

No. 629,367.

Patented July 25, 1899.

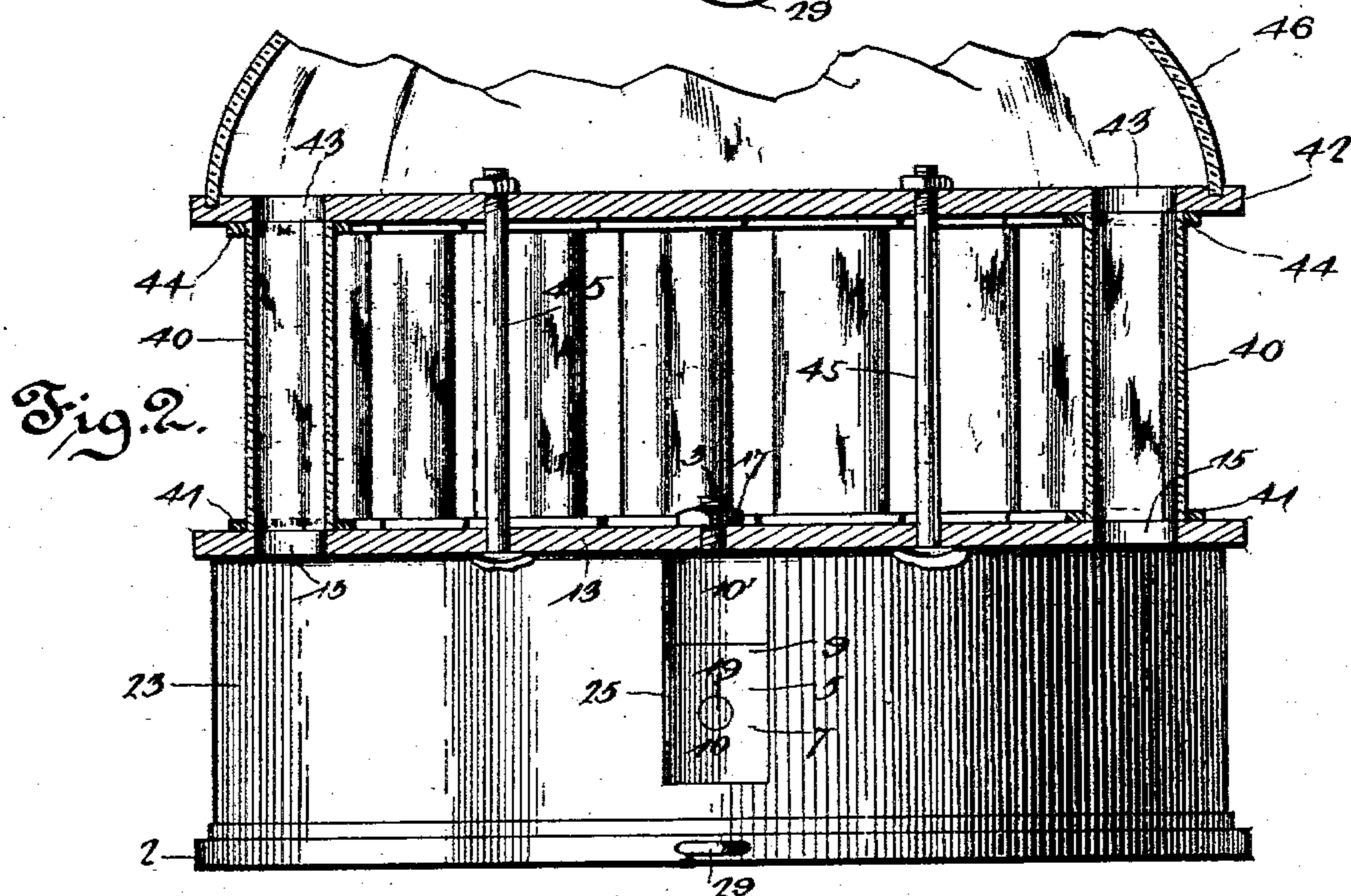
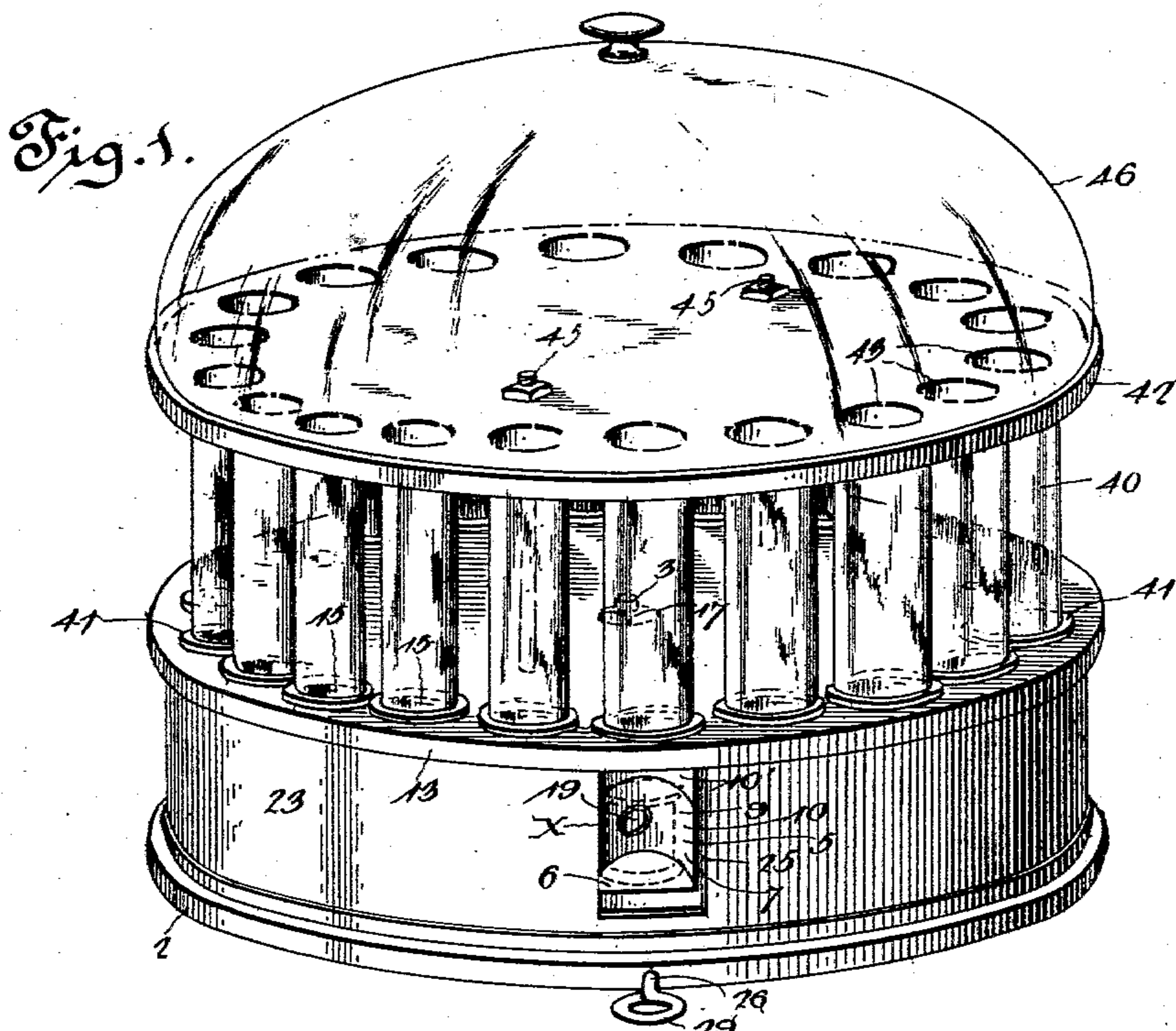
W. H. HUXFORD.

THREAD CASE.

(Application filed Mar. 30, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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2 Sheets—Sheet 2.

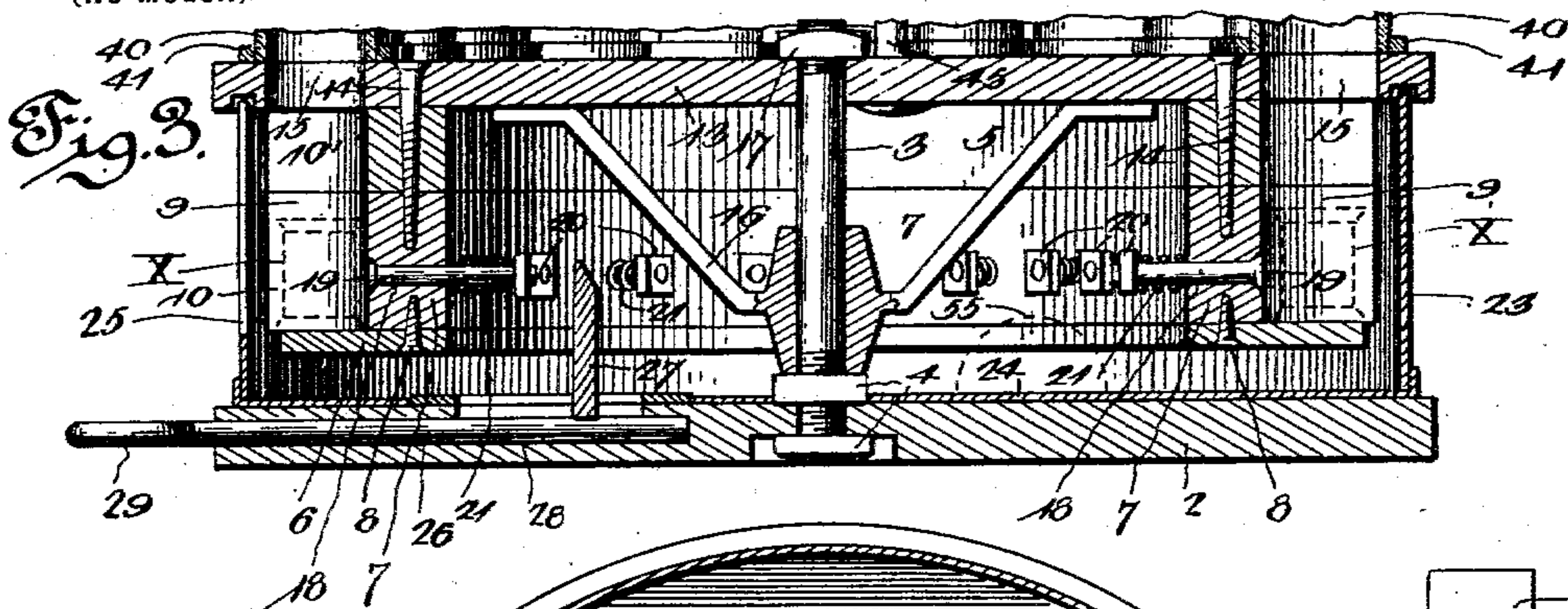


Fig. 4.

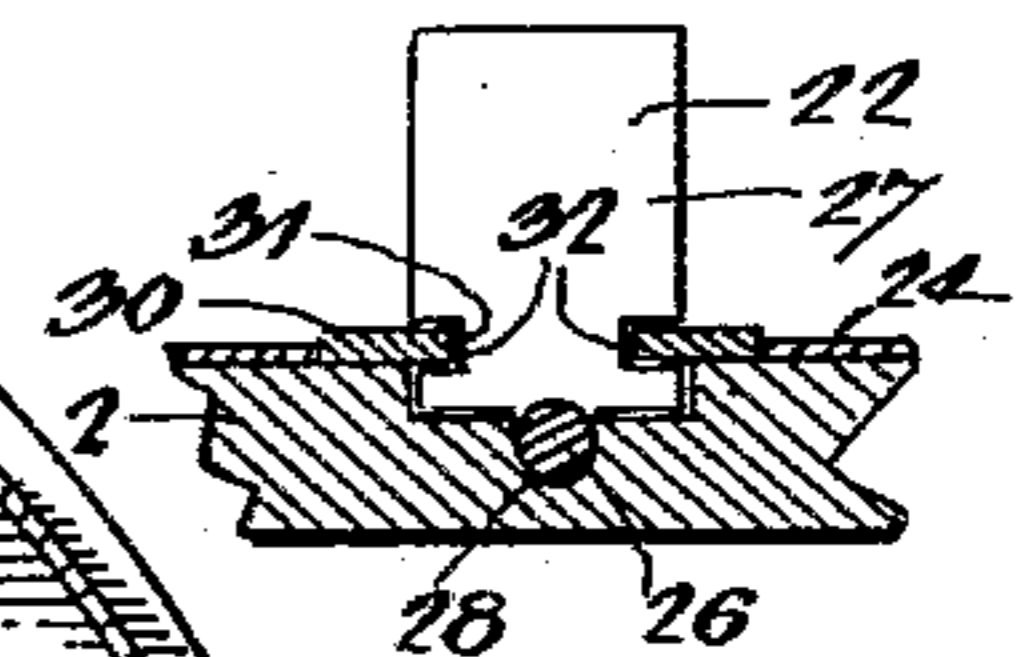
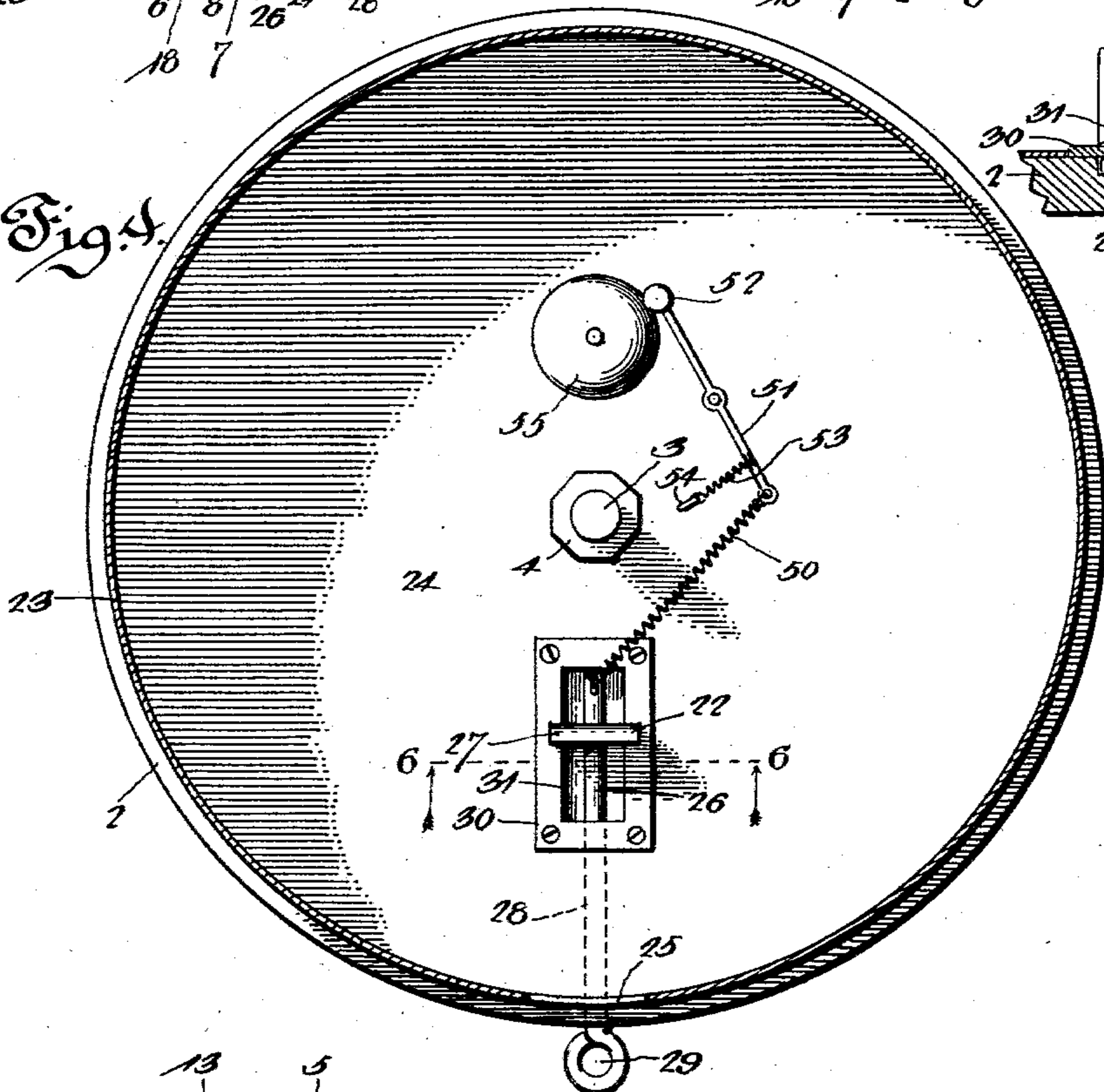
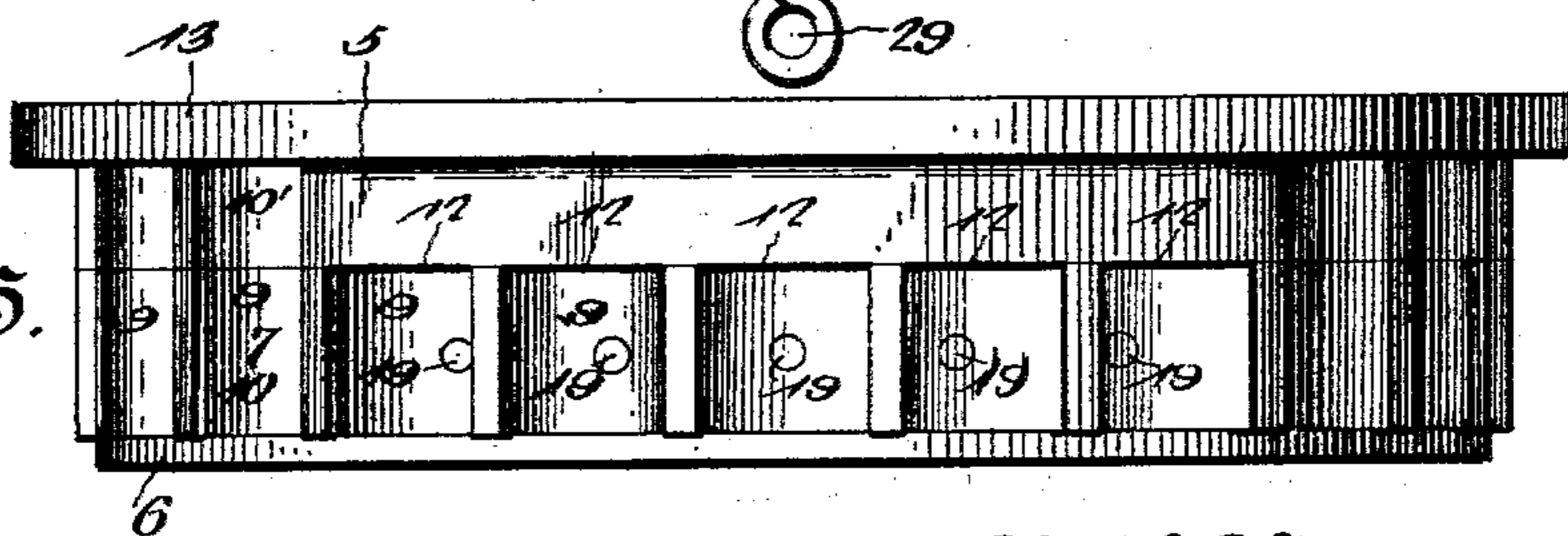


Fig. 6.

Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WALTER H. HUXFORD, OF PEARSON, GEORGIA.

THREAD-CASE.

SPECIFICATION forming part of Letters Patent No. 629,367, dated July 25, 1899.

Application filed March 30, 1899. Serial No. 711,106. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. HUXFORD, a citizen of the United States, residing at Pearson, in the county of Coffee and State of Georgia, have invented a new and useful Thread-Case, of which the following is a specification.

This invention relates to thread-cases; and the object of the invention is to provide a simple and efficient device of this character having a series of compartments or pockets for receiving different-sized spools of thread or silk; and it involves means for quickly removing a spool from any one of the compartments. In the present case the device includes a rotary carrier having a series of peripheral pockets and provided with a corresponding series of spool-ejectors and an actuator supported independently of said carrier and serving to operate each of said ejectors at a common point, thereby to effect the removal of the spools. The ejectors are preferably spring-controlled, the springs serving to maintain the same in their normal or ineffectual positions, so that when the carrier is turned the spools can be successively brought to the common ejecting-point for the purpose of removing the same or for exhibiting them to a prospective purchaser.

With these ends in view the invention consists in the novel combination of elements and in the construction and arrangement of parts which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a thread-case constructed in accordance with my invention. Fig. 2 is a sectional front elevation of the same. Fig. 3 is a diametrical section of the lower portion of the device. Fig. 4 is a plan view with the spool-carrier removed. Fig. 5 is a face view of said spool-carrier. Fig. 6 is a transverse section taken in the line 6-6, Fig. 4, and looking in the direction of the arrow.

Like characters denote like and correspond-

ing parts in each of the several figures of the drawings.

The device includes in its construction a base-piece 2, which ordinarily consists of a circular plate or disk, through which the vertical pivot or stud 3 centrally passes, said pivot consisting, preferably, of a bolt, which is held in fixed relation by check-nuts, as 4, in threaded engagement therewith and at opposite sides of and fitting against the base 2. The rotary carrier 5 turns upon this central pivot and contains the spools of thread, silk, or other articles to be exhibited and to be removed when a purchase is made. The rotary carrier 5 includes in its construction a ring 6 and a second ring 7, fitting upon the same and secured thereto by a series of fastening devices, as 8, and the ring 7 has a series of peripheral compartments or pockets 9 to receive the spools X, which rest upon the ring or support 6. The compartments 9 are of different sizes for the purpose of receiving large and small spools, respectively, and the ring in which the same are formed consists of two superposed sections 10 and 10', in which the complementary portions of the spool pockets or compartments are formed, and the said pockets upon the under section 10 are all open, while a series of the pockets in the upper section 10' are closed, as at 12, upon their outer edges, by reason of which the corresponding pockets under these closed portions are adapted to receive spools of less height than those pockets which are open entirely from the top to the bottom of the two sections of the ring 7.

To the upper side of the ring 7 the circular plate 13 is secured by fastening devices, as 14, which also extend through the two sections of the ring 7 for the purpose of holding said parts in fixed relation, and this circular plate has near its outer edge a multiplicity of openings 15, alining or registering with the peripheral compartments in the ring 7, and through these openings the spools of thread or silk can be inserted for the purpose of introducing the same into the compartments intended for them. The circular plate has upon its under side the bracket or bearing 16, having near its center a journal-opening to

receive the pivot-bolt 3, said bolt-hole extending through an opening in the center of the circular plate 13 and the upper end thereof being engaged by the nut 17 to hold the rotary carrier 5 in place.

In connection with the series of peripheral spool-receiving compartments 9 I provide a corresponding series of ejectors 18, consisting, preferably, of longitudinal bolts projectable through the walls of the compartments and adapted to push the spools out of said compartments when a common point is reached, an actuator, hereinafter described, being employed in connection with the ejectors. These ejectors extend through the lower section 10 of the ring 7 and are headed, as at 19, at their outer ends, and each of them is provided upon the inner end with a nut, as 20. The ejectors are preferably maintained in their normal or ineffective positions by coiled springs, as 21, surrounding the same and fitting against the inner surface of the rotary spool-carrier and against the nuts 20. By turning the nuts the tension of the springs can be easily adjusted.

In connection with the bolts I provide a single actuator, as 22, hereinafter more particularly described and which is adapted when properly operated to engage each ejector when the latter reaches a point of discharge, so that the ejector thus acted upon can be forced outward or advanced to push a spool out of a compartment. When the ejector is operated, the spring is compressed, so that when it relaxes it can return the ejector to its primary or ineffective position.

The series of compartments 9 is surrounded by the annular wall 23, which serves as a guard to prevent persons from removing the spools from the compartments except at the discharge-point, and this wall is secured to the plate 24, which is fastened to the upper surface of the base 2. Said wall has at a point in line with the ejector-actuator 22 an aperture or slot 25, through which a spool can be ejected.

The actuator 22 includes in its construction a reciprocatory bar 26, having near one end the transverse extension 27, adapted to engage the respective ejectors 18 as the successive spool-compartments are brought opposite the discharge aperture or slot 25. The bar is supported for sliding movement in the transverse bore or channel 28, formed in the base 2 below the discharge-aperture and extending diametrically of said base. Said bar has upon its outer end the eye or finger-piece 29, by which it may be moved back and forth. Over an opening formed in the base-piece for the reception of the transverse extension 27 is secured the slotted guide-plate 30, the inner walls 31 overlapping the opening and extending into notches 32 of the transverse extension, which passes through the slot of the guide-plate, as shown in Fig. 6. The transverse extension 27 is flat and is adapted to

engage the ejectors 18 when any one of the latter is brought to a point in front of said extension and in line with the discharge-opening 25.

When it is desired to remove a spool, the rotary carrier will be turned to bring the compartment containing the desired spool opposite the discharge opening or slot 25, at which time the ejector will be also in line with said slot and with the transverse extension 27 of the ejector-actuator 22. By passing the finger through the eye 29 the actuator, and consequently the transverse extension thereon, can be advanced for the purpose of forcing the ejector forward. As the ejector thus moves it serves to push the desired spool from place and through the discharge-aperture 25. When the actuator 22 is released by the finger, the spring 21 will return the ejector 18 to its normal position and will also serve to move the actuator 22 rearward for the purpose of repeating the operation at a succeeding point.

In connection with the spool-carrier 5 I provide means for containing a large quantity of spools, and such means consists in the present case of a series of tubes 40, located over the respective spool pockets or compartments 9, and consequently registering with the holes or openings 15 in the upper circular plate 13. These spool containers or tubes 40 are vertically disposed and are adapted to contain different numbers of spools, the quantities being governed by the height of the latter, and the spools gravitate from the tubes through the openings into the pockets, to be ejected from the latter as occasion demands in the manner hereinbefore set forth. The spool containers or tubes 40 are preferably transparent, so that the spools can be thereby exhibited, and they fit against the plate 13 and are held in place by rings, as 41, surrounding the lower ends of said tubes and secured to the said plate, and the upper ends of the tubes fit against the top plate 42 and register with the openings 43 in said top plate, and the upper ends of the tubes are surrounded by rings 44, secured to said top plate. The plates are connected together by means of the vertical tie-bolts 45, extending through the same and headed at one end and provided with the usual nuts at the other end.

The device will be surmounted by the top or cap 46 to exclude dust from the interior thereof.

In connection with the ejector-actuator I provide an alarm which is sounded each time the said actuator is manipulated, thereby indicating the removal of a spool. The actuator 22 is connected by means of the coiled spring 50 with the end of the crank striking-lever 51, which is fulcrumed between its ends to the bottom plate 24 and is provided at its opposite end with the striker or hammer 52, and said lever is connected between its fulcrum and the end to which the coiled spring

50 is attached with the short coiled spring 53, the opposite end of which is joined to the eye 54, secured to the plate 24, all as clearly shown in Fig. 4. When the ejector 22 is moved forward in the manner hereinbefore described, the hammer 52 will be swung away from the bell 55, thereby contracting the spring 53, so that when the ejector is released the spring 53 by relaxing will serve to throw the hammer 52 against the bell 55 for the purpose of sounding the latter.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. A device of the class described, consisting of a rotary carrier having a series of pockets, and provided with a corresponding series of spool-ejectors, and an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, substantially as described.

2. A device of the class specified, consisting of a rotary carrier having a series of peripheral pockets and provided with a corresponding series of spool-ejectors; and an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, substantially as described.

3. A device of the class described, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spring-controlled spool-ejectors; and an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, substantially as described.

4. A device of the class described, consisting of a rotary carrier having a series of different-sized pockets and provided with a corresponding series of spool-ejectors and an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, substantially as described.

5. A device of the class described, consisting of a rotary carrier having a series of pockets, a guide-wall surrounding said pockets and having a discharge-aperture, a series of ejectors adapted to push the spools from said pockets, and an actuator supported independently of said carrier and adjacent to said discharge-aperture and serving to operate each ejector when the spool controlled thereby is opposite said discharge-aperture, substantially as described.

6. A device of the class described, consisting of a rotary carrier having a series of pockets, a series of bolts projectable through the carrier and constituting spool-ejectors, nuts on said bolts, springs bearing against the carrier and the bolts for holding the latter in their ineffective positions, and an actuator

supported independently of the carrier and adapted to operate each bolt, substantially as described.

7. A device of the class described, consisting of a rotary carrier including a ring having a series of peripheral spool-receiving compartments and a plate secured to the same and having a corresponding series of openings in alinement with the respective compartments, a corresponding series of spool-ejectors, and a single actuator adapted to operate each of the ejectors and supported independently of said carrier, substantially as described.

8. In a device of the class described, the combination with a rotary device having a series of peripheral spool-receiving compartments, a ring upon which the spools rest, a circular plate secured to the upper side of said device and having a series of openings in alinement with the respective compartments, a series of bolts adapted to engage the spools for forcing the same from the compartments and each bolt being headed at one end and having a nut at the other end, coiled springs surrounding the bolts and fitting against the heads thereof, and a single actuator for engaging the bolts and supported independently of said rotary device, substantially as described.

9. A device of the class specified consisting of a rotary member having a series of peripheral pockets, a ring secured to the under side of said rotary member, a plate secured to the upper side of said rotary member and having a series of openings in alinement with said pockets, a vertical pivot-bolt provided with a nut on its upper end, a base-piece to which the bolt is secured, a series of spring-actuated bolts constituting spool-ejectors and projectable through said rotary member and across the spool-pockets, an annular wall surrounding said spool-pockets and having a discharge-opening, and an actuator supported in alinement with said discharge-opening and having a transverse extension adapted to engage each ejector-bolt, and provided with a finger-piece, said bolt being supported independently of the base-piece, substantially as described.

10. A device of the class specified, consisting of a rotary member having a series of peripheral pockets, a ring secured to the under side of said rotary member, a plate secured to the upper side of said rotary member and having a series of openings in alinement with said pockets, a vertical pivot-bolt provided with a nut on its upper end, a base-piece to which the bolt is secured, a series of spring-actuated bolts constituting spool-ejectors and projectable through said rotary member and across the spool-pockets, an annular wall surrounding said spool-pockets and having a discharge-opening, an actuator supported in alinement with said discharge-opening and having a transverse extension adapted to engage each ejector-bolt, and provided with a finger-piece, said bolt being supported independently of

the base-piece, and a slotted guide-plate secured to the base-piece, and the walls of the slot extending into notches formed in the opposite edges of said transverse extension, substantially as described.

11. A device of the class specified, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, an alarm, and means for operating the alarm, controlled by said ejector, substantially as described.

12. A device of the class described, consisting of a rotary carrier having a series of pockets, and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to operate each of said ejectors, an alarm, an alarm-actuating lever connected with the ejector, and a spring also connected with said alarm-actuating lever, substantially as described.

13. A device of the class specified, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, and a series of spool-containers mounted upon the rotary carrier and communicating with said pockets, substantially as described.

14. A device of the class described, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to op-

erate each of said ejectors at a common point, and a series of transparent spool-containers communicating respectively with said pockets, substantially as described.

15. A device of the class described, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, a plate located above said carrier, bolts connecting the plate and carrier, and a series of tubes located between and registering with openings in said two last-mentioned parts and also communicating with the respective compartments, substantially as described.

16. A device of the class described, consisting of a rotary carrier having a series of pockets and provided with a corresponding series of spool-ejectors, an actuator supported independently of said carrier and located to operate each of said ejectors at a common point, a plate located above said carrier, bolts connecting the plate and carrier, a series of tubes located between and registering with openings in said two last-mentioned parts and also communicating with the respective compartments, and a cap mounted upon said plate, substantially as described.

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

WALTER H. HUXFORD.

Witnesses:

W. L. DU VALL,
THOS. GRIFFIN.