

No. 615,659.

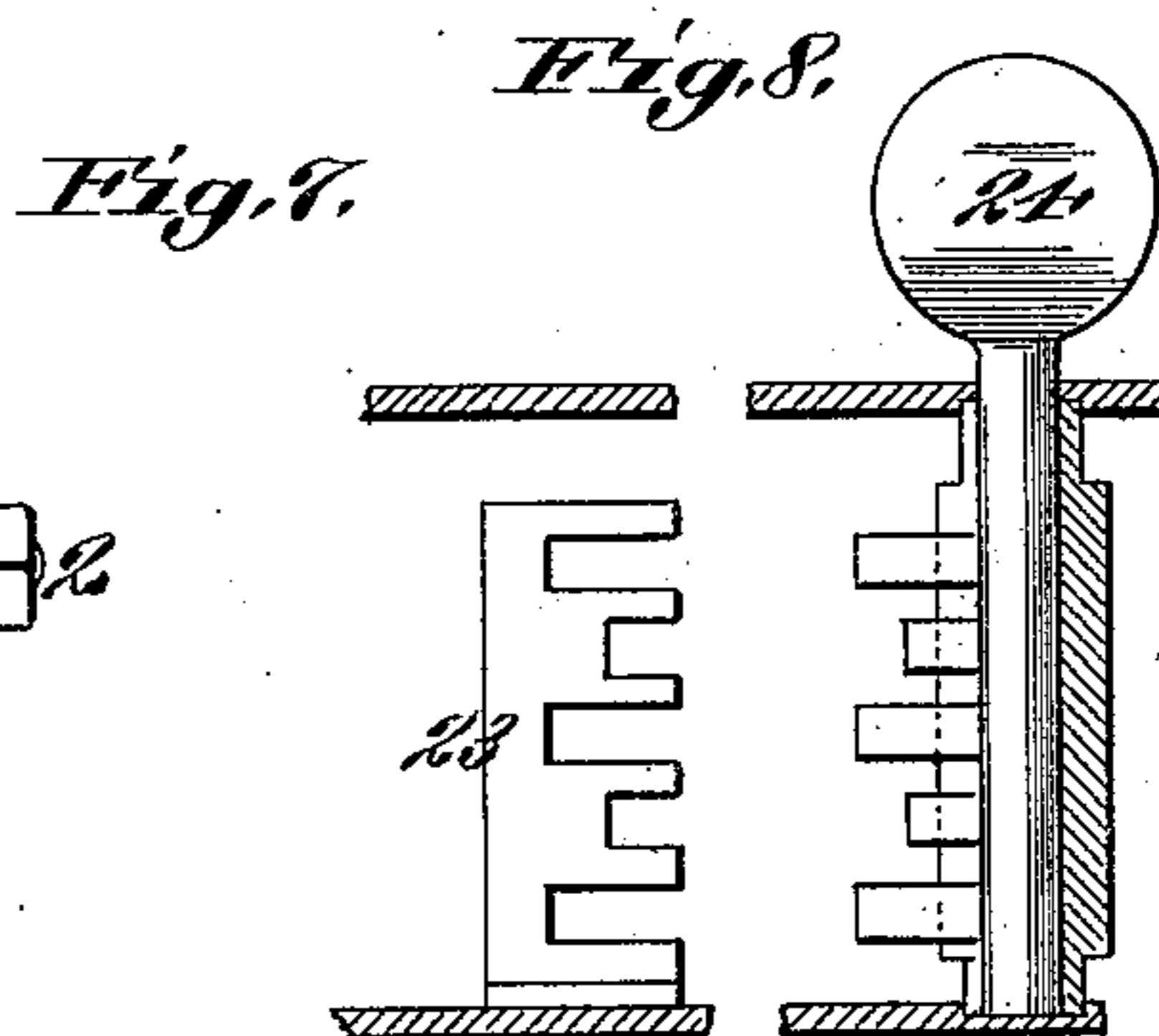
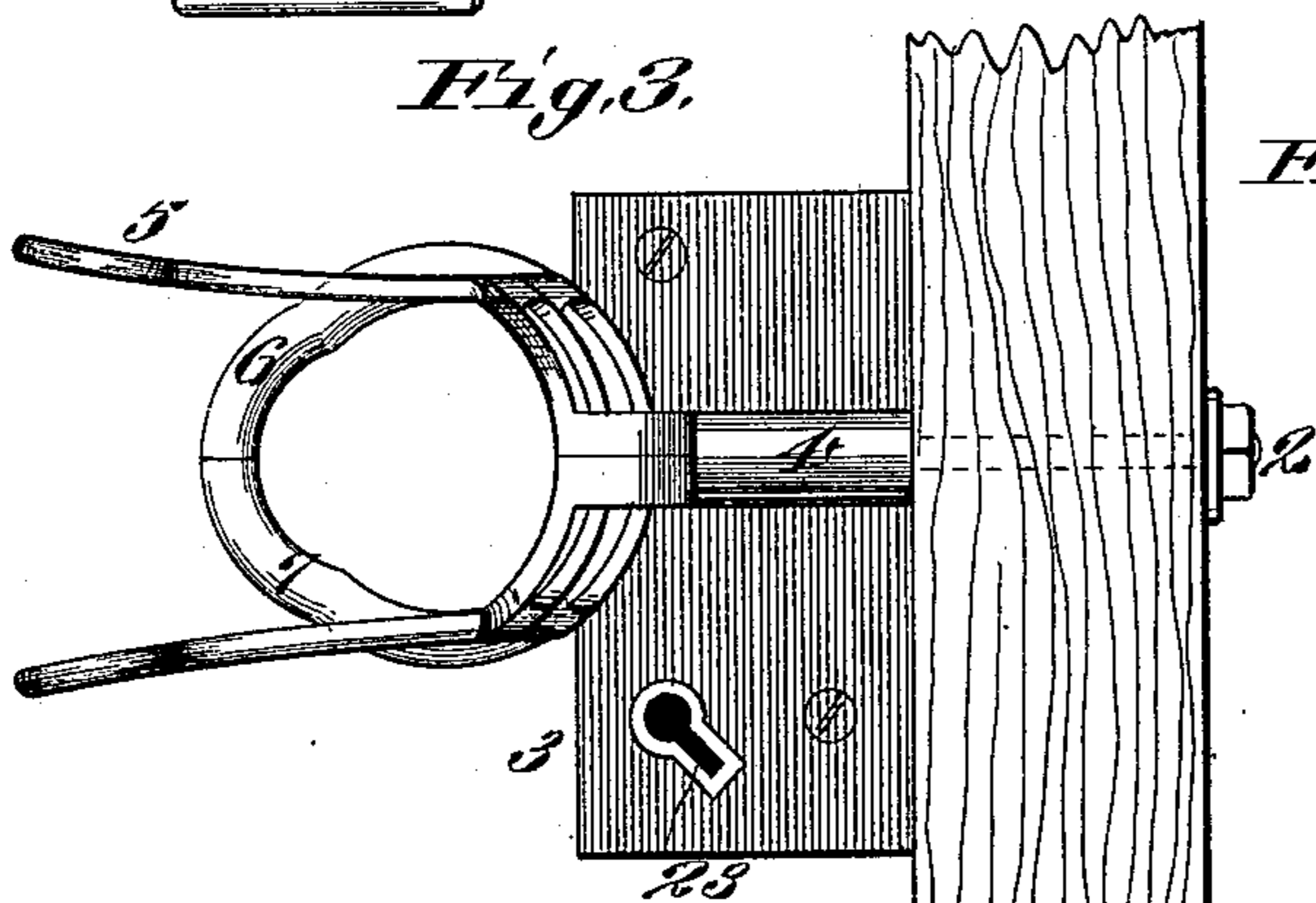
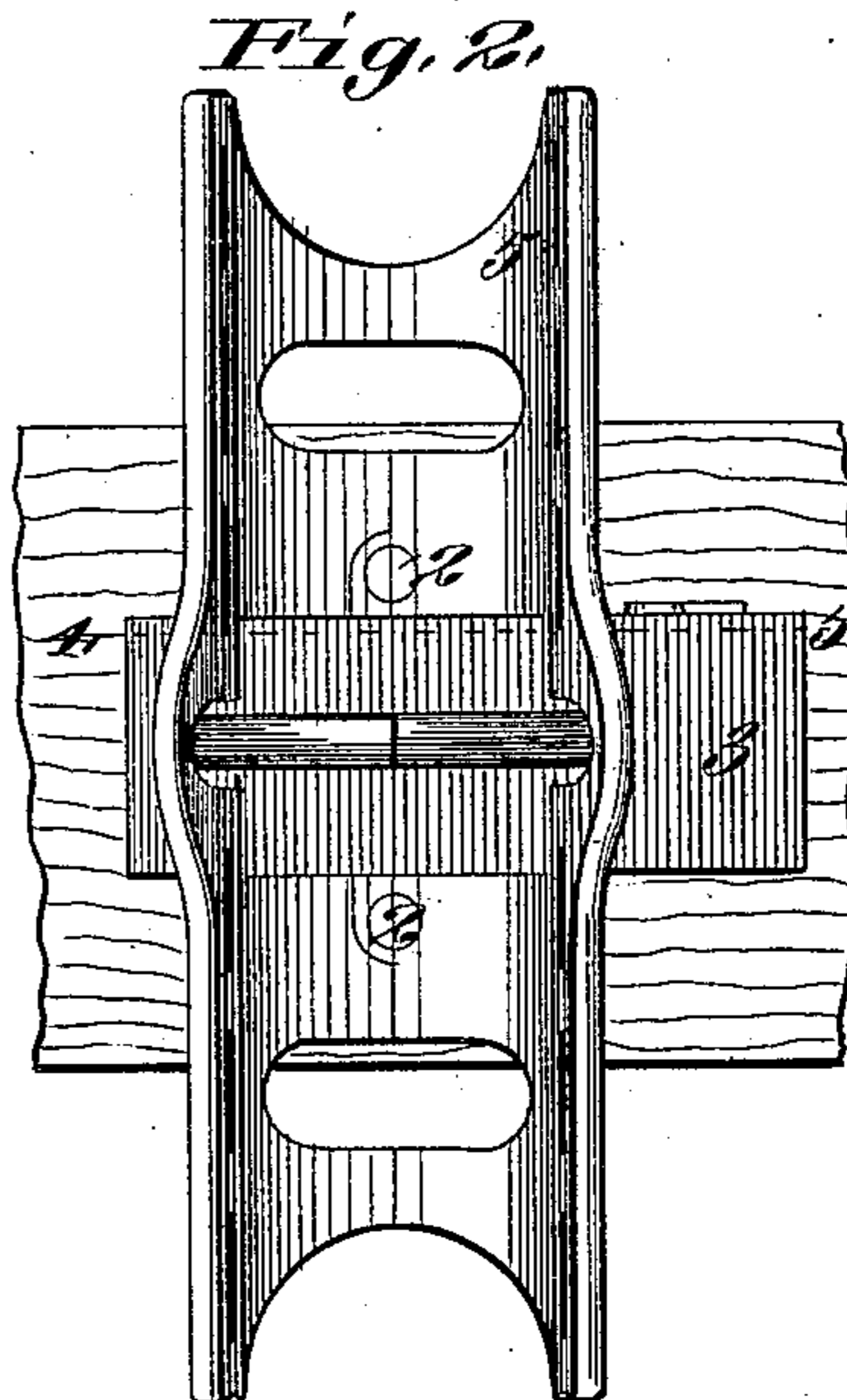
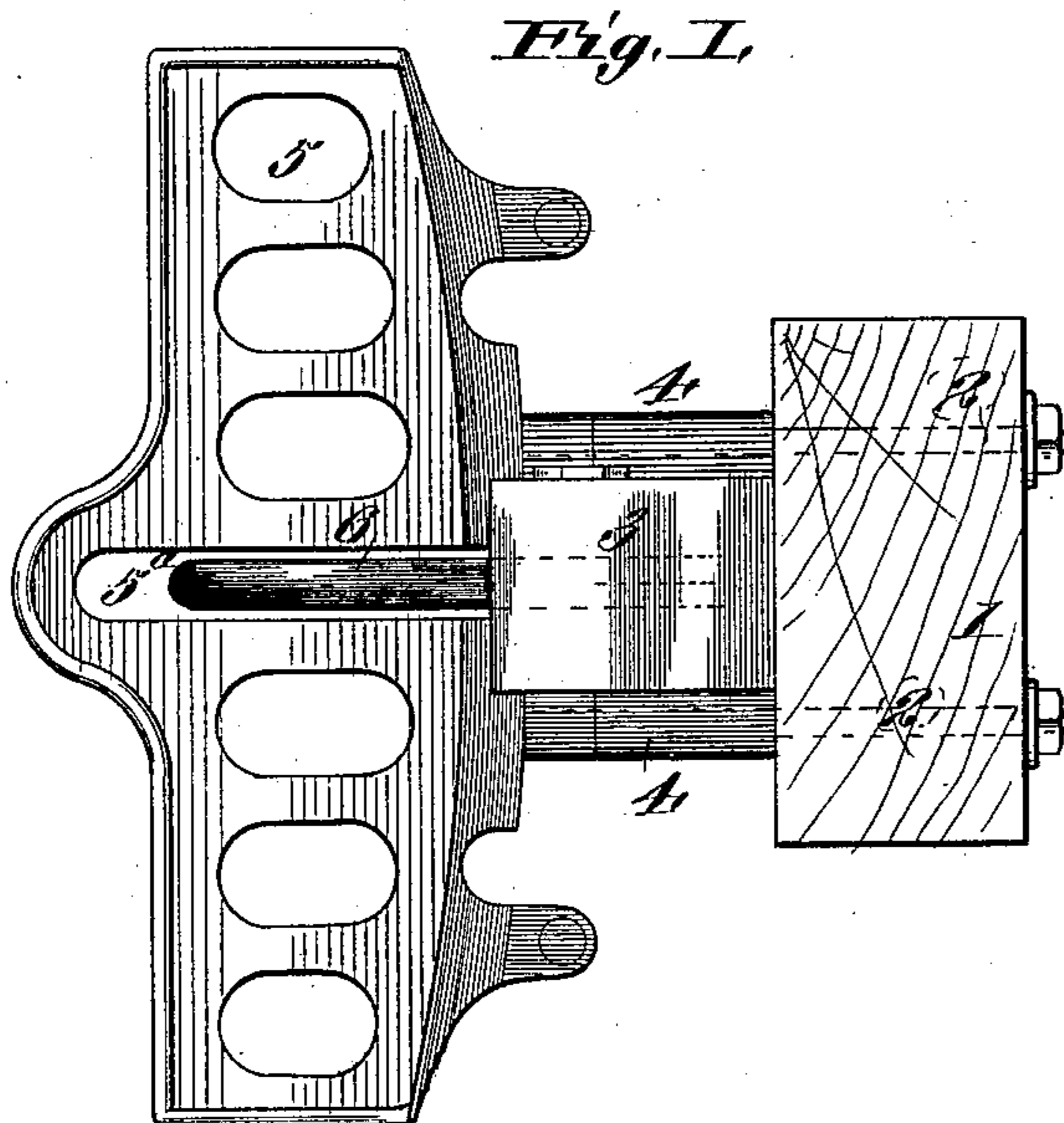
Patented Dec. 6, 1898.

W. BLYER.  
BICYCLE LOCK.

(Application filed Nov. 26, 1897.)

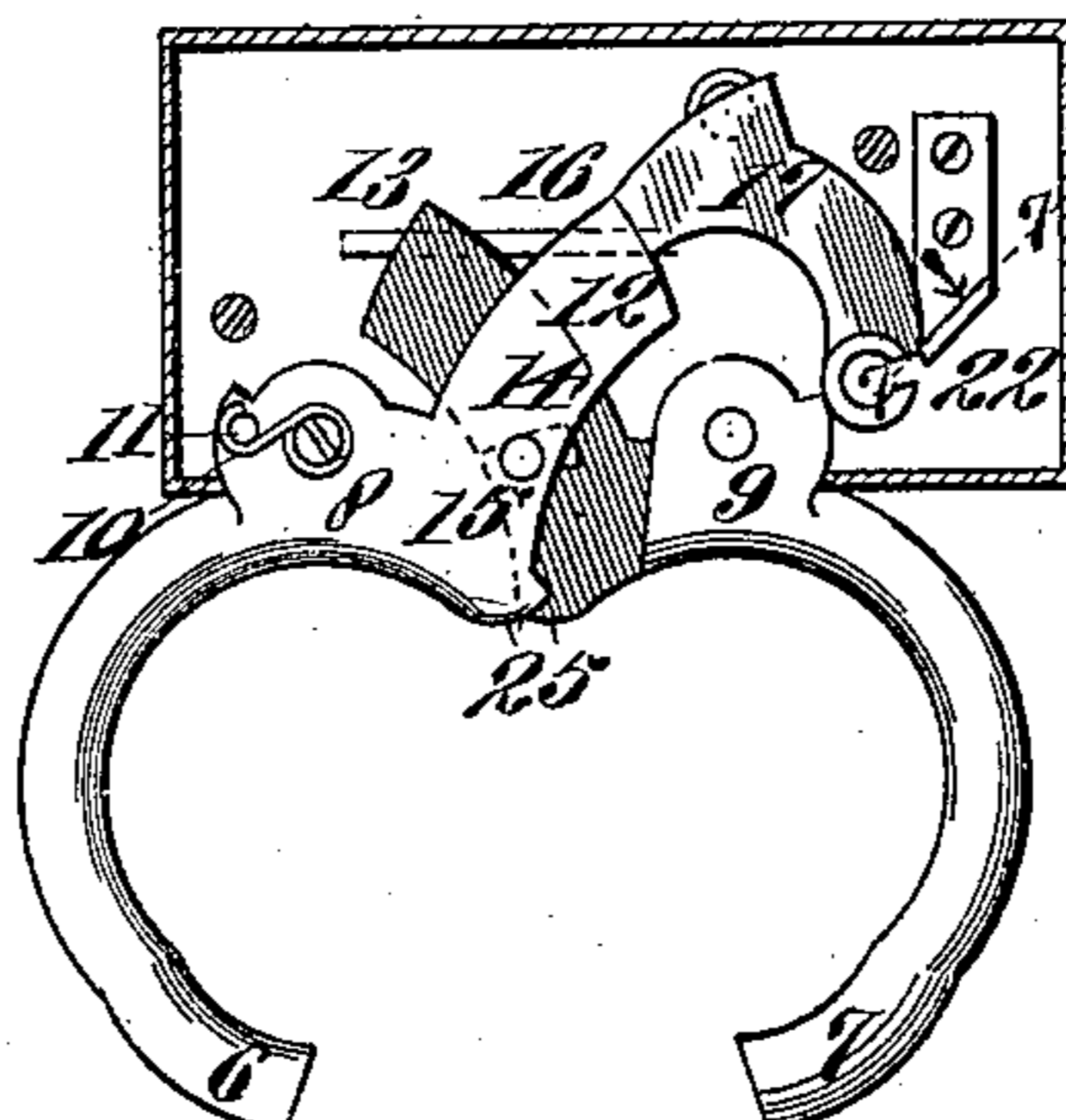
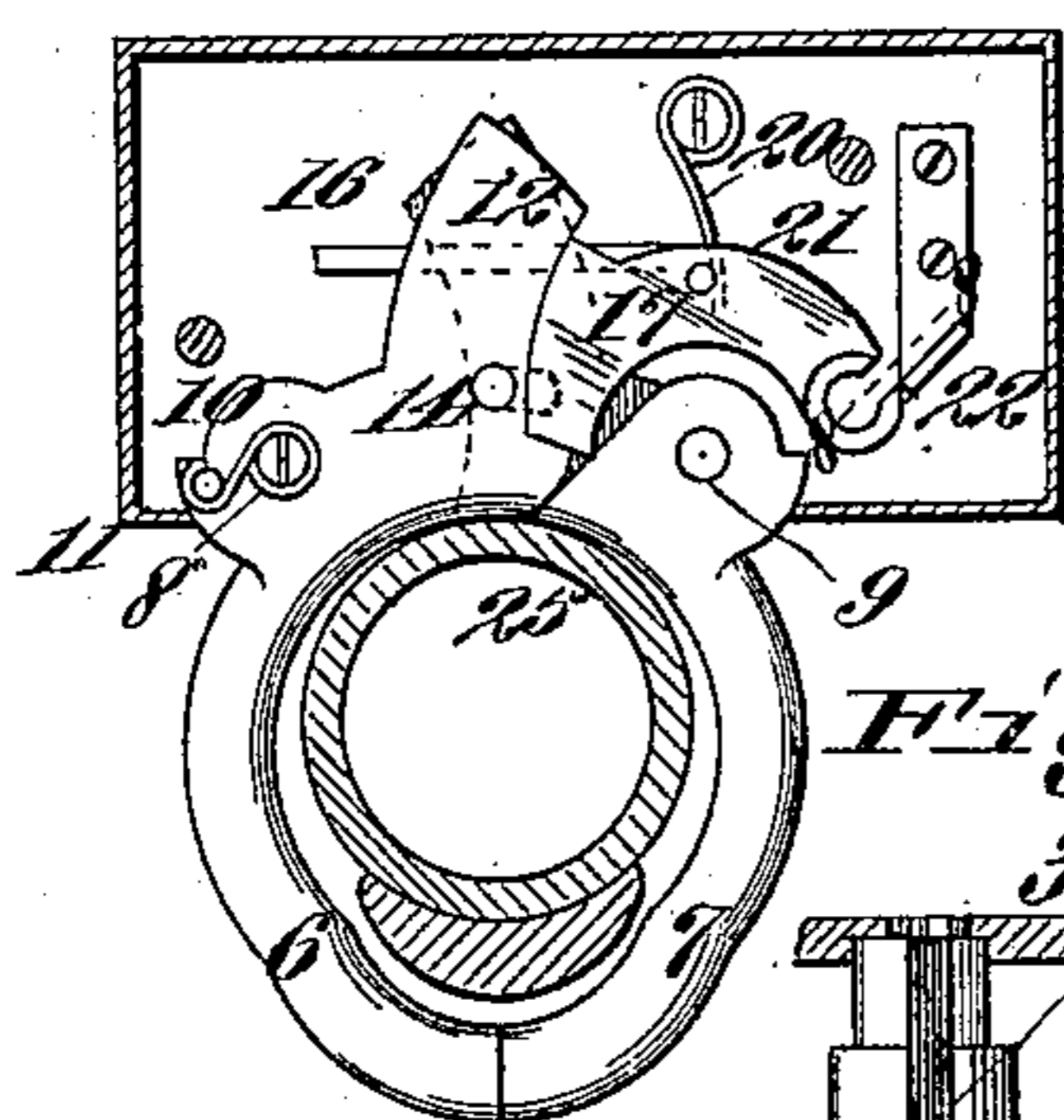
(No Model.)

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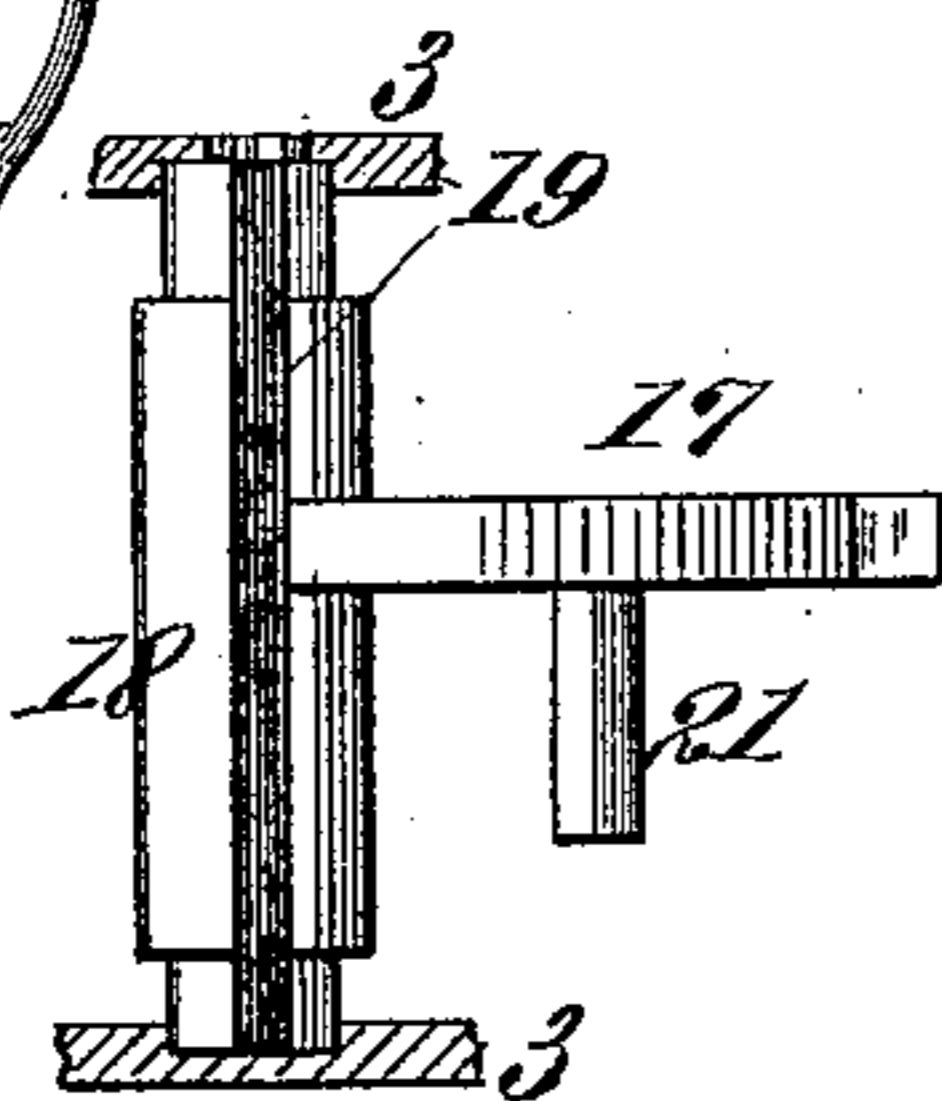


*Fig. 4.*

*Fig. 5.*



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**No. 615,659.**

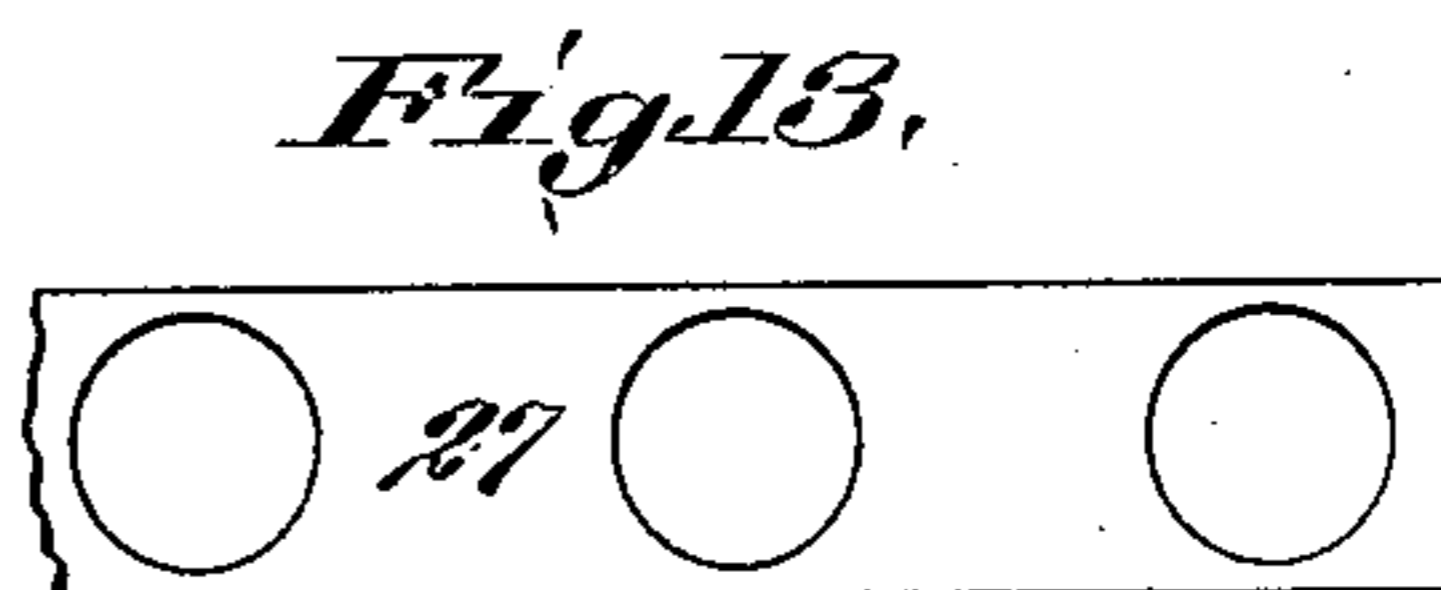
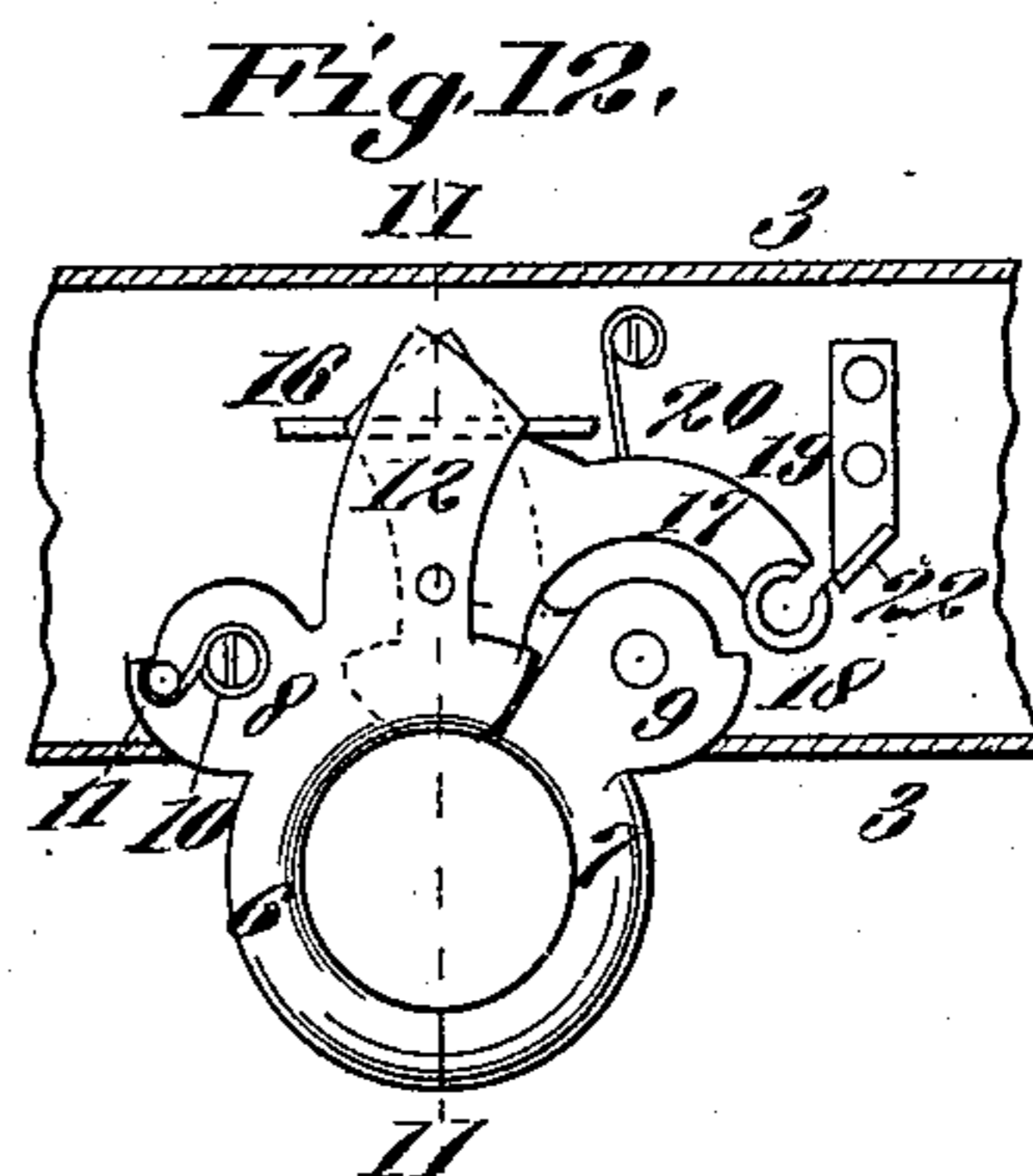
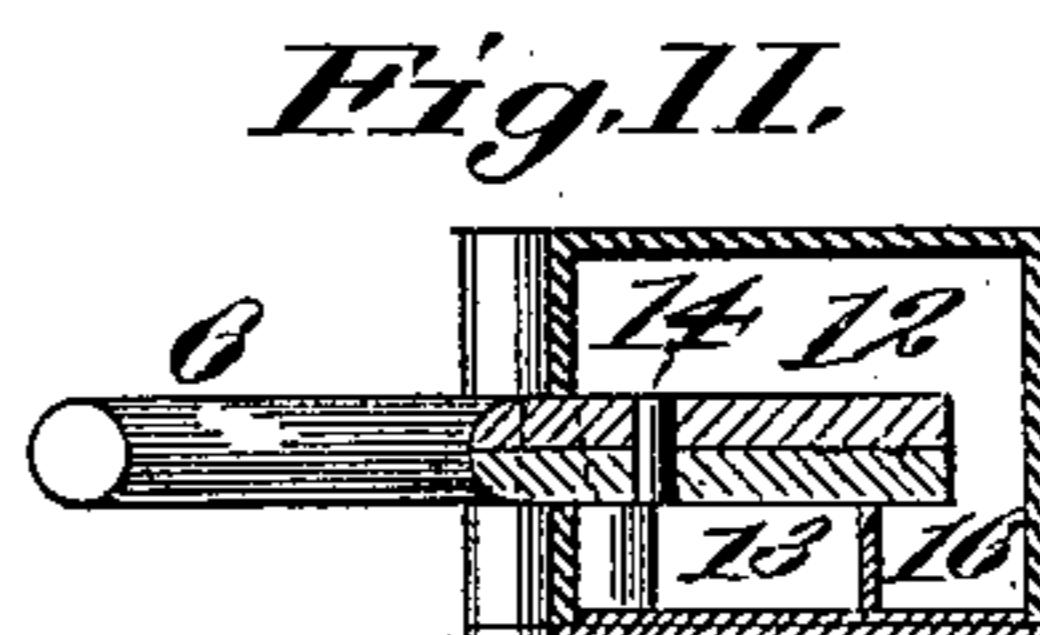
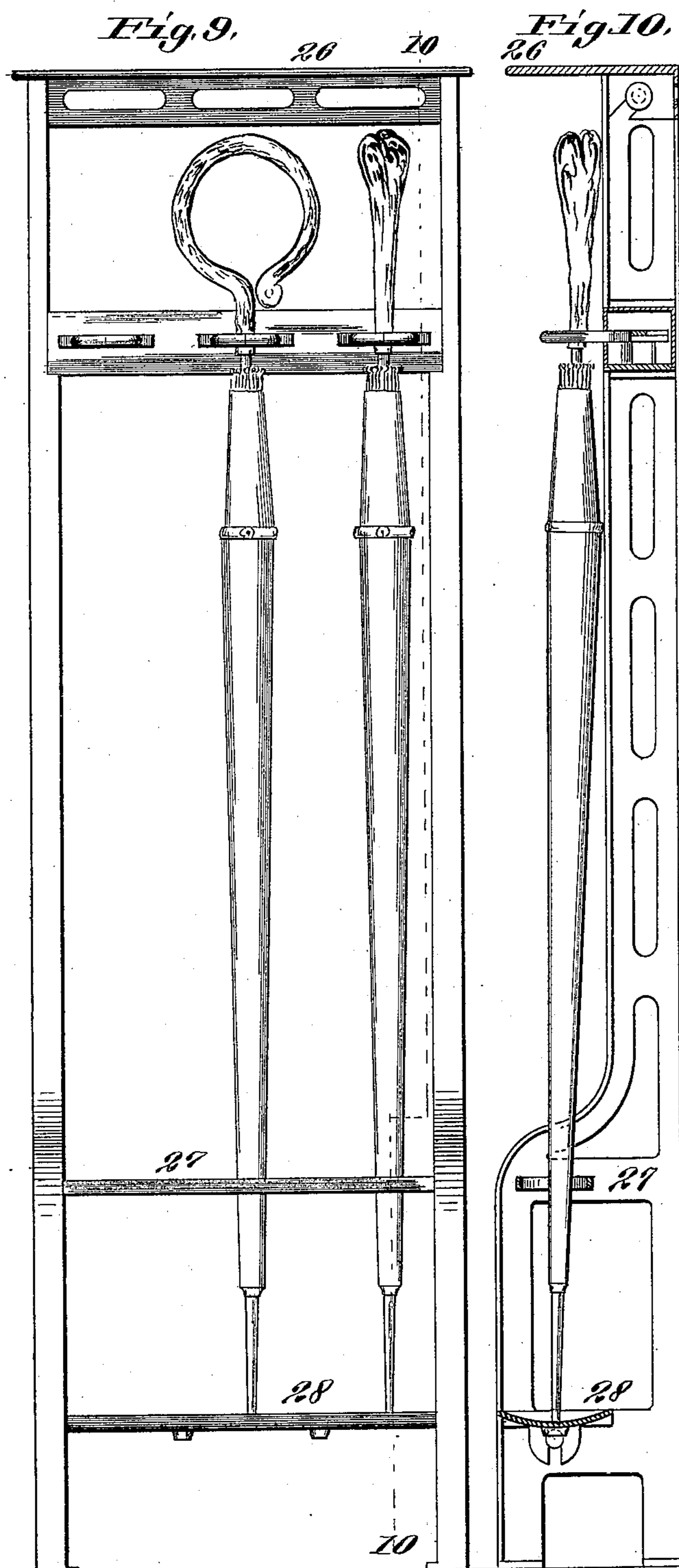
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**2 Sheets—Sheet 2.**



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# UNITED STATES PATENT OFFICE.

WILLIAM BLYER, OF ST. LOUIS, MISSOURI.

## BICYCLE-LOCK.

SPECIFICATION forming part of Letters Patent No. 615,659, dated December 6, 1898.

Application filed November 26, 1897. Serial No. 659,931. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BLYER, of the city of St. Louis, State of Missouri, have made a new and useful Improvement in Bicycle and Umbrella Locks, of which the following is a specification.

This invention relates to that class of locks which have embracing-arms for clasp-  
ing the tire of a bicycle or a handle of an umbrella and closing around them, which action permits a key to be withdrawn from the lock. So long as the key is detached from the lock the embracing-arms cannot be separated; but on inserting the key in the lock and turning the same the embracing-arms automatically spring open, permitting the bicycle-wheel or umbrella to be removed; and it consists in features of novelty, which will clearly be set forth in the annexed drawings, which are made  
a part of this specification, and in which—

Figure 1 is a side view of the bicycle stand and lock. Fig. 2 is a front view of Fig. 1. Fig. 3 is a top view of Fig. 1. Fig. 4 is a horizontal section of the locking mechanism on line 4 5 of Fig. 2, showing the arms closed. Fig. 5 is a similar section to Fig. 4, but with the arms open. Fig. 6 is a detailed view of the key-barrel and locking-tumbler. Fig. 7 is a view of the key-rack on line 7 7, Fig. 5, looking in the direction of the small arrow. Fig. 8 is a section of the key-barrel with key in place on line 8 8 of Fig. 4. Fig. 9 is a front view of the umbrella-stand provided with the lock. Fig. 10 is a vertical section on line 10 10 of Fig. 9. Fig. 11 is a vertical section through the center of the lock, taken on line 11 11 of Fig. 12. Fig. 12 is a section similar to section shown in Fig. 4. Fig. 13 is a top view of the perforated bar 27 shown in Figs. 9 and 10.

Referring to the drawings, 1 is the wooden beam to which the bicycle-lock is secured, the said beam 1 being about fifteen inches above the level of the ground. The lock 3 is secured to beam 1 by bolts 2, which pass through hollow ribs 4 on the top and bottom of the lock-case 3. To the front side of the lock-case 3 there is secured the wheel-guard 5, which is in the form of a segment of a U-shaped rim. 6 and 7 are the locking-arms, which project out from the lock-case 3 and through slots 5<sup>A</sup> in the wheel-guard 5. The locking-

arm 6 is pivoted at 8 on a vertical rod, and the locking-arm 7 is pivoted on a vertical rod 9, secured in the case 3. A small spring 10, secured to a pin 11 in the locking-arm 6, tends to force the arm 6 into the position shown in Fig. 5. The arms 6 and 7 are continued back within the case 3 by the lugs 12 and 13, respectively, the lug 12 overlapping lug 13. The lug 13 has a small slot 15 on its inner edge, into which a pin 14 moves. Said pin 14 is secured to the underside of lug 12. By examining Figs. 4 and 5 it will be seen that when one of the arms 6 or 7 is revolved or moved upon its pivot the action of the pin 14 in the slot 15 will cause a corresponding motion in the other arm. The under lug 13 rests and has a bearing upon a vertical bar 16, secured to the bottom of the case 3, as is clearly shown in Fig. 11.

17 is the locking-tumbler, which is secured to the key-barrel 18. The key-barrel 18 has a bearing in the upper and lower sides of the case 3 and is made hollow, with a slot 19 for permitting the projection of the teeth of the key. A spring 20, secured to the case 3, bears upon a small pin 21 on the under side of the tumbler 17 and tends to throw the tumbler into the position shown in Fig. 4.

22 is the key-rack, having notches to correspond with the teeth in the key 24, and in the top of the case 3 is a keyhole 23, through which the key may be inserted or removed. When the lock is unoccupied, the arms 6 and 7 will be in position shown in Fig. 5 and the key 24 will be in the keyhole 23 and turned so that the teeth of the key 24 will not be in line with the slot of the keyhole 23. When a bicycle-wheel is pushed into the wheel-guard 5, it strikes the two projecting points 25 of the arms 6 and 7 and forces them back into the position shown in Fig. 4. This brings the front ends of the arms 6 and 7 together, thereby having the arms 6 and 7 clasp the arm and tire of the wheel. This movement of the arms 6 and 7 brings the lug 12 into the position shown in Fig. 4, and the tumbler 17 then springs into the position shown in Fig. 4, revolving, as it does, with the key-barrel 18. In this position the teeth of the key 24 come in line with the slot of the keyhole 23, and the key may be withdrawn. It is evident that the arms 6 and 7 cannot be separated so

long as the tumbler 17 is in the position shown in Fig. 4. When it is desired to release the wheel, the key 24 is inserted in the lock and turned until the tumbler 17 is in the position 5 shown in Fig. 5, when the wheel may be withdrawn from the wheel-guard 5, and the two arms 6 and 7 will spring open by the action of the spring 10. The key-rack 22 may be of as complicated a design as is desired, thereby 10 increasing the difficulty of opening the lock with any but the proper key. When the arms 6 and 7 are in the position indicated in Fig. 5, the key 24 is securely in the lock and cannot be removed, so that there is little dan- 15 ger of the key becoming lost.

When it is desired to use this lock in connection with an umbrella-rack, the clasp-arms 6 and 7 are made circular in pattern instead of having the somewhat elliptical form 20 shown in Figs. 4 and 5. The rack is made with a projecting top 26 and has a series of locks placed and secured to the back of the frame at about the level of the beginning of the handle. A perforated bar 27 several 25 inches above the drip-pan 28 serves to hold the umbrella at the lower end. The unoccupied position of the lock would find the arms in the position indicated in Fig. 5. The umbrella would first be thrust through one of the 30 holes in the bar 27, the handle being pushed

against the points 25 of the arms 6 and 7, which would then clasp the handle of the umbrella. In disposition the umbrella could not be raised out of the rack on account of the overhanging top 26, and the key 24 would now 35 be removable. To remove the umbrella, it would be necessary to insert and turn the key, when the spring 10 would open the arms 6 and 7 of the lock and permit the umbrella to be drawn forward and raised out from the 40 bar 27.

Having described my invention, I claim the following:

In a bicycle and umbrella stand lock the combination of the inclosing case, clasp- 45 arms mounted upon separate pivots, points 25 that project from the case when the arms are open and which close the arms on being pressed toward the case, lugs extending back from the arms within the case, crossing and 50 overlapping each other, means for connecting the lugs 12 and 13 so that they will move together, and a tumbler for engaging one of said lugs and locking the arms closed, all substantially as described.

WM. BLYER.

Witnesses:

HALCOLM G. ELLIS,  
JOHN P. ELLIS.