E. V. LAWRENCE.

REEL.

APPLICATION FILED JUNE 29, 1915. RENEWED APR. 9, 1917.

1,225,658. Patented May 8, 1917.

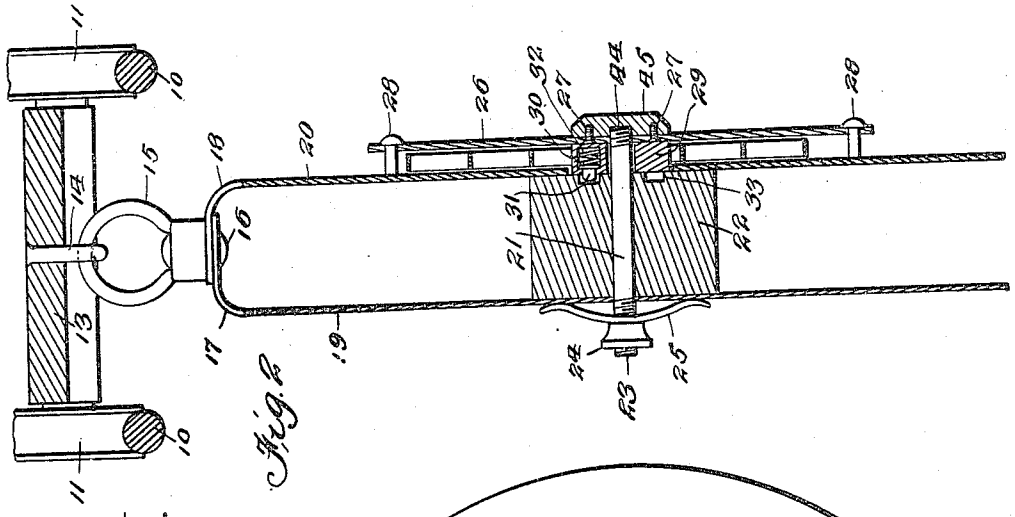


Fig. 2.

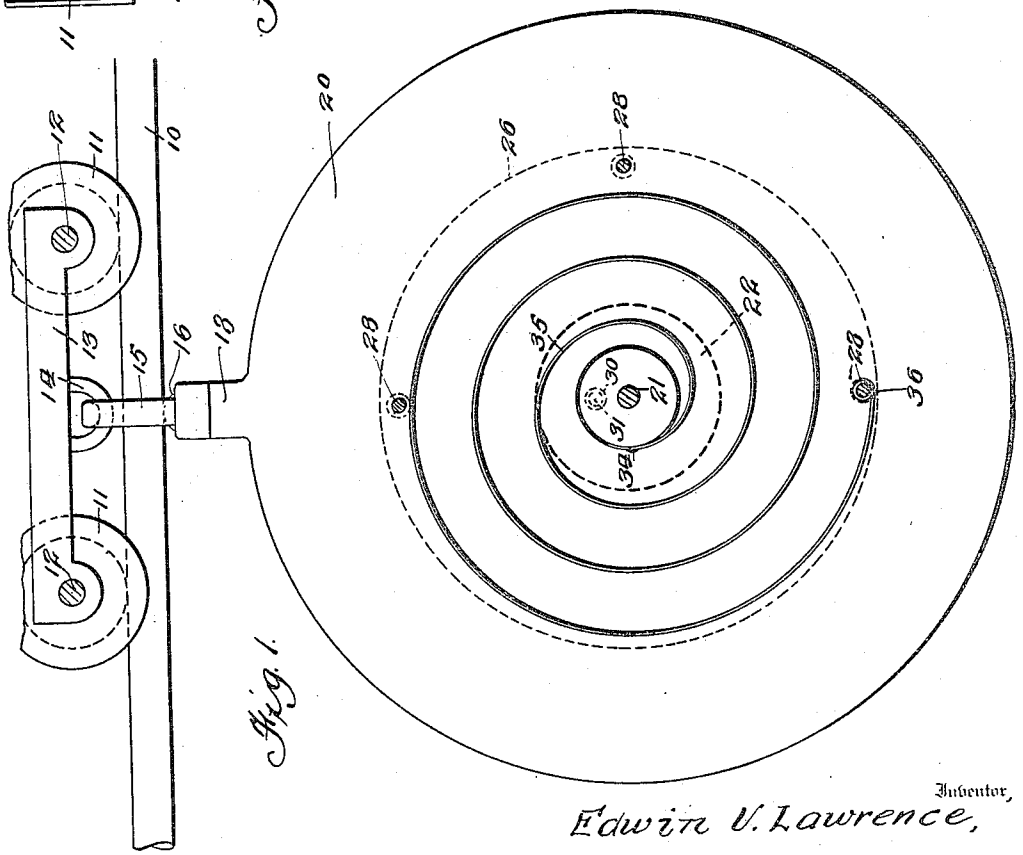


Fig. 1.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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REEL.

1,225,658. Specification of Letters Patent. Patented May 8, 1917.

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To all whom it may concern:

Be it known that I, EDWIN V. LAWRENCE, a citizen of the United States, residing at Brookfield, in the county of Worcester and State of Massachusetts have invented certain new and useful Improvements in Reels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to reels and more particularly to that type used for supporting a roll of sealing tape from which lengths of sealing tape may be drawn for sealing packages or the like.

It has for an object to provide an improved form for mounting a reel and a tension controlling device for retarding the withdrawal of the tape from the reel.

A further object of this invention is a provision of a return mechanism for rewinding the end of the tape when the end of said tape is released after having been drawn from the reel.

A further object of this invention is a provision of a ratchet mechanism for releasing the action of the roll of tape and this ratchet mechanism being of such design as to have one portion thereof sufficiently damaged when the roll of tape supported thereby is consumed to prevent rewinding of another grade of tape upon that portion thereof, which serves as one of the members of the ratchet mechanism.

Further objects will be apparent from the following specification, appended claims and drawings thereof, in which—

Figure 1 is a side elevation of the reel showing a cover member removed, and

Fig. 2 is a vertical sectional view through the machine at right angles to the plane shown in Fig. 1.

This reel will be used in conjunction with a hand sealing machine on which the roll of sealing tape is to be supported by the mechanism comprising this reel. As the sealing machine will be used upon store counters and the like and in view thereof, the use of the machine will cover large areas of the counter so to accommodate the range the reel may be supported by a trolley which has movement in directions most convenient for the use of the sealing machine.

Referring to the drawings, 10 indicates rods which form a track upon which the wheels 11 rotate and these wheels are supported by the axles 12 of a carriage 13 from which an eye 14 depends to receive an eye 15 to which the reel is swiveled. The pin 16 which passes through the enlarged part of the eye 15 supports the tongues 17 and 18 which are formed on the sides 19 and 20. A spindle 21 passes through these sides and supports a hub 22 of relatively large proportions so as to render the same impractical for grades of sealing tape other than those for which the hub is intended. The spindle 21 is threaded as at 23 to receive the adjusting nut 24 to facilitate in adjusting the tension upon the hub or spool 22 as by the spring 25 and the opposite end of this spindle is threaded as at 44 for engagement in the block 45 supported by the cover 26 as by the screws 27. The cover 26 is attached to the side 20 as by the screws or other fastening means 28 and as will be seen, the cover 26 indirectly supports the end of the spindle 21 to permit the desired compression being established between the sides 19 and 20 on the spool 22.

A head 29 is rotatably mounted upon the spindle 21 and this head is recessed as at 30 to receive the pawl 31 which is normally held in extended position as by the spring 32. The pawl 31 is adapted to engage one or another of a series of notches 33 formed in one of the ends of the spool 22 which are preferably made of wood. The head 29 is connected as at 34 to one end of the spiral spring 35 which is wound about said head and has its other ends supported as at 36 by one of the screws 28.

When a roll of sealing tape is placed in the machine having the spool 22 supported between the sides 19 and 20 upon the spindle 21, the end of the tape may be withdrawn from the reel at which time, through the notches 33 and pawl 31 the head 29 is rotated to exert a tension on the spring 35. When this tension reaches a maximum, the pawl 31 yields and allows the spool 32 to rotate without imparting any movement to the head 29. As soon as the end of the tape has been released, the spring 35 in its energized state imparts reverse motion to the head 29 which through its connection with the spool 22 serves to rewind the tape. The spool 22 will preferably be made of wood and the fibers thereof will sustain the action of the pawl 31 until the paper has been con-

sumed from the spool, but by the time the first reel of paper is consumed the spool is so damaged by the pawl 31 that it cannot be used for the second roll of tape. Also, the spool 22 will preferably be made any odd size so that it cannot be inserted in any standard roll of tape to permit the substitution of an inferior grade.

It is thought that the operation of this device is understood in view of the foregoing and that the benefits to be derived from its movable suspension will be appreciated. Also it is apparent that various modifications may be made within the scope of this invention without departing from the spirit thereof, as the drawings submitted are for illustrative purposes only.

Having thus described my invention, I claim:—

1. A reel of the class described comprising side plates, a spindle carried by said side plates, a spool frictionally held between said side plates, a head rotatably carried by said spindle, a pawl yieldably carried by said head engaging said spool, a spring connecting said head and one side member, and means for regulating the frictional contact of said side plates, spool and head.

2. A reel of the class described comprising side plates, a spindle supported by said side plates, a removable cover member supported by one of said side plates, one end of said spindle being supported by said cover, an adjusting nut and spring supported by the opposite end of said spindle, a spool frictionally held between said side plates about said spindle, a ratchet face formed in said spool, a head rotatable on said spindle, a pawl yieldably supported by said head adapted to coöperate with said ratchet face and a spring connecting said rotatable head and said frame.

3. A reel of the class described comprising side plates, a spindle carried by said side plates, a spool rotatable on said spindle, a head rotatable on said spindle, a pawl yieldably carried by said head contacting with said spool, said spool and head being relatively movable with each other, a spring connecting said head and one of said side plates, said spool having a series of notches formed therein concentric with the line formed by said pawl in its rotation, and said pawl having a damaging effect on the recess formed in said spool with which it engages when said spool is rotated independently of said head to limit the life of usage of said spool.

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

EDWIN V. LAWRENCE.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."