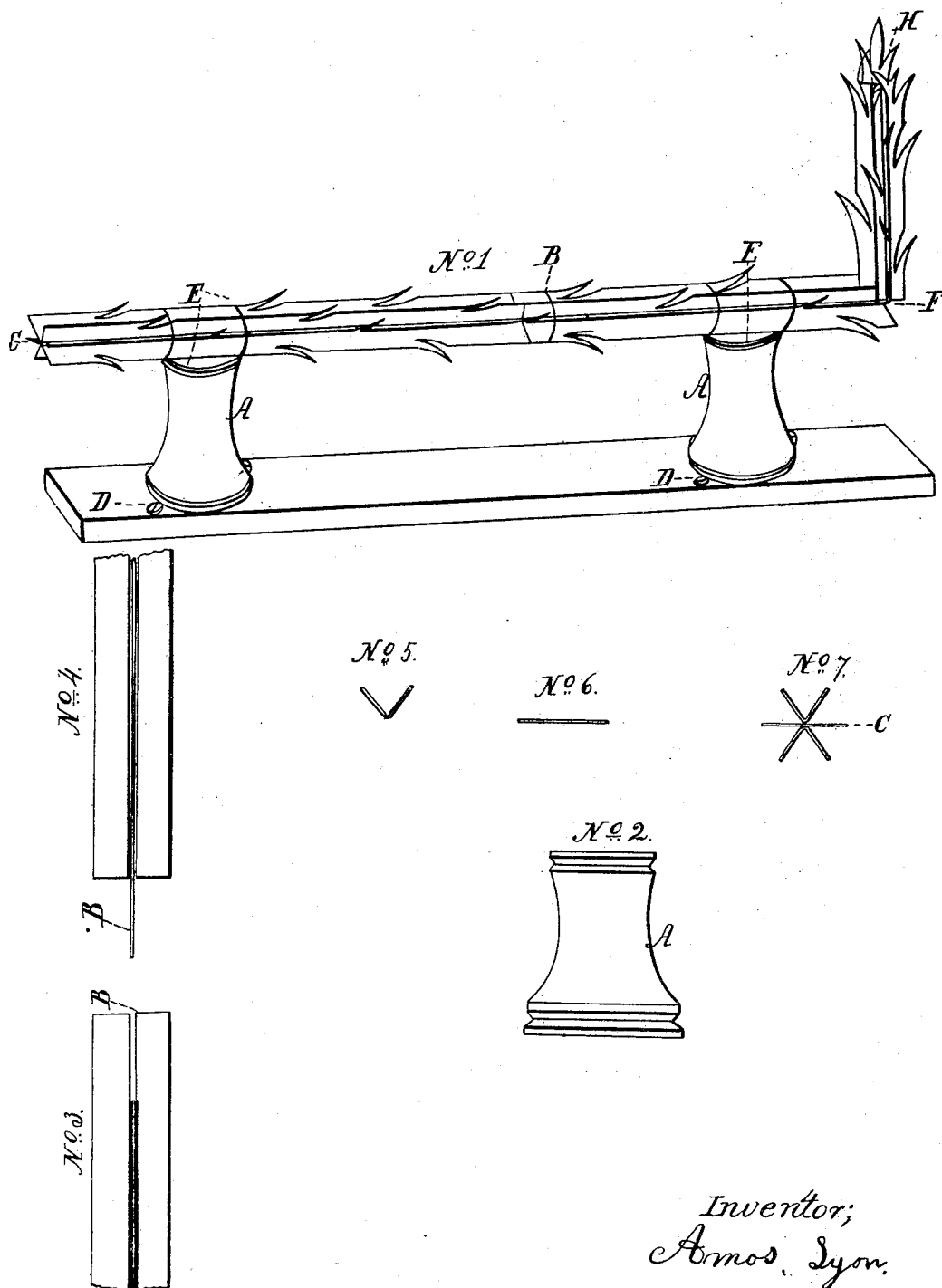


A. LYON.
LIGHTNING ROD.

No. 11,261.

Patented July 11, 1854.



Inventor;
Amos. Lyon.

UNITED STATES PATENT OFFICE.

AMOS LYON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN LIGHTNING-RODS.

Specification forming part of Letters Patent No. **11,261**, dated July 11, 1854.

To all whom it may concern:

Be it known that I, AMOS LYON, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and improved mode of constructing lightning-rods and of attaching the same to buildings; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon.

The nature of my invention consists, mainly, in the use of sheet-copper (on other metals to produce the same result) made in such a form for a lightning-rod as to present to the electrical atmosphere a proportionally large amount of surface with but a smaller amount of metal than is ordinarily used for the same purpose.

To enable others to make use of my invention, I will proceed to describe its construction and the manner of adjusting the rod to buildings.

I take sheet-copper about the thickness of sheathing or wash-boiler copper, five feet long, more or less, and cut it into strips three-fourths of an inch wide, or according to the size rod I wish to make, one of which I leave in a flat form, as may be seen in the accompanying drawing No. 6. The other two I bend (in a machine for the purpose) at their center lengthwise to an angle of sixty degrees, an end view of which may be seen at No. 5. The two, when bent, I solder, the one upon one side of the flat piece, in spots about six inches apart, and the other upon the other side thereof, in the same manner as represented in drawing No. 7 at letter C. When thus put together six continuous edges are presented equidistant from each other.

This rod is made continuous throughout its entire length, when adjusted upon a building, by letting the ends lap in the manner represented in drawings Nos. 3 and 4 and letters B B. An opening being left in No. 3 and a tongue upon the end of No. 4, when put together may be fastened by a wire, as is seen in drawing No. 1 at letter B. Throughout the

entire length of this rod I cut in upon its edges, with shears, in such manner that needle-like points are presented in different directions, as may be seen in drawing No. 1, from letters H to C. The points are intended to receive or break up the force of a current of electricity in its passage to or from the earth.

In adjusting this rod to buildings where the case requires it to be bent, I cut in upon opposite sides sufficiently near each other and deep enough to enable me to bend as I please. (See drawing No. 1 at letter F.) I attach this rod to buildings by the use of blocks of lignumvitæ wood as non-conducting mediums, made in the following manner: I turn them out in a bell form about one and three-fourths inch in length, leaving the base about one and a half inch and the other end about one inch. Near each end I cut a groove of suitable size to admit of a wire fastening once or more around. (See drawing No. 2, as also No. 1 at letter D.) In winding on this wire I have a pin upon opposite sides of the block, around which I form the eye for a nail or screw with which to fasten it to the building. At the smallest end of the block I wind a double wire and twist it on opposite sides, then pass the two wires around the rod and twist firmly to the same. (See drawing No. 1 at letter E.) These blocks I place about five feet apart, or as often as may be required to sustain the rod.

What I claim as my invention, and desire to secure by Letters Patent, is—

The metallic surface lightning-rod made in the form herein described, or in any and every form where sheet-copper, sheet-brass or iron, (either of which may be coated with metal or not,) and where the surface is all or nearly all exposed to the electrical atmosphere, and is adapted to present points upon its edges throughout its entire length, according to the mode herein described.

AMOS LYON.

Witnesses:

DARING A. WOOD,
LEWIS C. MUNN.