(No Model.)

# J. ROE.

## TAPE MEASURE REEL.

No. 475,470. Patented May 24, 1892.

Fig. 1.

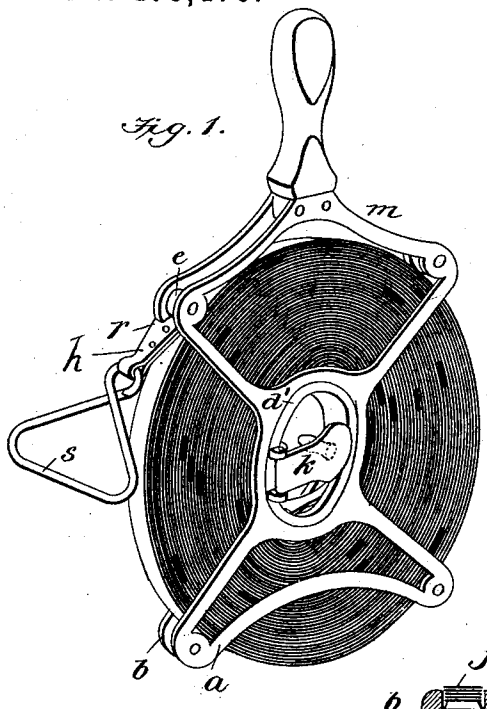



Fig. 2.

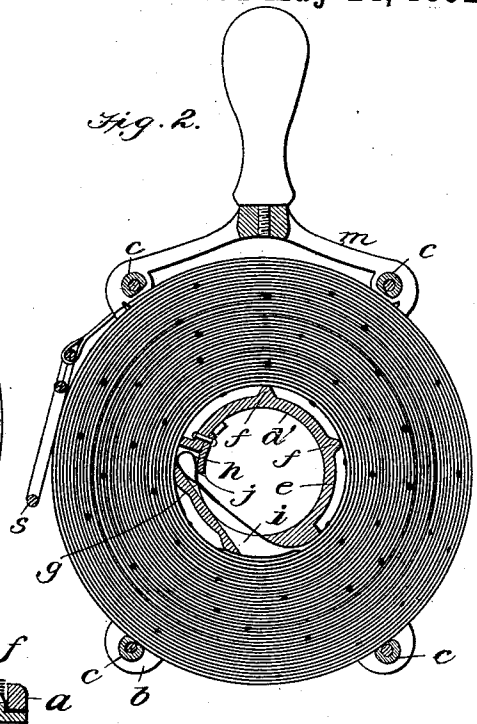



Fig. 5.

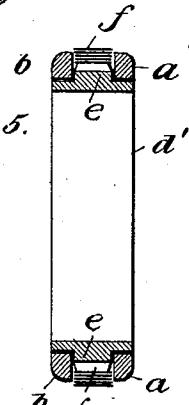



Fig. 3.

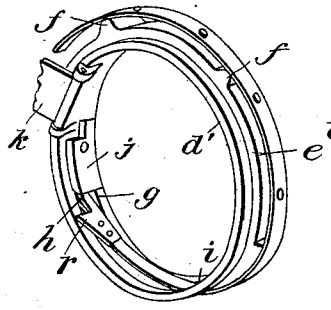
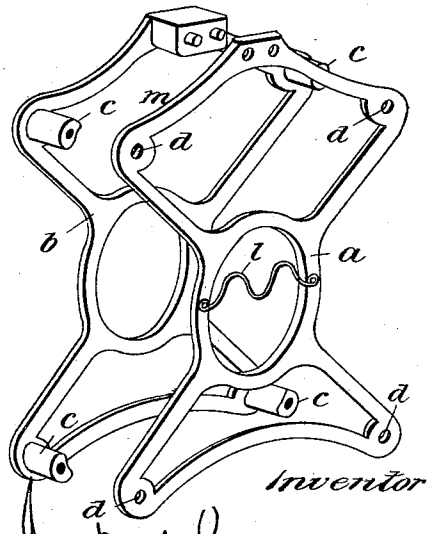



Fig. 4.




Witnesses
Louis A. Johnson
Lowell Gaston

Inventor
Justus Roe
By Johnson & Johnson
his Attorneys.

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# UNITED STATES PATENT OFFICE.

JUSTUS ROE, OF PATCHOGUE, NEW YORK.

## TAPE-MEASURE REEL.

SPECIFICATION forming part of Letters Patent No. 475,470, dated May 24, 1892.

Application filed February 19, 1892. Serial No. 422,098. (No model.)

*To all whom it may concern:*

Be it known that I, JUSTUS ROE, a citizen of the United States, residing at Patchogue, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Tape-Measure Reels, of which the following is a specification.

My invention is directed to the production of a reel for steel tape-measures, whereby a construction is provided which permits the tape to be reeled and unreeled easily under any circumstances, and the tape can be held at any point desired.

My improved reel is adapted for use with what is known as the "spider-frame;" and the particular matters of my improvement are a novel construction of the reel, which permits its use within a center opening of the frame, and which also permits the tape to be reeled so that its rivet-heads will not tend to crowd the tape to one side against the bars of the frame, and thus prevent binding and wear of of the tape edges, and a novel construction for fastening the tape to the reel within the open center of the frame, whereby the fastened end of the tape is out of the way of the frame-arms and makes no obstruction in reeling and unreeling. I also provide the frame with a finger-grip arranged diametrically over one end of the reel, whereby the frame can be held while using the reel, the palm of the hand grasping a part of the frame which projects beyond the circumference of the tape and the fingers grasping the center-grip bar.

The accompanying drawings illustrate these several novel constructions, in which—

Figure 1 represents my improved tape-measure reel complete. Fig. 2 is a diametric section of the same. Fig. 3 shows the reel with a part of the steel tape wound thereon. Fig. 4 shows the separate spider-frames which permit the use of my improved ring-reel, and Fig. 5 is a cross-section of the reel-ring and its seats.

I make the frame of two like spider parts *a* *b*, the outer corners of one part having shouldered bosses *c*, whereon the other spider part, having holes *d*, corresponding to said bosses, is riveted. Each spider part has a coincident central opening, which I prefer to make about two inches in diameter, and it is within these openings and in the space between these spider-frames that the reel is circumferentially seated and retained, being so seated before the spider-frames are riveted together, and the reeling capacity I make one hundred feet, more or less.

The reel *d* is of ring form, and is fitted to circumferentially seat within and upon the walls of the frame-openings, so as to be rotated therein. The ring-reel has a circumferential web *e* fitting between and having bearings upon the inner walls of the spider-frames to hold it from lateral displacement, and this web has a series of circumferential projections *f*, on which the tape is reeled and which prevents it from being crowded to one side in being reeled, and thus prevents the tape from binding and wearing at its edges, as it would be liable to do if the measure rivet-heads rested directly upon the circumference of the reel-web.

The ring-reel has a recess *g*, which opens at its inner wall within the central opening of the reel and is adapted to receive the usual eye *h*, which is riveted to the end of the tape, and near this recess the ring has a circumferential opening *i*, through which the tape passes from the inner to the outer side of the ring after having been placed within the recess, wherein it is fastened by a button *j*, pivoted to the inner wall of the ring.

A crank-handle *k* for rotating the reel is hinged at one edge of the reel, so as to be folded across and within the latter. At that side of the frame opposite to the reel-crank I secure to the frame a finger-grip *l*, placed across the ring, while the frame is made to project between two of its riveted corners, so as to form a hand-rest *m*, so that, the hand grasping the latter and the finger-grip, the tape can be reeled and unreeled, as seen in Fig. 4. I may, however, use a wooden handle hinged or rigid on the outer side of the frame.

It will be understood that each end of the tape has riveted eyed part *h*, which has a side lip *r*, which serves as a stop to catch against the side of the spider-frame when the tape is fully reeled, and that the manner in which the tape is fastened to the inner wall of the ring-reel places this eyed and lipped end within the open center of the frame, and

therefore in rotating the reel the fastened end of the tape is not carried between the frame-arms, where it would be liable to catch at every turn. It will also be understood that the usual link-handle *s* for the tape is fastened in the eyed end of the latter, and that the inner end of the tape may be fastened by other means than the button, so long as such fastening is within the central opening of the reel-ring and the latter is circumferentially seated within the central opening of a reel-frame. It will also be understood that the circumferential reel projections may take the place and serve the purpose of the reel-web.

I claim as my improvement—

1. In a tape-measure reel, the combination of a frame formed of two like side parts, each having a central opening, with a ring-reel circumferentially seated in and upon the walls of said frame-opening and having a circumferential web between the frame parts, and a handle for rotating said ring-reel, substantially as described.

2. In a tape-measure reel, the combination of a frame formed of two like parts, each having a central opening and a ring-reel circumferentially seated within and upon the walls of said frame-opening, with a tape having its end fastened to said ring-reel within the central opening of said frame, substantially as described.

3. In a tape-measure reel, the combination of a frame formed of two like parts, each having a central opening, with a ring-reel circumferentially seated within and upon the walls of said frame-opening and having circumferential projections between the frame parts, and a tape having its end fastened to said ring-reel within the central opening of said frame, substantially as described.

4. In a tape-measure reel, the combination, of a frame formed of two like parts, each having a central opening, with a ring-reel circumferentially seated within and upon the walls of said frame-opening, a handle for rotating said reel, and a hand-grasp for the frame, consisting of the finger-grip across the central opening and the projecting frame part, substantially as described.

5. In a tape-measure reel, the combination of a frame formed of two like parts, each having a central opening, with a reel-ring circumferentially seated within and upon the walls of said frame-opening, having a circumferential opening and a recess on its inner wall, a tape passed through said ring-opening and seated in said recess, and a button pivoted upon the inner wall of the ring for securing said tape thereto, substantially as described.

6. In a tape-measure reel, a frame formed of two riveted spider parts, each having a central opening, in combination with a ring-reel having a circumferential web and circumferential projections on said web and circumferentially seated within and upon the walls of said frame-opening, a handle for rotating said ring-reel, a tape having its end fastened to said ring-reel within the central opening of said frame, and a hand-grasp for the frame, substantially as described.

7. In a tape-measure reel, the combination, with a frame having a central opening, of a ring-reel circumferentially seated within and upon the walls of said opening, and a tape having its end fastened to said ring within the central opening of said frame, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of witnesses.

JUSTUS ROE.

Witnesses:
JOHN A. POTTER,
ISAAC G. WILLETTS.