

E. OBERHOLZER,
JACQUARD HEALD AND HARNESS.
APPLICATION FILED MAY 29, 1903.

Fig. 1.

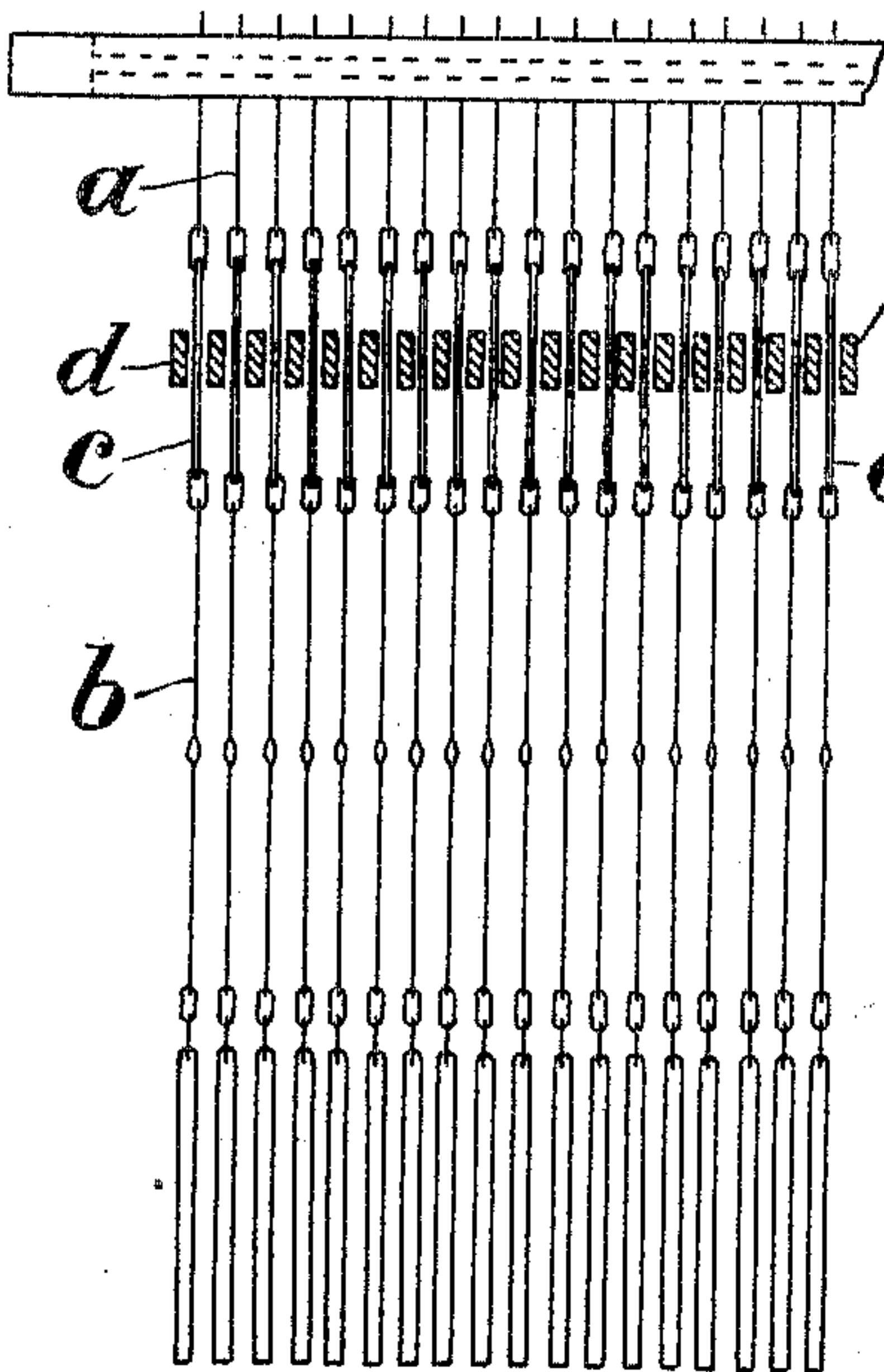


Fig. 2.

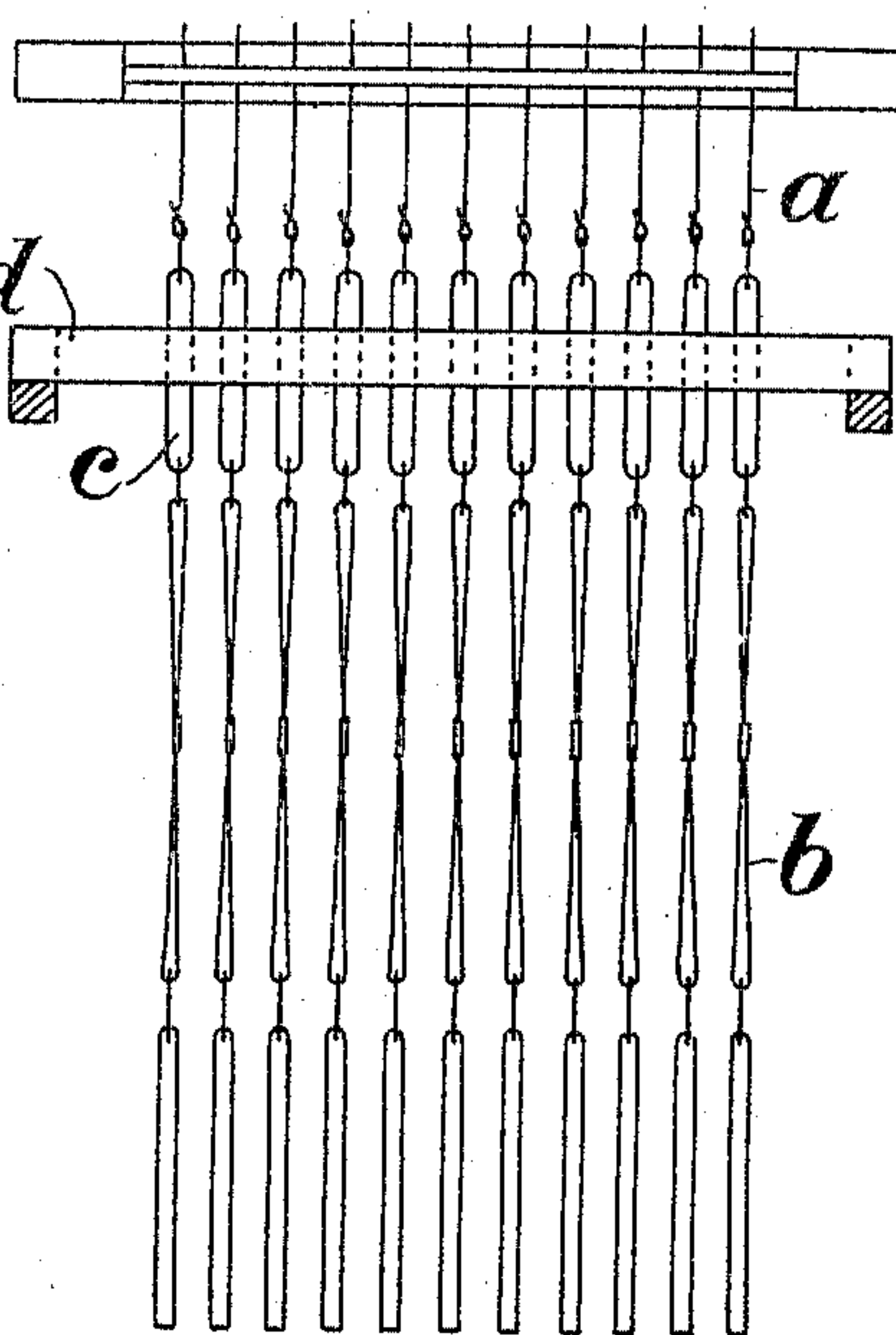
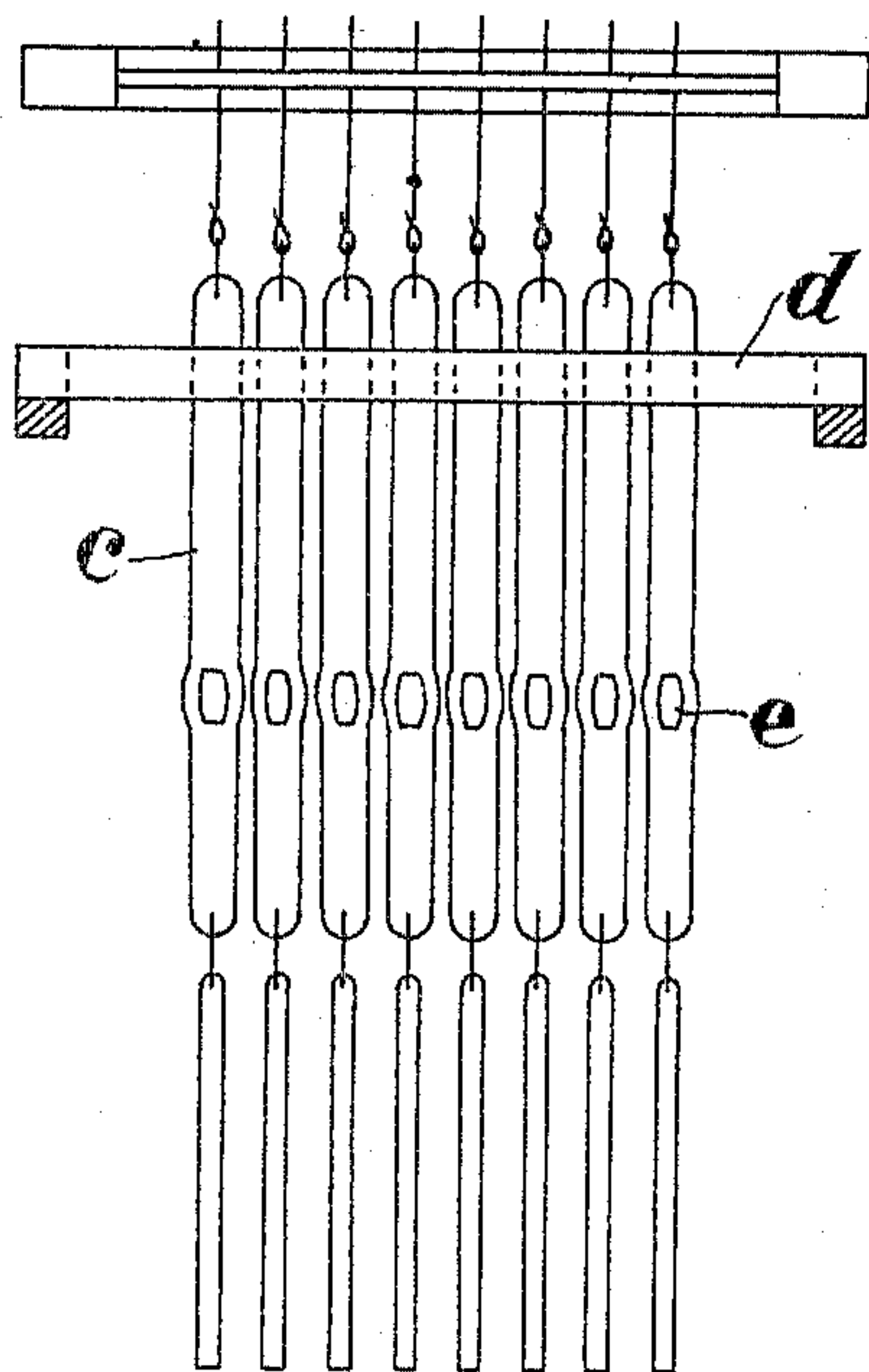


Fig. 3.



Witnesses:
Alfred Bosshardt
Stanley R. Bramall

Inventor:
Emil Oberholzer
By J. Bosshardt
Attorney.

UNITED STATES PATENT OFFICE.

EMIL OBERHOLZER, OF HORGEN, OBERDORF, SWITZERLAND.

JACQUARD HEALD AND HARNESS.

SPECIFICATION forming part of Letters Patent No. 780,220, dated January 17, 1905.

Application filed May 29, 1903. Serial No. 159,384.

To all whom it may concern:

Be it known that I, EMIL OBERHOLZER, a citizen of the Republic of Switzerland, residing at Horgen, Oberdorf, canton of Zürich, Switzerland, have invented new and useful Improvements in Jacquard Healds and Harness, of which the following is a specification.

As is well known, changes in temperature cause harness or heald strings to lengthen or shorten, and thereby twist. The healds being directly connected to the harness-strings they also twist, and thus frequently cause the warp-threads to break.

My invention has for its object to obviate the said defects; and it consists in employing in connection with the harness-strings flat guide-rods which are prevented from turning by rails interposed between the same. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view, and Fig. 2 a side view, of one form; and Fig. 3, a side view of another form in which my invention may be carried out.

Similar letters refer to similar parts throughout the several views.

Referring to Figs. 1 and 2, I employ between the harness-strings *a* and the healds *b* flat guide-rods *c*, which are prevented from twisting by the guide-rails *d*, interposed between them.

In Fig. 3 the guide-rods *c* take the place of the healds, an aperture *e* being formed in each for the warp-thread to pass through, and guide-rails *d* are also interposed between the same.

The guide-rods *c* can easily move vertically between the guide-rails *d*, but are prevented from twisting, although the harness-strings may twist themselves.

It is obvious that the guide-rods *c* may also be arranged between the healds and the heald-weights. Again, the said guide-rails may also run crosswise or parallel to the warp-threads.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a jacquard heald and harness, a harness-string and a heald, a flat rod inserted between the same and a guide-rail on each side of the said rod, the latter being laterally guided by the said rails and the heald and harness-string thereby prevented from twisting, all combined substantially as and for the purpose set forth.

2. In a jacquard heald and harness, a harness-string, a heald inserted into the same, consisting of a flat rod having a warp-hole and a guide-rail at each side of the said rod, the latter being laterally guided by the said rails and together with the harness-string prevented from twisting, all combined substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EMIL OBERHOLZER.

Witnesses:

CARL MÜLLER,
A. LIEBERKNECHT.