

No. 702,439.

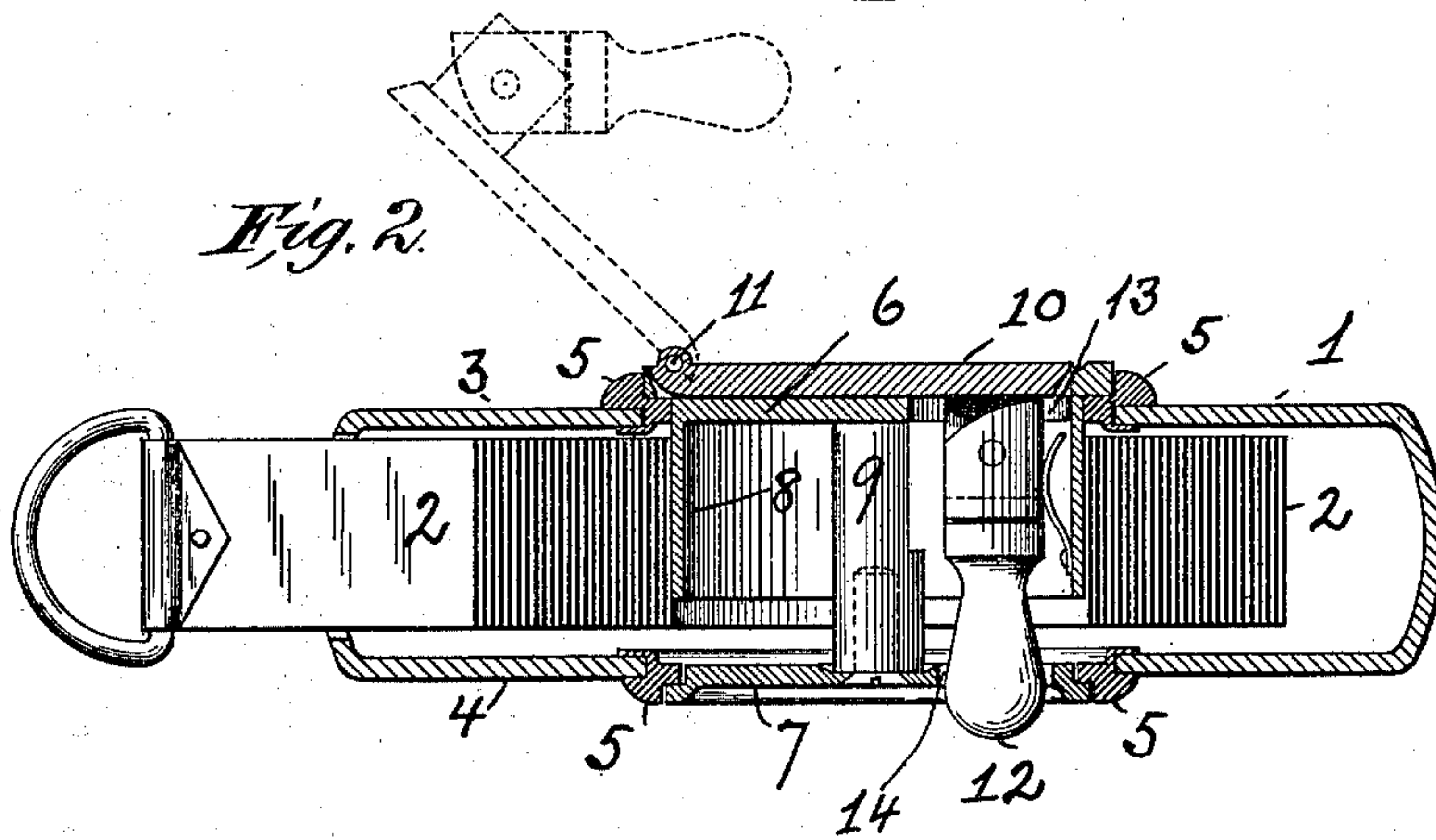
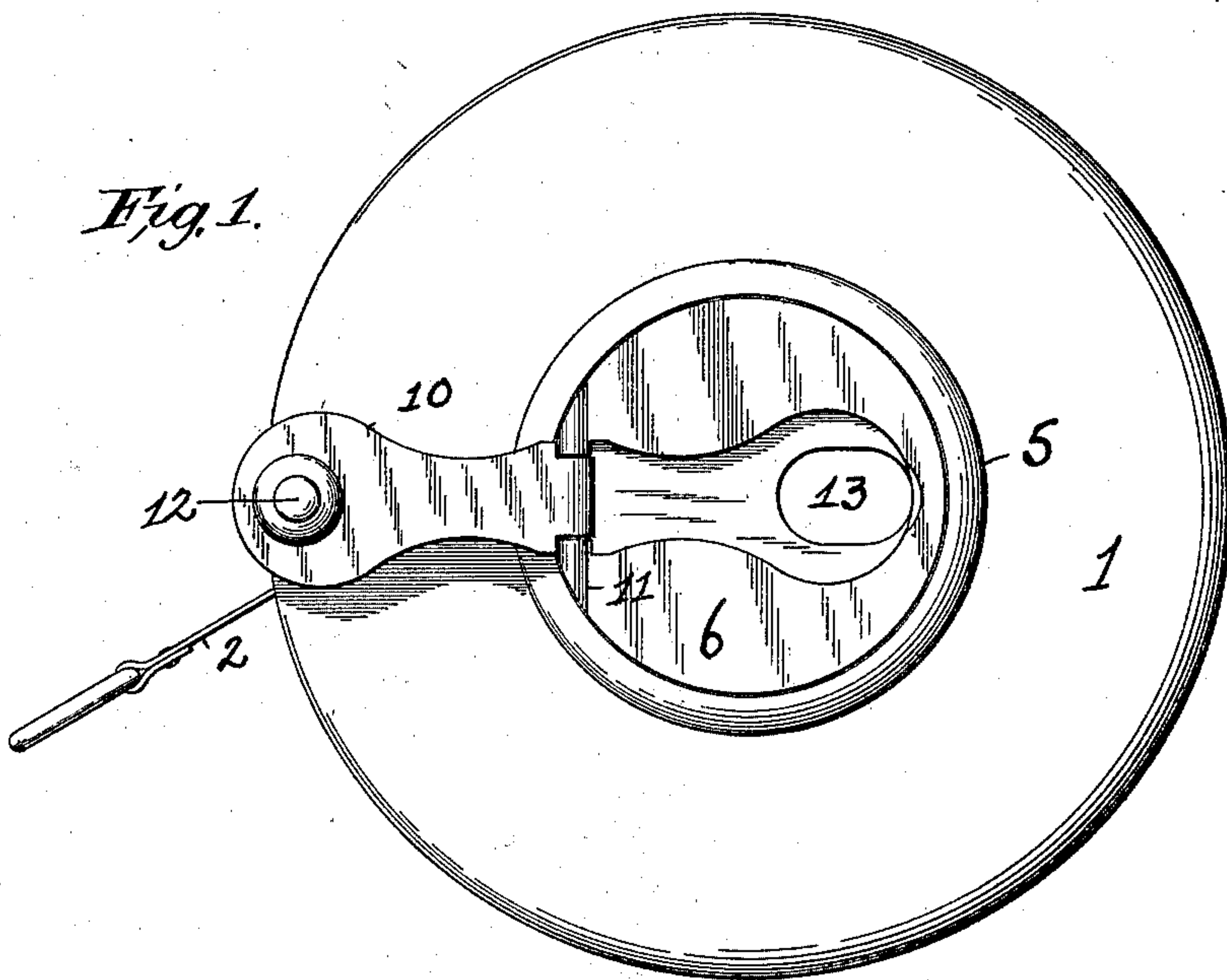
Patented June 17, 1902.

W. KEUFFEL.

TAPE REEL.

(Application filed Jan. 8, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILHELM KEUFFEL, OF HOBOKEN, NEW JERSEY, ASSIGNOR TO THE  
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## TAPE-REEL.

SPECIFICATION forming part of Letters Patent No. 702,439, dated June 17, 1902.

Application filed January 8, 1901. Serial No. 42,493. (No model.)

*To all whom it may concern:*

Be it known that I, WILHELM KEUFFEL, a citizen of the United States, residing in the city of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Tape-Reels, of which the following is a specification.

My invention relates to cased tape-reels; and its novelty consists in the construction and adaptation of the parts, as will be more fully hereinafter pointed out.

In the tape-reels known to me, which are provided with a leather case adapted to inclose and shelter the tape when reeled upon the drum and in which the crank-handle is folded into the drum, leaving a substantially flush or flat outer surface on each side of the case when the instrument is not in use, there are certain defects which it is the purpose of my invention to overcome. Nearly all of the tape-reels of this class have either too short a crank to provide a good leverage in unwinding the tape or too short a handle upon the crank to afford a firm hold for the fingers, especially if the user is wearing gloves or his fingers are stiff or chilled. In one form of such tape-reels the crank is provided with a knuckle-jointed handle which folds into a central aperture in the tape-drum. This gives a handle of sufficient size to grasp; but the crank is too short to secure proper leverage. An attempt was made to overcome this difficulty by having the crank made into two pieces which unfolded. This gave the desired length of crank; but the handle was too short. These difficulties, united with the requirement that the handle when not in use must lie flush within the case and must be capable of being opened readily and quickly with a gloved hand, have really made a difficult problem to be overcome.

I have overcome the difficulties referred to by retaining the flat folding crank with a knuckle-joining handle; but I pass the handle through an aperture in the tape-drum near to its edge, thereby obtaining a length of crank nearly equal to the diameter of the tape-drum and a length of handle equal to or greater than the thickness of the case of the reel. As the outermost knob of the handle may be

reached from that side of the case opposite to the one at which it is hinged, the crank is made readily usable even by a person with a gloved hand or stiff fingers.

In the drawings, Figure 1 is a top plan view of my improved tape-reel, showing the handle thrown back. Fig. 2 is a central vertical section of the same with the handle shown in dotted outline partly thrown back.

In the drawings, 1 is the case, made of any suitable material, as thin metal, and covered externally with leather. An opening is provided in its outer edge to provide for unwinding the tape 2. The plates 3 and 4 of the case have each an inner central aperture, and upon their peripheries is mounted the tape-drum in the usual manner upon bearings 5, crimped upon the plates 3 and 4. This drum consists of three plates—viz., two side plates 6 and 7 and a cylindrical plate 8, upon which the tape is wound. The plates 6 and 7 are united together by an axial post 9, and a transverse rod is the means whereby the inner end of the tape is attached to the drum.

The plate 6 carries the crank of the instrument. This crank consists of a plate 10, hinged upon a pintle 11 and provided upon its inner surface with a knuckle-jointed handle 12. The plate 6 is provided with an aperture 13 and the plate 7 with a similar aperture 14, whereby the handle 12 is permitted to pass through the drum, the end of the handle protruding slightly beyond the outer surface of the plate 7, so that the handle can easily be pushed inward. The apertures 13 and 14 are each near the edge of the plates, so that plate 10, which forms the crank of the handle, is nearly equal in length to the total diameter of the drum. This gives a long crank, so that a good leverage is obtained, and permits the use of a handle of sufficient size to be used with a gloved or stiff hand.

What I claim a new is—

In a tape-reel, the combination with a tape-case, and a tape-drum having registering openings through its opposite plates near one edge thereof, of a crank of a length equal to the width of the drum hinged externally to one drum-plate at the edge thereof diametrically opposite to the openings in the plate, and

a knuckle-jointed handle projecting from the  
outer end of the crank, when extended, and  
passing through the openings in both of the  
tape-drum plates, and projecting its end  
5 slightly beyond the opposite plate when  
closed, substantially as, and for the purpose  
set forth.

Witness my hand, this 29th day of Decem-  
ber, 1900, in the presence of two subscribing  
witnesses.

WILHELM KEUFFEL.

Witnesses:

HERMAN MEYER,  
MABEL K. WHITMAN.