

No. 643,827.

Patented Feb. 20, 1900.

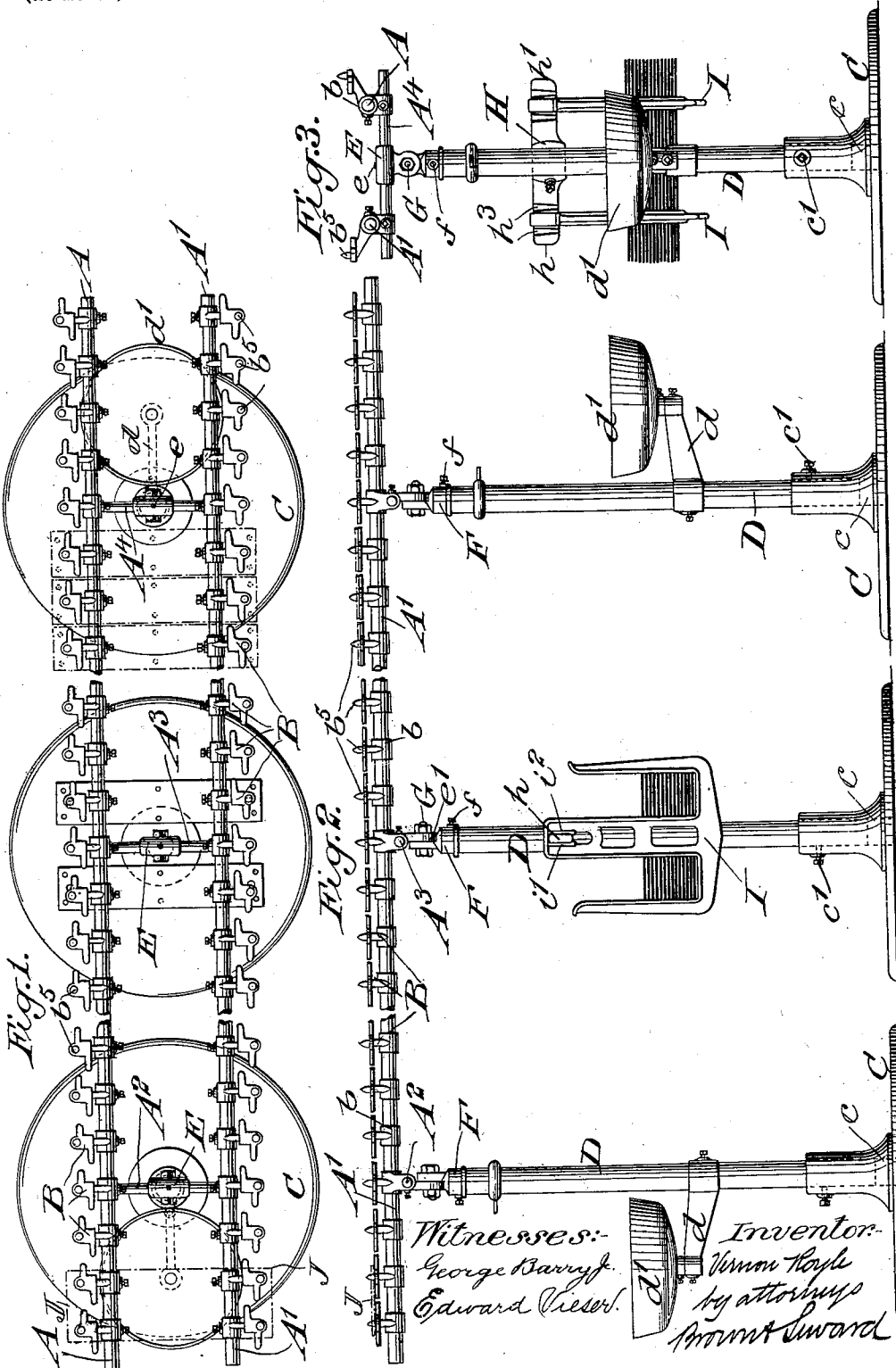
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WORK HOLDER FOR LACING JACQUARD CARDS.

(Application filed Feb. 13, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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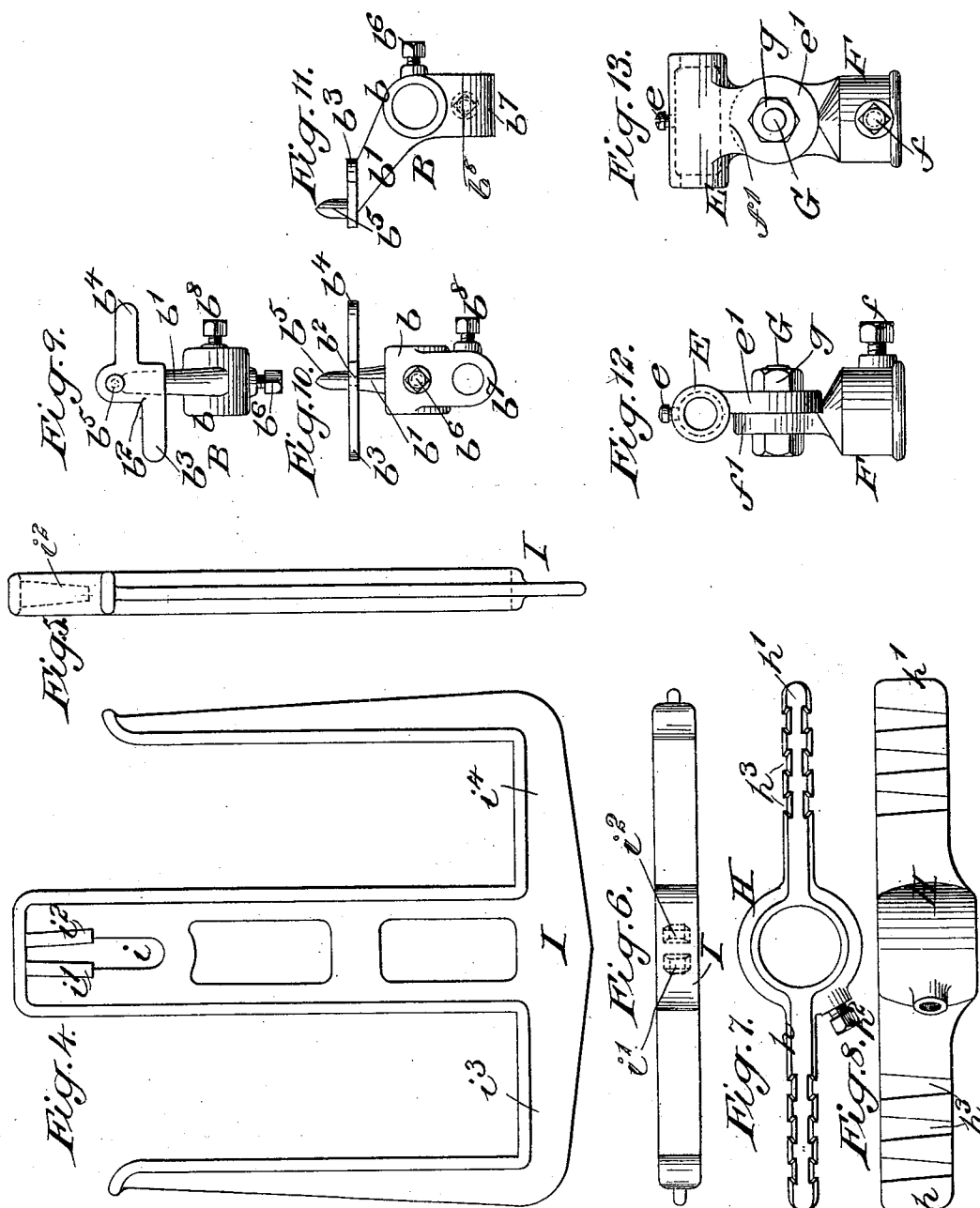
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WORK HOLDER FOR LACING JACQUARD CARDS.

(Application filed Feb. 13, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

VERNON ROYLE, OF PATERSON, NEW JERSEY.

WORK-HOLDER FOR LACING JACQUARD-CARDS.

SPECIFICATION forming part of Letters Patent No. 643,827, dated February 20, 1900.

Application filed February 13, 1899. Serial No. 705,369. (No model.)

To all whom it may concern:

Be it known that I, VERNON ROYLE, a citizen of the United States, and a resident of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Hand Lacing-Frames for Jacquard Pattern-Cards, of which the following is a specification.

One object of my invention is to provide a lacing-frame for jacquard pattern-cards in which the cards may be rapidly and accurately laced by hand.

A further object is to provide a lacing-frame which will be strong and durable, will not warp, and in which the card-rack may be adjusted to any desired height and at any angle relative to its supports.

A still further object is to provide a lacing-frame in which two lines of spur-brackets may be adjusted bodily toward and away from each other and in which the brackets on each side may be adjusted at the required distances apart to determine the spaces between the edges of the cards.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a top plan view of the frame, certain portions between its middle and ends being broken away. Fig. 2 is a side view of the same. Fig. 3 is an end view. Figs. 4, 5, and 6 represent face, edge, and top views of one of the card-stack holders. Figs. 7 and 8 represent top and side views of the hanging bracket for the card-stack holders. Figs. 9, 10, and 11 represent top, side, and end views, respectively, of one of the spur-brackets; and Figs. 12 and 13 represent edge and side views, respectively, of the hinged connection between the supporting-upright and the rack.

The card-rack of the lacing-frame consists of a pair of longitudinally-extended side bars $A A'$, each of them having a series of adjustable spur-brackets B mounted thereon, the said bars being connected at intervals by cross-bars $A^2 A^3 A^4$. Each of these spur-brackets B comprises a sleeve b , which is adapted to slide along one of the side bars $A A'$, a web b' uprising therefrom, which web connects the sleeve b with a plate b^2 , which plate is provided with arms $b^3 b^4$, projecting from the inner and outer ends of the oppo-

site edges of the plate, so that the arm b^3 of one plate might be caused to lap past the arm b^4 of the plate of the next adjoining bracket. This plate b^2 has a stud b^5 uprising therefrom, which stud is fitted to enter the stud-hole in the middle of one of the ends of the jacquard pattern-card for holding that end of the card in position on the rack. The sleeve b is provided with a set-screw b^6 , which is arranged to clamp the bracket to the side bar. Certain of the brackets B are provided with a supplemental sleeve b^7 below and at right angles to the sleeve b for receiving therein one end of one of the cross-bars $A^2 A^3 A^4$ of the rack. A set-screw b^8 enters this supplemental sleeve b^7 in position to clamp the bracket to the cross-bar.

The support for the card-rack comprises end uprights and one or more intermediate uprights, according to the length of the rack. Each of these uprights consists of a base C , having a socket c uprising therefrom, within which is adjustably secured a post D . In the present instance the post D is secured in its different vertical adjustments by means of a set-screw c' , which enters the socket c in position to impinge against the said post therein.

The rack is hinged to the several supporting-uprights, so that the bases of the individual uprights may accommodate themselves to any unevenness of the flooring, while the rack as a whole may remain level. Each of the hinges consists of the following parts: A sleeve E is adjustably secured upon one of the cross-bars $A^2 A^3 A^4$ by means of a set-screw e , which sleeve is provided with a downwardly-extended lug e' .

A cap F receives the upper end of the post D and is clamped thereto by means of a set-screw f . The cap F is further provided with an upwardly-extended lug f' , which corresponds to the lug e' upon the sleeve E . A pivot-bolt G passes through these lugs $e' f'$ and is secured in position by means of a suitable nut g . The end posts D may be provided with brackets d , which carry receptacles d' for the balls of twine or cord to be used in lacing the cards.

A stack-holder bracket is secured to the intermediate post of the frame, which bracket consists of a central sleeve H , having a pair of outwardly-extended arms $h h'$, the sleeve

being arranged to be secured to the post by means of a set-screw h^2 . The reserve supply of cards in stacks are supported near their ends in holders I, which holders are removably supported by the holder-supporting bracket. The structure which I employ for permitting the holders to be removably supported on said arms and also capable of adjustment toward and away from each other is as follows: Each of the arms h h' is provided with a series of sockets h^3 along its opposite sides, which sockets taper from their tops to their bottoms and are arranged to also extend downwardly and outwardly, as shown.

The holder I is provided with an elongated slot i in its upper end of sufficient size to permit the passage of one of the arms h h' therethrough. The upper end of the elongated slot i is contracted, as shown, so that when the holder has been passed over the end of one of the arms to a point opposite one of the sets of sockets h^3 and the holder then lowered into position the reduced portion of the elongated slot i will receive the arm therein and tapered guides i' i'' on opposite sides of the slot will enter the said sockets h^3 . This holder I is provided with oppositely-extended L-shaped arms i^3 i^4 , the distance between the vertical portions of the arms and the vertical portions of the holder being sufficient to permit the cards to be laid flat therein.

In Figs. 1 and 2 I have represented in dotted lines a pattern-plate J, which may be used for adjusting the distances between the pairs of spur-brackets upon opposite sides of the rack and between each bracket upon one side and its adjoining bracket to correspond with the pattern-card to be laced. I have also shown in Figs. 1 and 2 in dotted lines the position of a number of pattern-cards to show their positions relatively to one another.

All the parts of the lacing-frame are made of metal, so as to reduce the liability of the parts from warping and also to insure the maximum amount of strength and durability.

In putting the frame in condition for lacing the cards the spur-brackets upon each side are adjusted the required distance apart and the pairs of brackets on opposite sides the required distance apart by means of the pattern-plate J. When they are thus adjusted, the set-screws b^6 and b^8 are screwed up to hold the brackets in their positions. The rack may be then adjusted laterally by sliding the cross-bars A^2 A^3 A^4 through the sleeves E, and when the rack is adjusted to its proper position laterally the set-screw e is tightened. The rack is then adjusted to the required height and held in position by raising or lowering the posts D and then tightening the set-screws c' . The nuts g may then be loosened to permit the bases of the uprights to accom-

modate themselves to any unevenness in the flooring, and after the rack is adjusted to the proper point the nuts g are tightened.

It will be seen that by providing the bearing-plates of the spur-brackets with laterally-extended arms arranged so as to lap past the arms on the plates of the adjacent brackets the cards may be provided with an extended bearing-surface and yet the brackets may be brought into close proximity to each other. It will thus be seen that the lacing-frame has a universal adjustment, so that it may be placed in any position required.

It is evident that changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth; but

What I claim is—

1. In a card-lacing frame, a plurality of supporting-uprights, a card-lacing rack carried thereby comprising a pair of side bars, a plurality of cross-bars connecting the side bars and a plurality of spur-brackets mounted on the said bars in position to receive and retain the cards to be laced, substantially as set forth.

2. In a card-lacing frame, a plurality of supporting-uprights, a card-lacing rack carried thereby comprising a pair of side bars, a plurality of cross-bars connecting the side bars, a plurality of pairs of spur-brackets carried by the said side bars for receiving and retaining the cards to be laced and means for adjusting the pairs of brackets toward and away from each other, substantially as set forth.

3. In a card-lacing frame, suitable supports, a card-lacing rack carried thereby, a plurality of spur-brackets adjustably secured upon the rack, the said brackets having bearing-plates thereon provided with oppositely-extended arms, the arms upon one plate being arranged to lap past the arms upon the next adjoining plates as the brackets are moved into proximity to each other, substantially as set forth.

4. The combination with one of the supports of a card-lacing frame, of a bracket secured thereto, a pair of card-stack holders supported by the bracket and means for adjusting the holders toward and away from each other, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 27th day of January, 1899.

VERNON ROYLE.

Witnesses:

FREDK. HAYNES,
EDWARD VIESER.