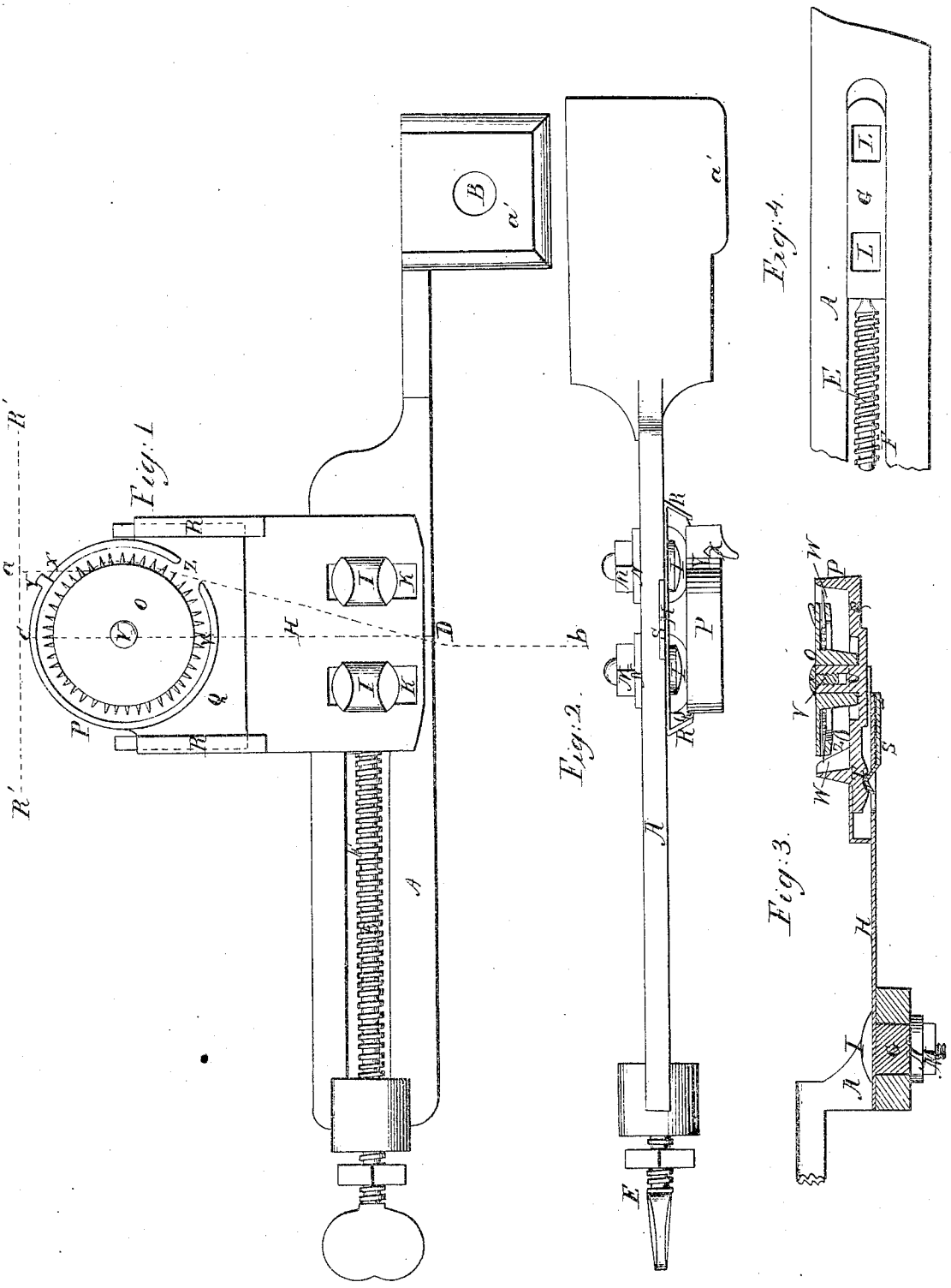
Craig & Cochrane.

Loom Temple.

No. 2,377. Patented Nov. 25, 1841.



UNITED STATES PATENT OFFICE.

WILLIAM CRAIG, OF MANCHESTER, AND JOHN COCHRANE, OF STOCKPORT, ENGLAND.

SELF-ACTING ROTARY TEMPLE FOR LOOMS.

Specification of Letters Patent No. 2,377, dated November 25, 1841.

To all whom it may concern:

Be it known that we, WILLIAM CRAIG, of Manchester, in the county of Lancaster, and JOHN COCHRANE, of Stockport, in the county of Chester, in England, both being subjects of her Majesty the Queen of Great Britain, have invented new and useful Improvements in Self-Acting Rotary Temples for Looms; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, which, taken in connection herewith, form our specification, wherein we have set forth the principles of our invention by which it may be distinguished from others of a like character, together with such parts or combinations as we claim and for which we solicit an exclusive property for fourteen years to be secured to us in the United States of America by Letters Patent.

Figures 1, 2, 3, 4 represent the improved self acting temple, the same letters of reference being used throughout in describing similar parts of said invention. Fig. 1, exhibits a plan of a temple, which is to be attached to the breast beam of a loom, one temple being on the right and another on the left of the center thereof, and fixed thereto and at a suitable distance apart, by a bolt or screw passing through the hole B in the lip *a'* of the supporting bar A, to which latter the temple is connected as will be hereinafter described. Fig. 2, is a side view of the temple. Fig. 3 is a cross section on the line C D Fig. 1, and Fig. 4 is a detailed view of the slide to which the temple plate is attached, and which will be more particularly described hereafter.

The supporting bar or fixture A, has a long thumb screw E, which is adapted to a corresponding female screw, formed in one end of the bar A, and extending longitudinally through the center of an elongated slot F, cut lengthwise through the supporting bar as seen in Fig. 1. The end of the screw E abuts against a sliding piece of metal, G, inserted in the slot as seen in Fig. 4, so as to be easily slid back and forth throughout the same.

The sheet iron plate H, carrying the rotary temple, is attached, to the top of the slide piece G, by two square screw bolts I, I, which are inserted through slots K, K Fig. 1, in the plate H and square holes L, L Fig. 4, of the slide G, the heads of the bolts being driven down upon the top surface of the iron plate H by nuts M, M screwed on the ends of the bolts I, I and against washers N, N, as seen in Fig. 2. The plate H is thus sustained in its proper direction and position with respect to the reed.

The revolving toothed wheel or temple O Figs. 1, 3, is arranged in a circular box P, formed on a plate of metal Q, the latter being connected to the sheet iron plate H, by two lips R, R, which are turned up from the side edges and lap over the sides of the plate Q Fig. 2. The plate Q is kept in position on the plate H, by an ordinary steel spring catch S, attached to the under side of the sheet iron plate before named, and projecting through the sheet iron into a recess T in the plate Q as seen in Fig. 3. By the connection of the plate H to the supporting bar, the former may be moved back and forth in the direction to or from the central part of the loom so as to be adapted to cloth of different width—and when so adjusted may be confined in position by the set screw E, which screws against the end of slide G as before described.

The toothed wheel O revolves upon a cylindrical arbor U projecting upward from the center of the box P, and is confined on the same by a small screw V, which is screwed into the top of the arbor, so that its head shall project over the central part of the wheel as seen in Fig. 3, thereby preventing the wheel from rising upward or slipping from the arbor. The circumference or edge of the wheel is cylindrical or is turned perpendicular to the top face of it, the latter being a plane surface for the cloth to rest over as seen in Figs. 1, 3. The cylindrical edge of flanch projects downward from the body or plate of the wheel as seen in section in Fig. 3, in order that holes may be drilled through it, for the reception of the points or teeth W, W, W, &c., which latter when passed through these holes, are confined therein by the insertion of the wheel in a steel die, and compression of the flanch by means of a press suitably arranged—or by hammering down the same, or by any similar process, by which the particles of the metal may be compressed so as to confine the points therein.

Directly in rear of the opening X where the edge of the cloth passes through the wheel box, is a small projection Y, standing out perpendicular from the circumference of the wheel box as seen in Figs. 1, 2. The sel-

vage of the cloth is lapped over this projection as it passes from the reed through the opening X to the points of the rotary temple, and from thence through the opening Z to and over the breast beam to the cloth beam, in the direction of the red line *a b* Fig. 1.

The red line R′ R′ represents the distance to which the reed is permitted to approach the circumference of the temple box when the blow is given to the weft. As the reed is brought up, should the shuttle come in contact with the temple box, the lathe will drive or slide the box P and plate Q back over the plate H, the spring catch which holds the former plate on the latter, being thrown out of the recess of the plate Q by the force of the blow, thereby saving the shuttle and reed from injury. Whenever this accident occurs, the temple plate must be pressed forward into its place by the weaver.

An important feature of our improvement consists in the peculiar formation of the toothed wheel or rotary temple, and the application to the side of the box of the projection before named, over which the cloth is passed immediately previous to entering the front opening of the temple box. As was before described the circumference of the flanch of the wheel is perpendicular to the top or face of the same. This construction of the wheel causes the strain of the cloth to be received on the circular edge or angle of junction of the flanch and top of the temple, the friction thereof preventing the points from drawing asunder the threads of the selvage, as in the case with rotary temples in general. The projection on the wheel box, presenting a vertical edge to the cloth, guides or directs the selvage passing over the same into the box and turns it downward, so as to admit it in such manner to the teeth as to be continually received upon and discharged by them, as the weaving of the cloth progresses.

Having thus described our improvements we shall claim in the same—

1. The method of constructing the self-acting rotary temple, so as to have the cloth pass over and in contact with the upper surface of the wheel, instead of a plate below which the wheel was placed as heretofore made; so that the selvage shall in a great degree be supported on the circular edge or junction of the faces of the flanch and wheel, by having the wheel of pins revolve on an arbor projecting from the box P as described.

We do not wish to be understood as making claim simply to this mode of working a wheel on an arbor, as it is a well known device, but to limit our claim to it when employed in temples of the above construction and in the manner and combination set forth.

2. We also claim the projection on the exterior of the wheel box formed as herein above described, and situated immediately in rear of the front opening in its circumference, and through which opening the cloth is introduced to the wheel, the same being for the purpose of guiding the selvage or turning it downward at the proper angle to be received on the points, as the wheel is revolved during the process of weaving.

In testimony that the foregoing is a true description of our said invention and improvements we have hereto set our signatures.

WM. CRAIG.
JOHN COCHRANE.

Witnesses:
JNO. W. GUHAX,
J. H. CALLSWORTH.