

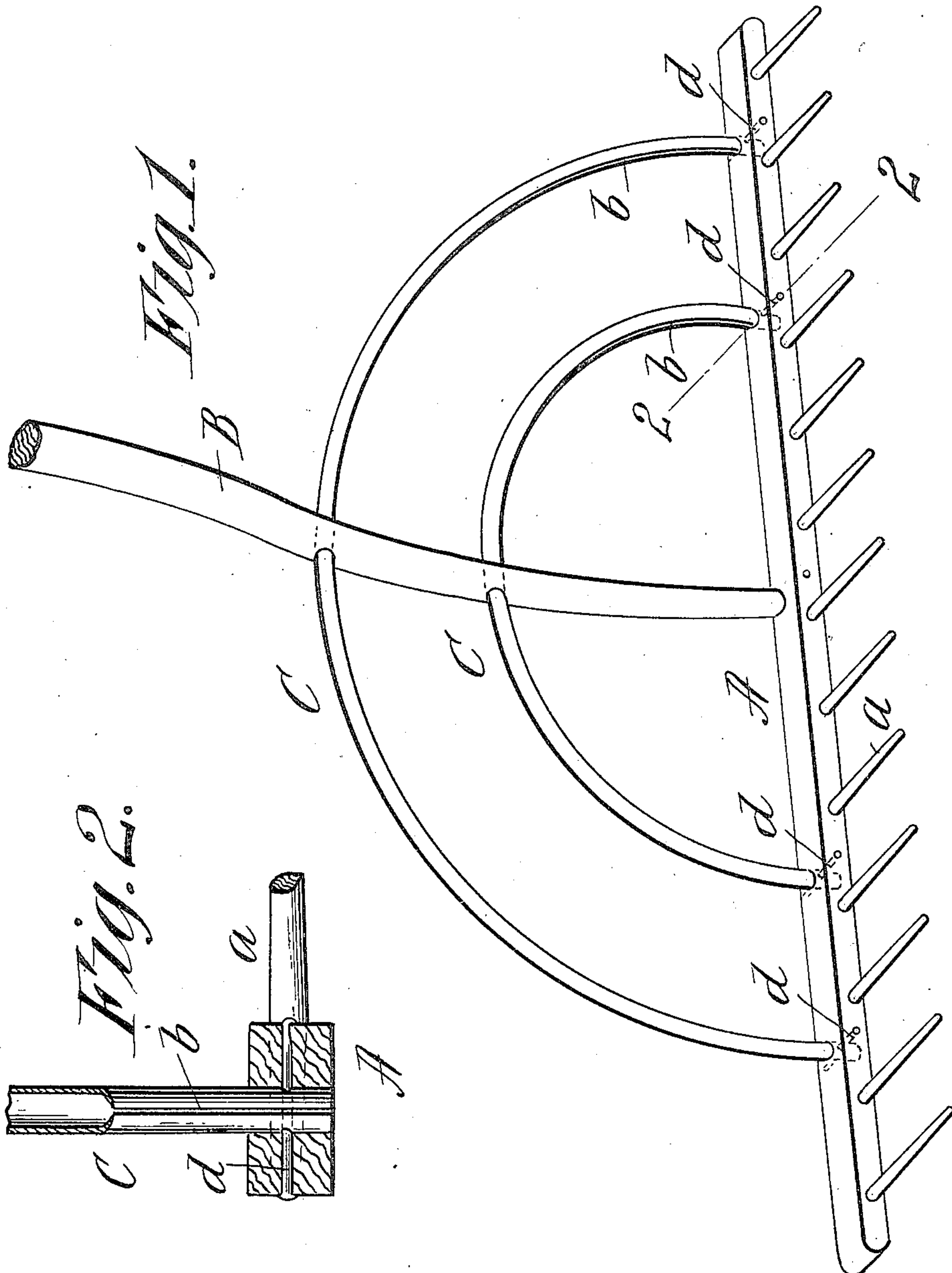
No. 812,457.

PATENTED FEB. 13, 1906.

F. A. RUGG.

RAKE.

APPLICATION FILED NOV. 20, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANCIS A. RUGG, OF GREENFIELD, MASSACHUSETTS.

RAKE.

No. 812,457.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed November 20, 1905, Serial No. 288,169.

To all whom it may concern:

Be it known that I, FRANCIS A. RUGG, a citizen of the United States of America, and a resident of Greenfield, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Rakes, of which the following is a full, clear, and exact description.

This invention relates to improvements in rakes, and pertains more particularly to a construction of the reinforcing - bows connected to and between the rake-handle and rake-head.

The object is to provide in a rake bows for bracing and strengthening the head in its connection with the stale or handle, which is of greatly-increased strength and durability, and which conduces to economy in manufacture, in that the large percentage of breakage, as has been heretofore occasioned in the employment of wood bows, is obviated.

The invention consists in a rake having bows intermediately engaged with the rake-handle and by their extremities connected with the rake-head and made of metal tubing, which while of comparatively light gage is extremely strong and contributes materially to the durability and general excellence of the implement.

The improved rake is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a view, partly in section, across the rake-head, as taken on the line 2 2, Fig. 1.

In the drawings, A represents the rake-head having the rake-teeth *a*, as usual. B is the handle, and C C the bows. The bows are constituted by curved tubes of metal—steel or iron being most practicable—and the bows may be made of tubing having an open seam *b*, or the seam may be closed or the tubing made seamless. In cases where open-seam tubing is used the bows are combined with the handle and head of the rake in such a manner that the seam *b* is located at the in-

ner or concave side of the semicircular bow. Suitable fastenings, as nails or pins *d*, are provided in connection between the extremities of the bows entered into sockets therefor in the rake-head, such fastenings penetrating the head and passing through small holes previously drilled therefor in the bows.

The bows, made of metallic tubing, as described and shown, while not appreciably heavier than wood bows, as formerly employed, manifestly add greatly to the value and excellence of the rake, as the rake thereby possesses greater strength and durability, and the bows are of the utmost uniformity as to their curvature in all the rakes made of a given pattern.

Hay-rakes or hand-rakes may of course be made to comprise any desired number of the bows, and in some cases the rakes are made in accordance with this invention, embodying three of the tubular metallic bows.

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

1. As a new article of manufacture, a rake having bows intermediately engaged with the rake-handle, and by their extremities connected with the rake-head, and made of comparatively light gage metal tubing for the production of an extremely strong and more durable implement.

2. As a new article of manufacture, a rake having bows intermediately engaged with the rake-handle, and by their extremities connected with the rake-head, and composed of unseamed metal tubing, arranged with their seam-lines at the inner or concave side of the bows.

Signed by me at Springfield, Massachusetts, in presence of two subscribing witnesses.

FRANCIS A. RUGG.

Witnesses:

WM. S. BELLOWS,
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