

(No Model.)

A. T. HYDE.
TAPE MEASURE.

No. 338,527.

Patented Mar. 23, 1886.

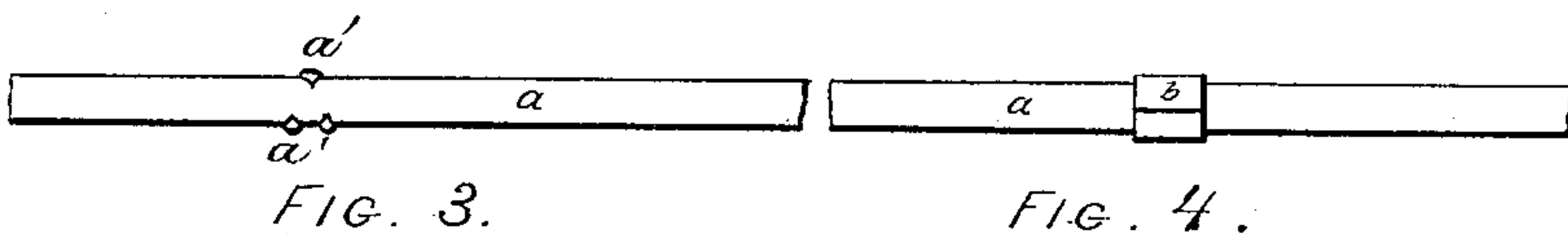
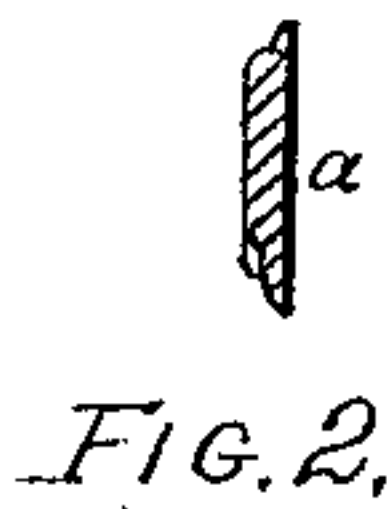
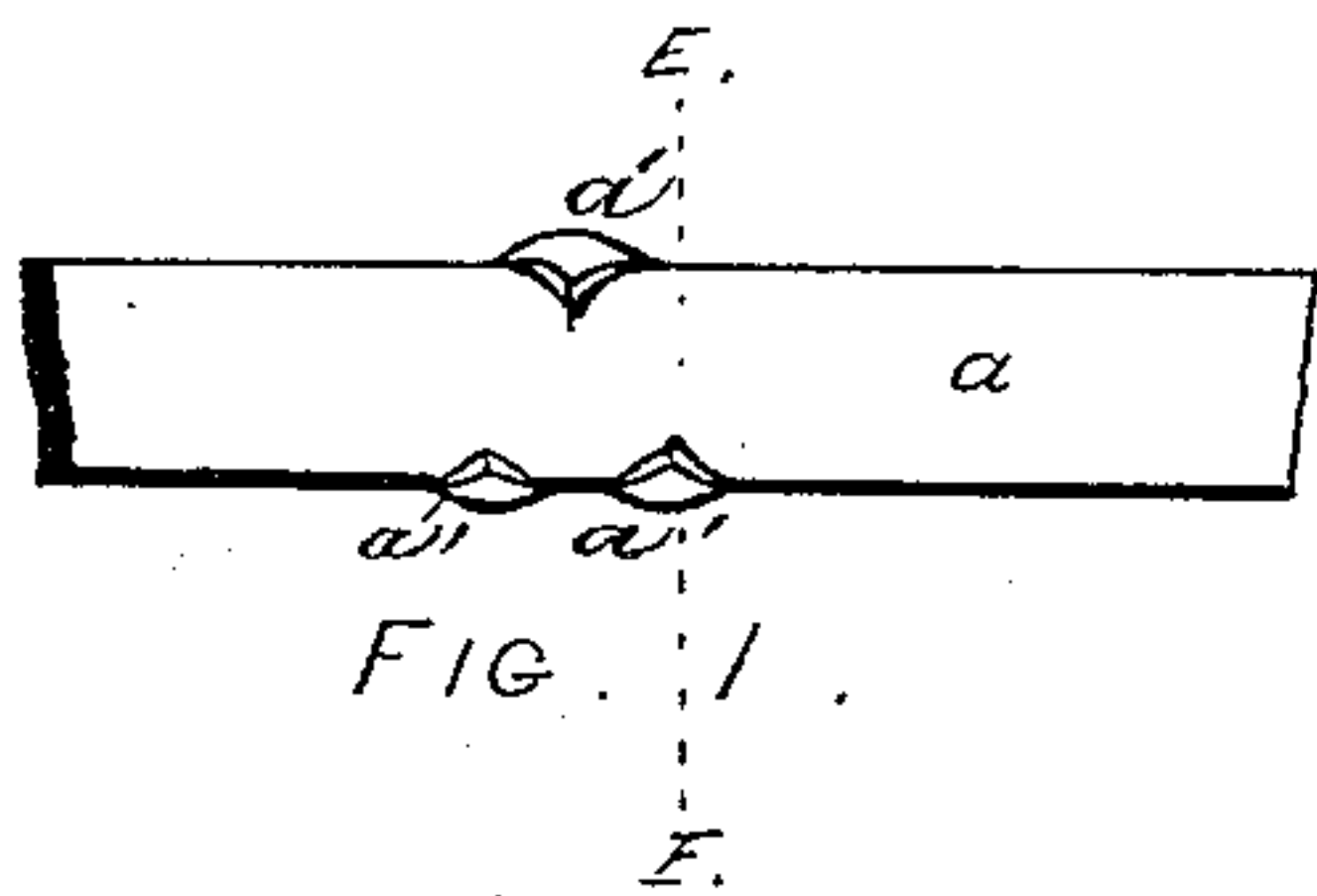


FIG. 4.



FIG. 5

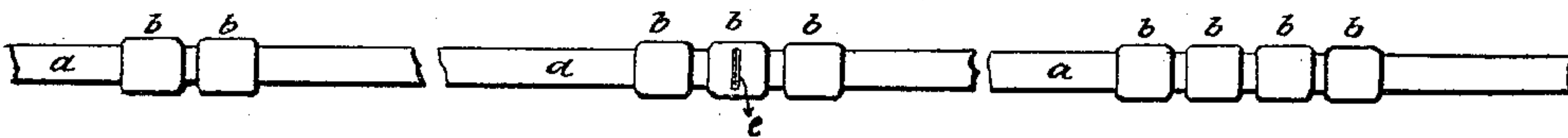


FIG. 6.

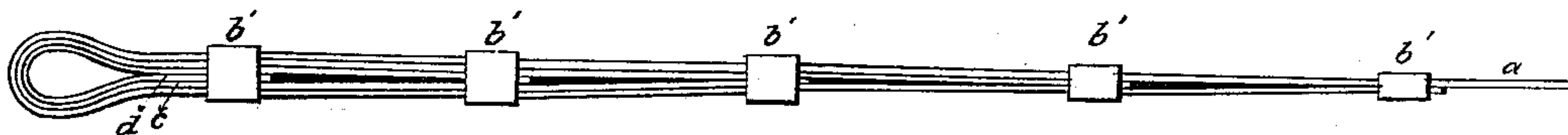


FIG. 7



WITNESSES

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TAPE-MEASURE.

SPECIFICATION forming part of Letters Patent No. 338,527, dated March 23, 1886.

Application filed November 21, 1885. Serial No. 183,533. (No model.)

To all whom it may concern:

Be it known that I, ALFRED T. HYDE, a citizen of the United States, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented a new and useful Improvement in Tape-Chains, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side view of a flat wire blank ready to receive the marking-tag. Fig. 2 shows a section on the line E. Fig. 3 is the same as Fig. 1 on a smaller scale. Fig. 4 is a side view of a marking-tag in place on the tape. Fig. 5 is an end view of Fig. 4. Fig. 6 shows the manner of affixing the tags for marking. Fig. 7 shows the ends of the tape with re-enforcing strips *c d* held by the clips *b'*.

My invention relates to measuring tape-chains; and it consists in the combination of devices hereinafter explained and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, *a* is a flat wire; *b*, a metal clasp or tag, and *b'* metal clips.

In the manufacture of my improved tape-chain the blank *a* is subjected to the action of a punch, which makes the serrations *a'* along its edges at such points as it is desired to affix the marking-tags *b* or the binding-clips *b'*. The punch is forced partly through the wire blank, thereby causing a flow of metal under the point of the punch at right angles to the length of the tape. The edges of the flat surface on which the tool acts are depressed, while the reverse edges become serrated, as shown at *a'*, Figs. 1, 2, and 3. The tags *b* are clasped about the wire blank *a* at the points where the serrations have been formed, and

there subjected to great pressure, so that the serrations are made to take hold on the inner surface of the clasps or tags, thus securing the tags in position and preventing the possibility of their slipping along the tape. A recessed mark, *e*, is made on the tag at the end of each unit of length for use when exact measurements are required. These depressions or recesses are made sufficiently deep in the metal so as not to be worn out by use. Single units are marked on the tape by a single tag with its mark 10, while fifty and ninety units should be marked with tags of double width. Twenty and eighty units are marked by two tags slightly separated, thirty and seventy units by three tags slightly separated, and forty and sixty units by four tags slightly separated.

In actual use tape-chains are found to break most frequently near the end. To prevent this, I extend the end so as to form a loop or handle, and this I re-enforce by the elastic pieces *c d*, extending to various distances from the loop, as shown in Fig. 7, thus making a gradual extension of strength and stiffness as the handle is approached. These re-enforcing pieces and the return end of the tape-chain are secured together by the clips *b'*, which may or may not serve at the same time as marking-tags.

To the tape any suitable ring or handle may be attached, which may, if desired, form a part of the measuring length of the chain.

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

As an article of manufacture, a tape having serrations on its edges, in combination with the tags *b*, substantially as herein described.

ALFRED T. HYDE.

Witnesses:

R. G. RUSSELL,
D. B. STOLL.