

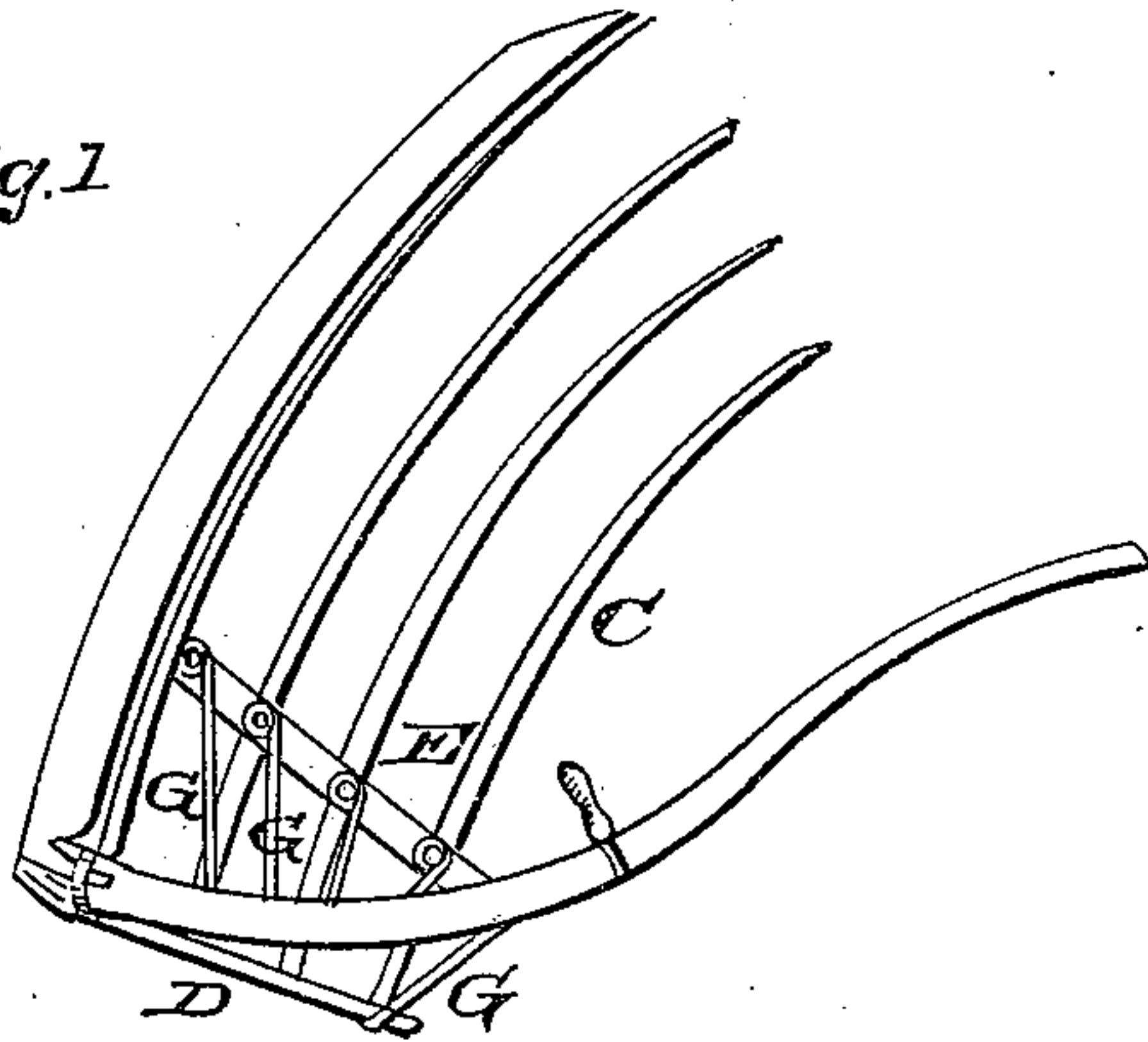
A. P. GROVER.

Grain Cradle.

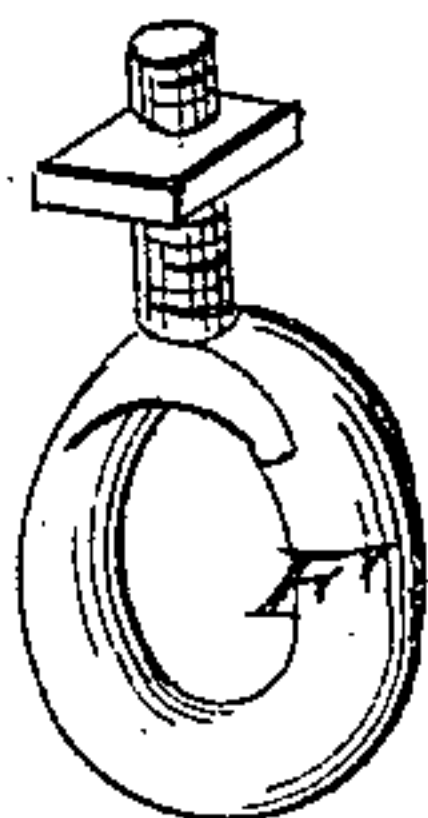
No. 41,215.

Patented Jan. 12, 1864.

*Fig. 1*



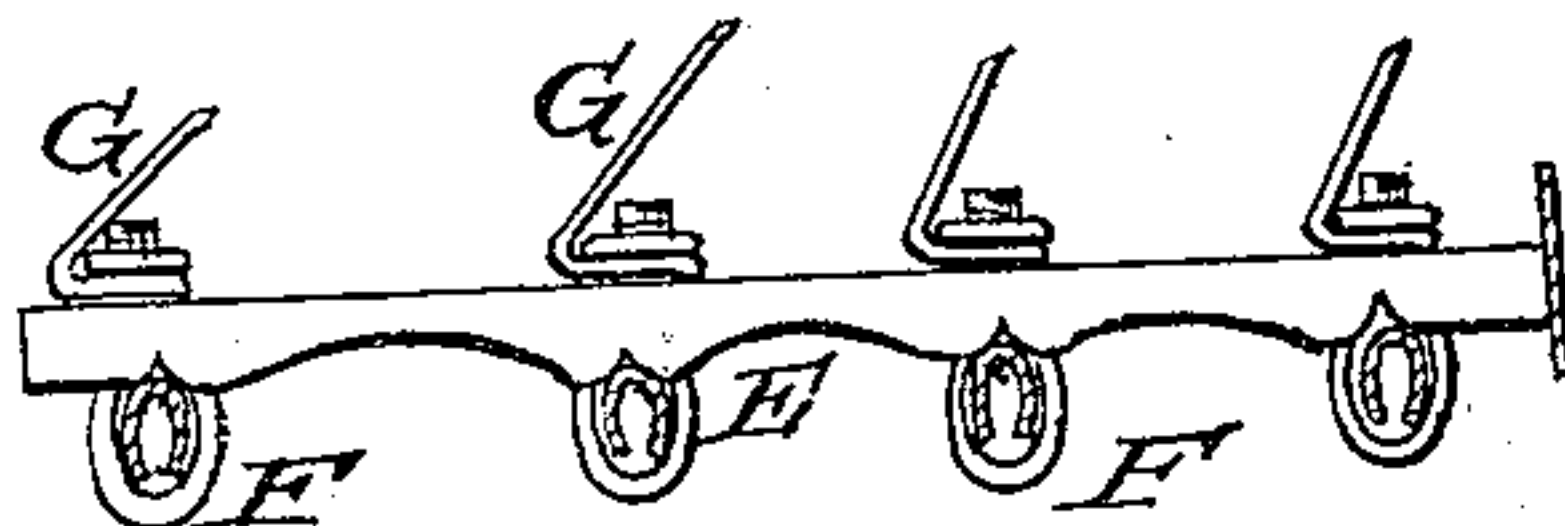
*Fig. 2*



*Fig. 4*



*Fig. 3.*



Witnesses

G. Breed  
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Inventor

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# UNITED STATES PATENT OFFICE.

A. P. GROVER, OF EUREKA, WISCONSIN.

## IMPROVEMENT IN GRAIN-CRADLES.

Specification forming part of Letters Patent No. 41,215, dated January 12, 1864.

*To all whom it may concern:*

Be it known that I, ALBERT P. GROVER, of Eureka, in the county of Winnebago and State of Wisconsin, have invented a new and useful Improvement in Grain-Cradles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in a peculiar construction of fingers for grain-cradles, and the construction and use of a stirrup, in connection with a yoke and braces for fastening the fingers.

In the accompanying drawings, Figure 1 is a perspective view of my improved grain-cradle. Fig. 2 is a view of the stirrup detached from the other parts. Fig. 3 is a transverse section of the fingers and scythe, showing also the front side of the yoke and portions of the brace-rods. Fig. 4 is a transverse section of my metallic finger.

My improved metallic cradle-finger is seen at C, Fig. 1, the other fingers in the cradle being made of wood boiled or steamed in oil. The metallic finger C is made from sheet metal, which is swaged into the form of a finger, the same being an imperfect tube, the back of the finger being left open. This construction of finger is very simple and cheap, yet very efficient. The back of this finger has less metal than the front. Therefore the finger is the strongest it is possible to make with a given amount of metal. The full strength of the tubular form is gained for the front of the finger, which is subject to a tensile strain, while the amount of metal in the back of the finger is sufficient to resist the thrust-strain to which

it is subjected in using the cradle. Therefore this finger is both cheaper and lighter than the tubular fingers heretofore invented. My metallic finger is fastened to the cradle-head D by means of a conical wedge driven into the end of the finger after the latter is inserted into a hole in the head. A yoke, E, is placed across all the fingers and each finger connected to the yoke by means of a stirrup, F, Fig. 2. These stirrups clasp the fingers, and thus serve to strengthen them instead of weakening them, as is the case with common cradles, the fingers being usually bored for fastening. The neck of the stirrup, after passing through the yoke, receives the eyes of the wire braces G, the whole being secured by the nuts H. The yoke E is bolted to the scythe, and the rake-head enters a hole in snath, the outer end of the head being held by a brace, G'. All the braces G and G' pass through the snath and are bent aside or fastened by screw-nuts upon their ends. Thus the whole cradle is firmly braced together.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A metallic cradle-finger, when made nearly tubular, the back of the finger being left open, in the manner and for the purposes substantially as set forth.
2. The arrangement and combination of yoke E with the fingers, stirrups, and brace-rods, substantially in the manner and for the purposes specified.

A. P. GROVER.

Witnesses:

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H. L. COLE.