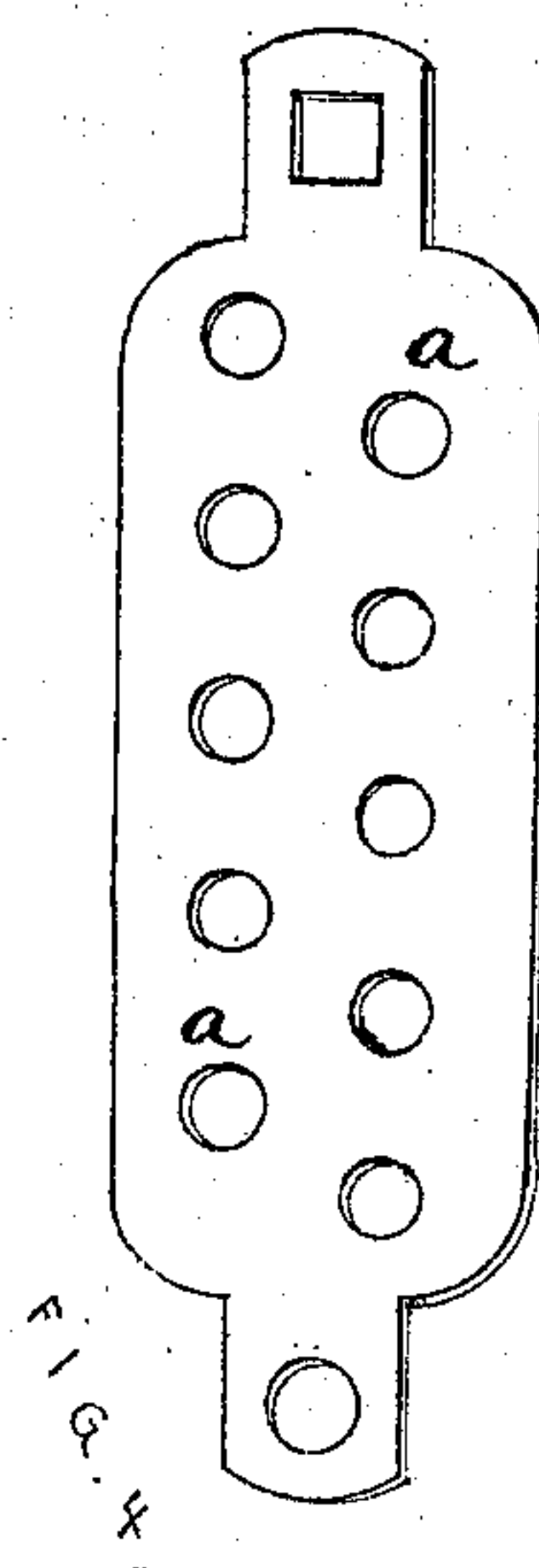
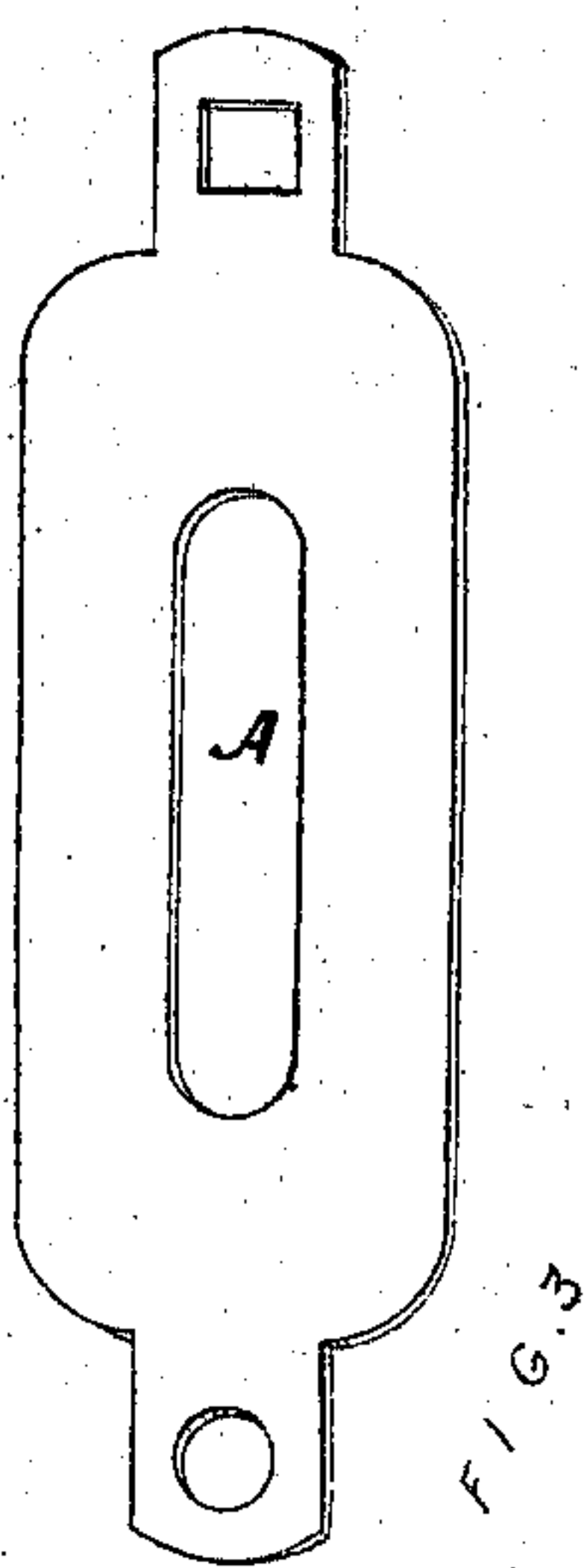
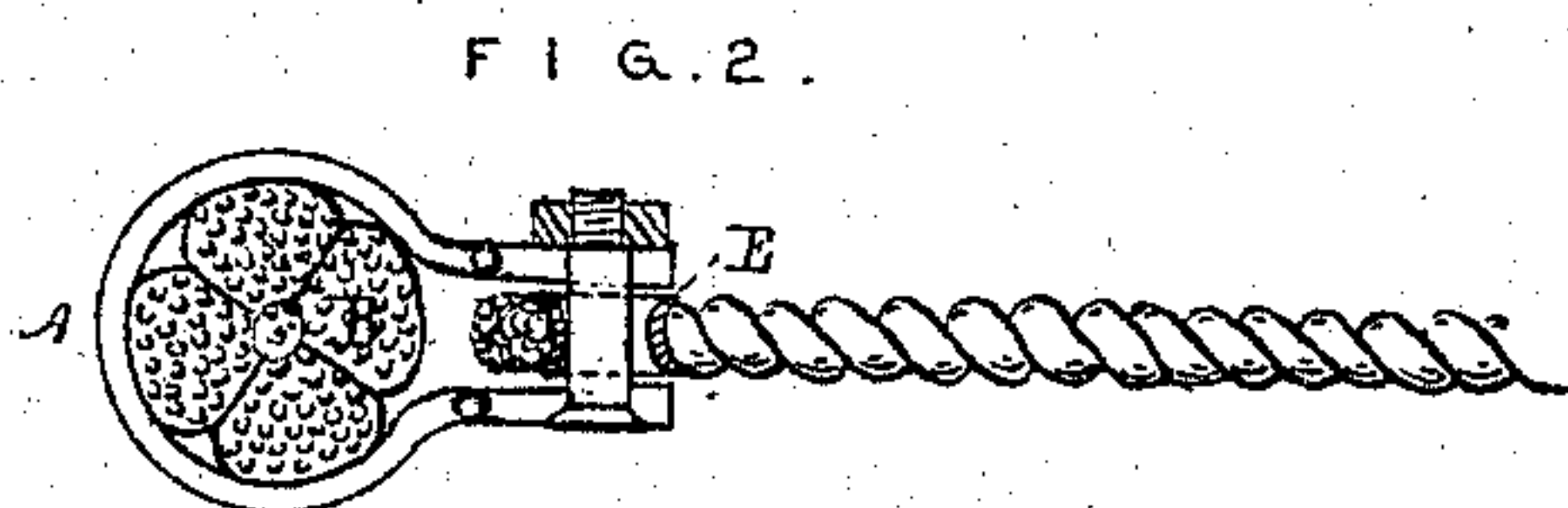
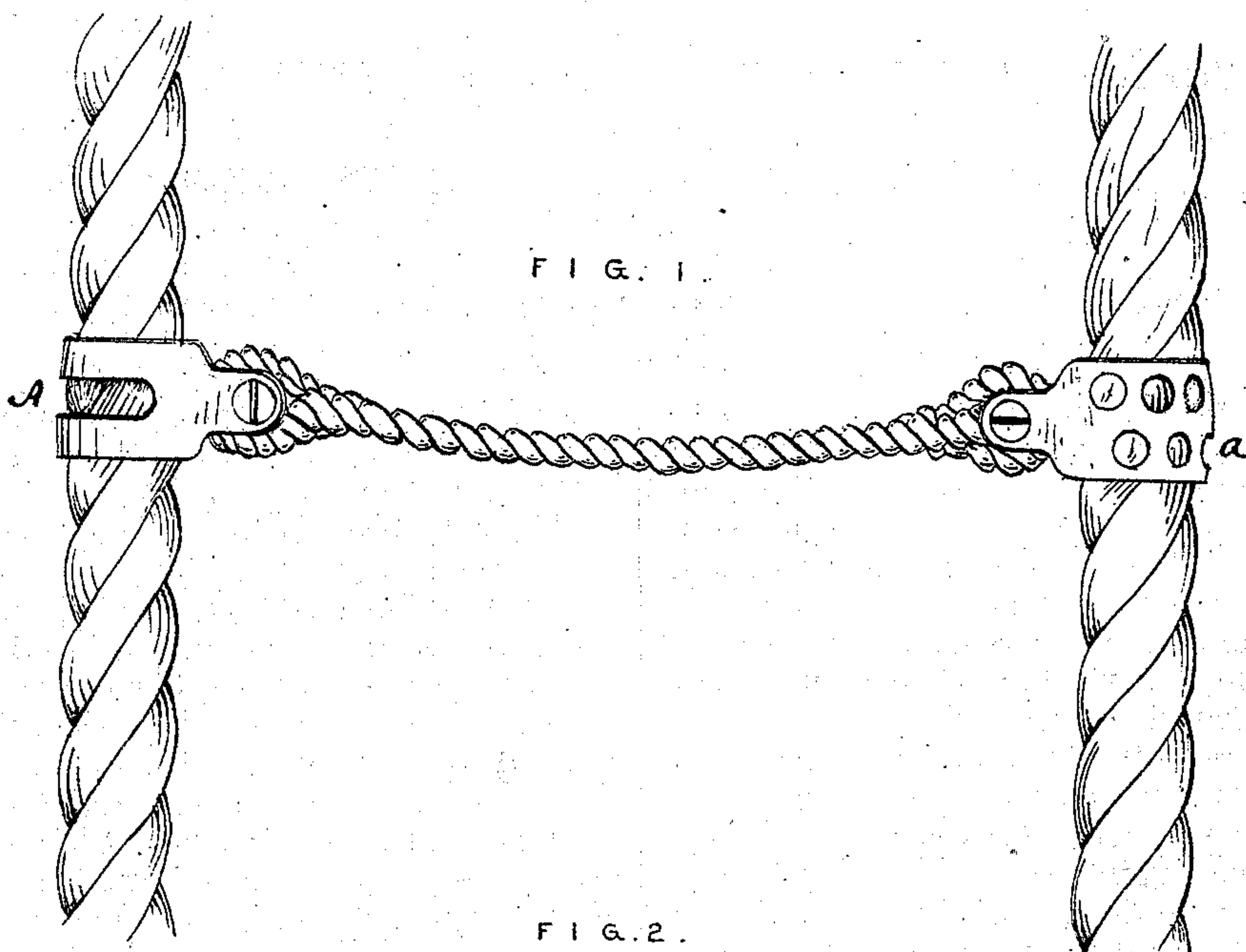


JOHN C. KNOWLTON.

Improvement in Ratlin Attachments for Rigging.
No. 120,820.

Patented Nov. 14, 1871.



WITNESSES.

B. McLaughlin
Peter F. Hughes

INVENTOR.

John C. Knowlton
per B F Thurston
att'y

UNITED STATES PATENT OFFICE.

JOHN C. KNOWLTON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN RATLIN ATTACHMENTS FOR RIGGING.

Specification forming part of Letters Patent No. 120,820, dated November 14, 1871.

To all whom it may concern:

Be it known that I, JOHN C. KNOWLTON, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Clasps used in Ratlin Attachments; and I do hereby declare that the following specification, taken in connection with the drawing making a part thereof, is a full, clear, and exact description of the same.

Figure 1 represents the front view of a shroud furnished with my improved clasp. Figs. 3 and 4 are front views of the improved clasp before it is applied to the rigging.

The present invention is an improvement upon the attachment for ratlins for which Letters Patent were granted to me dated December 27, 1870. Since the device in that patent has been introduced into use it has been found that moisture is liable to collect on that part of the rigging which is covered by the clasps used for securing the ratlins to the shrouds; and from this cause there is a liability that in time the rigging will become weakened by rot. To remedy the difficulty I propose to make the clasps in a way which will enable the air to reach the shroud with suf-

ficient freedom to allow any moisture which collects underneath the clasp to evaporate.

I therefore cut in each clasp one or more slots, A, Fig. 3, before it is bent to embrace the shroud; or, if preferred, perforate it with holes *a*, as seen at Fig. 4. The particular form of the openings in the clasp is quite immaterial so long as they serve to admit air to the rigging and allow of the escape of moisture by evaporation.

The ratlin attachment otherwise than as above mentioned is to be constructed and applied as set forth in the Letters Patent before mentioned as granted to me December 27, 1870, or in any other preferred form in which a clasp is employed.

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

The improvement in shroud-clasps used in ratlin attachments, which consists in making openings A or *a* through the same, substantially as described, for the purposes specified.

JOHN C. KNOWLTON.

Witnesses:

A. J. CUSHING,
PETER F. HUGHES.

(138)