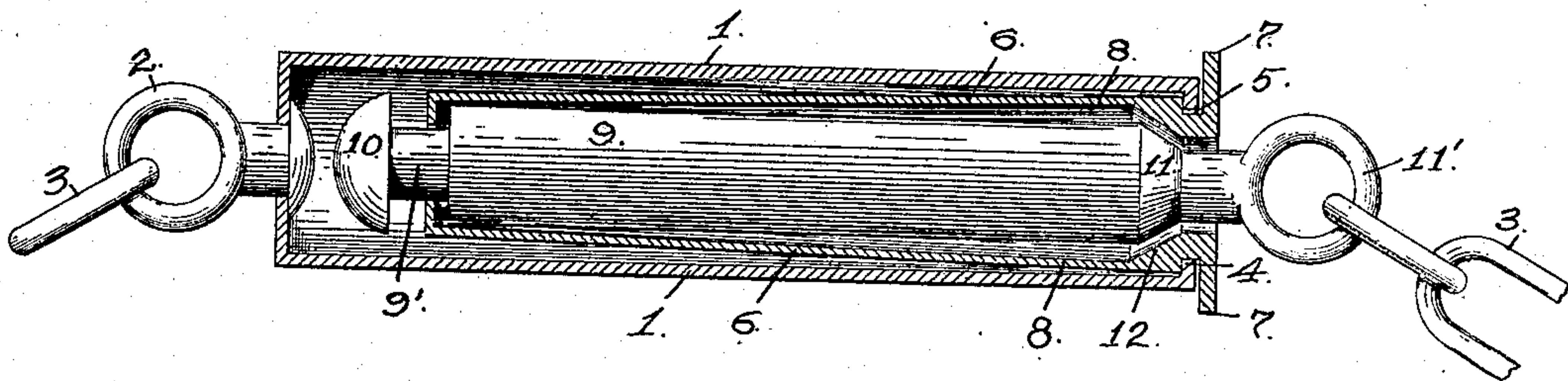


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SAFETY FASTENER.  
APPLICATION FILED MAR. 30, 1908.

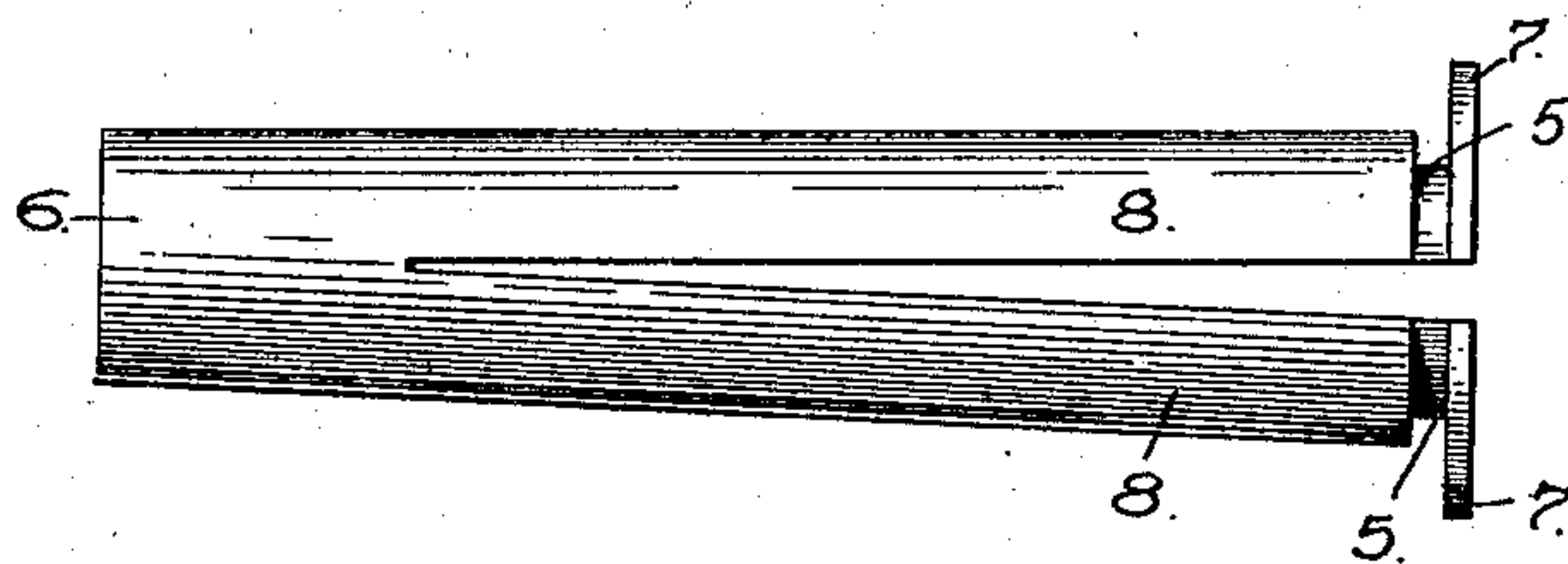
924,104.

Patented June 8, 1909.

*Fig. 1.*



*Fig. 2.*



WITNESSES.

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# UNITED STATES PATENT OFFICE.

GEORGE F. POWELL, OF SACRAMENTO, CALIFORNIA.

## SAFETY-FASTENER.

No. 924,104.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed March 30, 1908. Serial No. 424,264.

*To all whom it may concern:*

Be it known that I, GEORGE F. POWELL, a citizen of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented certain new and useful Improvements in Safety-Fasteners, of which the following is a specification.

The hereinafter described invention is more particularly designed for use as a fastener for jewelry, as for instance chains, necklaces, and bracelets, although it is equally as well adapted as a fastener for all purposes requiring that a securing resistance be offered to an outward pulling strain. In the present case the invention is illustrated as a fastener for connecting the ends of a chain or necklace, the object being to provide means whereby grip or lock jaws working within a barrel are expanded by an outward or pulling strain being exerted by the connected ends of the fastened article, so that, to separate the locked elements of the fastener, it is required that the grip or lock jaws be intentionally depressed to free the same of locked engagement with the barrel, thus positively providing against accidental separation of the fastener and the loss of the article of jewelry connected thereby.

To comprehend the invention reference should be had to the accompanying sheet of drawings, wherein—

Figure 1 is an enlarged longitudinal sectional view of the barrel or outer holder and the thimble fitted therein, the draw-bar within the thimble being shown in full. Fig. 2 is a detail perspective view of the thimble removed from the barrel or holder, with the draw-bar removed therefrom.

In the drawings, the numeral 1 is used to indicate a barrel, or a suitably shaped hollow holder, which comprises the outer section of the fastener, and, which, in the present case, has secured to its closed end a ring 2, for the attaching of one end of a chain or necklace 3 thereto. The open end of the barrel is formed with an inwardly extended circumferential flange 4, which is designed to fit into a circular groove or channel 5 formed in the outer end of a tapering thimble 6. This thimble 6 slips into the barrel 1, and is prevented from entering therein beyond a given distance by means of the outturned flange 7, which, when the thimble is in its proper position within the thimble, bears against the inwardly flanged end 4, of the

barrel or holder 1. In the present case, the thimble 6 is a split one, Fig. 2 of the drawings, forming two spring lock jaws 8. These jaws are held apart by the spring of the metal, being compressed or moved toward each other as the thimble is forced within the barrel 1, until the grooved or channeled portion 5 thereof is carried past or beyond the edge of the flange 4 of the barrel or holder 1, when they spring outwardly or separate to place the flange 4 of the barrel or holder 1 into the groove or channel 5, and, thus lock the thimble within the barrel or holder. Within the thimble 6, and between the spring jaws 8 thereof, works what shall be termed a draw-bar 9, which is slightly less in diameter than the interior of the thimble 6 and has a slight longitudinal movement or play therein. The inner end of the draw-bar is reduced and extended through an opening formed through the inner end of the thimble 6, and is prevented from or held against being withdrawn therefrom by means of the enlarged head 10. The draw-bar 9 is free to move outwardly until its head 10 bears onto the inner end of the thimble 6, when it is held against further outward movement. The outer end portion of the draw-bar 9 is formed with a downwardly inclined circumferential shoulder or bevel 11, against which acts the incline or shoulder 12 of the lock jaws 8, when the draw-bar 9 is drawn outwardly by a pulling strain exerted thereon. The draw-bar when drawn outwardly, serves as a wedge for forcing apart or separating the lock jaws 8, to hold the same separated and into locked engagement with the outer flange 4 of the barrel or holder 1. To the outer end of the draw-bar 9 is attached a ring 11', to which is secured the opposite end of the chain or necklace 3.

To disconnect or separate the chain or necklace 3, or other article connected by the described fastener, the lock jaws 8 are compressed to take the grooved or channeled portion 5 thereof clear of the circumferential flange 4 of the barrel or holder 1, when the said thimble with its draw-bar held thereto may be removed or withdrawn from within the said barrel or holder, thus unfastening the chain or necklace.

It will be observed that an outward or pulling strain exerted on the draw-bar 9, when the parts are fitted together, serves to hold the lock jaws 8 to the barrel or



holder 1, instead of causing the separation thereof.

The purpose of the lock jaws is to engage with the barrel or holder 1, while that of the draw-bar 9 is to act as an expander for the said lock jaws and as a means for holding the said lock jaws into engagement with the barrel or holder on an outward strain being exerted thereon, while the thimble 6 merely acts as ring for holding the lock jaws and for permitting of longitudinal movement of the draw-bar. However, the parts may be connected other than as above described, although the construction of the parts as illustrated is deemed the most effective for the work desired.

Having thus described the invention, what is claimed as new and desired to be protected by Letters Patent of the United States is—

1. A safety fastener comprising a hollow barrel, jaws adapted to engage the inner surface of the barrel and provided with portions projecting without the barrel permitting the manipulation thereof, and a draw-bar for wedging said jaws on an outer strain being exerted thereon so as to hold the jaws separated.

2. In a safety fastener, a barrel, a split thimble positioned within said barrel and provided with means projecting without the barrel permitting the manipulation of the jaws of the thimble and a longitudinally movable draw bar within the thimble, said draw-bar being adapted upon an outer pull to force the jaws of the thimble outwardly into engagement with the barrel.

3. In a safety fastener, the combination with a barrel or holder, a circumferential inwardly projecting flange at the outer open end thereof, locking means separable from said barrel or holder which engage with said circumferential flange, and a draw-bar longitudinally movable within the barrel or holder serving as a wedge for forcing the locking means into engagement with the flange on the barrel upon an outward strain being exerted thereon.

4. In a safety fastener, the combination with a barrel or holder, a circumferential inwardly projecting flange at the outer open end portion thereof, spring held lock jaws separable from the said barrel or holder, said jaws having a groove or channel therein into which fits the circumferential flange of

the barrel or holder when the jaws are separated or held open, and of a draw-bar longitudinally movable within the barrel or holder serving as a wedge for forcing the locking jaws outwardly to cause the channels therein to frictionally engage with the circumferential flange on the barrel upon an outward strain being exerted thereon.

5. In a safety fastener, the combination with a barrel or holder, an inwardly projecting flange at the outer open end portion thereof, of spring held lock jaws separable from the barrel or holder, said jaws having a groove or channel therein into which fits the flange of the barrel or holder, an incline on the inner face of said jaws, a draw-bar longitudinally movable within the barrel or holder, said draw-bar having an inclined shoulder at its outer end portion which acts against the incline of the lock jaws to wedge the same apart on an outward strain being exerted on the said draw-bar.

6. In a safety fastener, the combination with a barrel provided with an inwardly extending flange at the open end thereof, of a split thimble within said barrel, the sections of which form jaws which project beyond the open end of the barrel and are provided with grooves adapted to receive the flange at the end of the barrel, and means for positively holding said jaws in engagement with the barrel.

7. In a safety fastener, the combination with a barrel provided with an inwardly extending flange at the open end thereof, of a split thimble within said barrel, the sections of which form jaws which project beyond the open end of the barrel and are provided with grooves adapted to receive the flange at the end of the barrel, and a draw-bar permanently connected to said thimble and capable of limited longitudinal movement therein, said draw-bar and thimble being provided with cooperating portions whereby upon an outward pull on the draw-bar the jaws of the thimble will be pushed into engagement with the barrel.

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

GEORGE F. POWELL.

Witnesses:

A. M. SEYMOUR,  
M. R. BEARD.