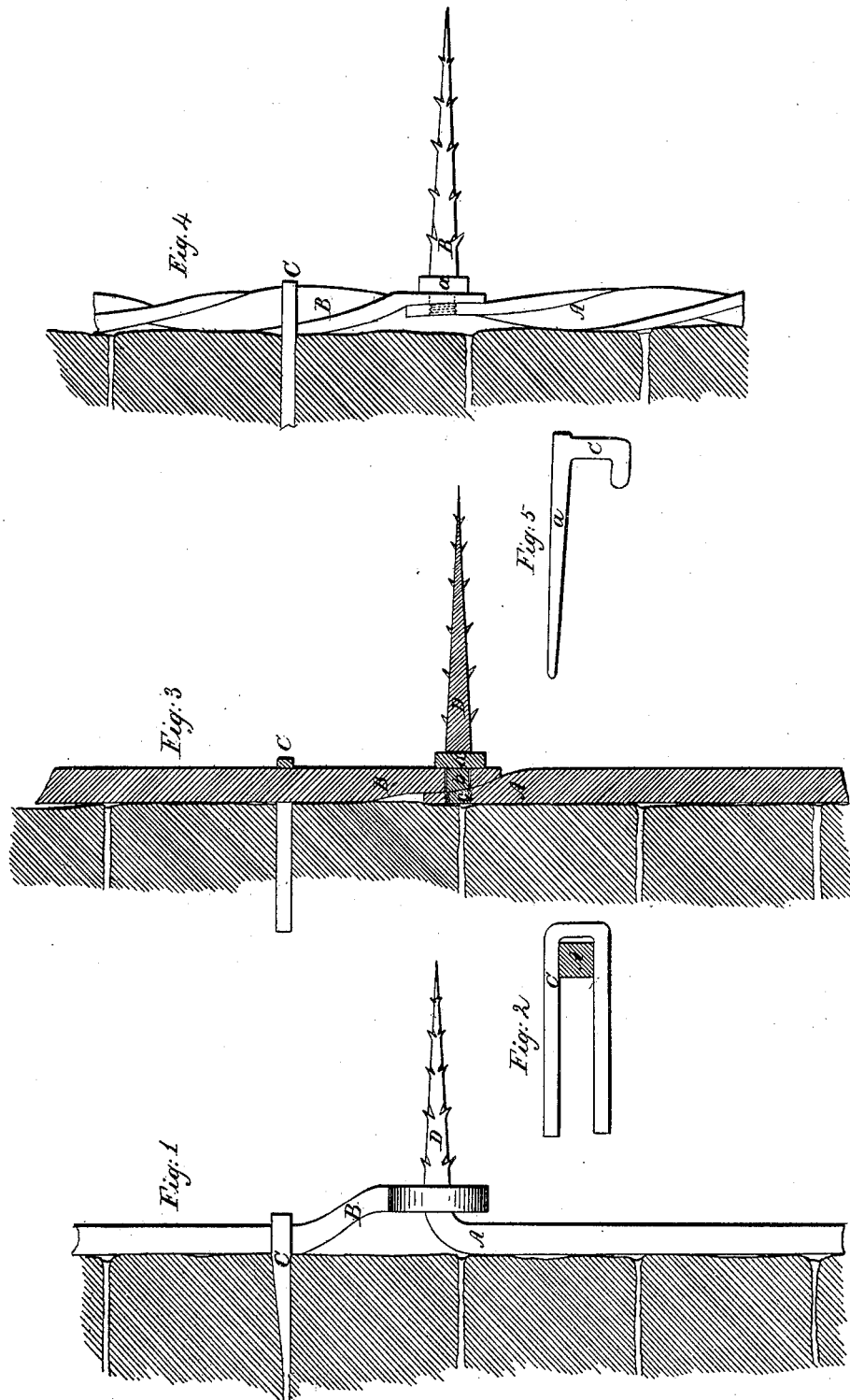


J. E. STRONG.

Lightning Rod.

No. 2,056.

Patented April 19, 1841.



UNITED STATES PATENT OFFICE.

JUSTIN E. STRONG, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN THE MODE OF CONNECTING THE RODS OF LIGHTNING-CONDUCTORS, &c.

Specification forming part of Letters Patent No. **2,056**, dated April 19, 1841.

To all whom it may concern:

Be it known that I, JUSTIN E. STRONG, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Connection of the Rods of Lightning-Conductors, and the application of the discharging-points thereto; and that the following is a full and exact description of the same, reference being had to the accompanying drawings, which, taken in connection herewith, form my specification, setting forth the principles of my improvement, by which it may be distinguished from other inventions of a like character, and such parts or combinations thereof as I claim, and for which I solicit an exclusive privilege to be secured to me for fourteen years by Letters Patent.

Figure 1 represents an elevation of the ends of two adjacent rods of a lightning-conductor as generally constructed and applied to a building, in which it will be seen that the end A is bent at right angles, pointed, and passes through a hole formed through the end B, which is hammered out or bent round for the purpose. The whole is secured to the wall of the house by a staple, C, Figs. 1 and 2, driven into the joints between the bricks, or into the wood-work just above the discharging-point, as seen in the drawings. To this method of fastening there is a serious objection, the nature of which is as follows: It often happens that the staple becomes loosened, owing to the action of the wind on the rod, or from the same not having been properly driven. When this is the case the lower part, B, of the upper joint will hang off or away from the ragged point D more or less, and by destroying the connection of the joints the power of the rod as a conductor of the electric fluid is often materially if not wholly impaired.

My improved method of connecting the joints so as to remedy the defect above described, and at the same time to render the rod a more perfect conductor, owing to a better or closer union of the parts thereof, is ex-

hibited in Figs. 3, 4, 5, and consists in hammering out or flattening the ends of the rods A B and placing one upon the other, as seen in the drawings.

The point D is of copper, and is formed with a square or other proper shaped shoulder, *a*, and in the rear of this shoulder is a short shank, *b*, the same being represented in section in Fig. 3, which exhibits a square iron rod, and in elevation in Fig. 4, which shows a twisted copper rod. The shank *b* passes through a suitable hole in the flattened part of the rod A, and thus the rods are secured together; and should the staple C, Figs. 3, 4, 5, be loosened, the bars cannot become separated from each other, so as to render the rod inefficient as a conductor of the electric fluid.

The staple I use is cast of copper or brass and has but one leg, *a*, as seen in Fig. 5, which is driven into the wall, while the other part serves as a hook, which clasps and secures the rod.

When the lightning-rod is of iron I apply copper points thereto, which, being less liable to oxidation than iron points, are much preferable to the latter.

I claim—

The mode hereinbefore set forth of connecting the joints of lightning-conductors, and constructing and applying the discharging-points thereto—that is to say, by forming each point with a shoulder and a shank in rear of the same, the said shank having a screw cut on the same and passing through one of the rods and being screwed into the other, the whole being arranged and applied to a building, substantially as described.

In testimony that the above is a true description of my said invention and improvement I have hereto set my signature this 18th day of March, in the year 1841.

JUSTIN E. STRONG.

Witnesses:

EZRA LINCOLN, Jr.,
GEO. D. DANA.