture against the pressure of said spring means when the said cabinet is pushed into contact with an obstacle.

2. A stabilized cabinet style ironer having a hinged top adapted to be laid back for access to the rolls and a stabilizer arm located in a lower outside edge of the back wall of a cabinet and having an elongated shank and a shorter bumper-rest portion connected at a right angle, spring means operatively associated with said arm biasing said arm in a direction outwardly of said cabinet, said shank being slidably mounted through an aperture in said wall with the said bumper-rest downwardly extending with the end thereof closely adjacent to, but not in actual contact with, the floor, said arm being normally extended by said spring means so as to touch the floor when said top is laid back and free to slide into the cabinet against the action of the spring means when the cabinet is pushed against an obstacle, until the downwardly extending bumper-rest is closely adjacent the said back wall.

3. A stabilizer for a cabinet style ironer having hollow bench-style legs and a hinged top adapted to be laid back for access to the rolls, said stabilizer comprising an arm having an elongated shank and a shorter bumper-rest portion having a non-skid tip, said arm being mounted with the shank portion thereof slidably supported in an aperture in the lower back wall of one of the said ironer legs with the bumper-rest portion downwardly extending with its non-skid tip closely adjacent to but not normally in actual contact with the floor when the cabinet is closed, an angle bracket located within the said leg and having a hole for supporting the inward end of said shank, stop means on said shank between said leg wall and said angle bracket, and a compression spring wound around the section of shank between the stop means and the said angle bracket so as to urge the said arm, when free, outwardly into stabilizing position and to permit it, when the said ironer cabinet is pushed against an obstacle, to slide back into the cabinet until the arm is retracted and the said bumper-rest portion thereof is closely adjacent the said leg.

4. A stabilizer as defined in claim 3 and further characterized in that the shank portion of the arm has its inward end ground away on a taper and the shank-supporting hole in the angle bracket is suitably shaped and proportioned to cooperate with the tapered end of the shank to function as a friction stop limiting inward travel of said shank.

5. A stabilized cabinet style ironer comprising a roll-enclosing cabinet supported by two bench-style hollow legs mounted on casters, the top of said cabinet being hinged so as to be laid back for access to the roll, a self-extending stabilizer arm located in a back wall of one of said legs and adjacent the floor, said stabilizer arm being an integral L-shaped piece having an elongated shank portion and a shorter bumper-rest portion having a non-skid tip, the shank of said arm being slidably mounted through an aperture in said back wall with its interior end slidably supported in a bracket located in the interior of said hollow leg, the bumper-rest portion of said arm being downwardly extending so as to bring its non-skid tip closely adjacent to but not normally in actual contact with the floor, when the cabinet top is closed, and capable of touching the floor when said top is laid back to expose the roll, a pin passed through said shank at a position adjacent the said leg wall and extending on both sides of said shank so as to limit outward travel of said shank by contact with said wall, a compression spring surrounding the portion of the shank between said pin and said bracket so that the said arm is normally extended, the interior end of said shank being taper ground so as to cooperate with the said hole in the said bracket and serve as a friction stop limiting inward travel of the said shank when the ironer is urged against an obstacle.

6. A self-extending stabilizer arm comprising a straight, open-ended shank portion and a rest portion connected at right angles, a front support having an aperture therein to receive said shank, a rear supporting bracket having a shaped aperture therein for receiving the open end of said straight shank portion, said shank portion having a pin projecting therefrom at an intermediate point in its length determined by the length of outward extension desired in said arm and at its open end having a portion of its surface taper ground so as to cooperate with the said aperture in the said rear bracket to form a friction stop limiting inward travel of said shank, and a compression spring mounted on the portion of the said shank normally between said pin stop and said angle bracket so as to maintain said shank portion normally extended yet permit it to slide inwardly in said rear bracket when a force is applied to said rest portion in the direction of said shank.

7. A self-extending stabilizer arm comprising an integral round rod bent at right angles to form a rest portion and a straight, open-ended shank portion, a front support having an aperture therein to receive said shank, an angle bracket having a segmentally circular aperture therein for supporting the open end of said shank, said shank having a pin projecting on both sides thereof at right angles to its axis to form a stop at an intermediate point in its length determined by the length of outward extension desired in said arm and having the surface of a portion of the length of its open end ground flat and feather

tapered at an intermediate point determined by the length of inward travel desired in said arm to form a friction stop with the said segmentally circular aperture in said angle bracket, and a compression spring wound about that portion of the shank normally between said outward pin stop and said angle bracket so as to maintain said shank portion normally extended yet permit its inward travel through said angle bracket when a force is applied to said rest portion in the direction of said shank.

8. In combination with a cabinet adapted to be movably supported on a floor surface, a stabilizing arm movably mounted on said cabinet and extended transversely of a lower portion thereof for limiting transverse tilting movement of said cabinet in one direction, said arm having a shank portion extended transversely of said cabinet and movable to a concealed position therein, spring means operatively associated with said cabinet and said arm for resisting said movement of the arm and for biasing said arm in a direction outwardly of said cabinet, and stop means on said arm engageable with said cabinet

for limiting movement of said arm to a stop position extended outwardly of said cabinet, said arm having a laterally extended portion at one end thereof arranged outwardly of said cabinet and engageable with said floor surface in the stop position of said arm for limiting transverse tilting of said cabinet in one direction.

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