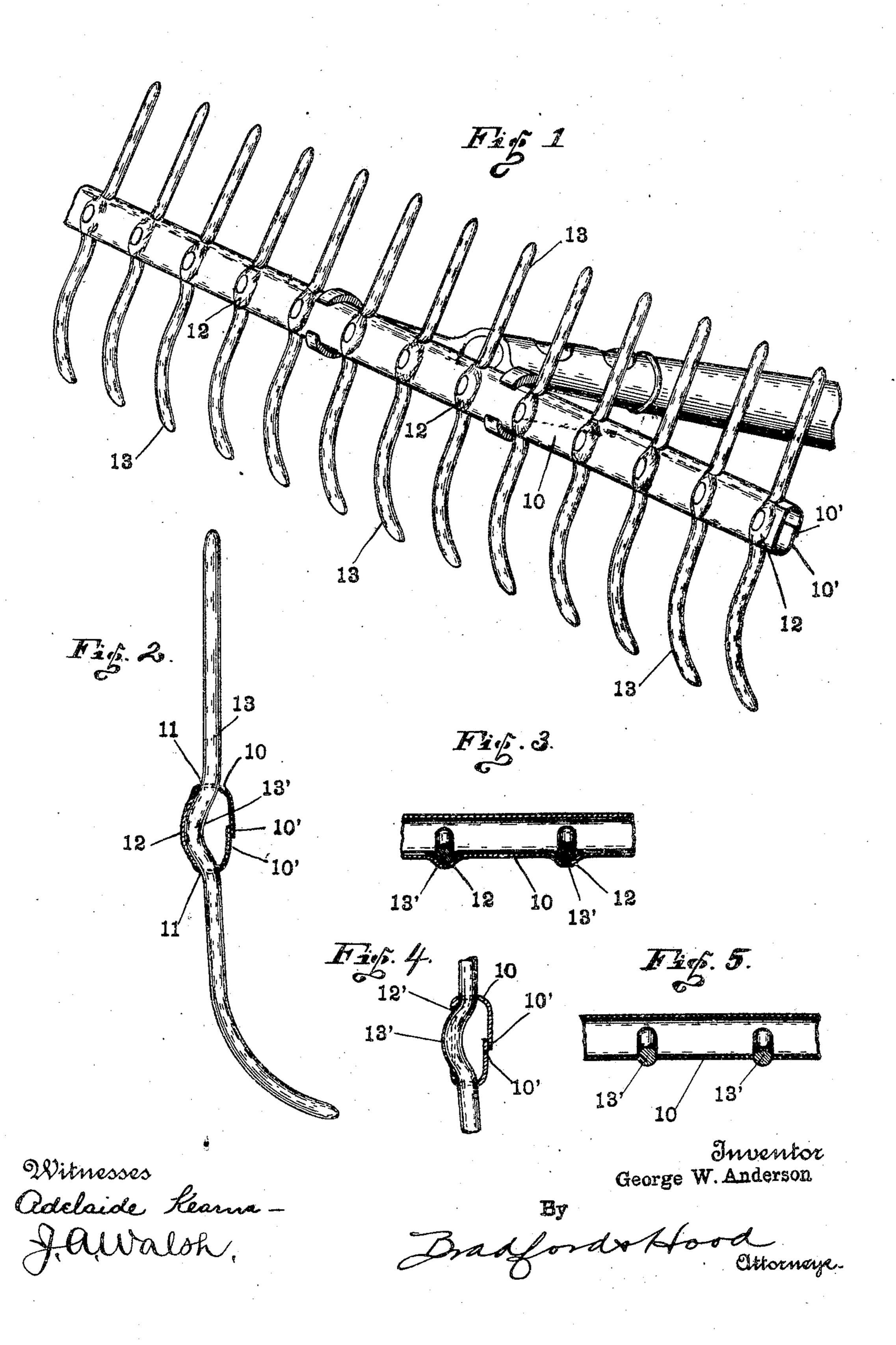
G. W. ANDERSON. RAKE.

APPLICATION FILED NOV. 18, 1904.



United States Patent Office.

GEORGE W. ANDERSON, OF LADOGA, INDIANA.

RAKE.

SPECIFICATION forming part of Letters Patent No. 789,831, dated May 16, 1905.

Application filed November 18, 1904. Serial No. 233,266.

To all whom it may concern:

Be it known that I, George W. Anderson, a citizen of the United States, residing at Ladoga, in the county of Montgomery and State of Indiana, have invented certain new and useful Improvements in Rakes, of which the following is a specification.

The object of my invention is to produce a rake structure having a cross-bar formed of sheet metal and teeth formed of wire, the construction being such that the teeth may be single and yet may be prevented from any turning upon their axes.

The accompanying drawings illustrate my

Figure 1 is a perspective view of a portion of a rake embodying my invention; Fig. 2, a transverse section; Fig. 3, longitudinal sections, and Figs. 4 and 5 are sectional details of a modified form.

In the drawings, 10 indicates a sheet of metal which is bent into a tubular form and provided on the sides of the tubes with perforations 11. The back of the tube or cross-bar thus formed is provided in alinement with each pair of perforations 11 with a dimple 12.

Tooth 13, which is formed of a piece of wire, is first passed through a pair of perforations 11 and then kinked in its middle, as at 13', said kink extending into the dimple 12. In practice the dimple 12 and kink 13' will be formed simultaneously in the following manner: The body 10 is partially formed, the front lips 10' extending at right angles to the 5 back. The tooth 13 is then passed through the pair of perforations 11 and the parts then placed under a plunger and over a die member which is provided with a depression of the form of the dimple 12. The plunger descends and simultaneously forms the kink 13' and the dimple 12.

I am aware that in rakes of this character it has been heretofore proposed to provide the tubular head with a longitudinal groove formed in the back into which the wire teeth 45 are kinked; but this construction serves merely to prevent longitudinal withdrawal of the teeth and does not prevent turning of the teeth, and it has therefore been necessary to make the teeth double. In the present 50 construction by making use of a dimple opposite each tooth the tooth can neither be withdrawn longitudinally nor turned axially.

In Figs. 4 and 5 I have shown a modification in which the bar 10 is provided in its 55 face with a plurality of narrow slots 12', which take the place of the dimples 12, and the kinked portion 13' of the tooth is forced into the alined slot 12'.

I claim as my invention—

1. In a rake, the combination of a cross-head having a pair of tooth-receiving perforations and an alined receptacle for an intermediate kinked portion of the tooth, and a tooth passed through said perforations and 65 having an intermediate portion between the

2. In a rake, the combination of a cross-head having a pair of tooth-receiving perforations, and a dimple formed in alinement 7° therewith, and a tooth passed through said perforations and having a portion between said perforations kinked into said dimple.

perforations kinked into said receptacle.

In witness whereof I have hereunto set my hand and seal, at Ladoga, Indiana, this 14th 75 day of November, A. D. 1904.

GEORGE W. ANDERSON. [L. s.]

Witnesses:

A. L. HAVENS, HARRY G. HUNTINGTON.