

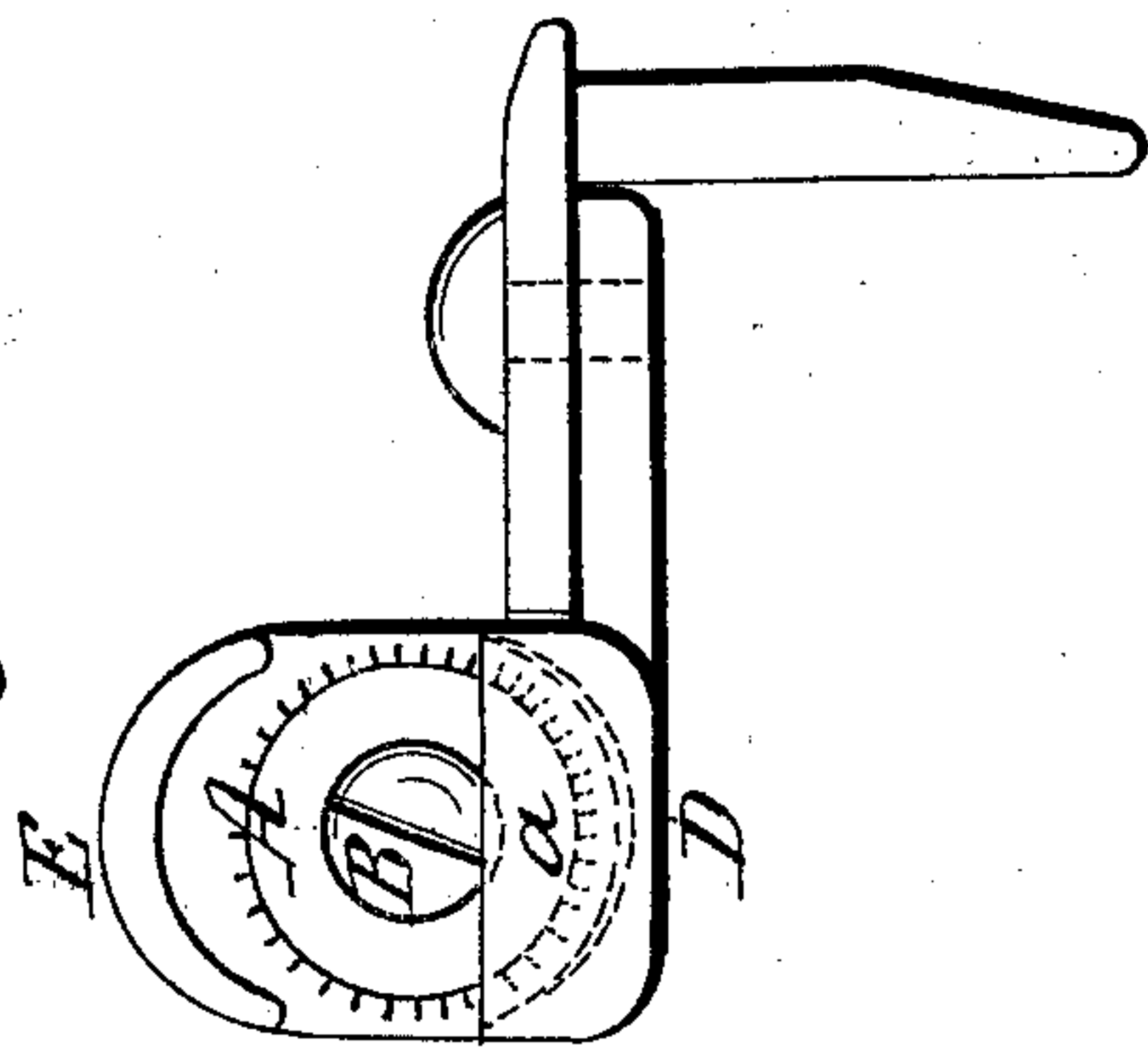
*J.H. Woodward.*

*Weaving Temple.*

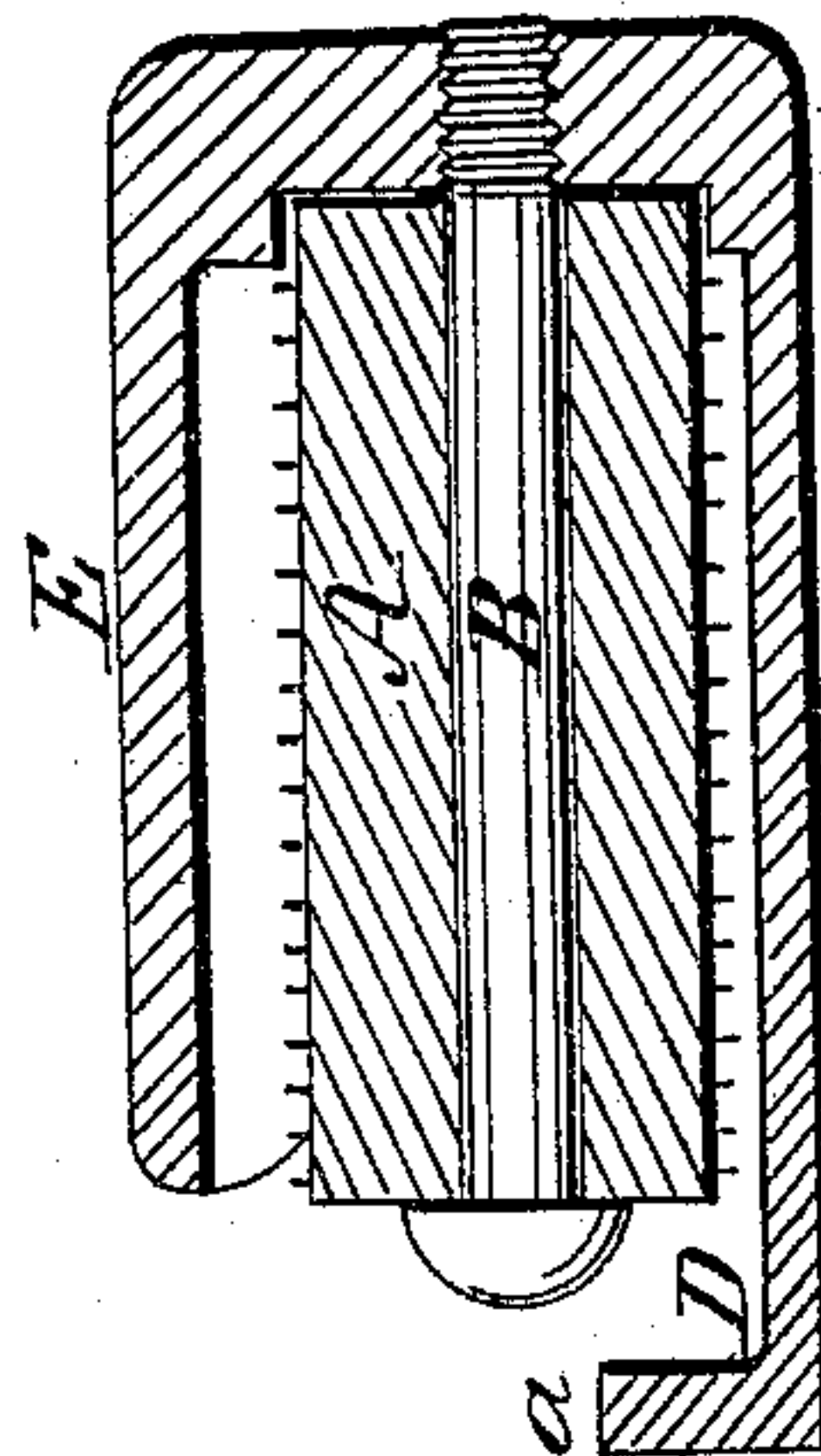
*N<sup>o</sup> 28,043.*

*Patented Apr. 24, 1860.*

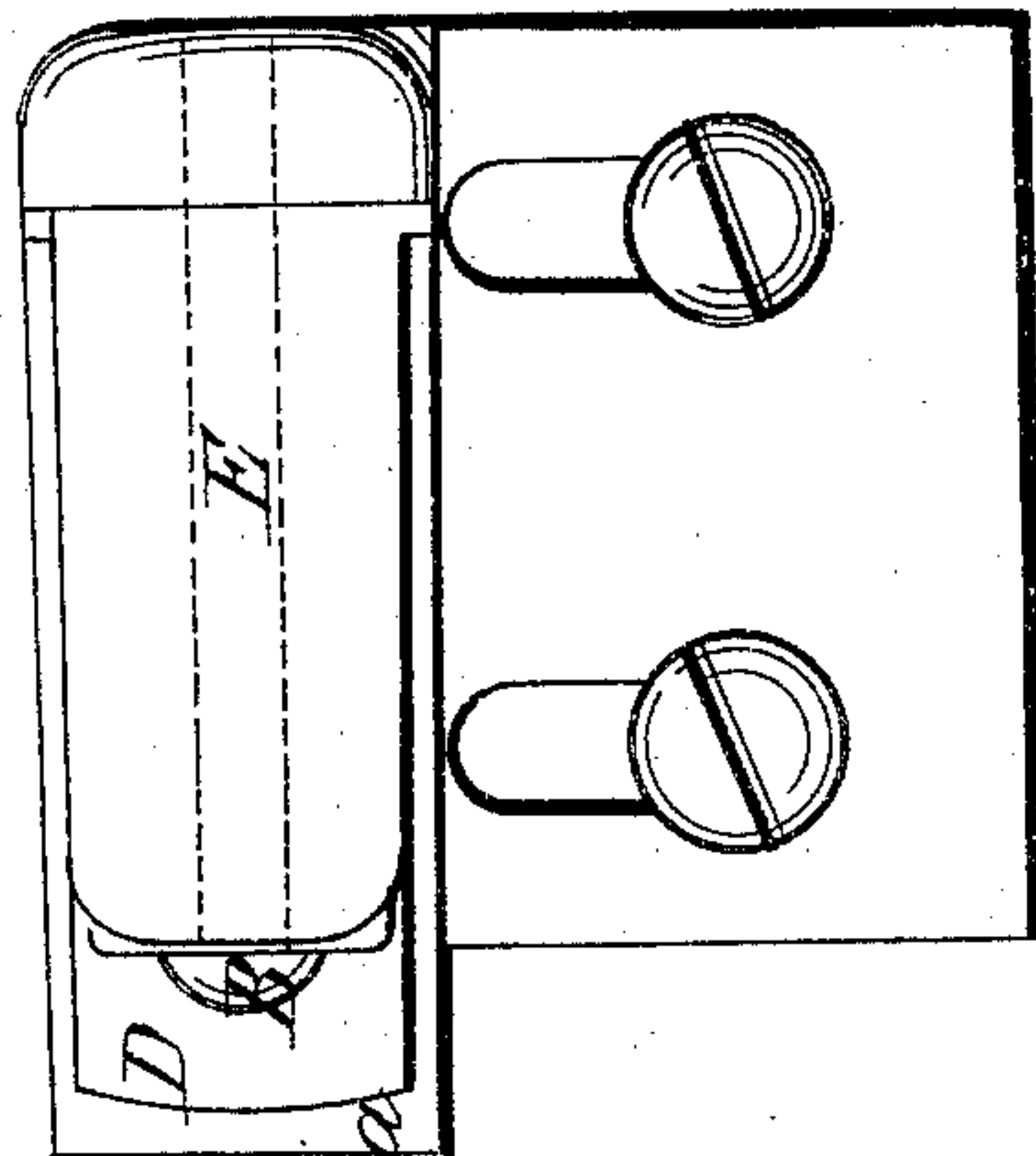
*Fig. 2.*



*Fig. 3.*



*Fig. 1.*



# UNITED STATES PATENT OFFICE.

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## TEMPLE.

Specification of Letters Patent No. 28,043, dated April 24, 1860.

*To all whom it may concern:*

Be it known that I, JESSE H. WOODWARD, of Nashua, in the county of Hillsboro and State of New Hampshire, have invented an  
5 Improvement in Cylindrical Roller-Temples for Looms for Weaving; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, denotes a top view of a loom temple provided with my improvement. Fig. 2, is an inner end view of it. Fig. 3, is a vertical section taken longitudinally through the toothed roller of the temple.

15 In temples of this nature, the roller generally revolves within a trough whose inner end is open, or between two bars in order that the cloth in passing under the roller shall rest on the upper edges of the trough  
20 or those of the bars and be deflected from a straight line or stand tangentially in two directions to the under surface of the roller, the same serving to maintain the cloth against the roller. In consequence of the  
25 inner end of the trough having been always open or the space between the bars or supporting surfaces thereof being left entirely open, the bend of the cloth has been continued to an injurious extent from the  
30 temple and in the direction of the axis of the roller prolonged toward the middle of the loom.

The object of my invention is to remove this curvature or bend of the cloth beyond  
35 the temple and to cause the deflection to take place entirely within the temple, and this is accomplished by closing the lower end of the trough of the roller or extending a bar across it and with its upper surface even  
40 with the upper or bearing edges of the trough.

In the drawings, A, denotes the temple roller armed with teeth, spurs or points projecting from its periphery or surface.

45 B, is the arbor on which the roller is supported and revolves.

D, is the trough in which the roller is placed, such trough being constructed with a closed inner end as shown at *a*.

50 E, is the cap or guard of the roller, such guard serving as a protection to the roller, as well as to prevent a person from accidental contact with its spurs or points.

The advantages of my invention may be  
55 thus stated. The first, in importance, is,

that it actually stretches the cloth, while on the temple more than it does immediately in front of the temples. That this is true, and how it is done, will be obvious upon examination. It is a well known axiom, that  
60 no line between two points is so short as a straight one. Now in the cylindrical roller temple, as heretofore constructed the cloth is curved down when passing under the  
65 toothed roller, but in my improved temple in consequence of the end bar or rest of the trough, the cloth, except that part, which is actually under the roller is held up in a plane. Thus while the cloth immediately in  
70 front of the roller lies in a straight line or plane, it becomes fastened to the teeth of the roller, and is carried down underneath each and is made as much wider for the time it is going through the temples, as a line passing  
75 over the inner closed ends of the temple trough and down under the rollers lengthwise of the two temples of the loom, is longer than a straight line extending on a level with the tops of the trough ends and from  
80 the edge of one selvage to that of the other.

As the design of all temples is to prevent the contraction of the cloth while it is being woven in order that it may not cause the warp to wear and break as well as injure the reed of the loom, the advantage of the above  
85 improvement will be obvious to every practical man especially in looms having no "filling stop motion" or those having a "flyter reed." On such looms it is necessary to set the roller temples a short distance back from  
90 the reed or cloth making point or place in order to prevent damage to the reed or the wear and breakage of the selvage yarn. Should the loom continue to run after the  
95 filling may have been exhausted from the shuttle (as all looms without filling stop motions are liable to do) such will give the cloth a chance to contract before it is seized by the temple teeth, and the consequence is  
100 that the cloth will not be properly templed or held out. My improved temple obviates this difficulty to a great extent, if not entirely, and compensates for being set back by carrying the cloth out wider than it finds  
105 it, and this prevents the contraction on the reed and the bad effects of such contraction.

In the second place, the improvement makes the temples more convenient for getting the cloth properly adjusted in them.

The cloth must be loosened in order to get  
110



it into most temples. Without my improvement, it will often be pulled out of one temple while it may be in the act of being introduced into the other, whereas with my improvement no such derangement can take place.

A third difficulty in cylindrical roller temples as heretofore constructed, and applied to certain kinds of woolen goods, is, that in consequence of the cloth slipping off the ends of their teeth, the teeth become worn and useless. This my improvement will remedy entirely as it forces the cloth at once to the surface of the roller, and will not allow it to draw across the points of the teeth.

My invention has no reference to the flat conical wheel temple such as is shown in George Draper's patent of the 28th day of October, A. D. 1840, but is only applicable to the cylindrical roller or cylinder temple. There is a great difference between the two kinds of temples, for in the former, the axis of the wheel is disposed vertically when the temple is at work, whereas with the roller temple, the axis of the roller or cylinder is arranged horizontally, and the trough in which the roller operates is also arranged horizontally. The wheel temple has no trough, nor any device which is strictly analogous to a trough, the wheel being placed in a case or box having a recess formed through its top, and so as to receive the cloth while it is on the wheel. It is true that the top of the box and the side of the recess support the cloth after it leaves the wheel, but as the wheel will produce no groove or bend in the cloth extending at right angles to its selvage, as does the troughed roller temple no device such as I have added to the trough of the cylindrical roller temple is needed in the wheel temple,

as the latter does not produce the evil or difficulty to which the device in question is intended to remedy. Furthermore, in the roller temple my device operates to press the cloth into contact with the teeth of the roller, whereas, in the wheel temple, that part of the box, on which the cloth rests has a reverse effect, that is, it rather tends to disengage the cloth from the teeth of the wheel. So, in regard to the slot or entrance passage of the case of the roller temple, it, owing to the cloth being seized close to its selvage by the points of the wheel produces a positive evil as it causes the cloth to bend around and under the periphery of the wheel, and thus leaves the edge or selvage of the cloth rolled or folded over on the cloth when the latter is taken from the loom. With my improved roller temple, the closed inner end of the trough supports the cloth at about an inch and a half from the selvage, and operates in no respect to fold or roll the cloth in manner as stated. Therefore I lay no claim to any wheel temple or conical wheel temple generally constructed, but in the well known cylindrical roller or toothed cylinder temple.

I claim—

Making the temple trough with a closed inner end, or a bar or analogous contrivance extending across the temple, and with respect to the inner end of the cylindrical roller, and the upper edges of the sides of the trough substantially in manner and for the purpose herein before set forth.

In testimony whereof I have hereunto set my signature.

JESSE H. WOODWARD.

Witnesses:

HENRY PARKINSON,  
C. P. DANFORTH.