

A. Jouan.
Screw Propeller
N^o 22,731. Patented Jan 25, 1859.

Fig: 1.

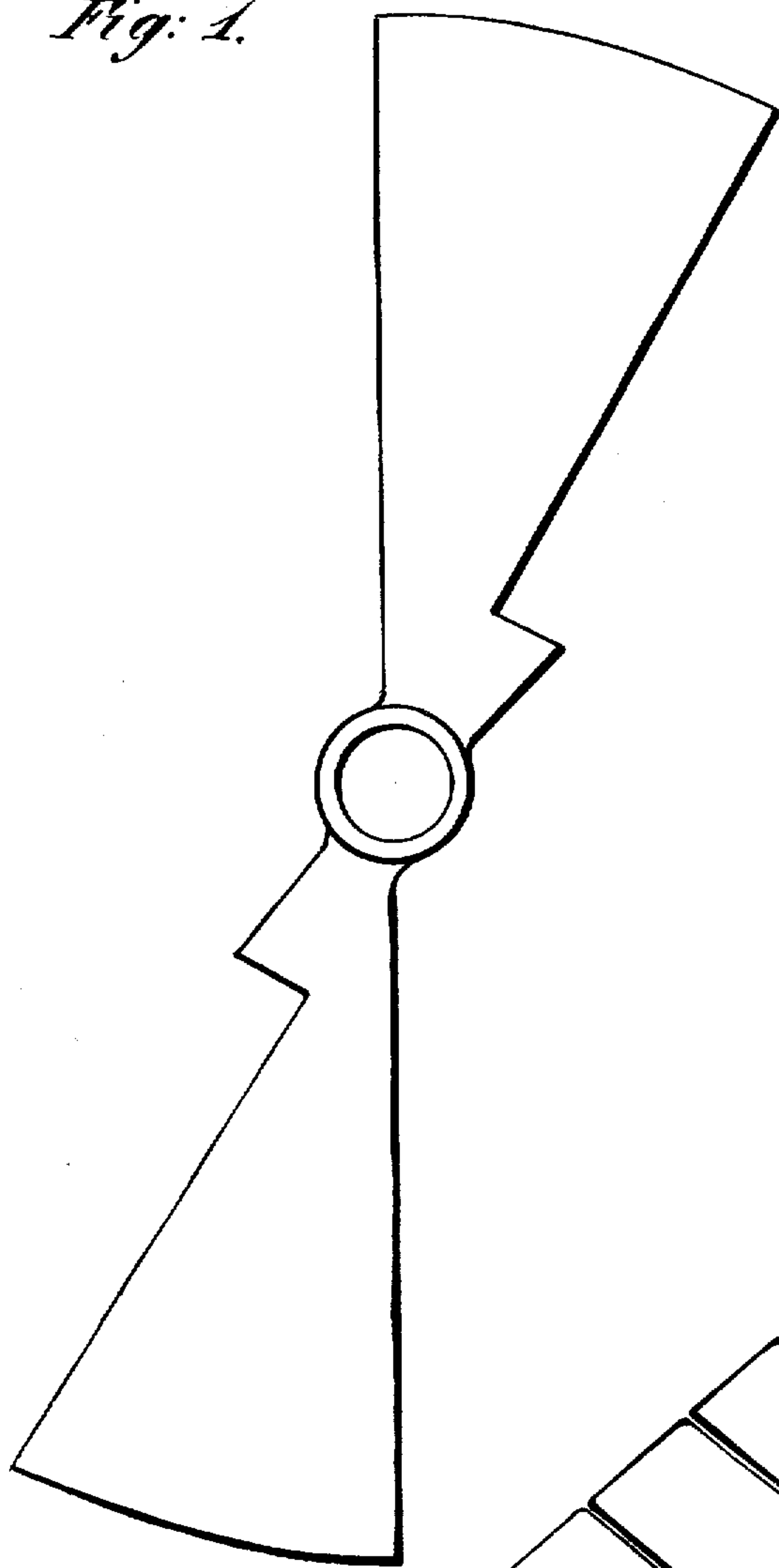
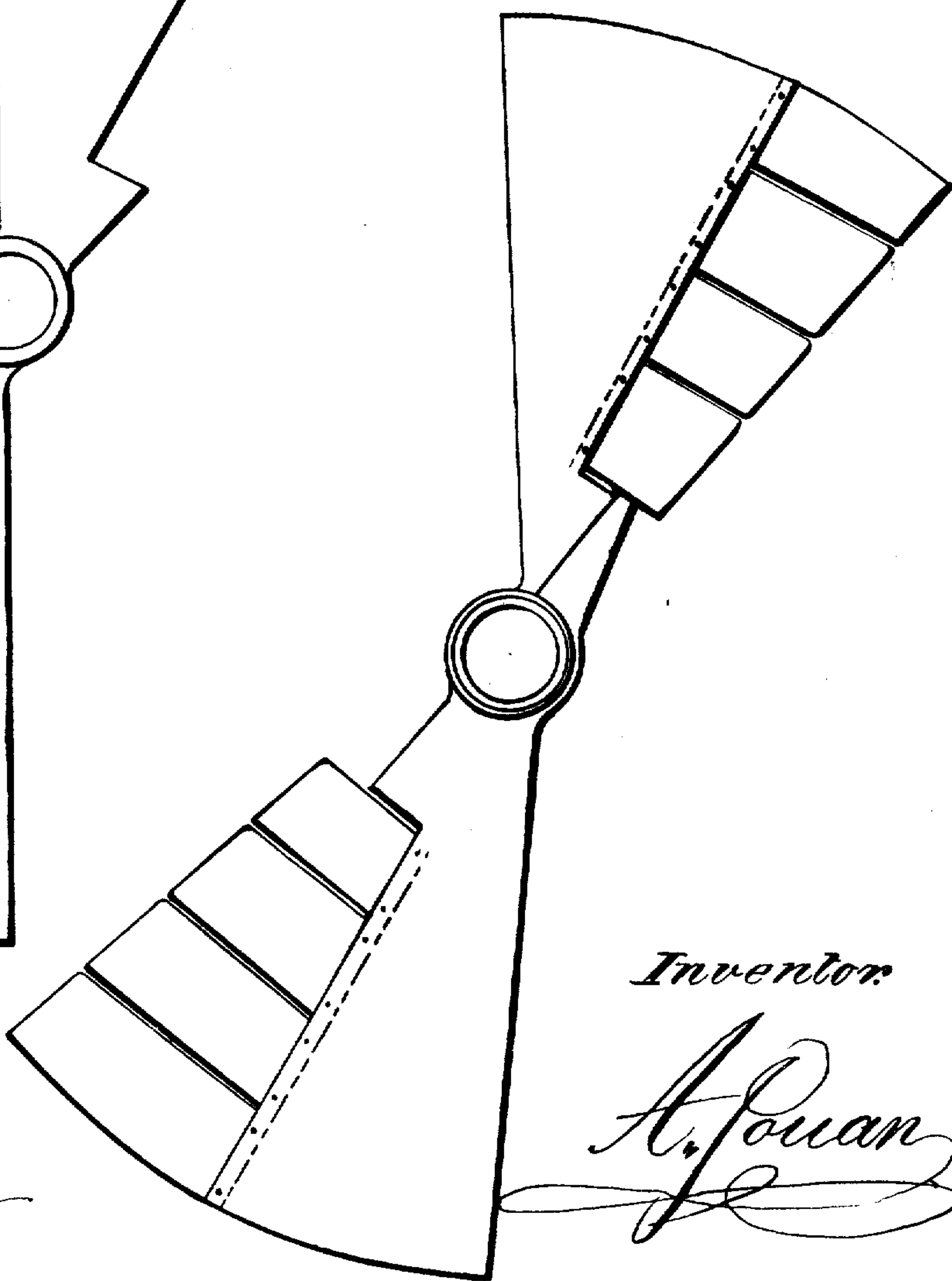


Fig: 2.



Witnesses:

E. B. George

T. T. Everett

Inventor:

A. Jouan

UNITED STATES PATENT OFFICE.

AUGUSTUS JOUAN, OF SAN FRANCISCO, CALIFORNIA.

SCREW-PROPELLER.

Specification of Letters Patent No. 22,731, dated January 25, 1859.

To all whom it may concern:

Be it known that I, AUGUSTUS JOUAN, of San Francisco, California, have invented a certain Improvement in the Construction of Ships' Propellers; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings and to the letters marked thereon.

10 Of the drawings forming part of this specification Figure A is a perspective view of the propeller without elastic blades, Fig. B is a view of the propeller complete.

15 My invention consists in making elastic a part of ships' propeller blades, cutting off for that purpose a portion of the ordinary rigid blades, as shown by Fig. A and substituting for it, elastic blades, as shown by Fig. B. These additional blades can
20 be made of steel properly tempered to cause greater vibration, galvanized by the process of galvano plastic or otherwise and so that when on the stand, their curve will follow that of their collateral half blade, their
25 greater thickness diminishing gradually lengthwise to an edge, their length to be in proportion with the diameter of the propeller, but long enough to cover a greater surface, about one third greater than the
30 surface of its collateral half, though rigid blade, as shown by Fig. B. The greater width of these elastic blades must not be

more than fifteen inches individually. They can be made firmly adherent to the rigid parts of the blades by means of rivets, so that any one could be easily replaced, or by any means that will allow of their removal in case of injury. Each elastic blade must be independent of any other, yet they must stand close together.

40 One of the advantages resulting from this invention, is that the whole propeller is of less weight in material, yet its central part is as firm and equally as heavy as in ordinary propellers. By this construction the rigid part of the blade propels by direct pressure and the elastic additional blades, in part likewise, but mostly by the vibration of their elasticity. The vibration commences when the blade is vertically rising in its rotary motion, progressing till the blade descends in dead water, then the vibration operates and causes an impulsion ahead.

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

Combining with the rigid blades of a propeller, an elastic blade, substantially as described.

A. JOUAN.

Witnesses:

T. T. EVERETT,
CHAS. EMERSON.