J. & L. HARDAKER.

Loom-Temple.

No. 228,256. Patented June 1, 1880.

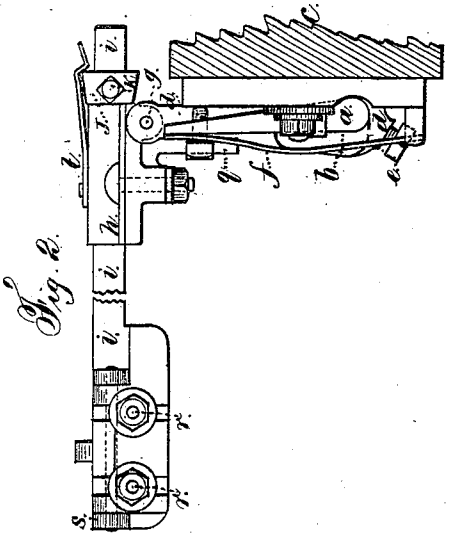

Fig. 2.

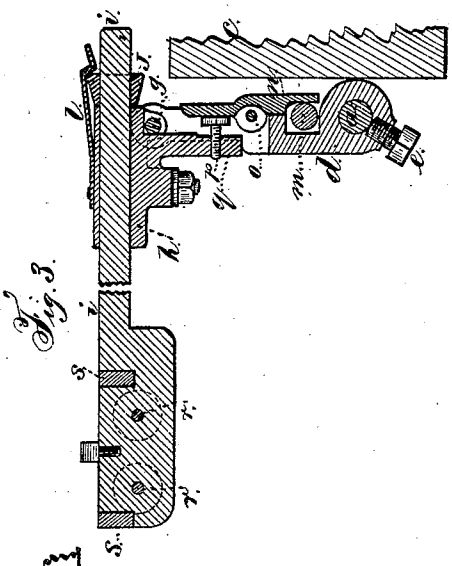

Fig. 3.

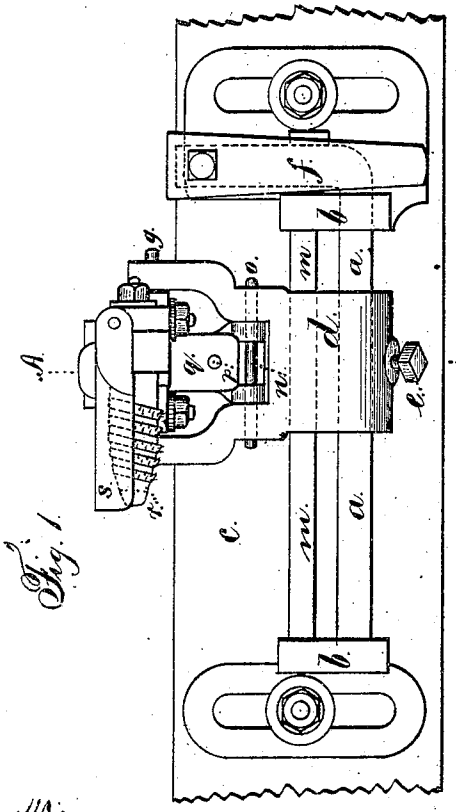

Fig. 1.

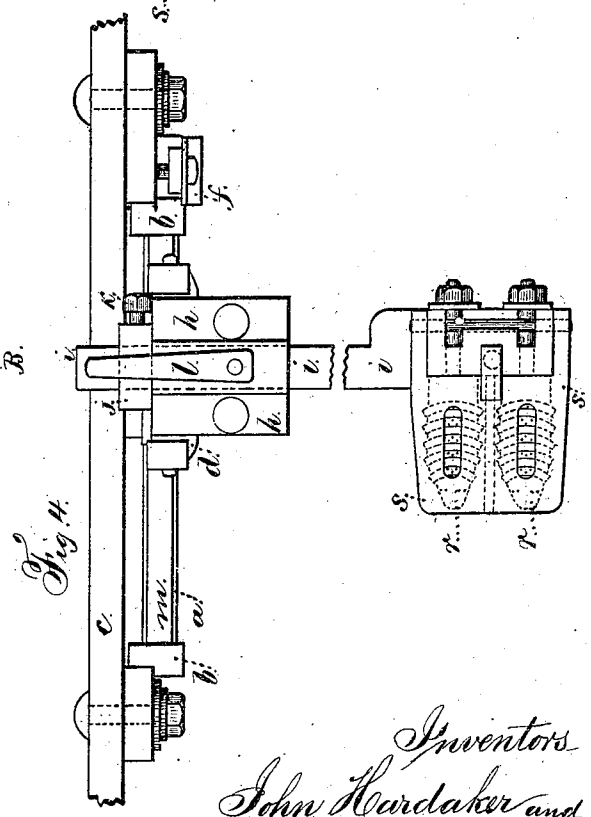

Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN HARDAKER AND LOUIS HARDAKER, OF LEEDS, ENGLAND.

LOOM-TEMPLE.

SPECIFICATION forming part of Letters Patent No. 228,256, dated June 1, 1880.

Application filed May 31, 1879. Patented in England April 9, 1877.

To all whom it may concern:

Be it known that we, JOHN HARDAKER and LOUIS HARDAKER, both of Leeds, in the county of York, England, have invented new and useful Improvements in Loom-Temples, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

Our invention relates to self-acting temples for looms, that may be introduced into less space and worked therein. The parts can be readily adjusted, and the temple is more effective in its application than those before made.

Figure 1 is a front elevation; Fig. 2, a side elevation; Fig. 3, a section through A B, Fig. 1; and Fig. 4, a plan, looking at the top.

We provide a rod, *a*, which, by preference, is fitted loose in its bearings *b* on the breast-rail *c* of a loom. *d* is an upright arm mounted and fixed, by means of the set-screw *e*, in any desired position on the rod *a*. One end of the rod *a* is provided with a spring, *f*, which acts upon and retains the rod *a* in position, and at the same time admits of the required radial movement of the arm *d*.

On the pin *g*, in suitable bearings on the upper portion of the arm *d*, is mounted the table *h*, which carries upon it the temple-bar *i*, fitted so as to admit of a sliding movement.

We provide a loose collar, *j*, on the temple-bar *i*, which is fixed thereon in any desired position by means of the set-screw *k*, rendering thereby the temple-bar *i* capable of adjustment, and for the purpose of retaining it in position we employ the hooked spring *l*, which drops or catches onto the collar *j*, as shown at Figs. 2 and 3.

We employ a second rod, *m*, which is for actuating an intermediate lever, *n*, which is mounted on pin *o*, through which the required compensating movement is derived for the purpose of retaining the temple-bar *i* at or as near a horizontal position as convenient during any portion of its movement.

The position of the bar may be adjusted by means of the set-screw *p*, which is applied within projecting piece *q* underneath the table *h*.

r r are two temple-rollers having taper barrels and toothed rings. By the application of taper temple-rollers the tension on the material is equalized in or on the temple, thereby obviating the marking and damaging properties in a more effective manner than when parallel temple-rollers are used. The woven material is passed over the first temple-roller *r*, and down under the central projection of the cap *s*, and up over the other taper temple-roller *r*, and then over the breast-beam of the loom. These temples are placed, as usual, one at each side of the woven fabric. Instead of these, when preferred, parallel temple-rollers may be employed; also, more than two temple-rollers may be employed.

s is the hinged cover, which is varied in form to suit the various kinds and number of temple-rollers employed.

Having now described the nature of the said invention, what we claim is—

1. The combination, with the temple-roller and its supporting mechanism *i h*, of the rod *a*, having a crank-arm at one end, the spring *f*, brackets *b*, and arm *d*, hinged at *g*, substantially as and for the purposes set forth.

2. In combination with the arm *d*, temple-roller *r*, and temple-bar *i*, the table *h*, adapted to receive the bar *i*, the collar *j*, and springs *l*, substantially as set forth.

3. The temple-roller and its supports *h i*, and arm *d*, hinged at *g*, in combination with the lever *n*, rod *m*, bearings *p q*, brackets *b*, rod *a*, and its crank and spring *f*, substantially as set forth.

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Witnesses:
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