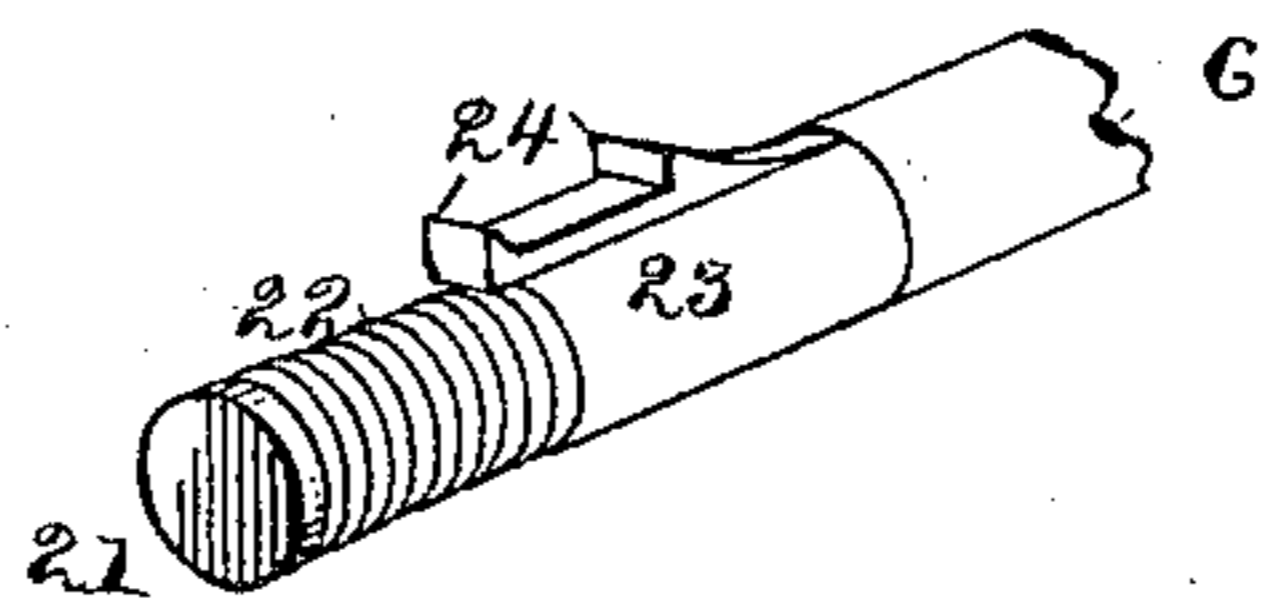
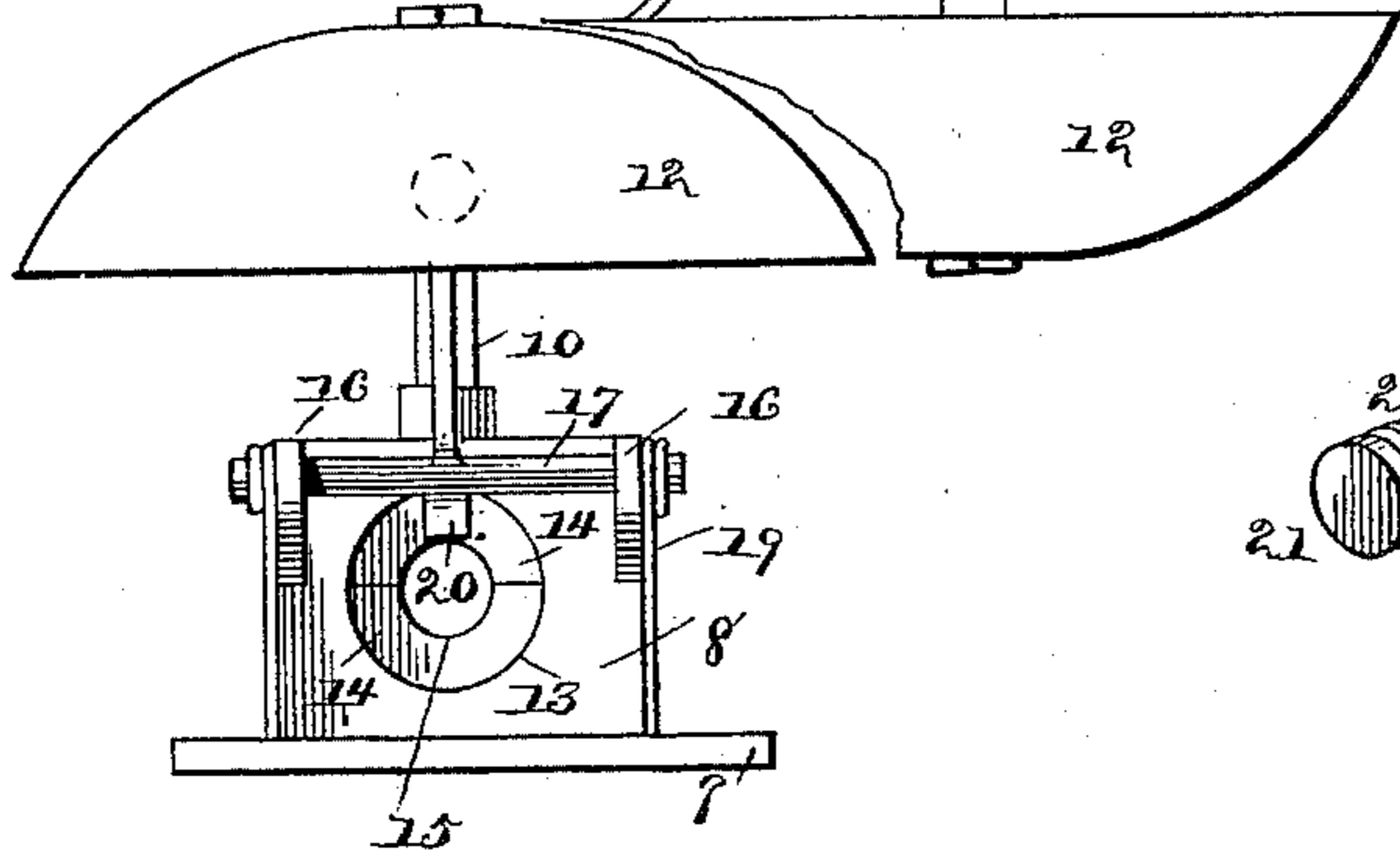
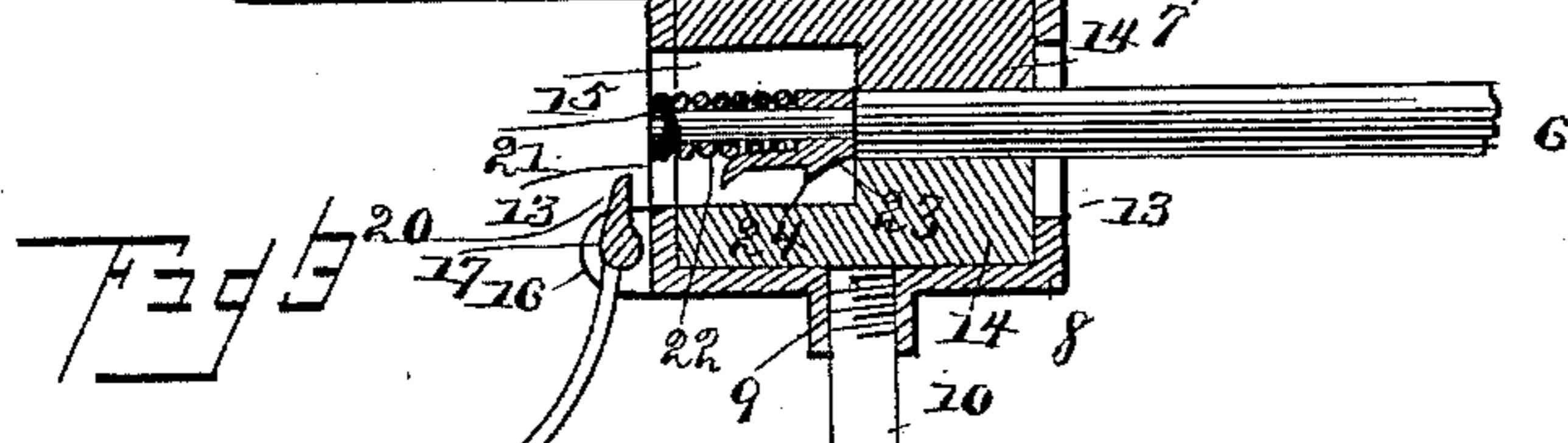
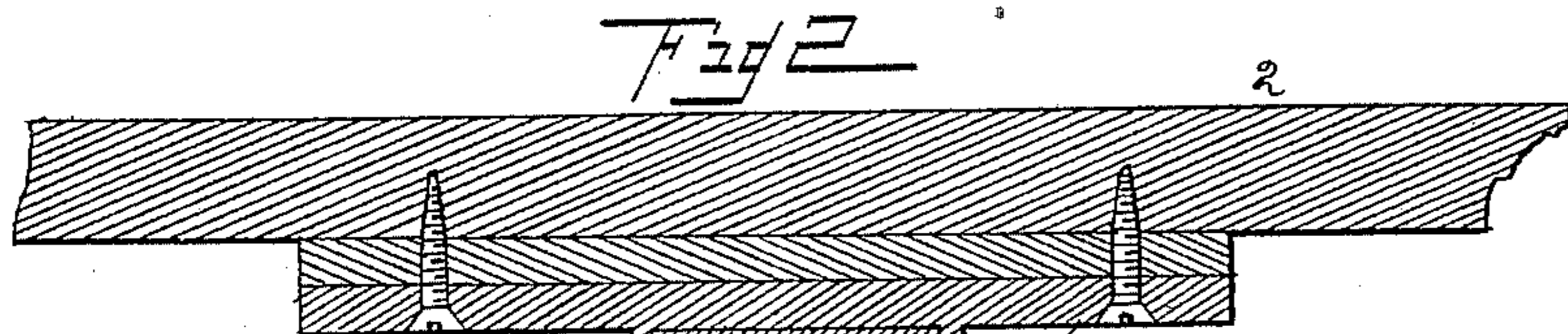
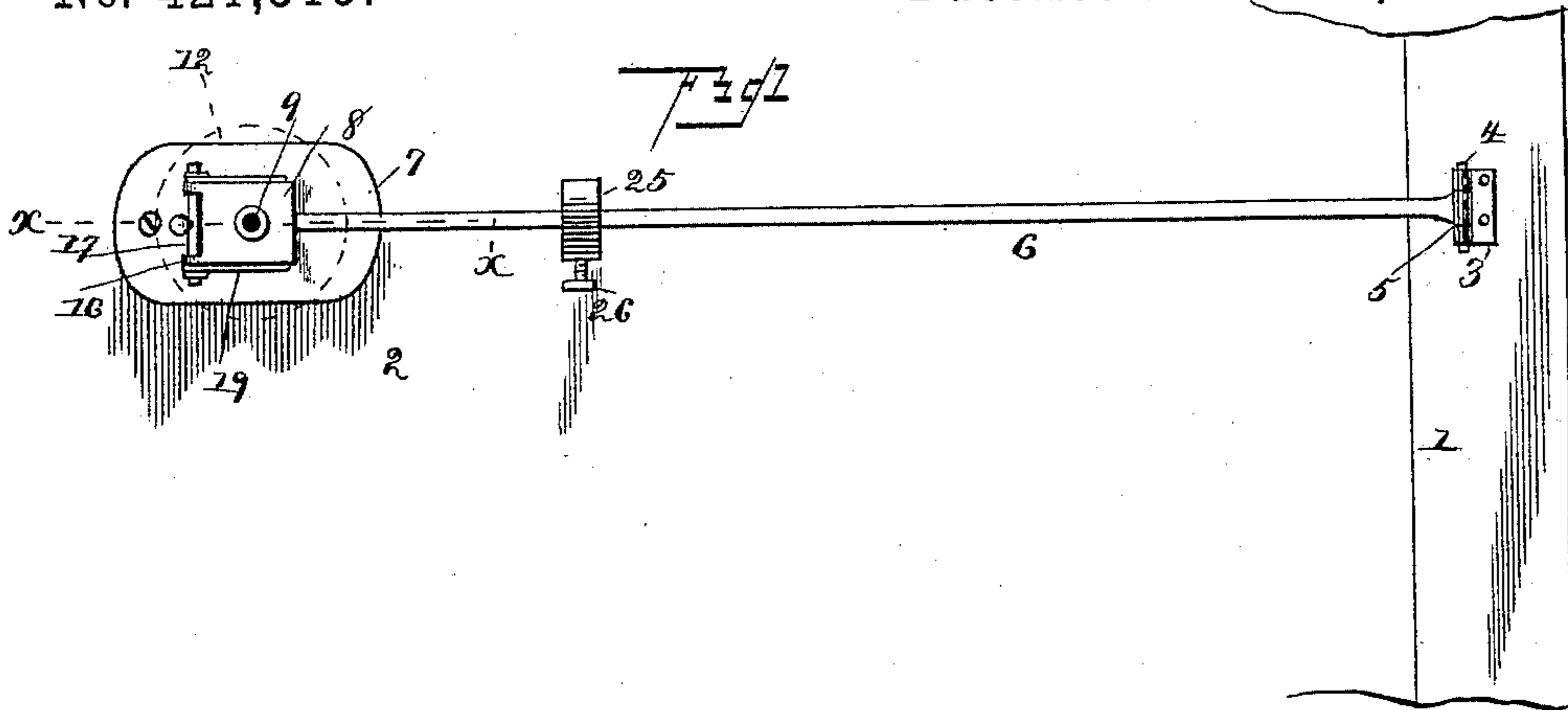


(No Model.)

M. McK. RITCH.
BURGLAR ALARM.

No. 421,315.

Patented Feb. 11, 1890.



Witnesses:

John Imrie
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By his Attorneys,

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UNITED STATES PATENT OFFICE.

MILTON McKEE RITCH, OF LAURINBURG, NORTH CAROLINA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 421,315, dated February 11, 1890.

Application filed June 14, 1889. Serial No. 314,201. (No model.)

To all whom it may concern:

Be it known that I, MILTON McKEE RITCH, a citizen of the United States, residing at Laurinburg, in the county of Richmond and State of North Carolina, have invented a new and useful Burglar-Alarm, of which the following is a specification.

This invention has relation to automatic burglar-alarms, to be used upon doors, blinds, &c., and among the objects in view are to provide a simply-constructed alarm that may be easily set, and which when set and the doors opened will give a series of detonations or alarms, and capable of being so arranged as to render its alarm mechanism inoperative.

With these general objects in view the invention consists in hinging a plunger-rod to a door-casing and passing said rod through a box provided with suitable alarm mechanism, and also with oppositely-located friction-blocks, and also in providing said rod with a revoluble trip having one or a series of dogs adapted to engage with the bell mechanism, and thus cause a series or a single detonation.

Referring to the drawings, Figure 1 is an elevation of a door provided with mechanism constructed in accordance with my invention. Fig. 2 is a transverse section taken on the line *xx* of Fig. 1. Fig. 3 is an end view of the boxing, and Fig. 4 is a detail in perspective of the operative end of the plunger-rod.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 represents a door-casing, or, it may be, a window-casing, and 2 a door or blind. Upon the casing 1, and near its inner edge, is secured one member of a hinge-joint 3, to which is connected by a pintle 4 the opposite member of a hinge-joint 5, the latter being formed upon the rear end of a rod 6, lying transverse the door.

7 represents a metal securing-plate suitably secured to the door and in a transverse line with the hinge formed by the metal rod, and upon said plate there is either secured separately or formed integral a rectangular housing 8, the upper surface of which is provided with a threaded cylindrical recess 9, in which is located a stud 10, carrying an alarm-bell 12. The opposite ends of the housing 8 are provided with openings 13, and through

the same and extending from end to end and projecting at the opposite side is passed the free end of the rod 6. Within the housing and vertically opposite each other are located wooden or, it may be, other friction-blocks 14, each of which is provided with a longitudinal semi-cylindrical recess 15, the one registering with the other and forming a central bore, through which the rod 6 passes and upon which said blocks lightly bind and form an efficient stop for maintaining the door at any desired angle and against accidental closing.

Ears 16 are formed at each side, at the outer end of the housing 8, and journaled in the same is a rock-shaft 17, carrying a bell-hammer designed to strike the bell 12. Opposite springs 19 are coiled around the ends of the shaft 17, which project outside of the ears 16, the terminals of the springs preferably resting against the securing-plate 7, said springs having a tendency to throw the bell-hammer against the bell. From the shaft 17 there depends an arm 20.

The outer or free end of the rod 6 is provided with a head 21, and adjacent thereto with a coiled spring 22, and next the spring with a revoluble sleeve 23, having one or a series of laterally-projecting teeth or dogs 24.

Upon the rod 6, and intermediate its hinge-connections and the housing 8, I mount a loose collar 25, provided with a set-screw 26, designed to act upon the rod and be adjusted thereupon, so as to limit the swinging of the door and thus obviate the use of the usual door-stop, and thereby preventing the knob of the door from injuring the walls, against which it will naturally swing.

In brief, the operation of my invention will be stated as follows: To set the alarm the sleeve 23 is turned, so that the series of dogs will be in line with the trip-arm 20. It is now apparent that in the act of opening the door the arm 6 will be forced through the housing, and each of the dogs 24 brought in succession against the arm 20, and thus operate the rock-shaft 17 and its hammer against the tendency of the springs 19, and in this manner cause as many detonations of the bell as there are dogs in the series. By reason of the tension of the blocks upon the rod the dogs 24 may be arranged in a most compact

series, and yet each stroke of the bell give a clear sound and unaffected by the next succeeding dog. Thus no very violent opening of the door can take place, the function of the blocks upon the rod being sufficient to make the door yield and open gradually. By revolving the sleeve 23 so as to throw the dogs out of line with the trip the door may be opened and closed without sounding the alarm.

During the day the blocks 14 serve as a frictional stop, and bear lightly upon the rod in such a manner as while not affecting to a material degree the easy operation of the door will yet bear sufficiently to prevent any accidental slamming of the same.

Having described my invention, what I claim is—

1. In a device of the class described, a door-casing and a door, in combination with a plunger-rod pivoted to the casing, and an alarm-housing mounted on the door and provided with opposite frictional blocks, between which said plunger-rod passes, whereby the door may be maintained at any angle and against accidental closing, the alarm mechanism carried by the housing, and the actuating-dog for the alarm mechanism mounted on the plunger-rod, substantially as specified.

2. The casing 1, in combination with the door 2, the hinge-rod 6, connected to the casing, and the housing 8, secured to the door and having the openings 13, and inclosing the opposite blocks 14, provided with the registering semi-cylindrical recesses 15, embracing the rod, the alarm mechanism carried by the housing, and the actuating-dog for the alarm mechanism mounted on the plunger-rod, substantially as specified.

3. In a device of the class described, the

combination, with the plunger-rod 6, pivoted to the door-casing, the alarm-housing 8, through which the rod passes, the alarm mechanism carried by the housing, and the spring-actuated revoluble sleeve 23, mounted on the rod 6, and provided with one or more dogs 24, as and for the purpose set forth.

4. The casing 1 and hinge-door 2, in combination with the rod 6, pivoted to the casing and provided at its end with the revoluble sleeve 23, having a dog 24, and the casing 8, having opposite openings to receive the rod and having the lugs 16, carrying the shaft 17, said shaft being provided with the trip 20, and hammer 18, and springs 19, and the alarm 12, substantially as specified.

5. The combination, with the casing 1 and the hinge-door 2, of the hinge member 3, the rod 6, terminating in the hinge member 5, and the pintle 4, connecting the same, said rod being provided with the head 21, spring 22, sleeve 23, and a series of dogs 24, and the casing 8, mounted on the plate 7 and perforated at 13 for the reception of the rod, the opposite friction-blocks 14, recesses 15 and mounted in the casing, the lugs 16 at the end of the casing, the shaft 17, mounted for oscillation in the lugs and provided with the springs 19, the hammer-arm 18, and trip 20, and the stud 10, threaded in a recess 9, formed in the upper end of the casing and carrying the bell 12, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MILTON MCKEE RITCH.

Witnesses:

WALTER H. NEAL,
JOHN H. SIGGERS.