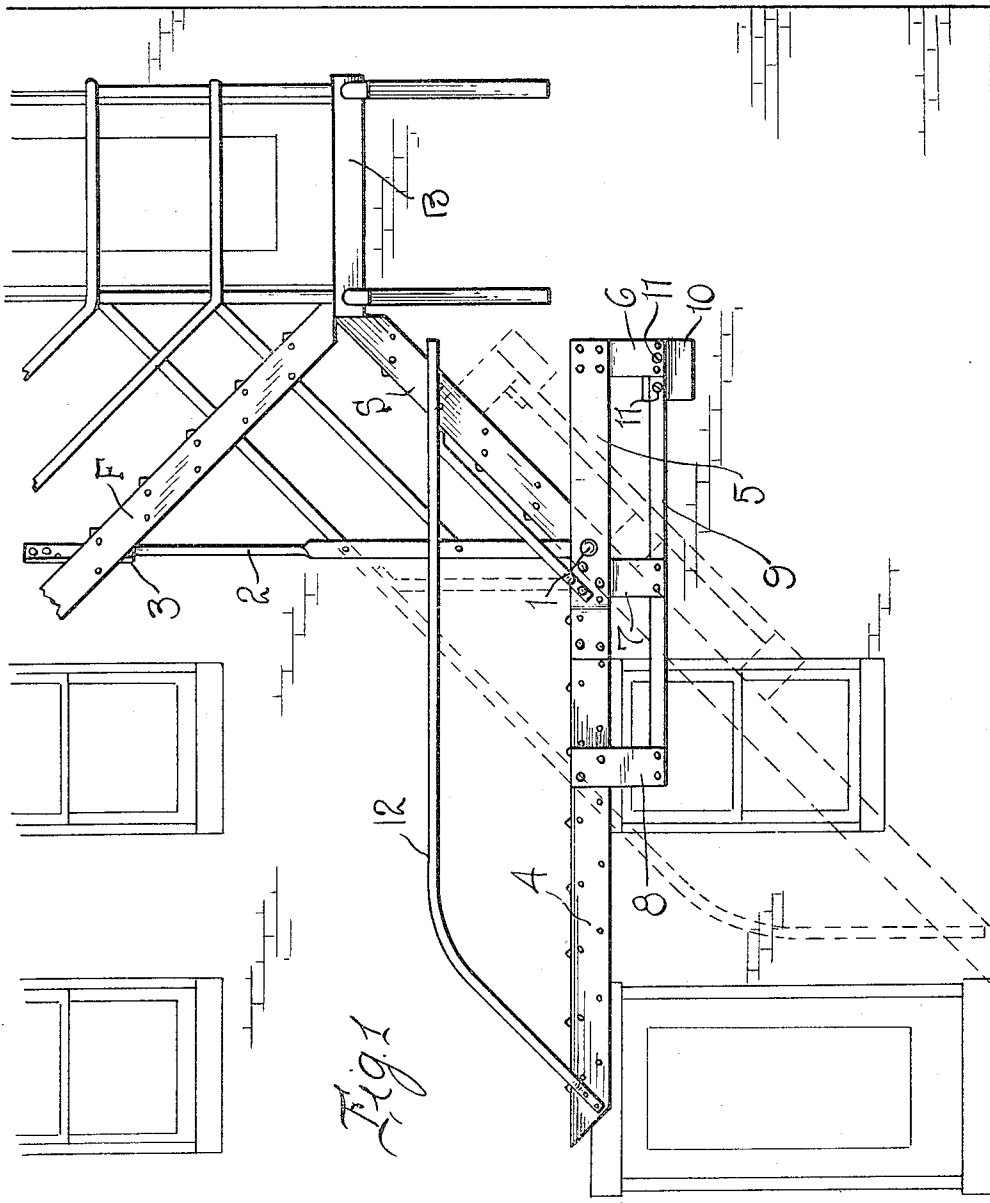


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COUNTERBALANCED STAIR.
APPLICATION FILED FEB. 27, 1915.

1,140,833.

Patented May 25, 1915.
2 SHEETS—SHEET 1.



Inventor

E. L. KEULING

Witnesses
Robert M. Sutphen.
A. J. Huff.

By *Watson E. Coleman*
Attorney

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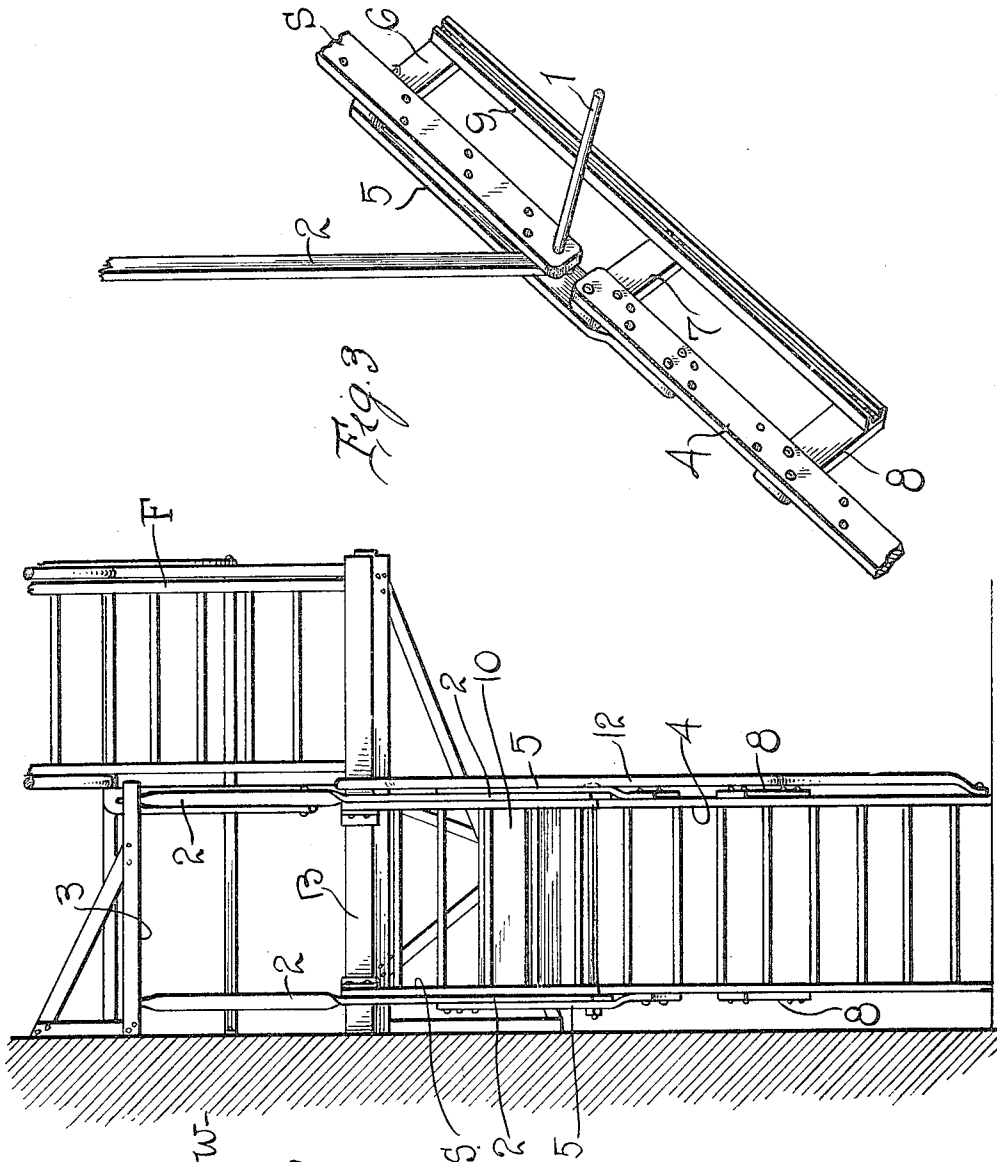


Fig. 2

Fig. 3

Witnesses
 Robert M. Sutphen
 A. J. Smith

Inventor
 E. L. KEULING

By *Watson E. Coleman*
 Attorney

UNITED STATES PATENT OFFICE.

EDGAR LOUIS KEULING, OF SCRANTON, PENNSYLVANIA.

COUNTERBALANCED STAIR.

1,140,833.

Specification of Letters Patent.

Patented May 25, 1915.

Application filed February 27, 1915. Serial No. 11,006.

To all whom it may concern:

Be it known that I, EDGAR LOUIS KEULING, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Counterbalanced Stairs, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in counterbalanced stairs and has relation more particularly to a device of this general character of a balcony type; and an object of the invention is to provide a device of this general character including novel and improved means whereby the stair is normally maintained in an inoperative position.

Furthermore, it is an object of the invention to provide a novel and improved device of this general character including a counterbalanced stair, said counter-balance being engaged with the stair in such a manner as to assure an even distribution of the weight of such counter-balance whereby the possibility of the stair becoming warped is obviated.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved counterbalanced stair whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise more convenient and advantageous for use, all as will be hereinafter more fully set forth.

The novel features of the invention will be carefully defined in the appended claim.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a view in side elevation of a counterbalanced stair constructed in accordance with an embodiment of my invention and in applied position; Fig. 2 is a view in front elevation of the device as illustrated in Fig. 1, with the stair in operative adjustment; and Fig. 3 is a fragmentary view in perspective illustrating in detail certain features of my invention as herein embodied.

As disclosed in the accompanying drawings, F denotes a balcony fire escape of conventional construction having depending from the lower balcony B thereof on a predetermined incline the stair section S terminating a predetermined distance above the

ground and having the lower extremities of the sides thereof tied or connected by the stationary shaft 1 projecting beyond opposite sides of the stair S and having secured thereto the lower extremities of the hangers 2, the upper extremities being suitably secured to the bracket 3 anchored to the wall W of a building structure.

4 denotes the stiles having their upper extremities provided with the extension stile pieces 5 which are pivotally engaged with the shaft 1 at a point in close proximity to the upper extremities of the stiles, as is believed to be clearly shown in the accompanying drawings, and said extension stile pieces 5 have depending from their free extremities and at right angles thereto the rigid arms 6 and disposed substantially in parallelism with the arms 6 are the arms 7 and 8, the arm 7 being secured to the stiles 4 adjacent the upper extremities thereof and to the extension stile pieces 5 while the arms 8 are secured to the stiles 4 at a predetermined distance inwardly of the upper extremities thereof and said arms 6, 7 and 8 are preferably equidistantly spaced.

Secured to the lower extremities of the arms 6, 7 and 8 and disposed in parallelism with the stiles 4 are the elongated members 9 formed preferably of channel iron and with which is engaged the counter-balance 10 and which is adapted to normally maintain the lower stair section in an elevated or inoperative position, as is illustrated by full lines in Fig. 1.

As herein embodied, the counter-balance 10 bridges the space between the elongated members 9 and is held against movement longitudinally of said members through the medium of the retaining screws 11. By the particular mounting of the counterweight 10 it will be readily appreciated that the weight thereof is evenly distributed upon the stiles 4 whereby the possibility of the stiles 4 warping is obviated and the usefulness of the device gradually prolonged.

Secured to the outer stile 4 and the adjacent extension stile piece 5 is the hand rail 12 which may be of any ordinary or preferred construction.

From the foregoing description, it is thought to be obvious that a counterbalanced stair constructed in accordance with my invention is of an extremely simple and comparatively inexpensive nature and is particularly well adapted for use by reason

of the convenience and facility with which it may be assembled and it will also be obvious that my invention is susceptible of some change and modification without material departure from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice.

I claim:

A device of the character described comprising a fixed stair section, another stair section pivotally supported thereby, extension stile pieces carried by the opposite stiles

of said second named stair and projecting beyond the pivoted extremity thereof, arms depending from the sides of the stair stiles and the extension stile pieces in predetermined spaced relation, elongated members secured to the free extremities of said arms, and a counter-balance bridging the space between the elongated members and secured thereto.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

EDGAR LOUIS KEULING.

Witnesses:

J. M. ATHERTON,

J. H. MEARS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."