C. F. BALCH.

TAPE MEASURE.

APPLICATION FILED MAY 14, 1910.

978,426. Patented Dec. 13, 1910.

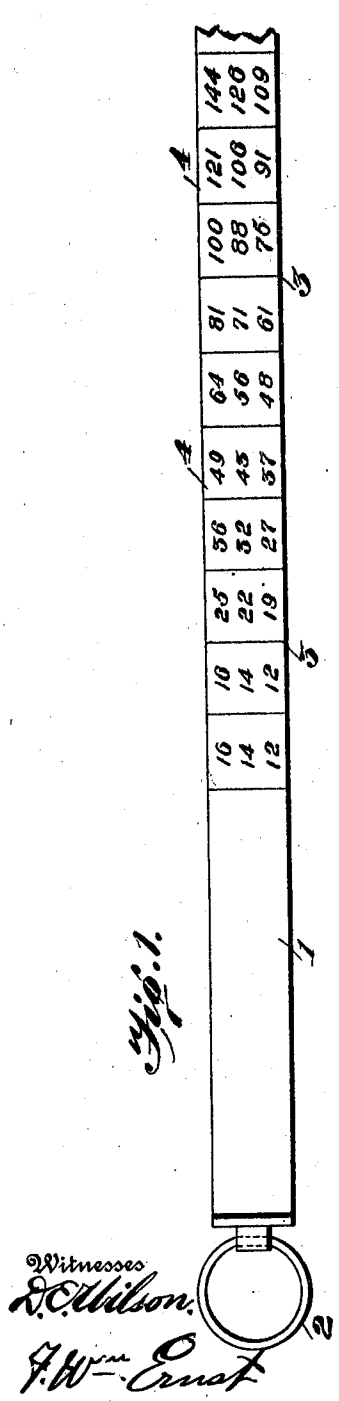

Fig. 1.

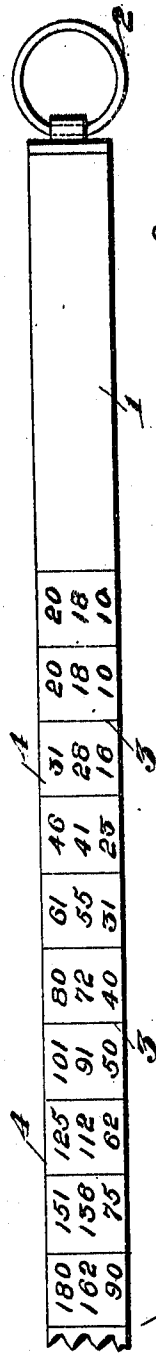

Fig. 2.

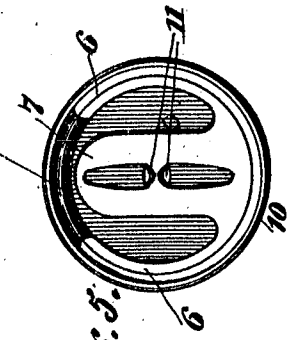

Fig. 5.

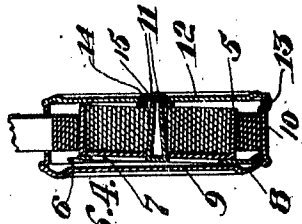

Fig. 4.

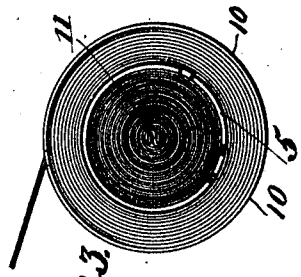

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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TAPE-MEASURE.

978,426. Specification of Letters Patent. Patented Dec. 13, 1910.

Application filed May 14, 1910. Serial No. 561,280.

To all whom it may concern:

Be it known that I, CHARLES FRANCIS BALCH, citizen of the United States, residing at Earl, in the county of Crittenden and State of Arkansas, have invented new and useful Improvements in Tape-Measures, of which the following is a specification.

My invention relates to improvements in measuring devices, and more particularly, to tape measures for ascertaining the cubical area of logs and the like.

The object of the invention is to provide a device of this character which is simple in construction and operation, and which may be used to accurately determine the areas of given logs in varying positions.

To the accomplishment of the recited object and others coördinate therewith, the preferred embodiment of my invention resides in that construction and arrangement hereinafter described, illustrated in the accompanying drawings, and embraced within the scope of the appended claims.

In said drawings: Figure 1 is an elevation of a portion of the tape. Fig. 2 is a similar view showing a portion of the tape reversed. Fig. 3 is a top plan view of the casing with the cover removed. Fig. 4 is a transverse sectional elevation of the casing, and Fig. 5 is a top plan view of the casing with the tape and spring cylinder removed.

Similar reference characters indicate corresponding parts throughout the several views.

Referring more particularly to the drawings for a detail description of my invention, the numeral 1 designates the tape, which is preferably constructed of steel, and is provided on its outer terminal with the usual ring 2. Commencing at a point removed from the ring 2 and on each side thereof, the tape is divided by the transverse lines 3 into inch spaces 4 containing columns of numbers. The first column of numbers on the obverse and reverse sides of the tape indicates the length of the logs for which the device is adapted, and the numbers in the remaining spaces represent the corresponding cubical area of the logs. For example, and referring to Fig. 1 of the drawings, if it be desired to ascertain the area of a sixteen foot log, the tape is stretched across the diameter of the log at the small end thereof, with the line adjacent the ring at one edge and say, the eighth column of figures at the opposite edge. The number at the top of the eighth column, which is "10", indicates the number of feet in the log. Assuming the log to be 14 feet long and having the same diameter, the number "88" which corresponds to the position of the number 14, would determine the area of the log. The same calculations will be followed out on the reverse side of the tape, which is exhibited in Fig. 2.

The tape is preferably wound upon a spring cylinder 5, in conjunction with which I employ a brake. This brake comprises a skeleton-like base substantially circular in contour with a pair of oppositely disposed arms 6 and a central projection 7, said arms being designed to yieldably and snugly fit in the annular concavity 8 of the bottom 9 of the case 10, while the projection 7 is disposed at a slight inclination to resiliently seat the cylinder 5 and is provided with a pair of convergent struck-up portions 11, which constitute an axis for said cylinder. The top 12 of the case is equipped with one or more tongues, as 13, which detachably engage the side of the case, and furthermore has a medial opening 14 designed to accommodate a button 15, loosely mounted on the upper terminals of the portions 11.

As will be found upon inspection of Fig. 4, a part of the upper edge of the cylinder 5 by reason of the disposition of the projection 7 normally engages the underneath surface of the top of the case. It will appear manifest that by depressing the button 15 the projection 7 will assume a substantially parallel relation with the bottom 9, and the cylinder will recede commensurately and be free to be energized by the spring.

With my device logs can be scaled in the woods where they are cut without necessitating any moving or adjusting of the same, and it will also be of considerable advantage in scaling logs in piles, besides being easy to carry and manipulate.

It should be understood that in its broader aspects the invention comprehends the employment not only of the various means described, but of equivalent means for performing the recited functions.

While the arrangement shown is thought at the present time to be preferable, it is desired to reserve the right to effect such modi-

fications and variations thereof as may come fairly within the scope of the appended claim.

What is claimed, is:—

The combination with a tape measure and a case therefor, of a spring cylinder, a plate constituting a resilient support for said cylinder whereby the latter is forced into frictional engagement with the case, oppositely disposed arms carried by said plate adapted to be detachably secured a said case, and means for releasing said cylinder from its frictional engagement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHAS. FRANCIS BALCH.

Witnesses:

ERNEST BALCH,

J. M. MCBEE.