J. McCrone.

Winding Bobbin.

No. 14,463. Patented Mar. 18, 1850.

Fig. 1.

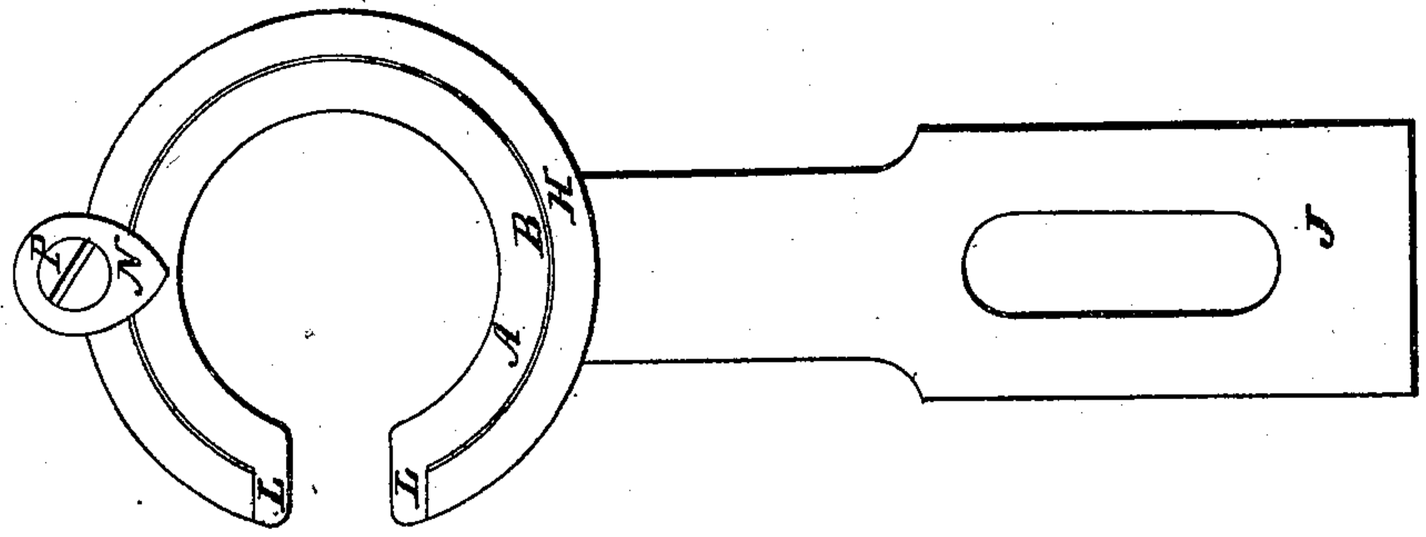


Fig. 2.

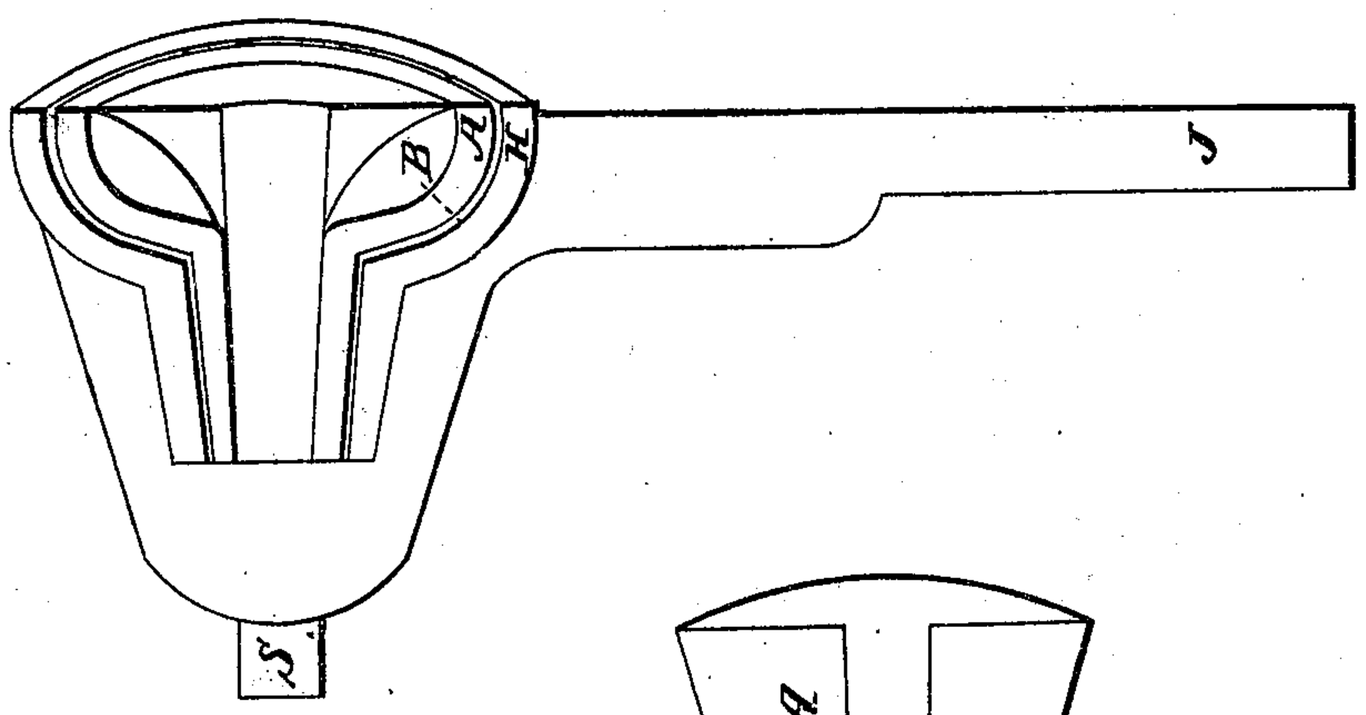
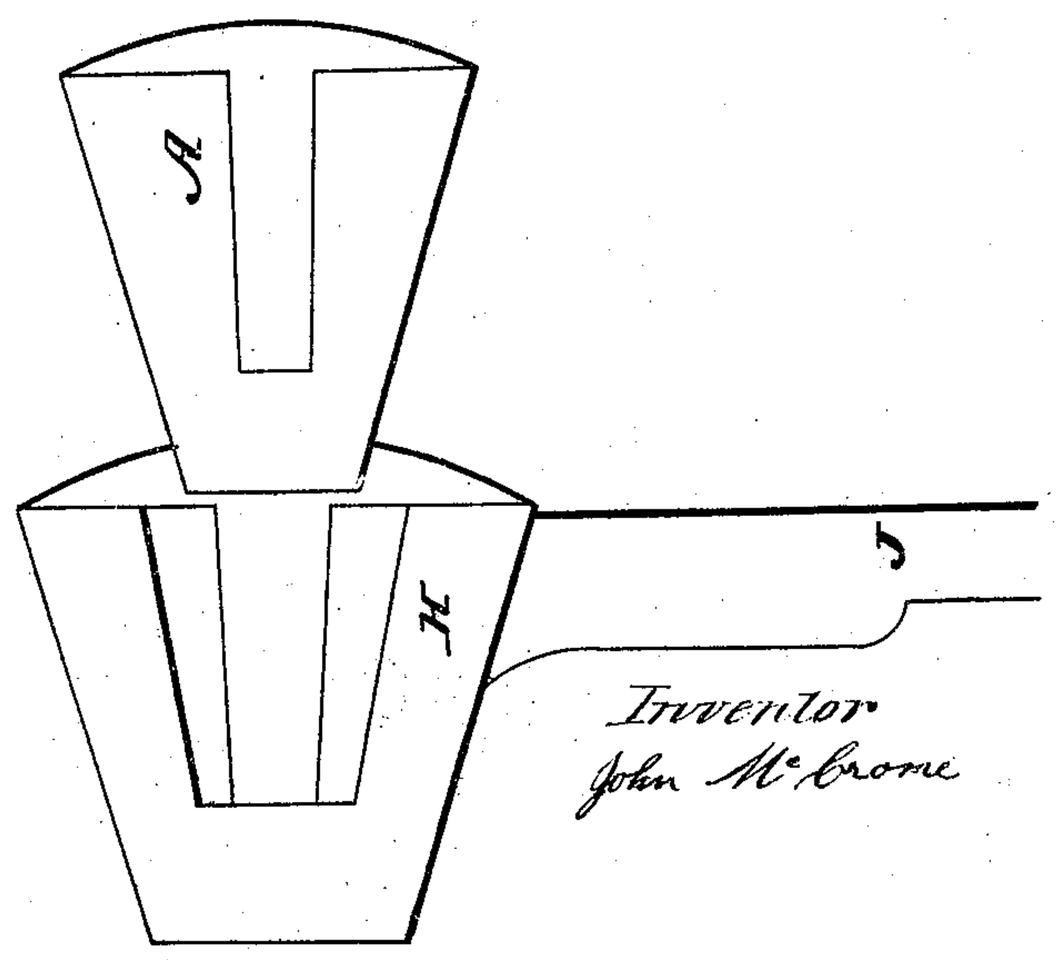


Fig. 3.



Inventor
John McCrone

UNITED STATES PATENT OFFICE.

JOHN McCRONE, OF THOMPSONVILLE, CONNECTICUT.

CONE-TUBE FOR WINDING-FRAMES.

Specification of Letters Patent No. 14,463, dated March 18, 1856.

To all whom it may concern:

Be it known that I, JOHN McCRONE, of Thompsonville, in the county of Hartford and State of Connecticut, have invented a new and useful improvement in cones or trumpets for shaping and consolidating the yarn on bobbins as used for winding woolen and cotton yarns and yarns of various other material; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 exhibits a vertical section of a socket either of metal or wood, with the crystal cone and zinc lining inserted. Fig. 2 exhibits a vertical transverse section of the same thing. Fig. 3 exhibits a vertical transverse section of the socket with the crystal cone detached; like letters referring to like parts in each figure.

To enable others skilled in the art to make and use my invention, and for the purpose of describing more fully the nature of my improvement I will state that the plan or method now in general use is a cast iron cone or trumpet in the use of which it has always been found that a great amount of friction was produced by the contact of the yarn with the metal, creating heat to such an extent when some particular colors of yarn were being wound as to scorch or burn the fiber rendering the yarn entirely worthless for the purpose for which it was originally intended.

My improvement it is found entirely obviates the difficulty above mentioned; by the use of it much less friction is produced; yarns of any color or of the shades that could not be wound with the old method can be worked with my improvement without injury and come from the machine entirely sound and perfect. I found that by inserting a crystal cone, as shown by Fig. 3, letter A, into a socket made or constructed of wood the desired object was obtained, but as an iron or metal socket being much more convenient, easier made more compact and durable it was my desire to substitute it in the place of wood. On experimenting I ascertained that a certain amount of heat was necessary to enable the bobbin as it comes in contact with the crystal to turn with ease and that with the iron socket, the iron being a conductor of heat and cold, the amount of heat required could not be realized. My attention was called to remedying this defect. After trying various experiments I found that by introducing a lining of zinc as shown by Figs. 1 and 2, letters, B, B, between the crystal A, A, and the iron socket H, H, the trouble was obviated and the heat created by the friction of the yarn against the crystal cone A, A, as the bobbin revolved was retained, thereby producing the same desirable effect as I had before ascertained to be produced by inserting the crystal cone in the wood socket. I have also found that it was desirable to have another lining between the zinc and the crystal cone for the purpose of softening down and preventing the breakage of the crystal as it came into connection with the metal, and have accordingly used for this purpose a lining of thin buckskin which is not represented in the drawings. I have not represented the crystal cone in the drawings as a thing entire of itself that is independent of a wood or metal socket as I consider the method represented in the drawings superior.

I will now proceed to describe my improvement more fully referring to the drawings. Fig. 1, letter A, represents an end view of the crystal cone or trumpet as inserted in the socket; L, L, represents the flanges of the cone which project through a slot in the socket for the purpose of preventing the yarn from wearing against the socket; N represents a projection on the socket with a button attached thereto confined by a screw P for the purpose of securing the cone permanently in its place; on the opposite end of the socket is a similar projection with a button attached for the same purpose not shown in the drawing; B or dotted line in Fig. 1, represents a zinc lining inserted between the crystal cone and the metal socket as described above; J, Fig. 1, represents the arm of the socket with a slot therein for the purpose of receiving a bolt in order to secure it to the machine.

S Fig. 2 represents the end of the bobbin passing through the cone.

What I claim as my invention, and desire

to have secured to me by Letters Patent, is—

The use of crystal as a material for the cones or trumpets used for shaping and consolidating yarn of woolen, cotton or other materials on bobbins.

In testimony whereof I have hereunto set my signature this twentieth day of December, A. D. eighteen hundred fifty-five.

JOHN McCRONE.

Witnesses:
WILLIAM GAMMELL, Jr.,
WILLIAM McCRONE.