G. Draper.

Rotary Temple.

No 2,464. Patented Feb. 21, 1842.

Fig. 1.

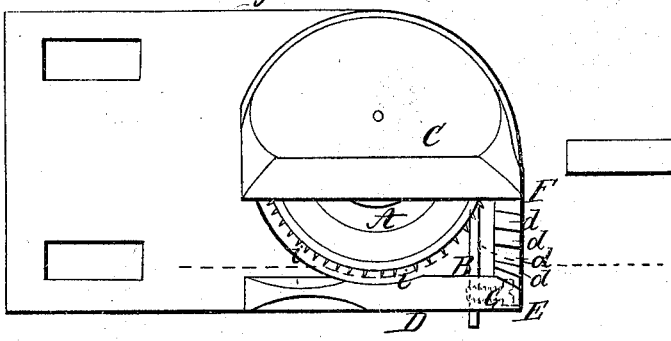


Fig. 2.

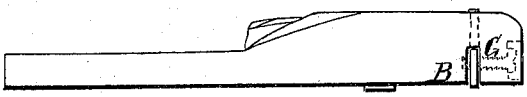
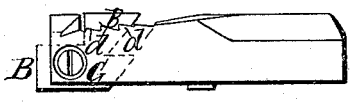


Fig. 4.

Fig. 3.



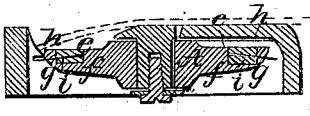
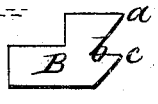


Fig. 5.



UNITED STATES PATENT OFFICE.

GEORGE DRAPER, OF SAUGUS, MASSACHUSETTS.

IMPROVEMENT IN ROTARY TEMPLES FOR POWER-LOOMS.

Specification forming part of Letters Patent No. **2,464**, dated February 21, 1842.

To all whom it may concern:

Be it known that I, GEORGE DRAPER, of Saugus, in the county of Essex, in the State of Massachusetts, have invented certain new and useful Improvements in Rotary Temples for Power-Looms; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, which, in connection with said description, form my specification and set forth the nature and principles of my improvements by which they may be distinguished from others of like character, together with such parts or combinations as I claim and for which I solicit Letters Patent.

Figure 1 of the drawings above referred to represents a top view of a revolving temple having my improvements. Fig. 2 is an elevation of that which would be deemed the outer side of the temple-box when arranged upon the loom. Fig. 3 is an elevation of that end which is nearest the lay. Fig. 4 is a transverse vertical section taken through the center of the temple-wheel. Fig. 5 is a side view of the gage as it would appear when detached from the temple-box.

My first improvement consists in the introduction in front of the toothed wheel A of a sliding gage B, Figs. 1, 2, 3, and 5, and for this purpose the temple-box C projects beyond the wheel in front in the angular shape D E F, as represented in Fig. 1. A suitable slot is formed through the side D E, in which the sliding gage B is inserted in the position exhibited by the drawings, and is therein confined by a set-screw G, Figs. 1, 2, and 3, which passes and is screwed through the side E F of the box near its angle E and abuts against the side of the gage B. The gage may be adjusted to any desirable position, and on turning up the screw G it may be confined in such position. The form of the gage is seen in Fig. 5, where it will be observed that it has an angular or other suitable-shaped notch *a b c* in its end, which is placed in front of the wheel. The selvage of the cloth is passed into or through this notch and bears against the side *a b* of the notch, and is turned or bent by the same downward to a proper angle to be received upon the points of the temple-wheel A. The peculiar object of the set-screw G is to enable the sliding gage to be adjusted or adapted to cloths of different thicknesses.

That part E F of the temple-box or opening in front of the gage B has its upper face jagged or notched or formed with teeth *d d d*, Figs. 1 and 3, over and upon which the selvage of the cloth rests and bears as it enters the temple. The object of the teeth *d d* is to keep the selvage of the cloth in front of the temple-box strained or stretched out in or nearly in the plane of the whole piece in order to prevent the threads in front of the temple-box from being bent so as to obstruct the free operation of the shuttle, as is often the case in other temples. The perimeter or circular edge of the temple-wheel is beveled downward, so as to make with the upper surface of the wheel an acute angle, rather less than a right angle, as seen in section in Fig. 4, and directly or at a short distance in rear of this circular edge a groove is turned in the top surface of the wheel, which groove is represented in section at *e f g h*, *e f g h*, Fig. 4. The wires *i i*, constituting the teeth or points of the temple-wheel, are passed through small holes drilled through the perimeter of the wheel and extend into the groove *e f g h*, so that their rear ends shall rest or abut against the inner vertical side *e f* of the groove, as seen in Fig. 3. These teeth are arranged in radial lines, and are depressed at their pointed ends somewhat below a horizontal plane or stand perpendicular to the beveled perimeter of the wheel. When the teeth are thus disposed, melted lead or other suitable metal or composition of metals is poured into the groove *e f g h*, so as to fill the same and completely surround the teeth and confine them in position. In most other respects the temple is arranged substantially similar to others in common use. It is intended that the reed shall beat the weft or filling to within a short distance of or nearly close up to the front edge of the part E F of the temple-box.

From the above it will be perceived that this temple contains many important improvements over others, inasmuch as the threads of the selvage part of the warp are by the notched part E F kept from being bent downward or out of their proper positions, as they generally are in common temples, and thus the interruption to the free action of the shuttle (a difficulty often experienced) is prevented. The selvage is so drawn or held down upon the upper face of the bar E F that the

notches *d d* keep it stretched out in its proper position for the correct action of the reed of the lay. Consequently a very perfect and even selvage is produced.

Having thus described my improvements, I claim—

1. Constructing the temple-box with a rest or notched bar E F and gage B in front of the temple-wheel and making said gage movable or adjustable, so as to be easily adapted to cloths of different thicknesses, the whole being arranged and operating substantially in the manner and for the purposes hereinbefore described.

2. The method of confining the teeth of the temple-wheel by forming a groove in the top face of the temple-wheel just in rear of the circular edge of said wheel and passing the teeth through the perimeter or outer edge of the wheel into said groove and against its rear side and confining said teeth therein by pouring or casting lead or other metal or composition of metals in said groove and around the said teeth, all as hereinbefore described.

In testimony that the foregoing is a true description of my said invention and improvements I have hereto set my signature this 27th day of December, in the year 1840.

GEORGE DRAPER.

Witnesses:

R. H. EDDY,

CALEB EDDY.