No. 641,327. Patented Jan. 16, 1900.

# T. A. ROBINSON & R. L. SHAW.

## REED FOR TEXTILE MACHINERY.

(No Model.) (Application filed Sept. 21, 1899.)

Fig 1:

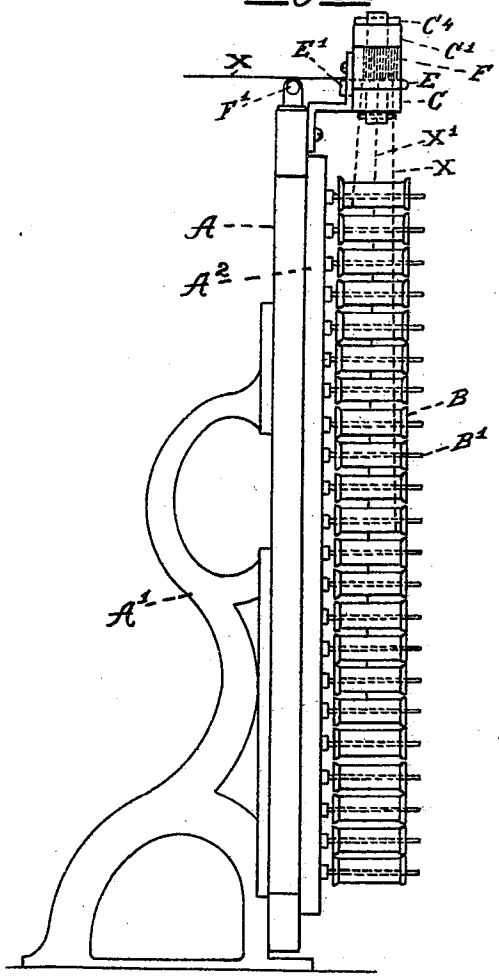



Fig 2:

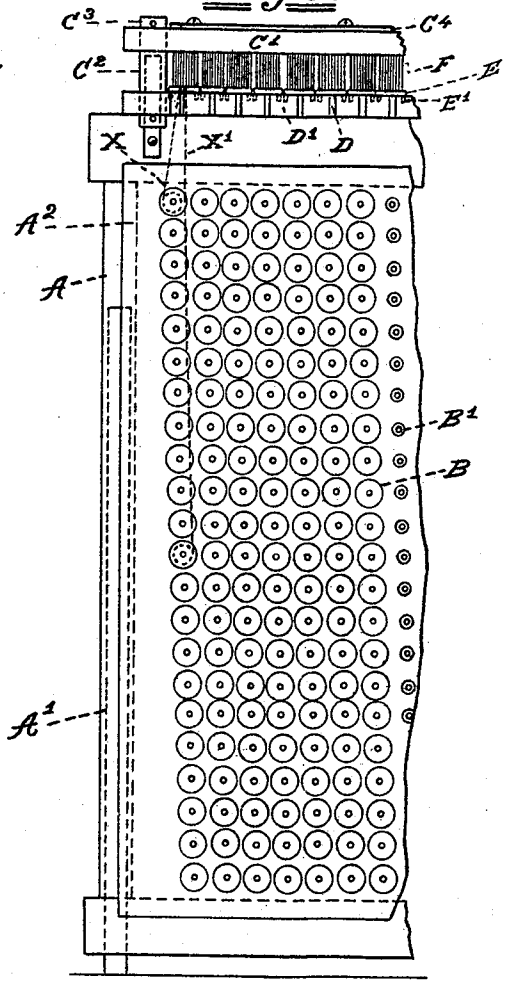
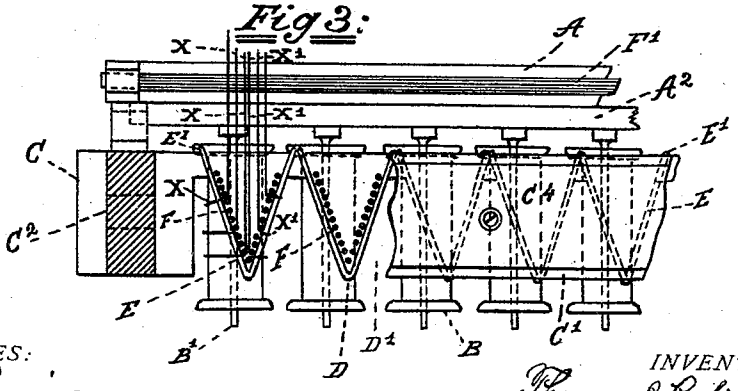



Fig 3:




WITNESSES:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

THOMAS A. ROBINSON AND ROBERT L. SHAW, OF PATERSON, NEW JERSEY.

## REED FOR TEXTILE MACHINERY.

SPECIFICATION forming part of Letters Patent No. 641,327, dated January 16, 1900.

Application filed September 21, 1899. Serial No. 731,164. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS A. ROBINSON and ROBERT L. SHAW, citizens of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Reeds for Textile Machinery, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to reeds for creel-boards used in connection with warping-machines, warping-mills, and other textile machinery; and the objects of our invention are, first, to increase the capacity of creel-frames; second, to decrease the size thereof; third, to give a creel-frame of reduced size a capacity greater than that of the frame now in vogue; fourth, to utilize the whole surface of the creel-frame by reducing the distance or spaces between the bobbins; fifth, to economize in floor-space and cost of production, and, sixth, to avoid the bunching, knotting, wearing, and cutting of threads by friction in passing from the bobbins. We attain these objects by the use of our improved reed, which is constructed and arranged as shown in the accompanying drawings, in which similar letters of reference indicate like parts.

In the drawings, Figure 1 is an end elevation of creel-frame with our improved reed secured to top thereof. Fig. 2 is a part front view thereof; and Fig. 3 is a plan view, part sectional and part broken away.

It has been found necessary in the past to have the bobbins containing the silk or other thread supported on pins secured to the creel-frame at quite a considerable distance apart in order to prevent the threads from being worn, knotted, cut, or tangled by friction with each other in passing from their respective bobbins. The pins to support the bobbins have also been arranged in oblique rows for the same purpose, as shown in Fig. 2. The spaces between the said pins when a great number of bobbins are required, which is in many instances, necessitate the use of a very large creel-frame.

In Fig. 2 of the drawings the thread X is shown as coming from the left side of the bobbin. In practice, however, we take all the threads from the right-hand side, as shown by X′ in the same figure. We divide the bobbins on the creel-board into the upper half and the lower half. The threads from the upper half we bring from the right-hand side of the bobbins to the left-hand sides of the respective angles of dents, and the threads from the lower half from the right-hand side of the bobbins to the right-hand sides of the said angles of dents. Our invention, however, enables us to utilize the spaces hitherto not occupied between the bobbins, for the reasons hereinbefore stated, increasing the capacity and at the same time reducing the size of the creel-frame, thus making more room for other machines by economizing in floor-space. We utilize the said spaces by mounting bobbins on pins secured in said spaces to the creel-frame and accommodate the increased number of threads coming from said bobbins by the use of our improved reed, which is shown in the drawings, and is provided with an increased number of dents without lengthening the reed. This we can do, as the dents in our reed are not inserted in the reed so as to form a straight line, but form a broken line or a series of V-shaped angles throughout the length of the reed. The top and bottom of the reed in which the dents of glass, wire, or other material are secured is wide for the purpose and may be either solid or skeleton in form and may be made of wood, metal, or other suitable material.

Our reed is provided with a rod or rods of glass or any other suitable substance and made to conform to the shape or configuration of the broken line of dents, over which rod or rods the threads pass in going through the reed. In being unwound from the bobbins the threads naturally traverse the length thereof and pass upward and over said rod or rods and through their respective dents in our reed, so that their relative positions in passing each other in their upward course are continually changing, and the effect is to keep the threads separate and disentangled, while in going to the ordinary reed now in use the tendency is for the threads to get together on approaching the reed, and the liability to wear, cut, and tangle is greater.

In the construction of our reed we do not wish to limit ourselves to any size or material and wish to claim, broadly, in a reed a series of dents forming a broken line and rods of

glass or other suitable material to conform therewith.

Any arrangement of dents in a reed in a broken line with guide-rods formed to fit said reed will come within the scope of our invention.

A represents the creel-frame; A′, support for same; $A^2$, the creel-bars; B, the bobbins; B′, the pins to support the bobbins.

C is the bottom rail of reed-frame; C′, the top rail thereof. $C^2$ are the end posts thereof, and $C^3$ are the securing-pins of the same, and $C^4$ the cover-plate thereof.

D D are the triangular parts of the bottom rail C of the reed-frame; D′, the open spaces for the passage of the threads or filaments.

E are the glass guides, which are provided with the locking or overlapping ends E′.

F are the reed-bars, F′ the guide-rod, and X X′ are the lines of thread or filament.

The glass guide-rods E are bent to form an angle, so as to fit against the dents at the bottom of the reed, and the ends of the rods E are bent downwardly, as indicated by the reference-letter E′, so as to overlap the bottom rail C of the reed-frame. The rods E are pressed against the dents, and the overlapping ends E′ are pressed down behind the bottom C of the reed-frame, which locks them snugly and keeps them in place.

With this description of our invention, what we claim is—

1. In a reed, dents mounted in a broken line, in combination with a glass rod or rods, shaped and adapted to fit against said dents and provided with bent ends to lock over the bottom rail of the reed-frame, substantially as set forth.

2. In a reed for textile machinery the combination with the reed-frame, of a guide-rod, of glass or other suitable substance, having one or more V-shaped portions throughout the length thereof, and overlapping ends, adapted to pass behind and lock over the bottom rail of the reed-frame, substantially as set forth.

3. In a reed for creel-frames or other textile machinery, the reed-frame in combination with dents secured and arranged therein so as to form one or more V-shaped angles throughout the line of dents, and a guide-rod, of glass or other suitable substance, having one or more V-shaped portions, to fit against the V-shaped angles of dents, and having bent ends to overlap the reed-frame, substantially as set forth.

4. In a creel-frame, the main body of the frame and pins rigidly affixed thereto, in oblique rows, and adapted to support bobbins thereon in close proximity, in combination with a reed secured to said frame, the dents of said reed being out of alinement so as to form one or more V-shaped angles throughout the line of dents, and a guide-rod having one or more V-shaped portions adapted to fit against the V-shaped angles of dents and having bent ends to lock over the bottom rail of the reed-frame, subtantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS A. ROBINSON.
ROBERT L. SHAW.

Witnesses:
E. FUERSTENBERG,
ADOLF BRANCH.