J. Yocom, Jr.

Casting Pulley Wheels

No. 42,426. Patented Apr. 19, 1864.

Fig 2.

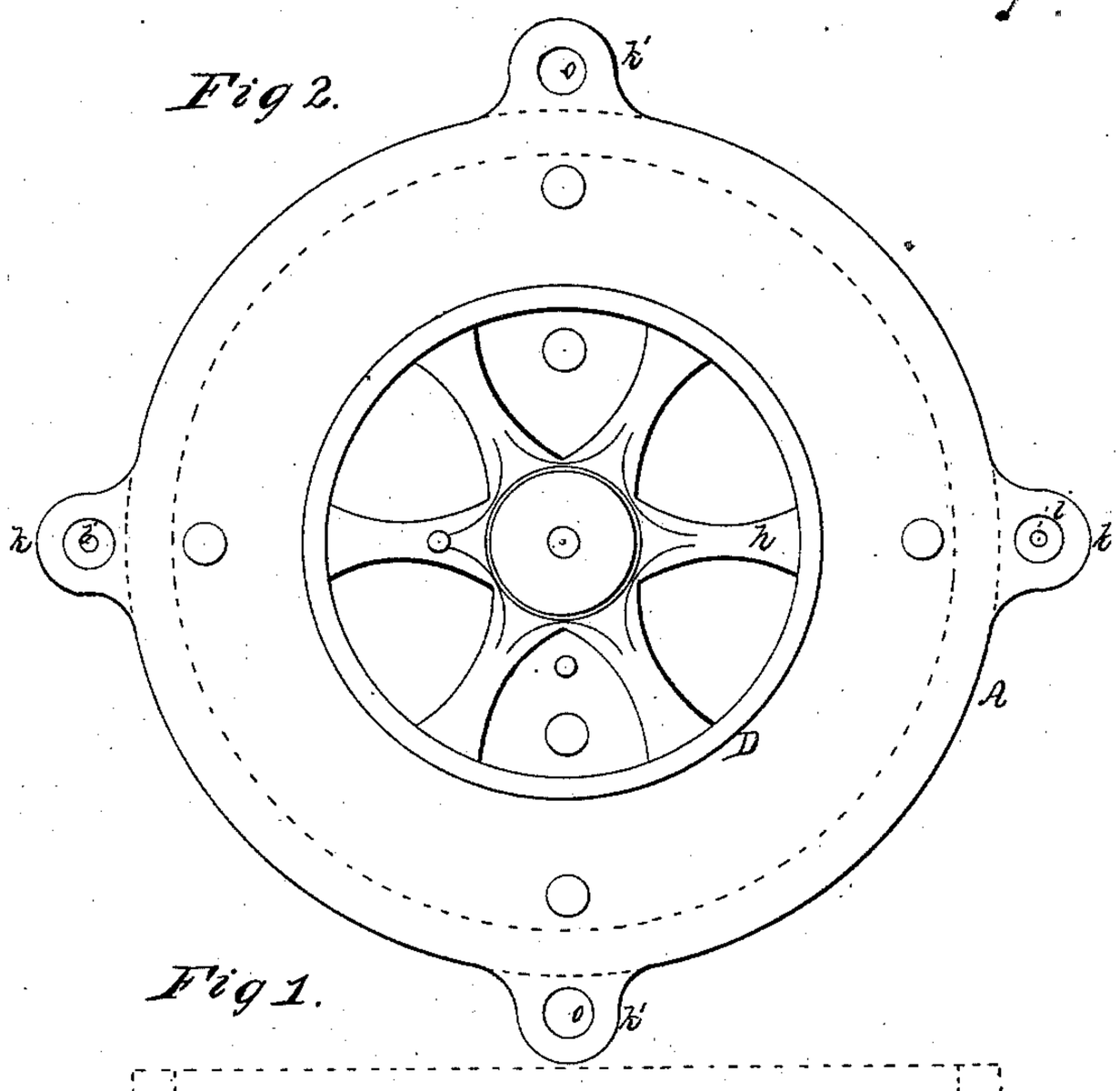
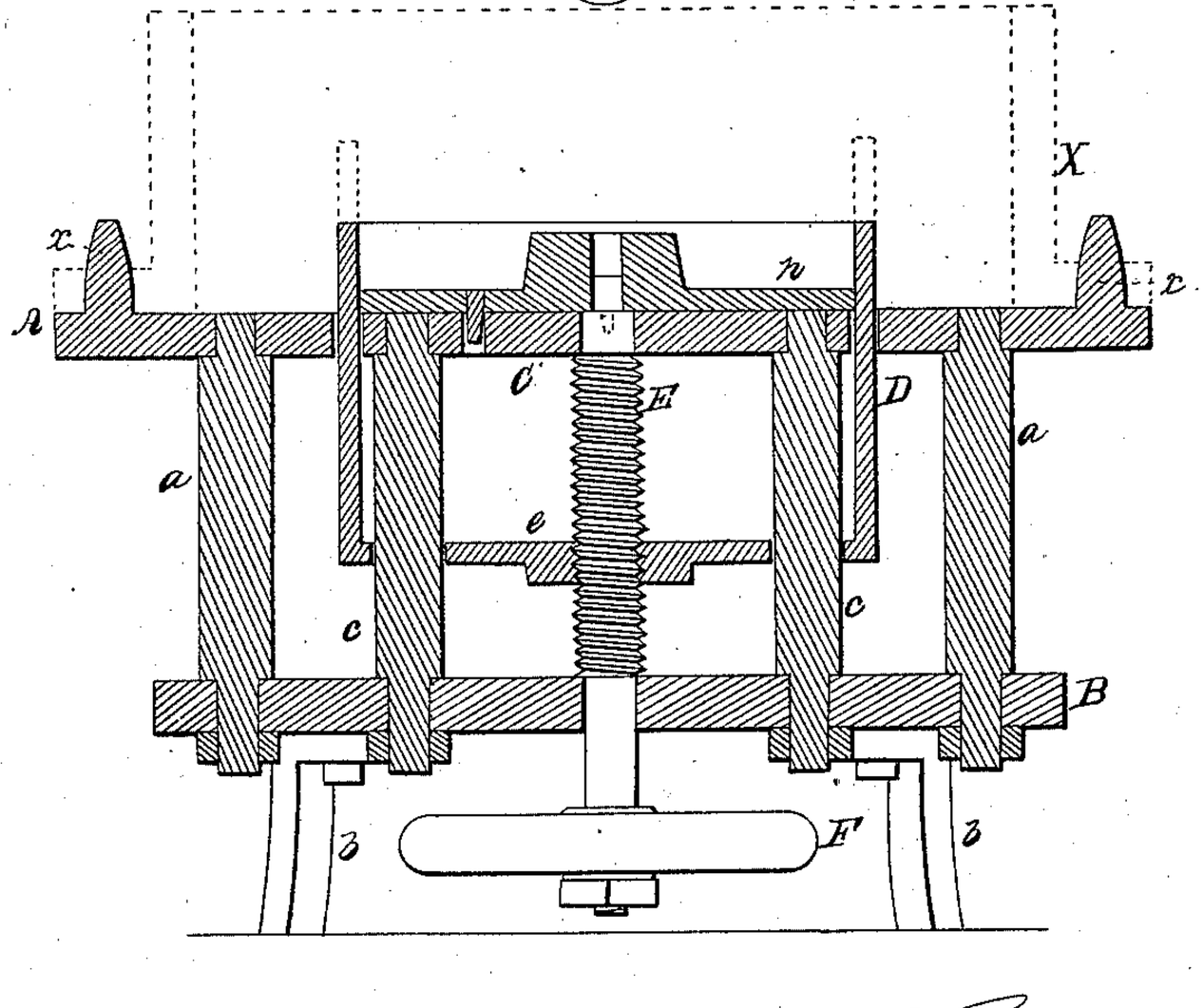


Fig 1.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES YOCOM, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED APPARATUS FOR MOLDING PULLEYS.

Specification forming part of Letters Patent No. **42,426**, dated April 19, 1864.

To all whom it may concern:

Be it known that I, JAMES YOCOM, Jr., of Philadelphia, Pennsylvania, have invented Certain Apparatus for Molding Pulleys; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of certain apparatus, fully described hereinafter, for facilitating the process and reducing the expense of molding pulleys.

In order to enable others skilled in the art to make and apply my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my apparatus for molding pulleys, and Fig. 2 a plan view.

Before describing my invention it may be well to state that in practicing the usual process of molding pulleys it is necessary to have as many different patterns as the pulleys to be molded have faces of different widths, although the different pulleys may be of the same diameter. Any foundry, therefore, which has to manufacture varieties of pulleys must use an extensive and costly array of patterns, which may be dispensed with by adopting the apparatus which I will now proceed to describe.

A is a plate secured by vertical rods or pillars *a* to an under plate, B, which is supported on suitable legs, *b b*.

Within a circular opening in the plate A is a circular plate, C, which is also secured to the under plate, B, by pillars *c c*.

It should be understood that the upper surfaces of the two plates A and C are made smooth and level and arranged in the same horizontal plane, which is uninterrupted, excepting by an annular opening between the two plates, into which opening the hollow vertical cylinder D is arranged to fit snugly, but slide freely. This cylinder is open at the top and closed below, and through the closed end *e* of the cylinder passes the screwed portion of the vertical shaft E, the latter turning at the top in the plate C and below in the plate B, beneath which it is furnished with a suitable hand-wheel, F.

Having determined the width of the pulley to be molded, the operator turns the hand-wheel F, thereby adjusting the cylinder vertically until a portion equal to one-half of the proposed pulley projects above the faces of the plates A and C. A pattern, *h*, which represents one-half of the proposed spokes and central hub of the intended pulley is then placed on the face of the plate C within the cylinder D. After this, one half, X, of a molding-flask (shown by red lines) is placed on the plate A, on which are steadying-pins *x*, the latter passing through lugs on the flask, the interior of which is now properly rammed with sand. The operator then by turning the screwed shaft E depresses the cylinder until its upper edge is withdrawn into the annular opening between the two plates A and C. The flask is then removed and one half of the mold is completed, the other half being subsequently finished by a similar use of the apparatus, and the two halves being finally placed together, so as to complete the mold preparatory to pouring in the molten metal in the usual manner.

It will be evident from the foregoing description that molds for pulleys with faces of various widths may be produced by the use of my improved apparatus, thereby dispensing with the usual costly array of patterns. It will be also evident that the number and shape of the spokes and size of the hub may be modified by the use of patterns of the form desired.

My apparatus possesses the further advantage of facilitating the process of molding. In forming pulley-molds in the ordinary manner it is well known that the process of withdrawing the pattern requires time and care, and that the mold has to be repaired by the tedious application of molders' tools, all of which is avoided by the above apparatus.

If desired, the vertical cylinder may be made stationary and the plates A and C movable. This plan, however, would involve the necessity of employing more expensive elevating and lowering apparatus than that described.

Without confining myself to any especial construction of frame-work or to any special device for raising and lowering the cylinder D, I claim as my invention and desire to secure by Letters Patent—

1. The vertical cylinder D, arranged in respect to the plates A and C, and for operating in conjunction with the said plates, substantially as and for the purpose herein set forth.

2. The combination of the pattern *h*, vertical cylinder D, and plates A and C.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES YOCOM, JR.

Witnesses:

CHAS. E. FOSTER,

JOHN WHITE.