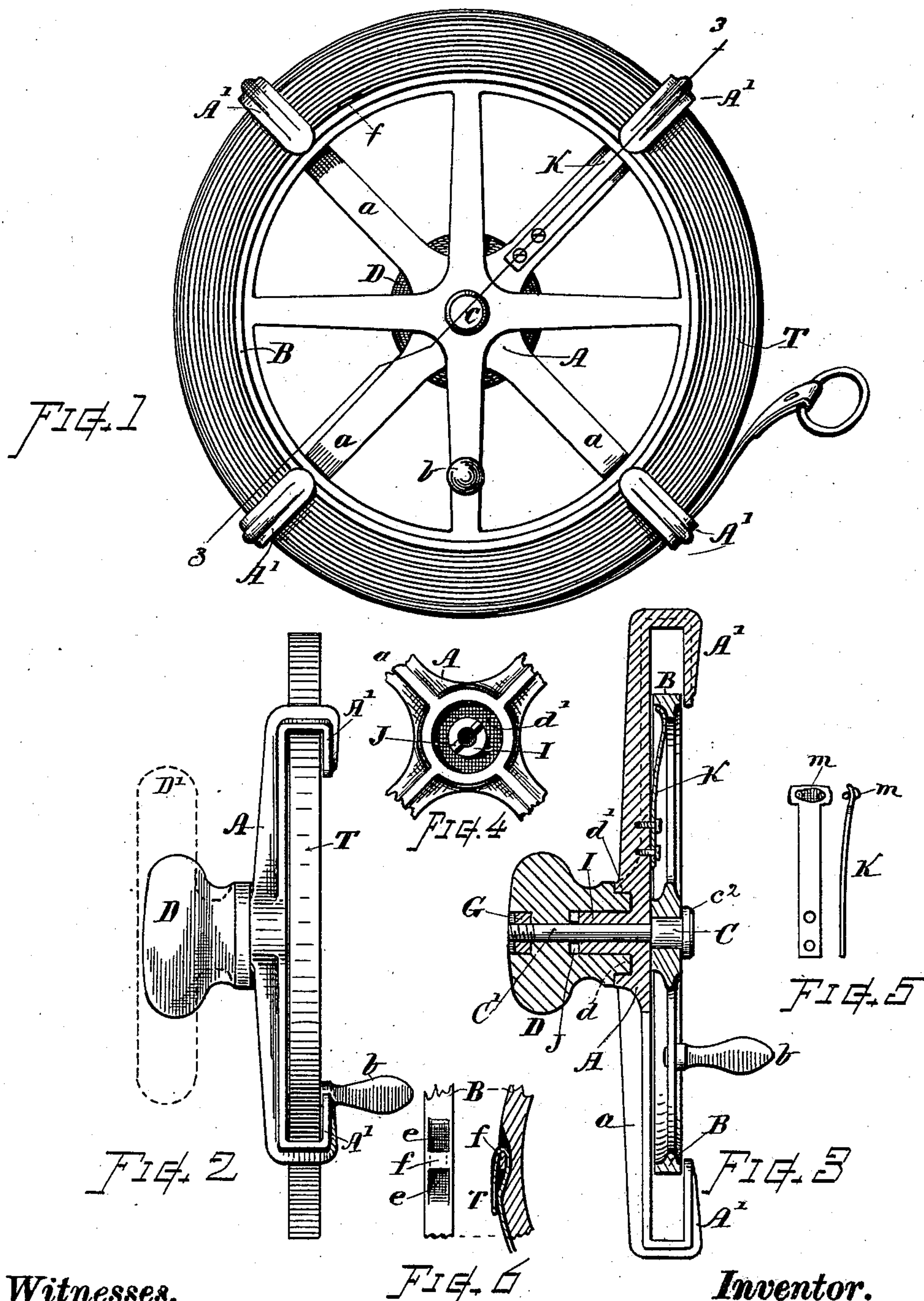


(No Model.)

J. H. SHEDD.
ENGINEER'S TAPE REEL.

No. 516,282.

Patented Mar. 13, 1894.



Witnesses.

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ENGINEER'S TAPE-REEL.

SPECIFICATION forming part of Letters Patent No. 516,282, dated March 13, 1894.

Application filed May 19, 1893. Serial No. 474,758. (No model.)

To all whom it may concern:

Be it known that I, JOEL HERBERT SHEDD, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Engineer's Tape-Reel, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The objects of my invention are to provide a more convenient, efficient and desirable instrument for winding and containing engineers' steel measuring tapes, and to render the construction strong, light and durable. These objects I attain by the mechanism shown in the drawings, wherein—

Figure 1 is a front view of my improved engineer's tape reel. Fig. 2 is a side view of the same. Fig. 3 is a section at line 3—3 Fig. 1 without the tape. Fig. 4 is a back view of the center of the frame showing the handle seat. Fig. 5 shows the brake spring, and Fig. 6 shows a means for connecting the tape to the winding wheel.

My improved instrument consists of a winding wheel B about four to six inches in diameter, more or less, rotatably mounted upon an axial stud C in connection with a spider or frame A having a series of radiating arms α that extend outward beyond the peripheral rim of said winding wheel, and are each forwardly offset to an extent sufficient to accommodate the width of the tape, and their ends inwardly returned to or slightly over the rim of the winding wheel, thereby providing on the end of each arm an inwardly open rectangular loop or guard A', within which the coils of the steel measuring tape T are confined when said tape is wound upon the periphery of the wheel B, as indicated in Figs. 1 and 2. The rim of the winding wheel is flat on its exterior, and is provided with means for the attachment of the end of the tape thereto. Fig. 6 shows a convenient means of attachment. In this the face of the wheel-rim is recessed, as at e , and transversely across this recess there is a fixed bar f . The end of the tape T is passed under said bar f and then folded back upon itself, as shown by the sec-

tion at the right in Fig. 6. A crank b is fixed in one of the arms of the wheel for conveniently rotating the wheel on its axis C for reeling in the tape.

The frame A is provided with a handle or knob D by which the instrument can be conveniently held in the hand. Said knob is preferably attached in the manner illustrated; as it is desirable to insure a strong and unyielding connection between the parts. The boss or hub of the spider is furnished with a backwardly extending integral tongue or nipple I having a central opening therein; and with an annular recess d' about its base. (See Figs. 3 and 4.) The knob or handle D is fitted with an internal chamber that matches said tongue I and with a projecting end tenon d that enters said annular recess d' . The center stud C is formed with a broad head c^2 ; a shoulder that seats against the face of the frame, and a long shank or spindle C' that extends through the knob and receives the binder or nut G on its threaded end, as illustrated in Fig. 3; said nut G being sunk within a recess in the knob so that its outer end is substantially flush and smooth with the outer surface of the handle. Transverse lugs or points J are formed on the part I that enter depressions on the part D and thus prevent rotation of one part on the other. This manner of attaching the knob or handle forms a very secure connection and avoids liability of the knob becoming split or working loose. If in any instance preferred a T-shaped handle (see dotted lines D' Fig. 2) can be employed in lieu of the round knob.

K indicates a spring or yielding presser arranged in connection with one of the arms α to serve as a friction brake against the winding wheel B for reducing its momentum when running off the tape. Said spring may be made as indicated in Fig. 5, with a perforated end having a cord or bit of leather m drawn into the perforations to serve as a contact pad against the side or inner rim surface of the wheel B. In any instance, if preferred, the instrument may be made and operated with the spring presser K omitted.

In the operation, the measuring tape is run off by simply holding the frame by the handle knob while the assistant walks away with the

end of the tape, or in other convenient manner of usage. Then for re-winding the tape the instrument is held by its knob in the left hand and the winding wheel is rotated by its crank with the right hand (or vice versa) and the tape is drawn in and laid in coils within the overhanging guards A' in Figs. 1 and 2.

It will be noticed that my invention, as herein shown and described, provides a light, strong and serviceable instrument for engineering work or measuring purposes; that the winding can be very rapidly performed so that the tape can be reeled in as fast as the operator may walk forward; that the coils of the tape, while confined by the overhanging arms, are fully exposed to view, can dry quickly if wet, and any adhering sand or dirt can be readily jarred off and will freely escape from among the coils. Another advantage is that the side of the wheel is unobstructed, affording a free swing for the crank, while the overhanging ends of the arms or guards simply retain the tape without interfering with the free operations of the winding wheel.

I claim as my invention herein, to be secured by Letters Patent—

1. The within described engineer's tape-reel, comprising the spider-frame consisting of a series of arms, the ends of which are each forwardly offset and inwardly returned in the form of a rectangular loop adapted for retaining the coils of the tape; in combination with the revoluble winding-wheel centrally pivoted to said spider-frame by an axial stud, its peripheral rim disposed at the inward opening of said arm-ends, and adapted for winding and supporting the tape within the loops or spaces embraced by the arms and their overhanging inwardly returned ends, as set forth.

2. In an instrument of the character described, the frame having the projecting integral nipple and annular groove, and the handle or knob having the internal chamber fitting said nipple, and the annular end tenon fitting said groove, in combination with the tape-winding wheel, the axial stud having a bearing for said wheel and a shank that extends through said frame and knob, and the binder nut on said shank, substantially as set forth.

3. In combination, substantially as described, the skeleton frame consisting of a series of narrow arms their respective ends offset and inwardly returned to form separate overhanging guard loops, the grip or handle fixed to the center of said frame, the winding-wheel axially supported in connection therewith, its peripheral rim revoluble within the spaces embraced between said arms and their overhanging inwardly returned ends, the measuring tape attached to the periphery of said wheel, and the presser-spring attached to an arm of said frame and its free end bearing against the rim of said winding-wheel, for the purpose set forth.

4. In an instrument of the character described, the winding wheel B having the oppositely beveled recess *e* sunk into the face of its peripheral rim, with the rigid bar *f* across said recess, in combination with the steel tape T having its end inserted beneath said bar and bent back upon itself, substantially as set forth.

Witness my hand this 2d day of May, A. D. 1893.

JOEL HERBERT SHEDD.

Witnesses:

CHARLES E. SMITH,
AURION V. CHEVERS.