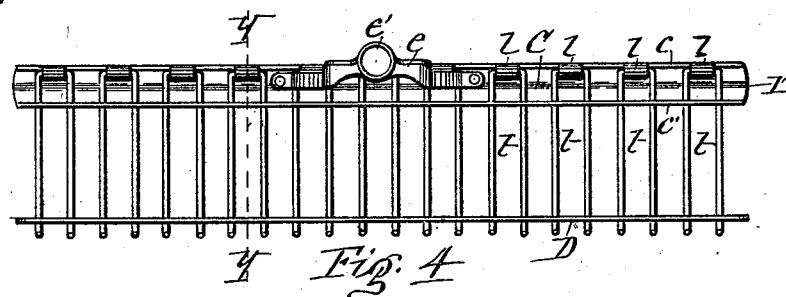
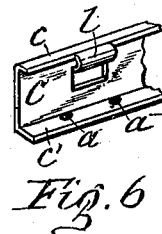
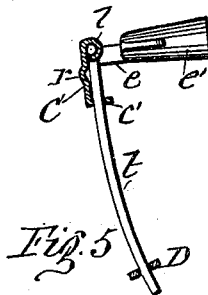
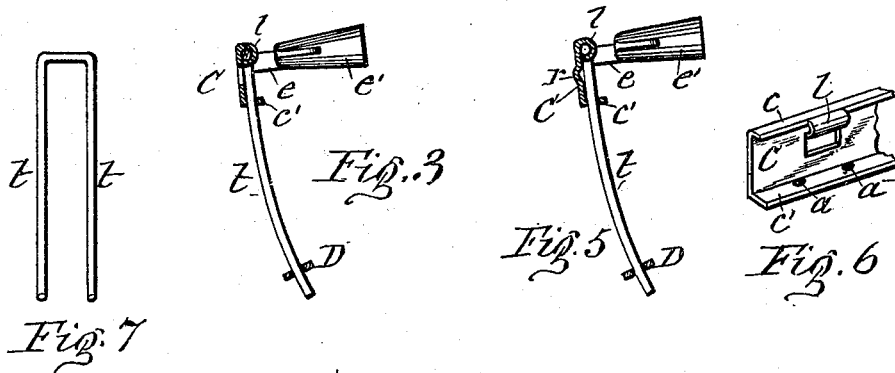
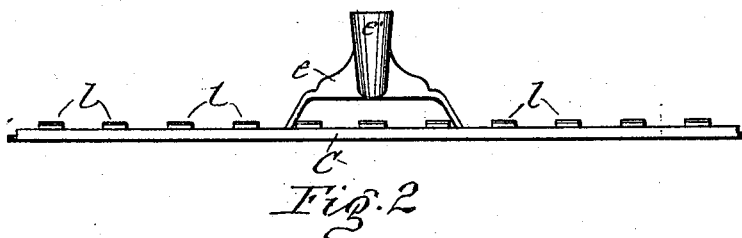
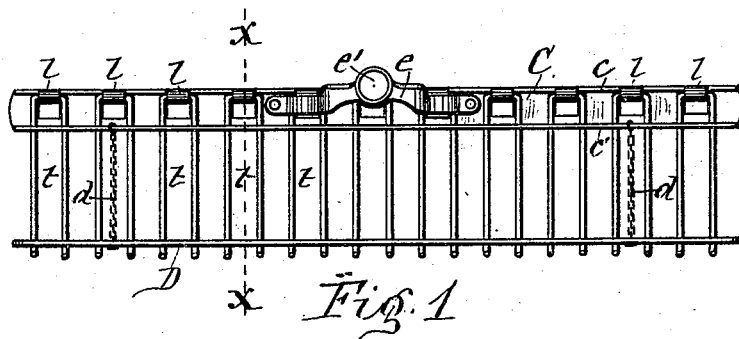


(No Model.)

J. NASE.
LAWN RAKE.

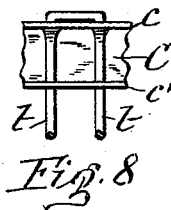
No. 492,166.

Patented Feb. 21, 1893.



WITNESSES:

C. L. Bendixon
H. M. Beamans



INVENTOR:

John Nase
By Hull, Lasso & Hull
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN NASE, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE SYRACUSE
SPECIALTY MANUFACTURING COMPANY, OF SAME PLACE.

LAWN-RAKE.

SPECIFICATION forming part of Letters Patent No. 492,166, dated February 21, 1893.

Application filed October 17, 1892. Serial No. 449,093. (No model.)

To all whom it may concern:

Be it known that I, JOHN NASE, of the city of Syracuse, in the county of Onondaga, in the State of New York, have invented new
5 and useful Improvements in Lawn-Rakes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of lawn-rakes which have the head and teeth formed of metal.

The invention consists in an improved construction of said rake-head and attachment of the teeth to said head as hereinafter fully
15 described and specifically set forth in the claims.

The accompanying drawings fully illustrate my invention.

In said drawings Figure 1 is a rear view of
20 the rake minus the handle, Fig. 2 is a top plan view of the same, Fig. 3 is a transverse section on line *x, x*, in Fig. 1, Fig. 4 is a rear view of a modification of my improved rake, Fig. 5 is a transverse section on line *y, y*, in
25 Fig. 4, Fig. 6 is a perspective view of a section of the rake-head, Fig. 7 is a detail view of one pair of teeth, and Fig. 8 illustrates a modification of the attachment of said teeth.

Similar letters of reference indicate corresponding parts.

C— represents the rake-head which I form in one piece of metal, preferably of a band of wrought or malleable iron or steel, flanged toward one and the same side at its top and
35 bottom edges as shown at —*c*— and —*c'*—. The bottom flange —*c'*— I perforate as shown at —*a*—*a*— for the reception of the teeth which are fastened to the top portion of the head. The top portion of said head I preferably provide with clinching lips —*l*—*l*—
40 which may be either formed by making longitudinal slits each terminating with upward short slits in the body of the head, as represented in Figs. 4 and 5 of the drawings, or
45 formed directly on the top flange —*c*— as shown in Figs. 1 and 3 of the drawings.

—*t*—*t*— represent the teeth of the rake. These teeth I form in pairs, each pair consisting of a piece of wire bent at its central
50 portion at right angles to the end portions

which latter are parallel to each other. Each of said pairs of teeth I fasten to the head —*C*— by passing them through two adjacent perforations —*a*—*a*— of the bottom flange —*c'*— and fastening the cross-bar of the teeth
55 to the top flange —*c*— preferably to the underside of said flange by bending the clinching lip —*l*— around said cross-bar so as to firmly embrace the same and hold it tightly against the top flange. If desired the head
60 —*C*— may have both flanges —*c*—*c'*— perforated and the teeth passed through both flanges. The cross bar of the teeth being then on top of the head and by spreading each tooth directly under one or both flanges as
65 shown in Fig. 8 of the drawings, the teeth are firmly secured to the head. In either of the described constructions the attachment of the teeth is thus effected very quickly and
70 securely.

D— represents the cleaning-bar designed to remove from the teeth the substance gathered thereon in the operation of raking. Said bar being perforated to receive the teeth
75 through it and is allowed to freely slide on said teeth. In order to prevent said bar from slipping off from the ends of the teeth I employ flexible hangers, preferably light chains —*d*—*d*— attached at one end to the head
80 —*C*—, preferably by a snap-hook, and at the opposite end to the bar —*D*—, which latter is thus suspended and carried normally near the free ends of the teeth simply by gravity of the bar. I have found in practice that
85 these chains are very efficient in their operation, owing to their flexibility. In the operation of raking the cleaning-bar —*D*— is pushed up by the substance gathered in front of the rake, and thus the chains become slack, then in raising the rake from the ground, the
90 cleaning bar drops by gravity and pushes the raked up substance from the teeth. The dropping of the bar —*D*— draws the chains suddenly taut, and in this action the chains cast from them any substance that may have
95 become lodged thereon.

e— denotes a bracket which is riveted to the head —*C*— and is formed with a socket —*e'*— for the reception of the handle. If desired the head —*C*— may be stiffened by a
100

longitudinal rib —r— in the center of its width as shown in Figs. 4 and 5 of the drawings.

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

1. The combination of a rake-head composed of metal and formed with a perforated horizontally projecting longitudinal rib on its bottom edge, and with clinching lips on its top portion, and teeth formed in pairs, each pair being formed in one piece of wire bent with its central portion at right angles to the end portions, said end portions passing through the perforation of the rib, and the central portion of the wire being embraced by one of the aforesaid clinching lips as set forth and shown.

2. The combination of a rake-head formed in one piece of a band of sheet metal braced by longitudinal flanges projecting toward one and the same side at the top and bottom edges

of the band and provided with clinching lips at its top portion, and with perforations in its bottom flange, and teeth formed in pairs of a wire having its central portion bent at right angles to the end portions, said end portions passing through the aforesaid perforations, and the central portion resting against the top flange and embraced by the clinching lip, substantially as described and shown.

3. The combination with the rake-head, rake-teeth and cleaning bar, of chains suspending said cleaning bar from the rake-head and carrying the same near the free ends of the teeth solely by gravity of the bar, as set forth.

In testimony whereof I have hereunto signed my name this 11th day of October, 1892.

JOHN NASE. [L. S.]

Witnesses:

H. M. SEAMANS,
J. J. LAASS.