

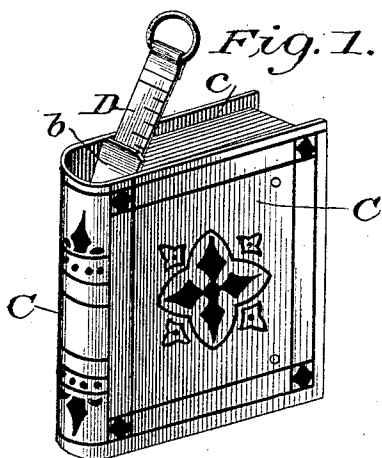
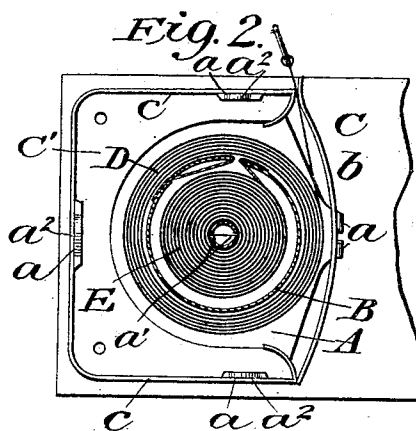
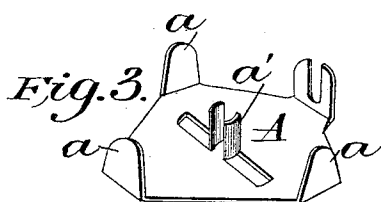
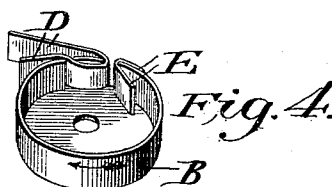
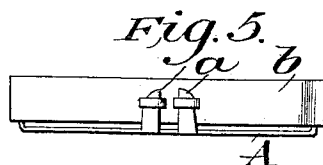
No. 618,050.

Patented Jan. 24, 1899.

J. S. BARNES.
TAPE MEASURE.

(Application filed July 30, 1897.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN S. BARNES, OF DETROIT, MICHIGAN, ASSIGNOR TO THE BARNES
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TAPE-MEASURE.

SPECIFICATION forming part of Letters Patent No. 618,050, dated January 24, 1899.

Application filed July 30, 1897. Serial No. 646,471. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. BARNES, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Tape-Measure, of which the following is a specification.

My invention relates to improvements in tape-measures in which the form of a closed book is substituted for the ordinary forms now in use, and the mechanism of my invention is substantially different from the ordinary tape-measures.

The design and mechanism of my tape-measure are illustrated in the accompanying drawings, in which—

Figure 1 is a view of the tape-measure completed; Fig. 2, a view of the entire inner mechanism. Figs. 3, 4, and 5 are detail views of the inner mechanism.

My invention consists of a plate A, Fig. 3, preferably made of iron or steel suitable for stamping, formed in the shape of a very short kite, having the four extremities bent upward, the extremity on the top of the kite or plate being divided. Near the center of the plate, extending laterally across it, the bottom has been stamped upward into two tongues, facing one another closely, a' , the space between being approximately on a line with the split in the upper upturned extremity of the plate. Over the aforesaid tongue a' is placed the shell B, Fig. 4, the tongue protruding through a hole in its bottom. On one side of the shell two incisions are made, leaving a tongue between them. A suitable flat spring E is now bent on one end and the bend fitted into the tongue in the center of the shell a' to hold it in place and coiled inside the shell, the other end of the spring passing through one of the incisions in the side of the shell and being there bent to hold the spring in place when coiled, (see a' and E in Fig. 2.) The end of the tape D, Fig. 4, is next fastened to the tongue on the side of the shell, preferably with a loop, and wound around the outside of the shell opposite to the coil of the spring E. The shell, with the tape wound around it, is next incased in the frame of the tape-

measure proper, C', which consists of a square, made preferably of wood, surrounding the coils on three sides, the center and one side of the frame being cut out to admit of receiving the coils. A piece of spring metal b is arranged to cross the fourth side and is held in place by small shoulders, which engage in the divided upturned extremity on the top of the plate A.

The frame C' has small mortises a^2 cut on three sides to engage the three upturned extremities on the sides and bottom of the plate A for the purpose of holding the same firmly in place. Surrounding the frame aforesaid is a suitable band c , fitted to engage over the ends of the frame and which forms the leaf-face of the tape-book.

The free or ringed end of the tape D, Fig. 1, passes between one end of the metal spring b and one end of the frame C, the spring b tightly engaging the tape at any desired length.

When it is desired to re-coil the tape, it can be done by releasing the tension of the spring b with the thumb or forefinger, allowing the coiled spring inside to expand, which rapidly winds up the tape.

By referring to Fig. 1 it will be seen that the form of the tape is nearly square, and because it is necessary to give some space for the action of the spring b in the rear of the tape the form of a bound-book cover, with some space at the back, was found to answer the purpose best, C and C', Fig. 1. The cover of the tape-measure has been accordingly made in the shape of an ordinary bound book, which is fastened to the frame C' by means of small tacks driven in at suitable places.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a square frame with mortises cut upon the outer face of three sides and fitted to receive three tongues of a plate forming the base of the device; the fourth side hollowed to receive a cup or shell filled with a spring and surrounded by the tape-measure, and a spring mortised in a standard

of the lower plate opposite the hollow side of
the frame both ends of said spring impinging
the projecting arms of the said frame, the
tape-measure being drawn between one end
5 of the said spring and one of the ends of the
said frame-arms, and held at any length de-
sired by the spring's tension, the whole cov-

ered by any suitable outer casing adapted to
conform to the special needs of the device, all
substantially as described.

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Witnesses:

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