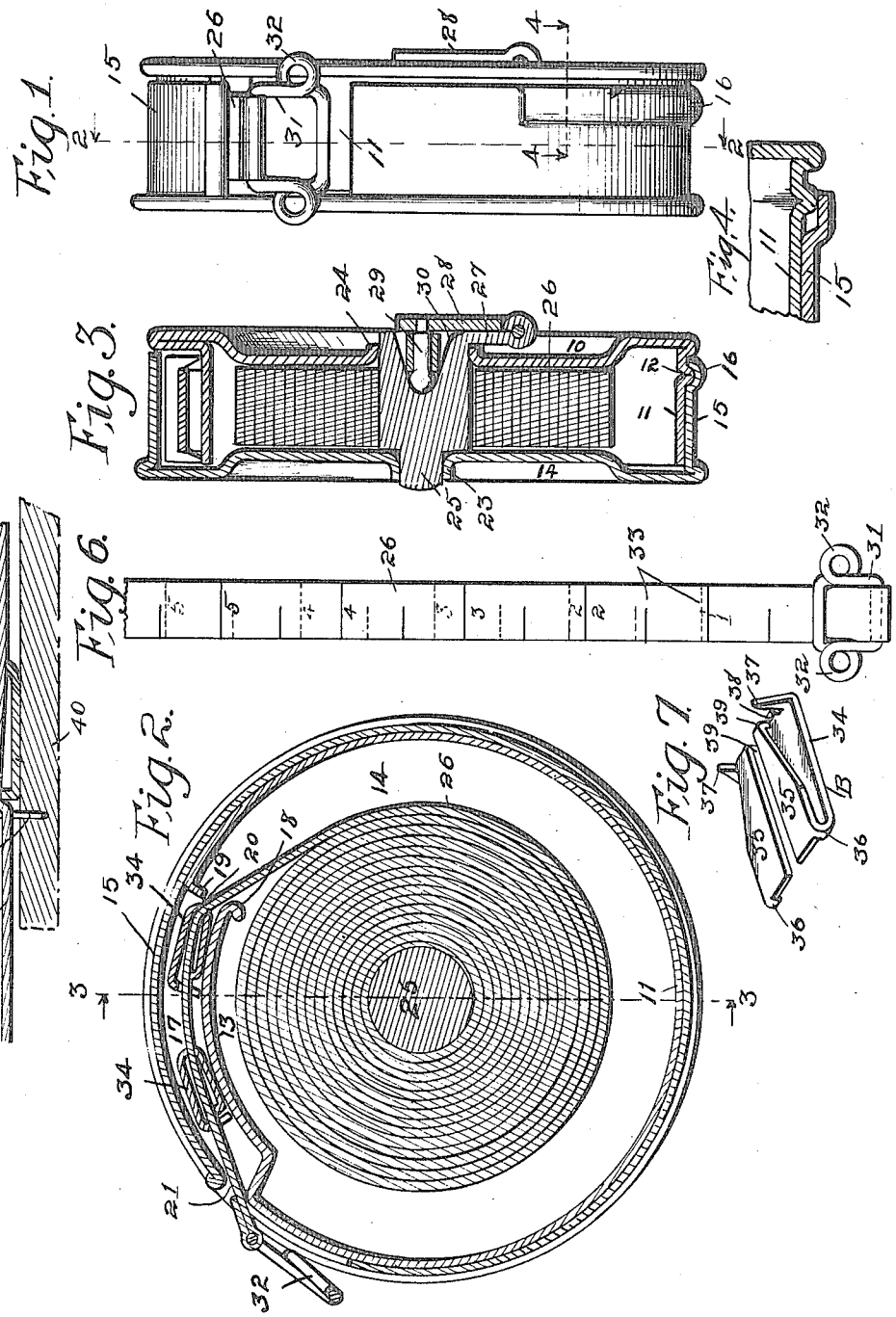
H. J. FRITZ.

PROPORTIONAL DIVIDER TAPE.

APPLICATION FILED MAY 14, 1914.

1,148,306. Patented July 27, 1915.



Witnesses

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PROPORTIONAL DIVIDER-TAPE.

1,148,306. Specification of Letters Patent. Patented July 27, 1915.

Application filed May 14, 1914. Serial No. 838,605.

To all whom it may concern:

Be it known that I, HENRY J. FRITZ, a citizen of the United States, and resident of Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Proportional Divider-Tape, of which the following is a specification.

The object of my invention is to provide a proportional divider tape of simple, durable and inexpensive construction, particularly adapted for use in dividing spaces into proportionate parts.

A further object is to provide such a tape made of resilient material and covered with indicating points or characters, and capable of being stretched for varying the relative distances between the points or characters, and to provide in connection with said tape clamping devices slidably mounted on the resilient tape and adapted to be driven into the wood of the side of a house or the like and to firmly grip the tape when so secured to the wood.

Still a further object is to provide such a tape line with such fastening devices mounted thereon, and to provide for the line a casing having a receptacle adapted to receive the fastening devices and having an arbor on which the tape line may be wound and having a space around the arbor independent of the receptacle for the fastening devices.

My invention consists in certain details, in the construction, combination and arrangement of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a front elevation of the casing for a tape, embodying my invention. Fig. 2 shows a horizontal, sectional view, through the tape and casing, taken on the line 2—2 of Fig. 1. Fig. 3 shows a vertical, sectional view, taken on the line 3—3 of Fig. 2. Fig. 4 shows a detail, sectional view, taken on the line 4—4 of Fig. 1. Fig. 5 shows a detail, sectional view through a portion of the tape line and one of the fastening devices thereon, and a wooden board to which said fastening device is secured. Fig. 6 shows a detail view of a portion of the tape, showing the devices at the end thereof, and Fig. 7 shows a perspective, detail view of one of the fastening devices.

In the accompanying drawing I have used the reference numeral 10 to indicate generally one side of the casing which incloses my improved tape line. The side of the casing just mentioned comprises the annular portion 10 and circumferential, annular flange 11, having formed in it near the portion 10 an annular, outwardly extending bead 12. The flange 11 extends only part way around the portion 10 at its circumference and for a short distance at 13 is spaced inwardly from the circumference of said portion 10, as shown in Fig. 2. The other side of the casing comprises the annular portion 14 and the laterally extending, circumferential, annular flange 15, having near its free edge an outwardly extending bead 16. The flanges 11 and 15 are preferably made of somewhat resilient material so that the two halves of the casing may be snapped together and held by the resiliency of said flanges, to form a substantially cylindrical casing. The flange 15 covers the space between the parts 10 and 14 above and outside of the member 13, leaving a receptacle or space 17 between the flange 15 and the member 13. The free end of the member 13 is bent over, as shown at 18, and the free end of the flange 11 is bent inwardly at 19 to form a narrow, elongated slot 20, between the portion 19 and the free end of the member 13. Part of the flange 15 is cut away to leave an entrance slot 21 between one end of the flange 15 and the flange 11 at the point where the latter flange is bent inwardly.

It will be seen that between the portion 13 and a part of the flange 15 and between the walls of the portions 10 and 14, is formed a chamber 17. It should be noted that the parts 14 and 15 may be rotated with relation to the parts 10 and 11, so that the chamber 17 may be entirely uncovered, or the flange 15 may be made to grip the tape 26 between said flange 15 and the flange 11. Normally, the opening or slot 21 is of sufficient size to permit the passage of the clamping devices B, hereinafter more fully described, and the slot 20 is of such size as to permit the tape to slide freely therein and to prevent the passage of the catch device.

In the walls 14 and 10 are formed openings around which are formed bearings 23 and 24 for an arbor 25, to which is secured the resilient tape 26, and on which said tape is adapted to be wound. Formed on the arbor 25, at one end thereof, is a laterally

extending arm 27, to which is pivoted a crank arm 28, on which is the crank handle 29. In the end of the arbor 25 on which the arm 27 is formed is a recess 30, adapted to receive the crank handle 29 when the same is folded over. The tape 26 is wound on the arbor 25 and extended through the slots 20 and 21.

Secured to the free end of the tape 26 is a fastening device, comprising the substantially rectangular loop 31, one side of which is secured to the tape 26. At the sides of the loop 31 are smaller loops 32. The tape 26 is provided with indicating marks or characters 33. Slidably mounted on the tape 26 is a plurality of clamping or fastening devices B, which are constructed as follows:

A plate 34 is formed with two extensions 35 bent over into a plane parallel with that in which the part 34 lies. The portions 35 are also parallel with each other and spaced from the body of the plate 34, as shown in Fig. 7. The fastening devices are made of resilient material. The members 35 are secured to the body of the plate 34 at the side edges of the latter plate at 36. At the end of the plate 34 opposite the end on which the members 35 are secured, and adjacent to the respective edges of said end, are laterally extending points 37. Between the points 37 the body of the plate 34 is bent to form a laterally extending flange 38. Formed on the members 35, near the flange 38, are blunt points 39 which extend toward the body of the plate 34. The members 35 extend almost to the flange 38, as shown in Fig. 7. The fastening devices B are slidably mounted on the tape 26, which is extended over the flange 28 and between the members 35 and the body 34, as shown in Figs. 2 and 5.

I shall now describe the practical operation of my improved proportional divider tape. Assuming that it is desirable to divide the side of a house into proportionate distances for putting on siding, it may be desirable for instance to divide the outside wall into proper distance from the lower part of the wall up to the first window opening. Ordinarily this must be done by measuring and figuring the number of pieces of siding that should be put on and their proportionate exposures to the weather. Where two of my devices are used, the fastening device 31 may be secured, by means of a nail, to the wood and the tape stretched until the indicating characters indicate the proper points for placing the siding. One of the fastening devices B on each tape may then be placed with the points 37 against the wood and the point 37 may be driven into the wood of the wall 40, as shown in Fig. 5. It will readily be seen that when the points 37 are driven into the wall, the members 35 will be pressed toward the plate 34 and the plate 26 will be gripped between the points 39 and the plate 34, as shown in said Fig. 5. Another of the fastening devices may be used for securing proportionate divisions of the space at the side of a window opening or the like, etc.

If it is desired to place the end of the tape 26 exactly at the lower edge of the lower board on a building where there is a stone or brick foundation, for instance, and there is nothing below the board to which the fastening devices 31 may be secured, said fastening devices may be turned over, as is shown in Fig. 6, with the end of the tape in line with the edge of the lower board and tacks may be driven through the loops 32 for securing the end of the tape to the boards at the side of the house. When the tape is not in use it may be wound upon the arbor 25 in the ordinary way. The opening 21 is of such size that the fastening devices B may pass through it into the receptacle or space 17 and they are prevented from passing out of such space into the body of the tape line casing by the size of the opening 20. It will be seen that the fastening devices are then protected and are within the receptacle 17 so that they will not accidentally catch on clothing or the like. The width of the opening 20 is such that the loops 32 will not pass through said opening.

Some changes may be made in the details of the construction of my improved proportional divider tape without departing from its essential features, and it is my intent to cover by this application any such changes as may be included within the scope of the following claims.

I claim as my invention:

1. In a device of the class described, a casing comprising an annular plate with an annular flange at its periphery, said flange being bent inwardly and spaced from the edge a short distance for part of its length, a second plate with an annular peripheral flange partly cut away, and rotatably mounted on the first flange, the parts being so arranged that the size of the opening between one end of the second flange and the first flange at the point where it bends inwardly may be varied.

2. In a device of the class described, a casing comprising a plate having an annular laterally extending flange partially cut away, a second plate having a similar flange, said second plate being rotatably mounted with relation to the first plate, whereby the cut away portions of said flanges may be adjusted for varying the size of the opening in said casing walls.

3. In a device of the class described, a casing, said casing being made in parts each having an opening, said parts being adjust-

able whereby the openings may be brought more or less into registry to form a common opening, an elastic measuring device adapted to be received within said casing, and a plurality of resilient fastening devices slidably mounted on said measuring device, said fastening devices being formed with sharp points and being so constructed and arranged that when said sharp points are driven into wood or the like, the parts of the fastening devices frictionally engage the measuring device for preventing sliding movement of the fastening devices with relation thereto.

4. A proportional divider tape comprising the combination of a flexible stretchable measuring device with a plurality of fastening devices mounted thereon, to permit the measuring device to slide longitudinally with relation to the fastening devices, each fastening device having a part adapted to be driven into wood or the like, and being so constructed that when said part is so driven into wood or the like, the measuring device is gripped between parts of the fastening device, so that sliding movement of the measuring device is prevented.

5. In a device of the class described, a flexible, stretchable tape, a plurality of fasteners mounted thereon, each of said fasteners having a part adapted to be driven into wood or the like, and being so constructed and mounted on said tape that when said part is driven into wood or the like, the tape is frictionally gripped for preventing movement of the fasteners with relation to the tape, and being so constructed and mounted on the tape as to release the tape for permitting the fasteners to slide freely thereon when said part is withdrawn from the wood or the like.

6. In a device of the class described, the combination of a casing, an arbor therein, a flexible, stretchable measuring device secured to said arbor and adapted to be wound thereon, a receptacle formed within said casing and having an opening to communicate with the interior of the casing, said receptacle being adapted to receive said fastening devices and the portion of the tape on which said fastening devices are mounted, said opening being of such size as to prevent the passage of the fastening devices, said casing being made of movable parts adapted when rotated to close the receptacle.

Des Moines, Iowa, May 7, 1914.

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Witnesses:

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