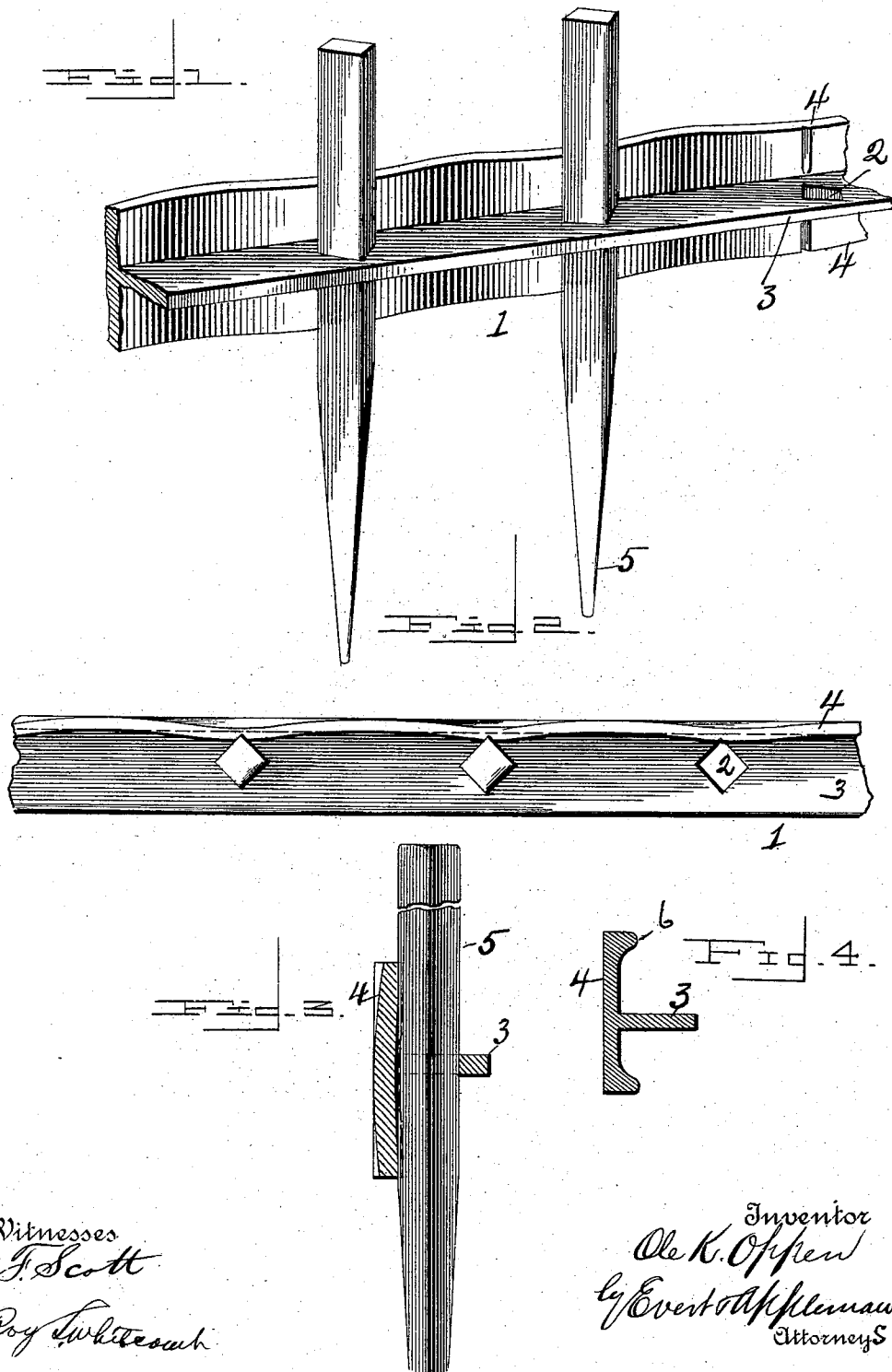


(No Model.)

O. K. OPPEN.
HARROW.

No. 537,304.

Patented Apr. 9, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

OLE K. OPPEN, OF WORTHINGTON, MINNESOTA.

HARROW.

SPECIFICATION forming part of Letters Patent No. 537,304, dated April 9, 1895.

Application filed July 2, 1894. Serial No. 516,328. (No model.)

To all whom it may concern:

Be it known that I, OLE K. OPPEN, a citizen of the United States of America, residing at Worthington, in the county of Nobles and State of Minnesota, have invented certain new and useful Improvements in Harrows, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to harrows, and particularly to beams for harrows, the following being a clear, full, and exact description of the same.

The object of the invention is to produce a harrow beam that shall possess advantages in points of simplicity, durability and general efficiency making it at the same time comparatively inexpensive of manufacture.

A further object of the invention consists in producing a harrow beam in which the teeth are readily inserted in position and secured, being also easily removed when desired.

With these and other objects in view the invention consists in the novel details of construction and arrangement of parts to be hereinafter more specifically pointed out.

In describing the invention in detail reference is had to the accompanying drawings forming a part of this specification, wherein like numerals indicate corresponding parts in the several views, in which—

Figure 1, is a view in perspective of a portion of my improved harrow beam. Fig 2, is a top plan view of the same. Fig. 3, is a vertical sectional view, and Fig. 4, is a sectional view showing a modified form of beam.

In the drawings:—1, denotes the harrow beam formed of T-shaped metal, with apertures 2, arranged equidistantly on the stem 3, while the flanged portions 4, 4, are sprung toward the stem and extend over the inner edge of the tooth apertures 2, and exert a strong pressure against the edges of the teeth 5, when driven into position. It will be thus apparent that the flanged portions as sprung will engage the teeth at the point 6, 6, by which it will be securely wedged.

In Fig. 4, I have shown a modified form with the flanges having ridges 6, thus insuring a strong and permanent engagement with the teeth.

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

1. A T-shaped beam for harrows having the flanges bent inwardly to press against the teeth substantially as described.

2. A T-shaped beam for harrows having the flanges provided with ridges integral therewith to press against the teeth substantially as described.

3. An approximately T-shaped beam for harrows having the flanges bent inwardly opposite the apertures for the teeth, to press against the edges of the teeth, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

OLE K. OPPEN.

Witnesses:

J. P. EASTMAN,
GILBERT ANDERSON.