

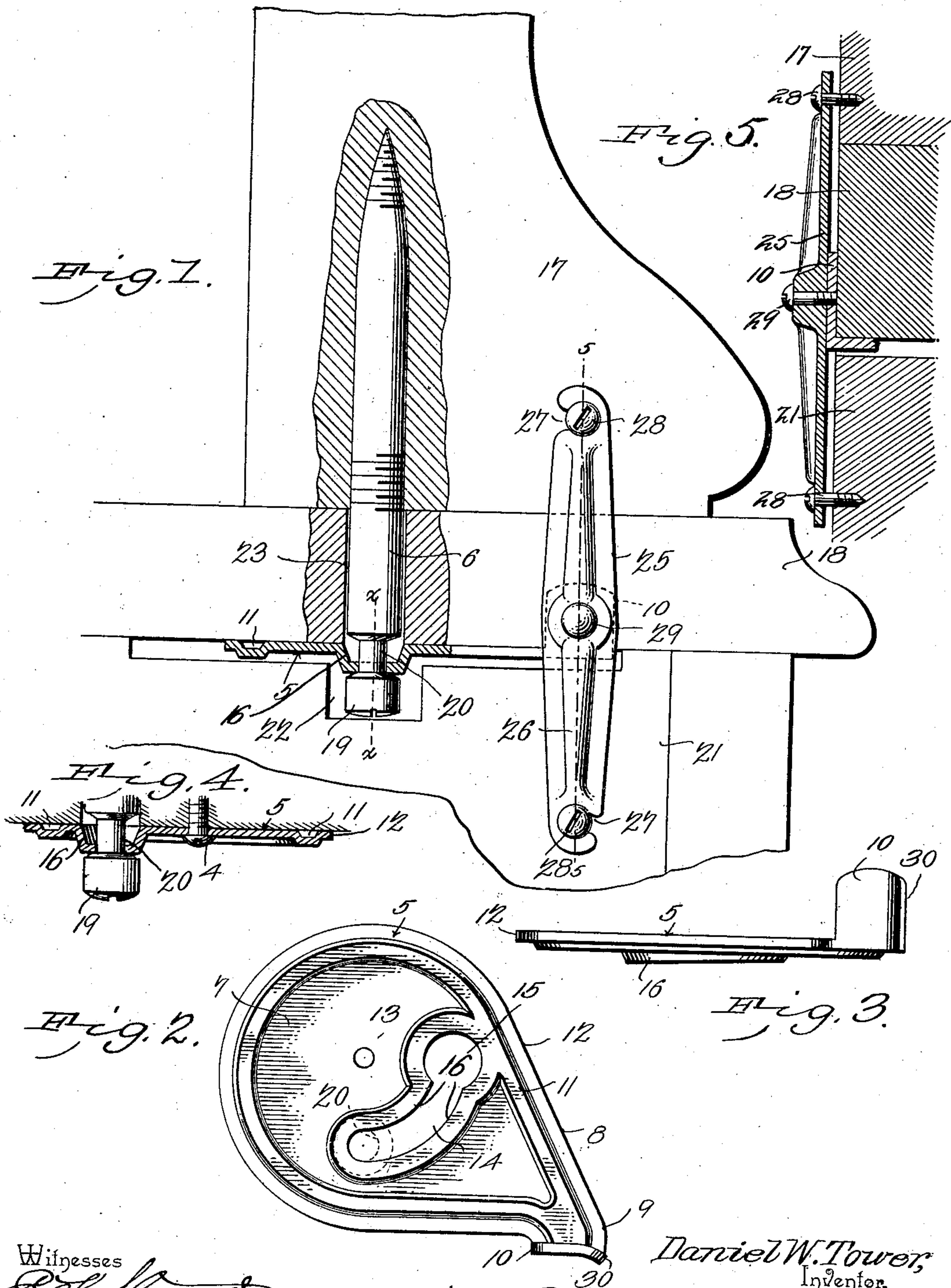
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D. W. TOWER.  
FASTENING DEVICE FOR FURNITURE.

APPLICATION FILED AUG. 18, 1902.

NO MODEL.



Witnesses  
*E. H. Stewart*  
*Wm. Bagger*

Daniel W. Tower,  
Inventor.  
by *C. A. Snow*  
Attorneys



# UNITED STATES PATENT OFFICE.

DANIEL W. TOWER, OF GRAND RAPIDS, MICHIGAN.

## FASTENING DEVICE FOR FURNITURE.

SPECIFICATION forming part of Letters Patent No. 742,525, dated October 27, 1903.

Application filed August 18, 1902. Serial No. 120,113. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL W. TOWER, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Fastening Device for Furniture, of which the following is a specification.

This invention relates to fastening devices for furniture or means for connecting parts of furniture that abut upon each other in such a manner that while the connection between the parts shall be absolutely stiff and rigid the parts may be easily and conveniently separated when it shall be desired to do so. Such fastening means are needed in different articles of furniture; but for the purpose of illustrating my invention I have herein shown the same applied to a dressing-case for the purpose of connecting to the same the standards between which the mirror is pivotally mounted, these standards carrying the mirror it is frequently desired to detach from the body of the dresser, especially when moving the same, in order that the parts may be moved separately with less danger of breakage than when connected.

My invention has for its object to provide means for effecting such connection between the parts of all kinds of furniture capable of being thus connected which shall possess superior advantages in point of simplicity, durability, and general efficiency.

With these ends in view my invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation showing my invention as applied to a dressing-case, a portion of the rear side of the same being shown. Fig. 2 is a plan view of the plate which constitutes the principal member of my improved fastening device. Fig. 3 is a front edge view of the same. Fig. 4 is a sectional detail taken on the line  $x-x$  in Fig. 1. Fig. 5 is a sectional detail view on the line  $5-5$  in Fig. 1.

Corresponding parts in the several figures are indicated by like numerals of reference.

My improved fastening device is composed of two principal members—namely, the fastening-plate 5 and the screw member 6. The

fastening-plate, which is plainly shown in Fig. 2 of the drawings, is preferably composed of sheet metal, from which it is stamped into the desired shape or outline. This shape may vary according to individual preferences. The plate shown in the drawings may be described as being composed of a segment 7, having an approximately triangular extension 8, at the point 9 of which is an upturned lip forming a handle 10. A rib or depression 11 is formed in the plate parallel to and at a short distance from the outer edge 12 of said plate. This rib, which extends practically around the circumference of the plate 5, is simply for the purpose of stiffening and strengthening said plate. The plate 5 is provided with a perforation 13 to receive a screw 4, by means of which the said plate is secured pivotally in its operative position, as shown in Fig. 4 of the drawings.

14 is a slot formed in the plate 5 concentrically with the perforation 13. This slot is provided at one end with an enlargement 15, and it is entirely surrounded on its under side with a stiffening-flange 16, which tapers like a wedge from the enlarged end 15 to the opposite end of the slot 14, at which point the wedge-flange 16 is deepest, as will be readily seen by reference to Fig. 3 of the drawings.

The plate just described may be readily stamped from sheet metal of suitable thickness and strength and may be produced at a trifling expense.

The second principal member of my improved fastening device, to which I have already referred as the "screw" 6, consists simply of a screw of ordinary or of any desired construction, which is inserted into the under side of the standard 17, which is to be connected with the top 18 of the dressing-case, a sufficient portion of said screw extending below the standard to extend through the top 18 and to engage the fastening-plate, which latter is secured to the under side of the top by means of the screw 4 engaging the perforation 13. The screw member 6 is provided with a head 19, between which and the body it is reduced, so as to form a neck 20. The said neck should be of a diameter approximately equal to the width of the slot 14 in the fastening-plate, while the head 19 must not exceed the diameter of the enlarged por-



tion 15 of said slot. It is obvious that when the screw member 6 is provided with a head exceeding the diameter of the body thereof the reduced portion forming the neck 20 may be omitted; but I prefer the construction herein shown as being neater and more durable.

The operation of this part of my invention will be readily understood by reference to the drawings. The plate 5 is secured to the under side of the top 18 of the dressing-case (or to one of the parts to be connected) by means of the screw 4 or some other fastening means extending through the perforation 13, and which shall permit the said plate to turn as upon a pivot. The back 21 of the dressing-case is provided at its upper edge with a slot or recess 22 of sufficient size to permit the elongated or triangular portion of the plate 5 to swing in an outward direction in operating the device and also to accommodate a portion of said plate in the event of it being found desirable to locate the said plate close to the rear edge of the top 18. The said top is provided with a vertical perforation 23 to admit the fastening-screw 6, which is connected, as already described, with the standard 17. It is obvious that the axial line of the screw member 6 and the center of the slot 14, as well as the enlargement 15 of the latter, must be equidistant from the pivotal point of the plate 5. To place the parts 5 and 6 in engagement with each other, the plate 5 is turned outward by means of the handle 10 until the enlargement 15 of the slot 14 is in registration with the perforation 23. The portion of the screw member 6 which extends below the standard 17 may now be inserted through the perforation 23 until the screw-head 19 extends through the enlarged portion of the slot 14 of the plate. The proper adjustment of the screw member 6 may now be effected until the reduced portion or neck thereof will readily engage the slot 14 of the plate 5. The latter is now turned by pushing its handle 10 in the direction of the rear edge of the top 18 of the dressing-case, when the wedge-flange 16 will gradually bear down upon the head of the screw member 6, thus drawing the standard 17 tightly into engagement with the top 18 of the dressing-case.

As hereinbefore stated, the plate 5 is preferably struck up or stamped from a sheet of metal, such as sheet-steel of suitable thickness. It follows that the said wedge-shaped flange is possessed of some degree of resiliency, which when the plate 5 is turned to what may be termed the "locked" position causes the said flange to impinge upon the head of the screw member 6, thereby drawing the parts tightly together and at the same time, if necessary, yielding sufficiently to enable the plate 5 to be brought to the said locked position without unnecessary or injurious strain upon the parts that are to be connected.

While I am aware that wedge means for drawing parts that are to be connected in the direction of each other are not new in the arts, I am not aware that a device constructed and operating as just described has been heretofore known or used.

It is obvious that the use of the device is not confined to dressing-cases, but that it may be used in any connection that may be found desirable. It is also obvious that when the device is applied to a dressing-case it will be applied to both of the mirror-carrying standards. In this event I may find it preferable to construct right and left hand fastening-plates; but this will be readily understood and does not further require to be enlarged upon.

At times I may find it desirable to use in connection with the plate member 5 of my improved fastening device a locking device, which has been illustrated in Fig. 1 of the drawings. This consists simply of a turn-button 25, stamped from sheet metal and provided with a longitudinal strengthening-rib 26. The ends of the turn-button are provided with oppositely-extending slots or recesses 27, adapted to engage screws 28, partly inserted in the back of the dressing-case and in the rear side of the standard, as clearly shown in Fig. 1. When this device is used, the screws 28 are to be tightened after the turn-button has been placed in operative position, thus preventing it from being accidentally unlocked. The turn-button is pivotally connected with the rear side of the upturned handle 10 by means of a headed pin 29 or other suitable fastening device. When this auxiliary locking device is used, it serves not only to secure the plate 5 against accidental displacement, but it also forms a stiffener whereby the standards 17 are held rigidly in an upright position.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood.

The construction of my improved fastening device is extremely simple and inexpensive, and by means thereof parts of furniture may be connected very securely and yet in such a manner as to be readily detachable from each other.

I would have it understood that the locking device comprised by the turn-button 25 and its related parts may be and is usually entirely dispensed with, as illustrated in Figs. 2 and 3 of the drawings. When this locking means is thus dispensed with, I prefer to provide the handle portion 10 of the plate 5 with an outwardly-turned flange portion 30, which forms a convenient grip for the thumb when the device is to be operated for the purpose of separating the parts. I would further have it understood that while I have in the foregoing described the preferred forms of my invention I do not wish to be regarded as limiting myself with regard to the structural



details herein set forth. Accordingly I do not limit myself to the precise forms of the device herein shown, but reserve to myself the right to any changes, modifications, and alterations which may be resorted to without detracting from the utility of my invention or departing from the spirit and scope thereof.

I am aware that fastening or coupling devices for furniture in which a slidable slotted wedge coöperates with a headed fastening member to draw the parts together have been used prior to my invention. In such cases, however, it has been found necessary to employ additional means, such as screws and clamping-plates, for driving the wedge to and retaining it in operative position. By my improvement the pivot of the plate which forms one of the fastening members constitutes a fixed point of attachment for said fastening member, whereby it is permanently connected with one of the parts to be connected. No additional forcing or fastening means are required. There is no danger of loss or displacement of either of the fastening members. The parts connected by my improved coupling or fastening device may be easily and swiftly taken apart and again connected without the use of tools of any kind, and the attachment of both the members of my improved fastening device being practically permanent they will always be in proper registration, and the operation of connecting the parts provided therewith will thus be greatly facilitated.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a device of the class described, a fastening-plate having a pivotal opening, a concentric slot provided with an enlargement at one end and a concentric wedge-shaped flange surrounding said slot and increasing in thickness toward the end of the slot opposite to the enlargement, said plate being struck up from a single sheet of metal.

2. In a device of the class described, a fastening-plate having a pivotal opening, a concentric slot enlarged at one end, a concentric wedge-shaped flange surrounding said slot and a stiffening-rib extending around the circumference of the plate, said plate or fastening member being struck up from a single sheet of metal.

3. In a device of the class described, a plate or fastening member having a pivotal opening, a concentric slot enlarged at one end, a concentric wedge-shaped flange surrounding said slot and a stiffening-rib extending around the circumference of said plate, the latter being provided with an upturned handle member and the whole being struck from a single piece of sheet metal.

4. In a device of the class described, the combination of a pivoted fastening-plate having a concentric slot enlarged at one end, a concentric wedge-shaped flange surrounding said slot and a handle upturned at one end of said plate, a fastening member having a reduced portion forming a neck and a head at the end thereof, a locking device comprising a turn-button pivotally connected with the handle of the fastening-plate and provided at opposite ends with oppositely-extending slots, and screws engaging said slots.

5. A device of the class described, comprising a headed fastening member, a pivoted fastening-plate having a concentric slot to receive the headed fastening member and provided with a concentric wedge-shaped flange engaging the said headed fastening member and drawing it in the direction of said pivoted fastening-plate, and means for locking the latter against displacement.

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

DANIEL W. TOWER.

Witnesses:

PERRY C. PECKHAM,  
E. L. KNAPP.