

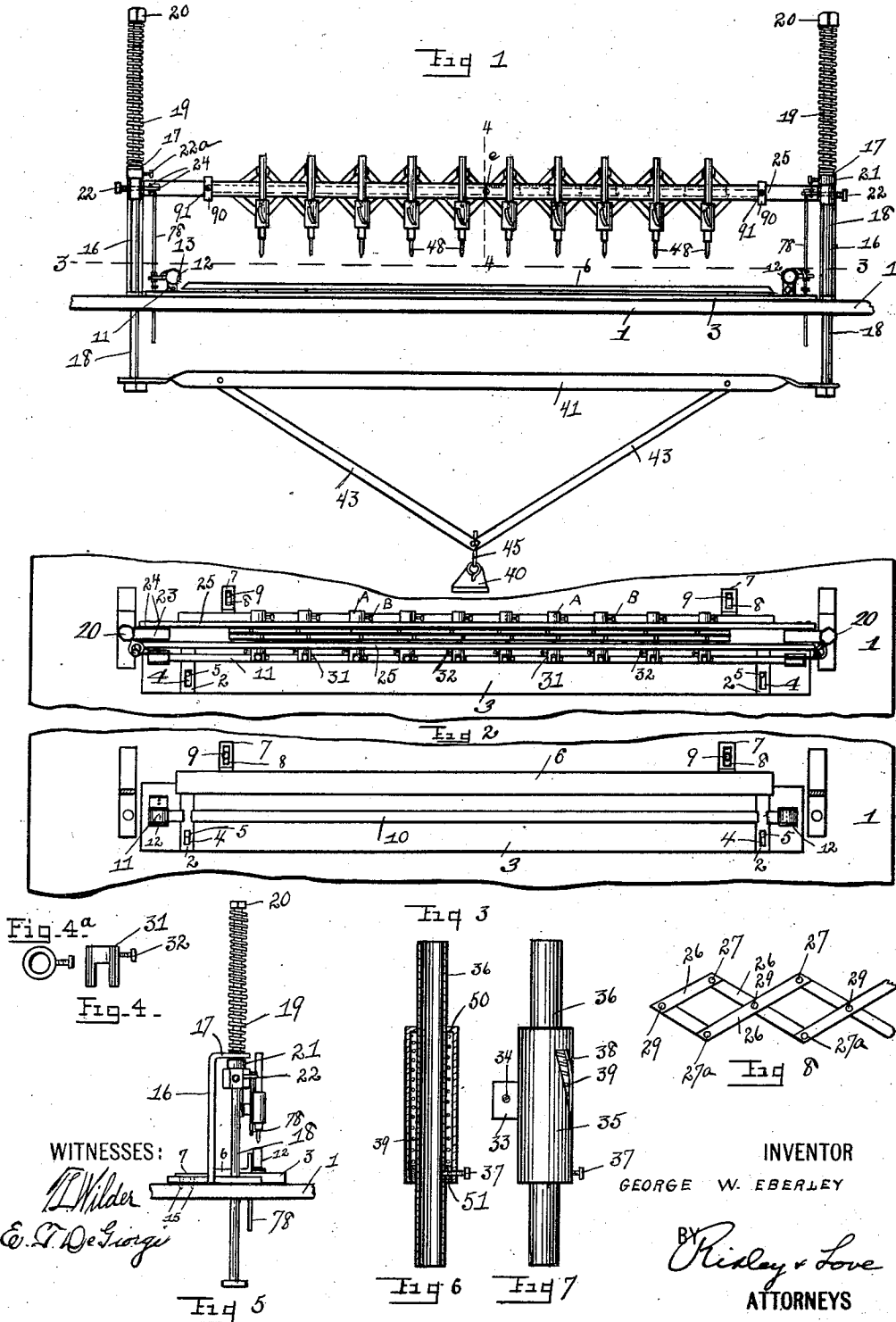
G. W. EBERLEY.
SPACER.

APPLICATION FILED MAY 7, 1910.

1,019,139.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.



G. W. EBERLEY.

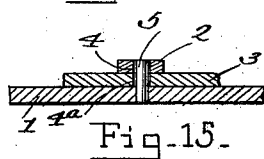
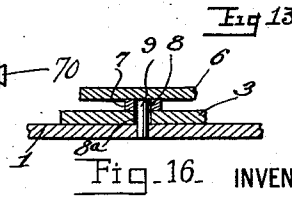
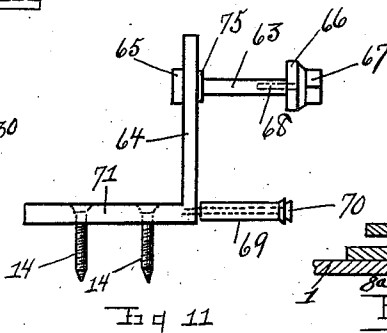
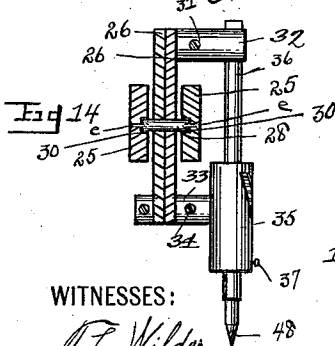
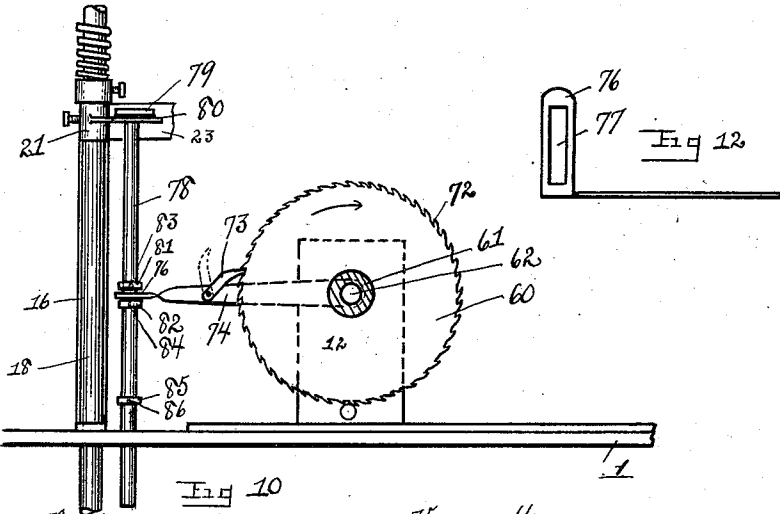
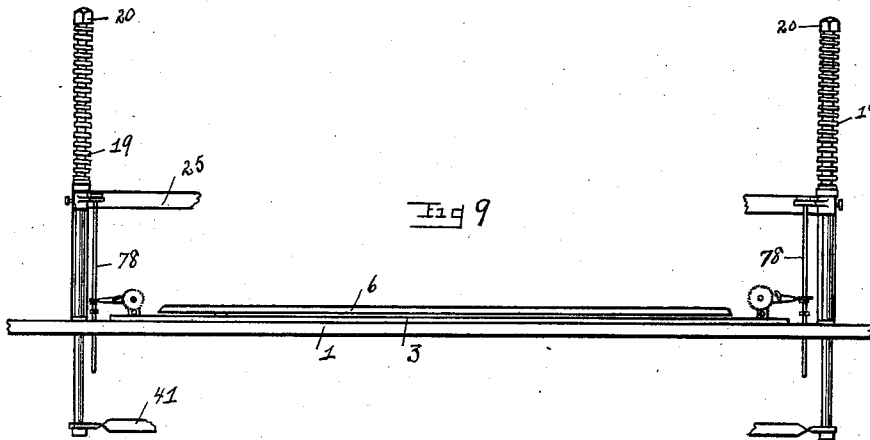
SPACEB.

APPLICATION FILED MAY 7, 1910.

1,019,139.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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SPACER.

1,019,139.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed May 7, 1910. Serial No. 560,036.

To all whom it may concern:

Be it known that I, GEORGE W. EBERLEY, citizen of the United States, residing at Whitesboro, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Spacers, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a spacer and I declare the following to be a full, clear, concise and exact description thereof sufficient to enable any one skilled in the art to which it appertains to make and use the same reference being had to the accompanying drawings in which like reference characters refer to like parts throughout.

The object of the invention is to provide an efficient device whereby the accurate spacing at regular intervals of places for buttons and button-holes on garments may be attained.

The device embodies a lazy tongs supporting a plurality of pencils or markers adapted to contact with a rotary movement upon any garment placed beneath them and thus distinctly mark the same.

Further objects will appear by reference to the drawings in which:

Figure 1 is a side elevation of the machine; Fig. 2 is a top plan view; Fig. 3 is a plan view taken on line 3—3 of Fig. 1; Fig. 4 is a detail view somewhat enlarged of a part employed on the device; Fig. 4^a is an end elevation of Fig. 4; Fig. 5 is an end elevation of Fig. 1; Figs. 6, 7 and 8 are details enlarged of specific parts of the device; Fig. 9 is a fragmentary side elevation showing the automatic mechanism for moving the ribbon; Fig. 10 is a fragmentary detail enlarged showing more clearly the automatic mechanism for moving the ribbon; Figs. 11 and 12 are detail views of specific parts employed as shown clearly in Fig. 10. Fig. 13 is a detail view enlarged of a pin employed on the device, as an alternative. Fig. 14 is a section enlarged taken on the line 4—4 of Fig. 1. Fig. 15 is an enlarged fragmentary view in section showing cer-

tain details of construction; Fig. 16 is an enlarged fragmentary view in section showing certain details of construction.

Referring to the drawings more particularly, the machine is suitably mounted upon a table 1 having movably secured thereto a board 3 at either end of which are mounted braces 2 2 provided with slots 4 corresponding to like slots 4^a underneath in board 3. Board 3 is adapted by means of slots 4 in braces 2 and the corresponding slots underneath same in board 3 to adjustably move along transverse the surface of table 1 on screws 5 rigidly mounted in table 1. Adjacent the rear portion of board 3 there is held slightly above same a strip 6. Strip 6 is slidably held in position by metallic braces 7 slotted as at 8 adapted for the passage therealong and along corresponding slots 8^a underneath 8 in board 3, of screws 9 rigidly mounted in table 1. Centrally disposed longitudinally of board 3 there is provided a groove 10 adapted for the passage of an inked ribbon 11 wound about spools 12 mounted in bracket bearings 13 secured to board 3 by screws 14.

The spacing mechanism contemplates brackets 16, one at either end of the device, rigidly mounted on table 1 by screws or bolts 15. Brackets 16 are provided with horizontal portions or shelves 17 bored for the reception of rods 18 held normally above said shelves by springs 19 coiled upon said rods 18 and engaging nuts 20 at the upper ends and shelves 17 at their lower ends. Below said shelves 17 and as here shown in Fig. 5 more clearly, there are mounted sleeves 21 held vertically on rods 18 by set screws 22 and 22^a. Sleeves 21 are provided with laterally projecting lugs 23 preferably cast integral with sleeves 21 and adapted for the passage of bolts 24 which pass through corresponding bores in supporting bars 25 and hold same rigidly to said lugs 23, in a suspended position as shown clearly in Fig. 1.

Lazy tongs comprising a plurality of crossed levers 26 pivoted as indicated in Fig. 8 adapted for rectilinear movement

upon supporting bars 25 by providing the center or master pivot 28 of the lazy tongs with projecting ends adapted to extend into suitable bearings in bars 25 and held rigidly thereto by screws *e—e* screw mounted in bars 25 and in a corresponding bore in pivot 28. The other pivots as 29 of the lazy tongs are also provided with projections adapted to extend into grooves 30 formed on the inner adjacent surfaces of bars 25 as indicated by dotted lines in Fig. 1, in order to hold the lazy tongs in a horizontal position. Upon the projecting parts of pivots 27 are mounted a plurality of forked sleeves 31 having bores adapted to fit upon the projecting parts of pivots 27 and be held rigidly thereto by set screws 32. The forked portion of sleeves 31 has a purpose that I shall presently explain. Upon the projecting portions of pivot pins 27^a are mounted sleeves 33 held rigidly to said projecting pivot pins 27^a by set screws 34. The opposite projecting ends of pivot pins 27^a are secured by bushings A held to said parts by set screws B. Sleeves 33 are cast integral with casings 35 formed for the insertion of tubes 36 held in assembled position upon casings 35 by set screws 37 screw mounted in tubes 36 and held normally at the lower end of spiral slots 38 in casings 35 by coiled springs 39 resting at their upper end against shoulder 50, formed in casings 35, and at their lower end against bushings 51 held in proper position by screws 37 which pass through a suitable screw threaded bore in bushings 51. Tubes 36 are held in a vertical position or perpendicularly to board 3 by forked sleeves 31 whose sides act as guides to the tubes 36.

To operate the machine the operator first sets strips 6 back at a proper distance from groove 10 upon board 3 in accordance with the margin intended to be left upon the edge of the garment. It might be found desirable to have braces 7 graduated along slots 9 for this purpose. If the garment is to be marked on both sides, groove 10 along which runs the inked ribbon 11 is set directly under the points of pencils or markers 48. The operator then holds up the garment with edge to be marked parallel to the line of pencils or markers and places one end of the edge of the garment under pencil or marker to the extreme right held in casing numbered 1, the remaining casings holding the markers 48 being numbered consecutively, and up against strip or stop 6. To the opposite or remote end of the edge of the garment he adjusts in a rectilinear manner the pencil or marker corresponding to the number of desired buttons or button-holes intended to be made thereon, say the tenth if ten buttons or button-holes are required. Having arranged the edge of the garment adjacent the strip or stop 6 and

having set the first and tenth pencils or markers opposite the respective ends of the garment, the operator presses down with his foot on treadle 40 which is connected indirectly to pencils or markers 48 by means of sleeves 21, rods 18, transverse beam 41, bars 43 pivotally mounted on beam 41 and link 45 to treadle 40 hinged to the floor. Obviously the pencils or markers 48 descend simultaneously with treadle 40. Immediately the pencils or markers 48 touch the surface of the garment, being rigidly held to tubes 36 by set screws 37 they revolve because casings 35 still continue to descend being held to pivot pins 27^a on the lazy tongs, and cause screws 37 to spirally rise in grooves 38 whereby the pencils or markers are revolved upon the surface of the cloth. The mark thus made by the pencils or markers is duplicated by the inked ribbon underneath the garment. When the operator releases treadle 40, springs 19 retract bars 18 to their normal position. As the lazy tongs is raised up, pencils or markers 48 are gradually removed from the surface of the garment, not however, until they have completed revolving in the reverse direction and so still continue to mark the garment until casings 35 are raised high enough by their intermediate connections with springs 19 to permit the pencil points or markers to rise up off from the garment. Immediately the pencil points or markers are free, springs 39 retract screws 37 and the parts connected therewith, that is bushings 51, tubes 36 and pencils or markers 48 within said tubes, to their normal position with screws 37 abutting against the lower ends of spiral grooves or slots 38.

In the event that it is found desirable to make holes in the garment instead of pencil marks, the operator pushes board 3 to the rear of the device by loosening screws 5 and sliding the board 3 rearward, for which purpose slots 4 are provided, until groove 10 lies to the side of pencils or markers 48. Sharp pointed pins may be inserted in tubes 36 in place of pencils 48 by loosening screws 37 and taking out pencils 48 and replacing them with pins 50^b as shown in Fig. 13.

There may be used to confine the rectilinear movement of the lazy tongs within certain prescribed limits, if desired, collars 90—90 adjustably held along bars 25—25 by set screws 91—91. Collars 90—90 may, however, be pushed back along bars 25—25 in a position where they will be out of commission, provided the operator does not care to use them. Bars 25—25 may be graduated as shown in Fig. 1 which might serve a useful purpose in some instances.

The preferred manner of moving the ribbon 11 contemplates the following described mechanism embodying parts shown more

clearly in Figs. 9, 10, 11 and 12. More particularly, spools 12 are provided with a disk 60 having integral therewith a barrel 61 upon which is wound the inked ribbon 11 shown in Fig. 3. Barrel 61 has a bore 62 adapted to be rotatably mounted upon axle 63 held in proper suspended position by bracket bearing 64 provided with a bore adjacent its upper end for the passage of axle 63 which is held rigidly in assembled position by nut 65 screw mounted thereto. In order to hold wheel of spool 12 from turning too freely upon axle 63 there is placed thereon a leather washer 66 held at different tensions against the barrel 61 by nut 67 provided with screw bolt 68 integral therewith and screw mounted into a corresponding bore in axle 63 shown by dotted lines in Fig. 11.

In order to confine ribbon 11 to its proper position along trough or groove 10 there is disposed directly under wheel 12 a friction roller 69 mounted upon a headed pin 70 screw threaded into base 71 of bracket 64. The periphery of wheel or disk 60 has teeth as 72 adapted to cause disk 60 to rotate in one direction, indicated by an arrow, by a pawl 73 pivoted to lever 74 mounted at one end upon bushing 75 rigidly secured to axle 63. The remote end of lever 74 is bent at an angle of ninety degrees to provide an arm 76 having a recess 77 adapted to permit arm 76 to be moved within the limits prescribed by recess 77 along rod 78 in order that the transverse adjustment of board 3 to which bracket 64 is secured with reference to table 1 might not be prevented. Rod 78 is loosely held by head 79 integral therewith in ring 80 secured in any suitable manner to sleeve 21. Obviously when rod 18 and sleeve 21 rigidly secured thereto drop or are forced downward by treadle 40 rod 78 will simultaneously drop by force of gravity and carry with it arm 76 of lever 74, which arm is held between nuts 81 and 82 adjustably held along rod 78 by set screws 83 and 84. The downward movement of rod 78 will be stopped, however, at a predetermined point by nut 85 adjustably held to rod 78 by set screw 86. When lever 74 moves downward pawl 73 pivoted thereto rides down over teeth 72 of disk 60 and when rod 18 is retracted ring 80 connected with sleeve 21 rigidly held to rod 18 draws up rod 78 and with it lever 74 which by means of pawl 73 turns disk 60 of wheel 12 and thus causes the ribbon 11 to move the distance between any two successive teeth if desired or the distance between two or more teeth according to the adjustment of nut 85 upon rod 78, which may be graduated with a view to convenience of ascertaining the distance on rod 78 from table 1

that set nut 85 must be placed for a given rotation of disk 60 of wheel 12.

Both ribbon wheels 12 are provided with the foregoing described mechanism and in order that the ribbon may move in one direction at a time it is simply necessary to throw up one of the pawls 73 from engagement with disk 60 as shown in dotted lines in Fig. 10.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a spacer of the character described, the combination of pencils rigidly held in tubes which are rotatorily mounted in casings, means on said tubes engaging means on said casings whereby said tubes are rotated to mark a garment, mechanism secured centrally to move said tubes and casings in a rectilinear manner, and mechanism to project said pencils upon a garment, substantially as described.

2. In a spacer, the combination of pencils rigidly held to tubes which are slidably mounted in casings, lever mechanism comprising lazy tongs secured centrally adapted to move said casings rectilinearly, mechanism to project said pencils upon the surface of garments, and spring mechanism for retracting said pencils and said casings, substantially as described.

3. In a spacer, the combination of pencils rigidly mounted in tubes by screws having portions adapted to slide in spiral grooves in casings whereby to rotate said pencils to mark a garment, said casings secured to lever mechanism whereby same may be moved in a rectilinear manner for spacing, a treadle to project said pencils upon the surface of a garment, and spring means for withdrawing said pencils from off the surface of said garment, substantially as described.

4. In a spacer, the combination of pencils, tubes, and casings, said pencils rigidly held to said tubes, said tubes mounted to spirally move in said casings, springs in said casings adapted to retract said tubes and pencils, lazy tongs to which said casings are mounted, said lazy tongs adapted to move said casings in a rectilinear manner, rods actuated by a treadle whereby to project said pencils upon the surface of a garment, and springs upon said rods adapted to retract same.

5. In a spacer of the character described, the combination of pencils, tubes, casings, lazy tongs, bars and rods said pencils rigidly held to said tubes spirally mounted in said casings held upon said lazy tongs, guides secured to said lazy tongs and adapted to secure said tubes in vertical position, said lazy tongs mounted upon said bars secured

to said rods, a treadle to actuate said rods whereby said pencils may be projected upon a garment, and a stop adapted to have said pencils projected upon said garment at a predetermined distance from the edge thereof.

6. In a spacer, the combination of markers, tubes, and casings, having spiral grooves, said markers rigidly held to said tubes by screws having portions adapted to slide in said spiral grooves in said casings, lazy tongs to which said casings are secured, said lazy tongs having guide sleeves to hold said tubes in vertical position, bars connecting said lazy tongs to rods actuated by a treadle, whereby to project said markers onto the surface of a garment, and means on said rods whereby to retract said markers from off said garment, substantially as described.

7. In a spacer of the character described, the combination of markers, casings, lazy tongs, bars, and rods, said markers secured to said casings in a revolving manner, springs in said casings adapted to hold said markers normally at one position in said casings, said casings secured to said lazy tongs suspended by said bars connected with said rods actuated by a lever, whereby to project said pencils upon the surface of a garment, and coiled springs on said rods whereby to retract said pencils from off said garment.

8. In a spacer, a plurality of markers mounted to move in a rectilinear manner, mechanism for projecting said markers upon one surface of a garment, means for marking the reverse side of said garment, and automatic mechanism for moving said last named means whereby to present a new surface of said means for marking, substantially as described.

9. In a spacer, the combination of markers and lazy tongs, said markers held in said lazy tongs, means for projecting said markers upon a garment, means underneath said garment whereby the reverse side of said garment may be marked, and automatic means for moving said means under said garment, whereby to present a new surface of said means for marking, substantially as described.

10. In a spacer, the combination of markers and lazy tongs, means for projecting an inked ribbon disposed underneath said garment for marking the reverse side thereof, and automatic means for moving said ribbon.

11. In a spacer, the combination of markers and lazy tongs, means for projecting said markers upon a surface to be marked, means adapted to mark the reverse side of said surface, and automatic means for actuating said means for marking the reverse side.

12. In a spacer, the combination of markers rotatorily mounted whereby to mark a garment, lazy tongs secured in a central manner, bars held in elevated position whereby to support said lazy tongs, and mechanism to project said markers upon the surface of a garment.

13. In a device of the character described, the combination of markers rotatorily mounted whereby to intensify the mark upon a garment, lever mechanism to move said markers rectilinearly, bars to support said lever mechanism in elevated position, rods for supporting said bars, mechanism to project said markers upon the surface of a garment, and adjustable means adapted to determine the distance from the edge of the garment upon which the markers shall project.

14. In a spacer, the combination of markers rotatorily mounted in casings whereby to intensify the mark made thereby upon a garment, mechanism to move said markers in a rectilinear manner, mechanism to project same upon the surface of a garment, mechanism to mark the reverse side of said garment, and adjustable mechanism whereby the distance from the edge of said garment upon which the markers shall project, may be determined.

15. In a spacer, the combination of pencils, tubes, and casings, said pencils held to said tubes, the latter rotatorily mounted in said casings, pivotal means whereby to move said tubes and casings in a rectilinear manner, bars to secure said pivotal means in a central manner, rods to support said bars in elevated position, and mechanism to project said pencils upon a garment to be marked.

16. In a spacer, the combination of markers, lever mechanism supported centrally to move said markers rectilinearly, mechanism to project said markers upon the surface of garments, and means for limiting the rectilinear movement of said casings.

17. In a spacer, the combination of markers rotatorily mounted, lever mechanism to move said markers in a given direction, bars adapted to hold said markers in elevated position, rods adapted to support said bars, mechanism to project said markers upon the surface of a garment, and adjustable means for limiting the movement of said markers in a rectilinear direction.

18. In a spacer, the combination of pencils, tubes, and casings, said pencils held in said tubes, the latter rotatorily mounted in said casings, lazy tongs secured centrally by a master pivot whereby said tubes and casings may be moved in a rectilinear manner with reference to said master pivot, substantially as described.

19. In a spacer, the combination of mark-

ers, lever mechanism secured centrally by a
master pivot, bars to thus support said lever
mechanism, rods to support said bars, said
lever mechanism adapted to move said mark-
5 ers in a rectilinear manner with reference to
said master pivot, mechanism to project said
markers upon the surface of a garment.

In testimony whereof I have hereunto
affixed my signature in the presence of two
witnesses.

GEORGE W. EBERLEY.

Witnesses:

HENRY M. LOVE,
T. L. WILDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."