No. 722,754. PATENTED MAR. 17, 1903.

J. E. RILEY.

SASH LOCK AND LIFT.

APPLICATION FILED JUNE 23, 1902.

NO MODEL.

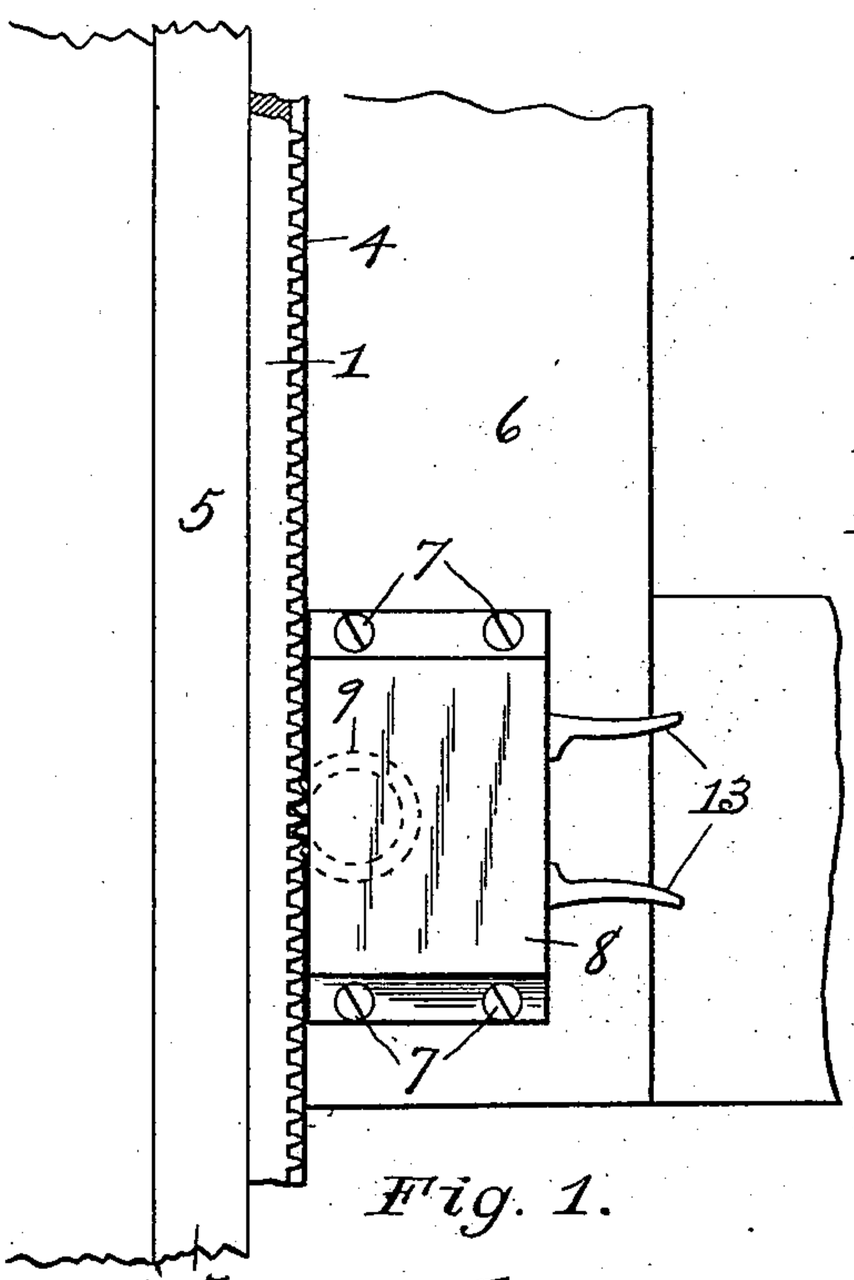

Fig. 1.

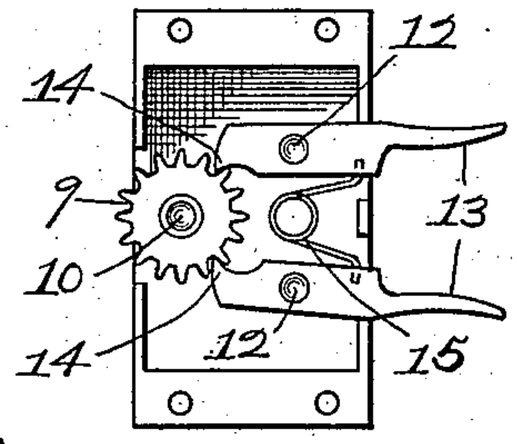

Fig. 2.

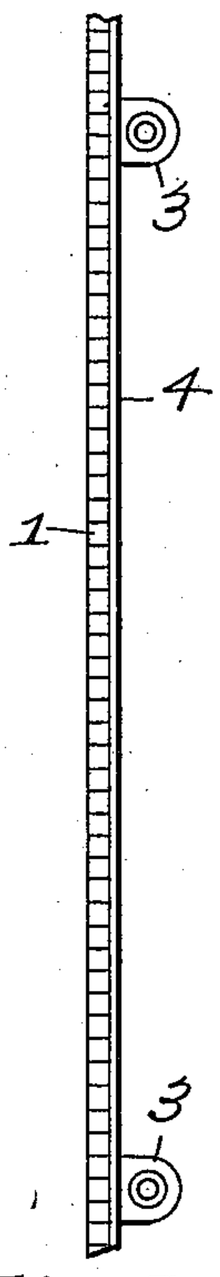

Fig. 3.

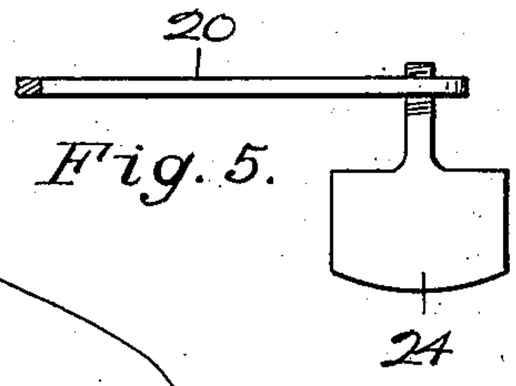

Fig. 5.

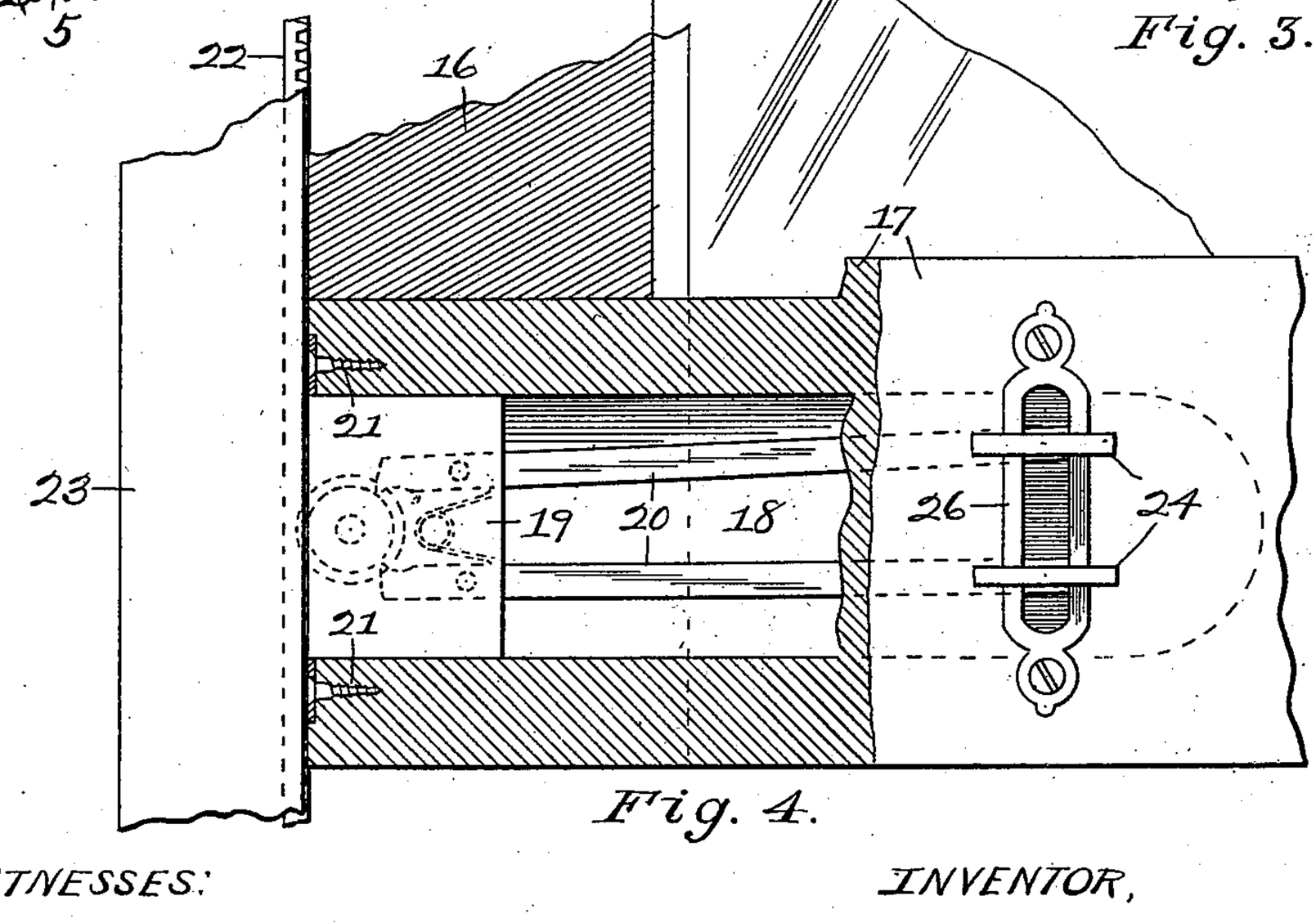

Fig. 4.

WITNESSES:

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SASH LOCK AND LIFT.

SPECIFICATION forming part of Letters Patent No. 722,754, dated March 17, 1903.

Application filed June 23, 1902. Serial No. 112,753. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. RILEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented new and useful Improvements in a Combined Sash Lock and Lift, of which the following is a specification.

My invention relates to a combined sash-lift and sash-lock.

The object of my invention is to produce an article of this kind which is simple and neat in construction and appearance and which in its preferred form may be applied to any sash and casing without any tools except a screw-driver. The advantages of this device will be apparent from the following description.

Referring now to the accompanying drawings, Figure 1 is a front view of the preferred form of my invention. Fig. 2 is an interior face view of the lock proper detached. Fig. 3 is a side elevation of a portion of the rack. Fig. 4 is a partly-sectional front elevation of a modified form in which the lock is mortised in the bottom rail of a sash. Fig. 5 is a plan view of a portion of one of the levers employed in the modification shown in Fig. 4.

Referring to Figs. 1, 2, and 3, a rack 1, provided with a suitable number of ears 3, is secured vertically to one of the sash-stops 5, preferably the left-hand one, as the lock is more conveniently operated at this side of the sash. The rack is secured by screws passing through the ears 3. Secured to the adjacent sash-stile 6 by screws 7 is a casing 8. Within said casing and partially projecting therefrom to engage the rack 1 is a pinion 9, mounted rotatably upon a stud 10, which is secured to the front of the casing 8 and projects inwardly therefrom. Two similar studs 12 12 are secured to said casing and provide fulcrums for two small levers 13 13, respectively. The inner end of each said lever is provided with a dog or detent portion 14, which is adapted to enter between teeth of the pinion 9 and prevent rotation thereof. The outer arms of said levers are normally held apart by a substantially U-shaped spring 15, having an intermediate coiled portion and having its ends mounted in sockets or holes in said levers. The outer portions of said levers project through a slot or recess in the casing 8 and are adapted to be pressed together by the thumb and finger.

The rack 1 is provided with a longitudinal flange 4, the purpose of which is to prevent the pinion 9 from slipping off the teeth of the rack by reason of the usual space between the sash-stile and the parting-strip. As shown, said flange is between the teeth of the rack and the sash-stile 6. The rack 1 is cut of a length equal to the travel of the sash from open to closed position. As the pinion 9 is always in mesh with the rack and the dogs 14 normally engage the pinion to prevent its rotation, it follows that the sash may be raised to any desired position (after first pressing together the levers 13) by lifting upon the lower lever 13 and secured in that position by releasing said levers, when the spring 15 will cause the dogs 14 to engage the pinion 9, as shown in Fig. 2. The lock or casing 9 may be attached to any desired portion of the sash-stile; but it could be most conveniently operated if placed near the bottom of the sash.

The rack and the lock substantially as described may be arranged in such a manner that they will be concealed from view. Such a modification is represented in Fig. 4, in which the sash-stile 16 and the bottom rail 17 are shown partly in section. A mortise-slot 18 is cut in the rail, as shown, to receive the lock-casing 19 and a pair of levers 20 20 projecting therefrom. The casing 19 is secured in the mouth of the mortise-slot by screws 21. The rack 22 instead of being secured to the sash-stop is sunk in a groove cut in the working face of the jamb 23, so that the teeth of the rack are about flush with said face.

The interior construction of the lock proper is the same as that described heretofore; but the levers 20 are extended several inches to the right of the casing 19 and an outwardly-projecting finger-piece 24 is secured to the end of each lever. Before the lock is secured in position a vertical slot is cut in the rail 17 at the correct distance from the jamb to pass the shanks of the said finger-pieces 24. An escutcheon 26 is then placed over said slot, and when the lock is secured in position the finger-pieces 24 are screwed into threaded

holes at the ends of the respective levers 20. Instead of screwing the finger-pieces 24 into the levers 20 the ends of said levers may be bent outwardly and threaded externally, while the shanks of the finger-pieces would be internally threaded for attachment to the levers. The sash is raised, lowered, locked, or unlocked by manipulating the finger-pieces 24 in the same manner as the levers 13 in the preferred form of the invention.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A combined sash lift and lock comprising a casing secured to the bottom rail of a sash, a pinion mounted within said casing but projecting therefrom, two detent-levers fulcrumed within said casing and engaging teeth of said pinion to prevent rotation thereof, the lower of said levers being adapted as a lift, a spring between said levers, the ends of said spring pressing said levers in opposite directions, and a rack secured vertically to a jamb of the sash-frame, said rack being engaged by said pinion, substantially as described.

2. The combination of a rack secured to the jamb of a sash-frame, a sash-rail having a mortise-slot therein, a casing held within said slot, a pinion mounted rotatably within said casing, a pair of detent-levers fulcrumed within said casing, the shorter ends of said levers engaging the teeth of said pinion, said levers being elongated in the opposite direction from said pinion, finger-pieces secured to the respective longer ends of said levers, said finger-pieces projecting through an opening communicating with said mortise-slot, and a spring interposed between the longer arms of said levers, said spring holding said levers normally in engagement with said pinion, substantially as described.

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

JAMES E. RILEY.

Witnesses:
K. M. IMBODEN,
M. L. LANGE.