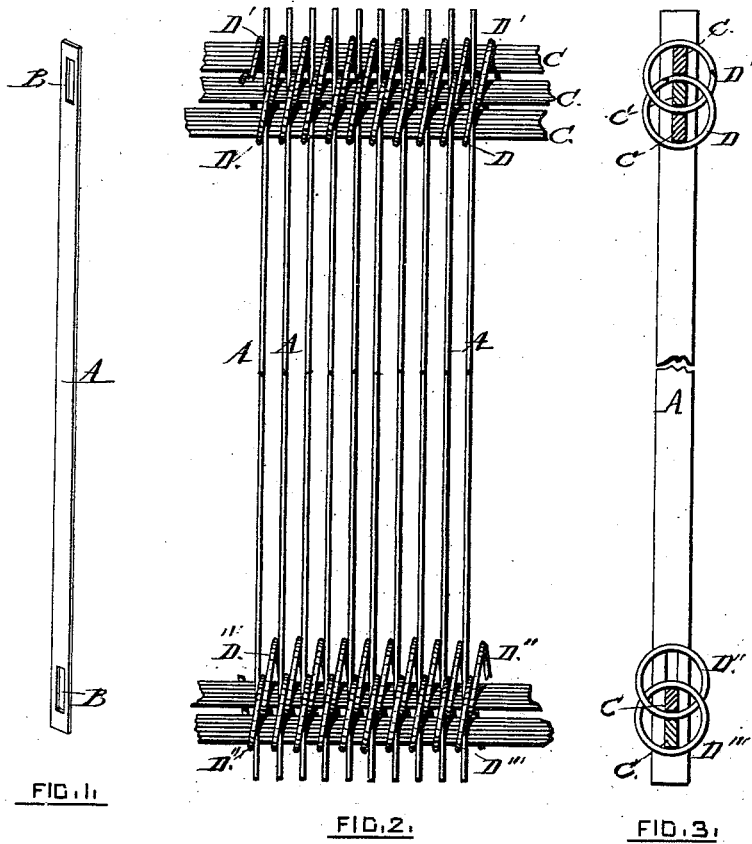


E. ADAMSON.  
Expansible Weaver's Reed.

No. 212,120.

Patented Feb. 11, 1879.



WITNESSES.

*Joseph Adamson*  
*Richard Whalin*

INVENTOR

*Edward Adamson*

# UNITED STATES PATENT OFFICE.

EDWARD ADAMSON, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN EXPANSIBLE WEAVERS' REEDS.

Specification forming part of Letters Patent No. **212,120**, dated February 11, 1879; application filed April 3, 1878.

*To all whom it may concern:*

Be it known that I, EDWARD ADAMSON, of Providence, Rhode Island, have invented certain Improvements in Weavers' Reeds, of which the following is a specification:

My invention is an improvement on what are known as "expansible weavers' reeds;" and it consists of a double spiral spring, composed of two single spiral springs interlacing each other and encircling metallic rods, which pass through slots in the ends of the dents.

It has for its object to provide a reed that will be capable of expanding or contracting, to embrace a wide range of combs, so that, instead of the weaver requiring a separate reed for each change in cloth, it will only be necessary for him to draw out or contract his reed to the required spread of the yarn.

In my drawings, Figure 1 is a perspective view of one of the dents, showing the position and shape of the openings or slots therein. Fig. 2 is a front view of a portion of the reed, showing the dents, springs, and supporting-rods. Fig. 3 is a sectional view of the reed, showing the relation between the dents, springs, and rods which compose the reed.

Similar reference-letters indicate like parts in all of the figures.

Referring to drawings, A A are the dents, arranged in the usual way, in parallel lines, provided with slots B B at their ends. C are the rods which pass through the slots of the dents, and are bound together with the interlacing spiral springs D D' D'' D'''.

It is apparent that when additional dents are required in the reed it is only necessary to slip them in between the coils of the springs D D', outside of those already in, and to pass the rods C through the slots of the added dents, and secure the ends of the springs and

the rods in a suitable manner. The spacing of the dents will be reduced or increased as the dents are added or taken away from the reed.

In carrying out my invention, I use the double spiral spring, composed of two single spiral springs interlacing with each other. The dents in my reed have slots in each of their ends thrice as long as their width, so that when placed in the springs each slot is divided into three sections by the springs, and through one or more of said sections I pass metallic rods large enough to fill up the space, but not so as to interfere with the expansive force of said springs or the free rectilinear motion of the dents. The rods, with the springs, support the dents at each end, and connect them firmly.

I am aware of English Patent No. 2,850 of 1858, in which spiral springs are used, in combination with suitable substitutes, for the ordinary dents, and this arrangement I do not claim.

I am also aware of the patent of Nichols, 46,381, in which one or more of the outer dents of the reed are secured with interposing elastic washers; and to such I make no claim.

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

In an expansible weaver's reed, the double interlacing spiral springs D D' D'' D''', in combination with dents A, provided with slots at both ends, and the bars C, passing through the dents and the springs, as and for the purpose set forth.

EDWARD ADAMSON.

Witnesses:

JOSEPH ADAMSON,  
RICHARD WHALIN.