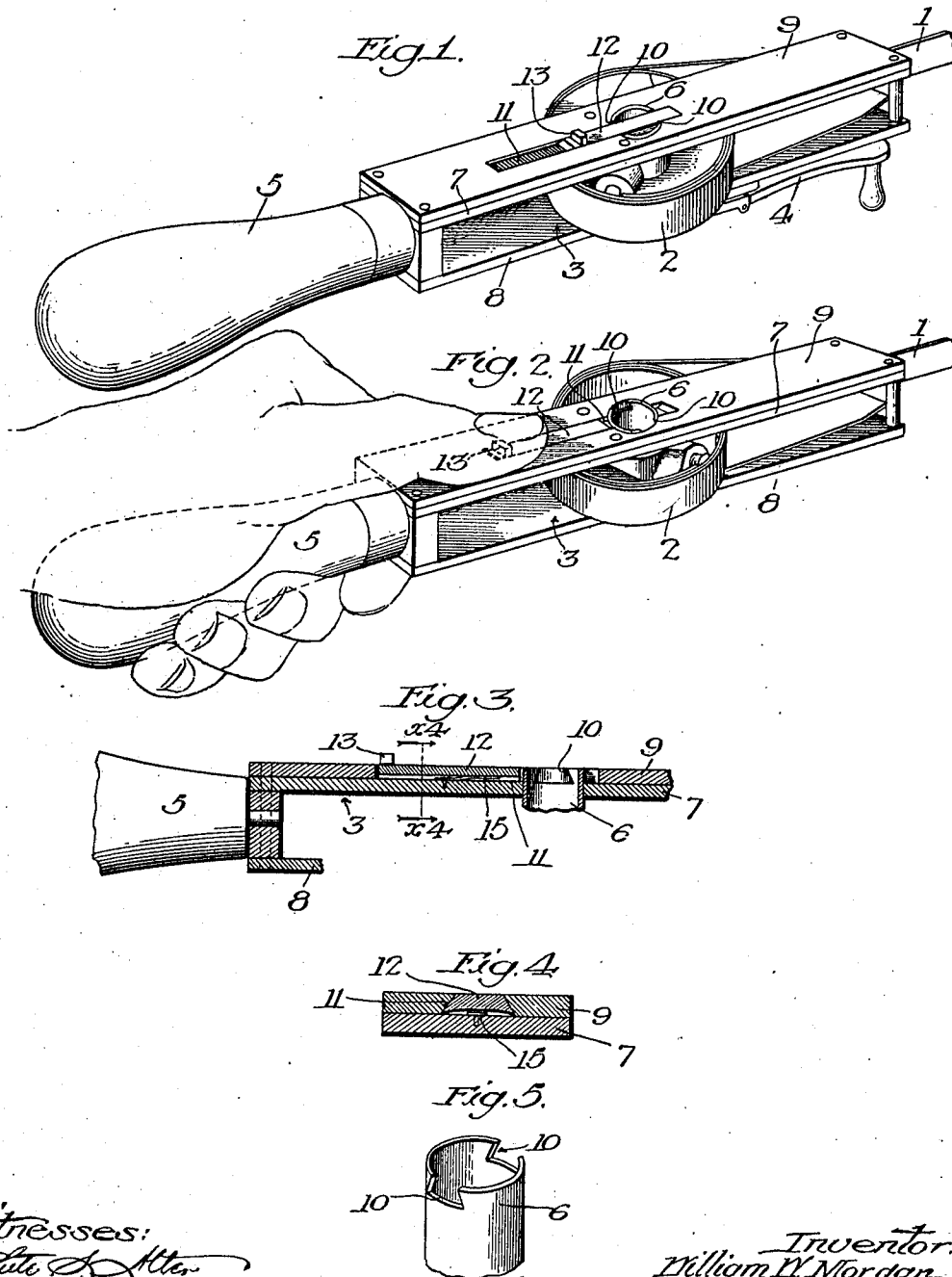


W. W. MORGAN.
SURVEYOR'S REEL.
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974,417.

Patented Nov. 1, 1910.



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UNITED STATES PATENT OFFICE.

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SURVEYOR'S REEL.

974,417.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM W. MORGAN, a citizen of the United States, residing at Hollywood, in the county of Los Angeles and State of California, have invented a new and useful Surveyor's Reel, of which the following is a specification.

This invention relates to improved measuring tape for use by surveyors and the main object of the invention is to provide means whereby the tape may be held or locked in definite position after it has been run out to measure a definite length.

It is often necessary or desirable in surveying to use the same length of tape repeatedly, the tape being used in the manner of a chain, and it is also desirable after the tape has been run out for measurement to retain the measurement until an opportunity is afforded for record thereof. The present invention provides means whereby such retention of the tape can be quickly and readily effected.

The accompanying drawings illustrate the invention and referring thereto: Figure 1 is a perspective of the tape measure in locked position. Fig. 2 is a similar view showing the device in unlocked position. Fig. 3 is a fragmentary sectional view of the device taken longitudinally of the tape support. Fig. 4 is a transverse section on the line x^4-x^4 in Fig. 3. Fig. 5 is a perspective of the tubular arbor for the tape reel.

The invention is illustrated as applied in connection with the usual form of surveyors' tape, the tape indicated at 1, carried by a reel 2 journaled in a frame 3, said reel 2 being provided with a handle 4 for winding the reel and the carrier frame 3 being provided with a handle 5 in the usual manner.

The reel 2 is mounted on the frame 3 by means of a tubular arbor 6 journaled in top and bottom plates 7, 8 of the frame 3. The top plate 7 is preferably reinforced by an additional plate 9 serving as a guide plate for the locking means hereinafter described and the tubular arbor 6 extends upwardly through this top plate 9 and is provided with two diametrically opposite notches or slots 10 registering with a longitudinal slot or way 11 carried in the top plate 9. The

slots 10 and 11 are preferably undercut or dovetailed as shown. A sliding bolt or locking member 12 is mounted in the slot or way 11 to slide longitudinally therein, the edges of said bolt 12 being flared downwardly to fit the undercut slots 10 and 11, thereby retaining the said bolt in place. The top plate 9 is secured in place on the plate 7 after the bolt 12 is put in place and said top plate 9 serves to hold the bolt in position. Bolt 12 is further provided with an upwardly extending lug or projection 13, whereby the bolt may be manually operated to move it into or out of locking position. A spring indicated at 15 is preferably provided at the bottom of the way 11 beneath the sliding bolt 12 and engaging the bottom of said sliding bolt to hold the same frictionally in position.

When a measurement is being made or the tape is being run out, the bolt 12 will be withdrawn to position shown in Fig. 2, leaving the reel free to turn. When the tape has been unwound to the required extent it is desired to retain or set it at that length, the bolt is shoved forwardly to position shown in Fig. 1, causing the bolt 12 to engage in the notches 10 in the arbor of the reel. It will be understood that in order to effect such locking of the reel, the reel must be turned to position to bring the slots 10 into register with the slot or way 11 and the bolt 12, but as this requires not more than one-half of a revolution of the reel in one or the other direction, it can be readily effected without materially disturbing the reading point on the tape.

What I claim is:—

1. A surveyor's tape comprising a reel provided with a tape and with an arbor, the arbor having an undercut slot extending diametrically across its end, a frame in which said arbor is journaled, and said frame having a way, a bolt slidably mounted in said way and adapted to engage the slotted portion of the arbor, said bolt having a projection serving as a manually operating means.

2. A surveyor's tape comprising a reel provided with a tape and with an arbor, a frame in which said arbor is journaled, said arbor having a diametrical slot across its

end, and said frame having a way extending
diametrically of said arbor, a bolt slidably
mounted in said way and adapted to engage
the slotted portion of the arbor, and spring
5 means engaging said bolt for holding said
bolt in locking or unlocking position.

In testimony whereof, I have hereunto set

my hand at Los Angeles, California, this 1st
day of February 1910.

WILLIAM W. MORGAN.

In presence of—

G. T. HACKLEY,

FRANK L. A. GRAHAM.