

# J. LOFVENDAHL

## SHUTTLE

117183

PATENTED JUL 18 1871

Fig 1

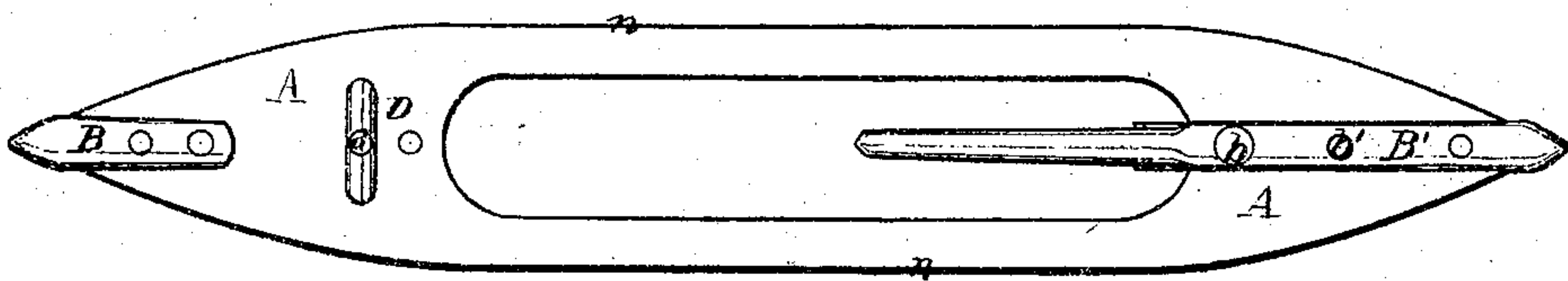


Fig 2

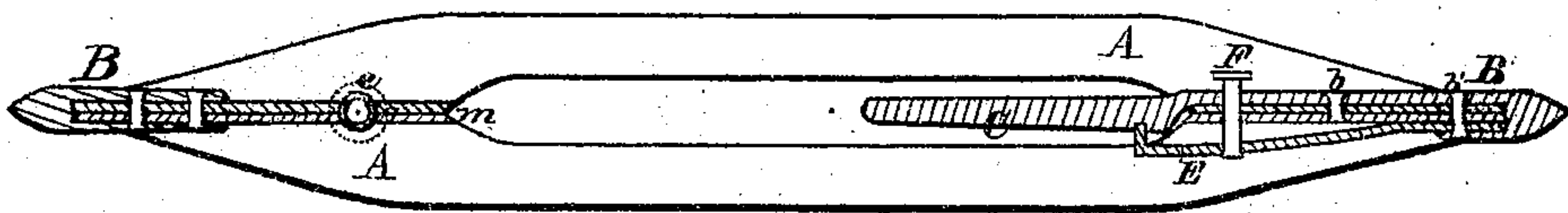
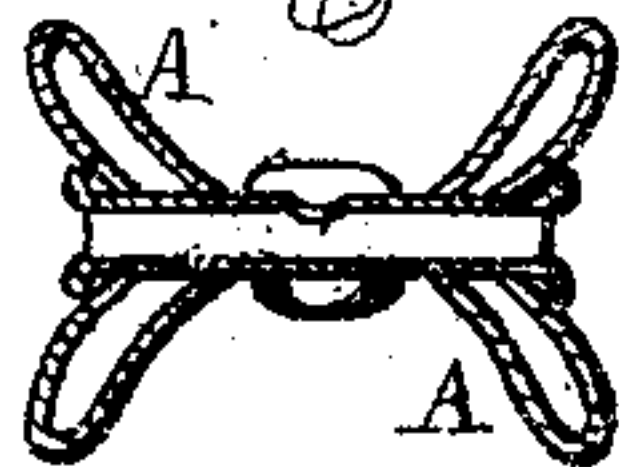


Fig 3



Witnesses  
F. B. Curtis.  
J. M. Hynes.

Inventor  
J. Lofvendahl.  
Chipman Fosmire & Co.  
Atty.

# UNITED STATES PATENT OFFICE.

JOSEPH LOFVENDAHL, OF WOONSOCKET, RHODE ISLAND.

## IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. 117,183, dated July 18, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH LOFVENDAHL, of Woonsocket, in the county of Providence and State of Rhode Island, have invented a new and valuable Improvement in Metallic Shuttle; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a side view of my invention. Fig. 2 is a central vertical longitudinal section. Fig. 3 is a detached view.

My invention relates to loom-shuttles; and consists in the construction and novel arrangement of devices intended to render it a simple, strong, and durable shuttle, affording ready means for the attachment and removal of the cap; and it further consists in constructing the shuttle of a skeleton frame of sheet metal in two or more pieces, bent to the requisite form, and united at their ends by pointed metallic caps or tips.

In the accompanying drawing illustrating this invention, A A' represent two pieces of sheet metal of elongated elliptical form and attached together at their ends, as shown on the drawing. These pieces are connected or united at the ends by brazing, welding, and riveting to the slotted pointed caps B B'. The cap B' is provided with a spindle, C, upon which the cap is placed. This spindle C and cap B' are made of one piece of metal and securely riveted to the metal pieces A A' at b b'. The spindle C is stationary and short, so that the caps may be easily adjusted and removed at pleasure. D represents a tube passing through one end of the shuttle with an opening at or near its center, so that the yarn may be blown through the tube instead of being drawn through by suction. The yarn is inserted

in the opening *d* in the center of the tube and blown through and out on either side of the tube. The common method of threading the shuttle is to place the "wadded" end of the yarn in the eye and then to "suck" it through the eye by applying the mouth or lips to the outer end of the eye-piece—a very difficult and unhealthy operation, as the effort required carries the dust and lint from the yarn into the lungs. E represents a steel spring-catch for confining the bobbin to the spindle, it being riveted to the cap B' and metal pieces A A', as shown on the drawing in Fig. 2. The spring-catch is thrown out of engagement with the groove of the bobbin-head when forced down by means of a thumb-piece, F, arranged and secured in the spring-catch, as shown. In this manner a bobbin can be easily removed from the shuttle and another put in its place by depressing the thumb-piece. The sheet-metal pieces A A' are slotted, each at *z*, to receive the bobbin, and at *e* to receive the tube D. The face of each piece A A' is concave, being bent symmetrically from its fellow with which it is in contact along the center line *m*. The edges of each sheet are then curled or bent over in such a manner that rounded corners or runners *n n* shall be formed.

I claim as my invention—

1. The sheet-metal shuttle herein described, consisting of the pieces A A', caps B' C, and tube D, substantially as specified.

2. In a shuttle, the yarn-tube D provided with the central opening *d*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH LOFVENDAHL.

Witnesses:

FRANCIS L. O'REILLY,  
GEORGE A. WILBUR.