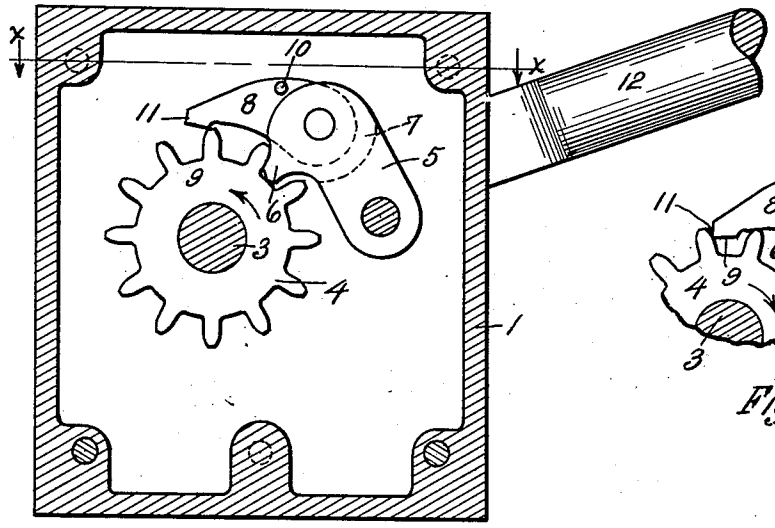
M. A. BASLEY.

SELF LOCKING AND UNLOCKING MECHANISM.

APPLICATION FILED SEPT. 3, 1910.

1,012,053. Patented Dec. 19, 1911.

Fig. 1



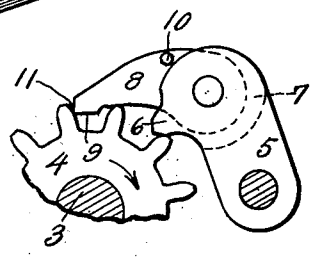


Fig. 3

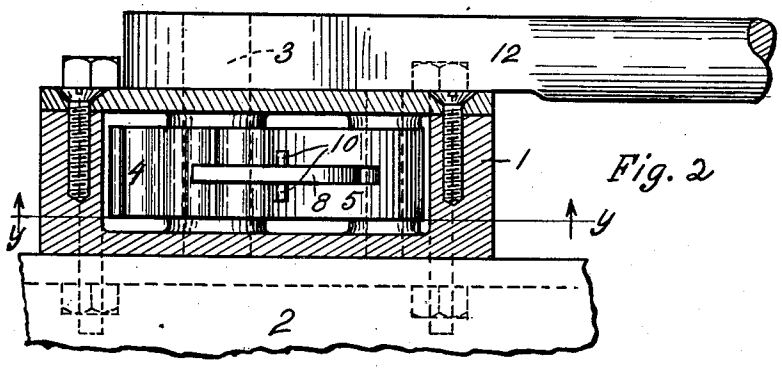


Fig. 2

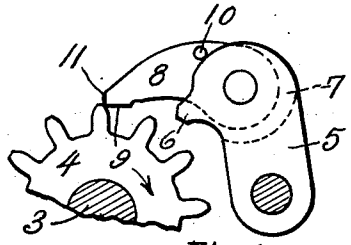


Fig. 4

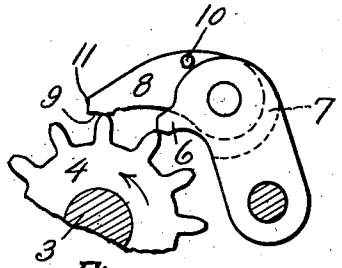


Fig. 5

Witnesses:

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UNITED STATES PATENT OFFICE.

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SELF LOCKING AND UNLOCKING MECHANISM.

1,012,053. Specification of Letters Patent. **Patented Dec. 19, 1911.**

Application filed September 3, 1910. Serial No. 580,412.

To all whom it may concern:

Be it known that I, MANFRED A. BASLEY, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Self Locking and Unlocking Mechanism, of which the following is a specification.

My invention relates to self locking and unlocking mechanism especially adapted for use on adjustable beds, folding couches and the like.

The object of the invention is the provision of such mechanism which shall be strong and durable and efficient in operation, and the invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification and in which,

Figure 1 is a sectional elevation illustrating the mechanism, Fig. 2 a section of the mechanism taken on line *x*—*x* of Fig. 1, and Figs. 3, 4 and 5 are detail views illustrating the locking mechanism in different positions.

The preferred form of construction as illustrated in the drawings comprises a pair of suitable housings 1 secured to the supports 2 in transverse alinement with each other. In each of the housings 1 is mounted a shaft 3 carrying a cog wheel or spur gear 4 in said housing. A locking dog 5 is pivoted in housing 1 and provided with a projection 6 arranged to interlock with cog wheel 4 to prevent rotation of said cog wheel in a clock-hand-wise direction and to permit rotation of said wheel in a counter clock-hand-wise direction. Dog 5 is provided with a notch 7 at its outer end in which a finger 8 is pivoted as shown. At its outer end finger 8 carries a flat land 9 adapted to ride upon the outer ends of the teeth of cog wheel 4 and so positioned relatively to dog 5 that when the nose or projection 6 thereon rests against the outer end of one of the teeth of wheel 4 land 9 rests upon the outer end of the adjacent tooth of said cog wheel as indicated in Fig. 7. Finger 8 carries a pin 10 adapted to contact with the end of dog 5 to limit the inward swinging of said finger.

The relative arrangement and the form of the parts is such that in the positions indicated in Fig. 1 cog wheel 4 is locked against rotation in a clock-hand-wise direction by projection 6 on dog 5 and is free to rotate in a counter clock-hand-wise direction. When it is desired to rotate wheel 4 in a clock-hand-wise direction, it must be first partially rotated in a counter clock-hand-wise direction until projection 6 and land 9 ride up upon the ends of adjacent teeth as indicated in Fig. 5. With the parts in this relation it will be observed that upon rotation of wheel 4 in a clock-hand-wise direction the nose 11 of finger 8 will contact with the side of a cog to prevent projection 6 from falling fully into the space between two teeth as indicated in Fig. 3. With the parts in this relation further rotation of cog wheel 4 will cause the nose 11 to ride up the side of the tooth contacting therewith and raise projection 6 entirely out of engagement with the cog wheel teeth as indicated in Fig. 4. Slight further continuation of this rotation causes the parts to assume the relation indicated in Fig. 5, which as above explained permits further rotation of said cog wheel in a clock-hand-wise direction. To lock the cog wheel against clock-hand-wise rotation all that is necessary is to bring the parts into relation as indicated in Fig. 5 when slight further rotation in counter clock-hand-wise direction will cause projection 6 to drop into the space between two teeth, land 9 sliding freely on the top of a corresponding tooth to permit of this, when the parts will assume the relation shown in Fig. 1 which is in normal locking position. Thus it will be observed that cog wheel 4 is always free for counter clock-hand-wise rotation and may be readily locked against reverse rotation or such reverse rotation permitted.

Each of the shafts 3 is extended beyond the corresponding housing 1 where it is fixed to the side arm 12 of an adjustable head rest or the like. When it is desired to lower said head portion all that is necessary is a slight elevation of arm 12 to cause a slight partial counter-clock-hand-wise rotation of cog wheel 4 to bring the parts into relation as indicated in Fig. 5 when counter clock-hand-wise rotation of said cog wheel is permitted by the interaction of the parts as above explained.

The mechanism described above will be

found to be durable and efficient for use on a bed and is also well adapted for use on folding couches or in other situations where a self locking or unlocking mechanism is desired.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation or modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the exact details set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In a device of the class described, the combination of a cog wheel; a pivoted dog arranged to lock said wheel against rotation in one direction; and a finger pivoted to said dog, said finger being provided with a flat land arranged to ride upon one of the teeth of said wheel when the nose of said dog contacts with the outer end of an adjacent tooth and having a nose adapted to contact with the side of a tooth to elevate said dog out of locking engagement and then to ride over said tooth when said wheel is rotated in said direction, substantially as described.

2. In a device of the class described, the combination of a cog wheel; a pivoted dog arranged to lock said wheel against rotation in one direction; a finger pivoted to said dog, said finger being provided with a flat land arranged to ride upon one of the teeth of said wheel when the nose of said dog contacts with the outer end of an adjacent tooth and having a nose adapted to contact with the side of said tooth to elevate said dog out of locking engagement and then to ride over said tooth when said wheel is rotated in said direction; and means for limiting the inward swinging of said finger, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MANFRED A. BASLEY.

Witnesses:

FLORENCE E. LILLIS,

JOSHUA R. H. POTTS.