


Posselt's

Textile Journal

A Monthly Journal of the Textile Industries

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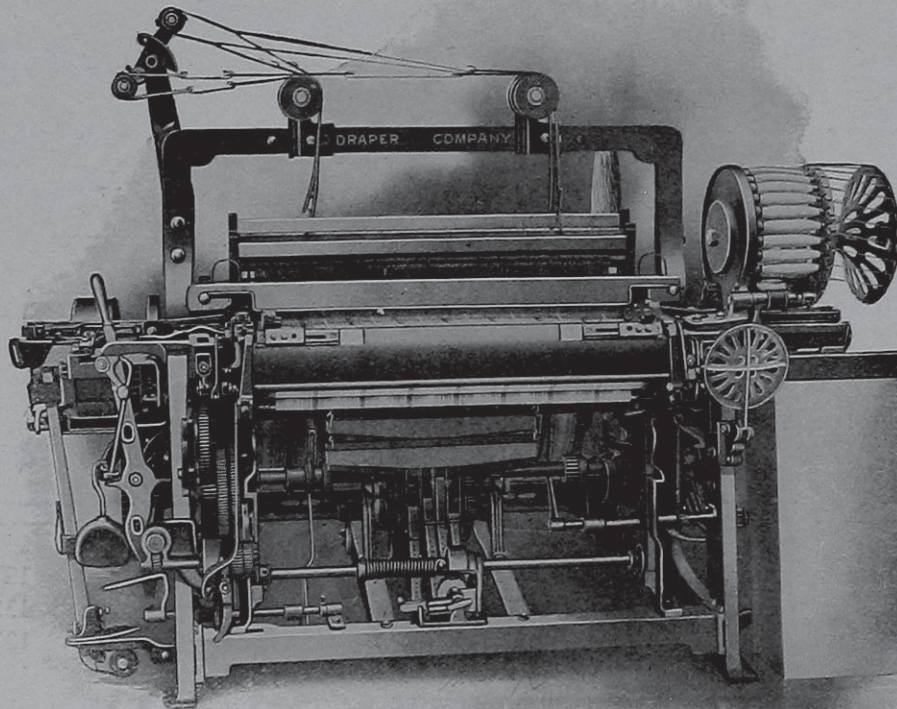
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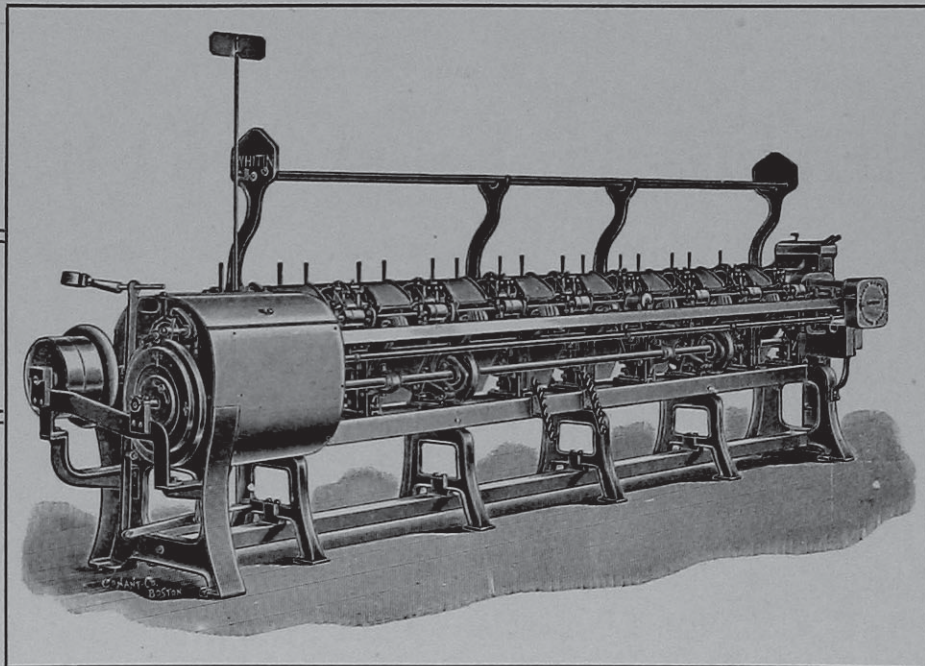
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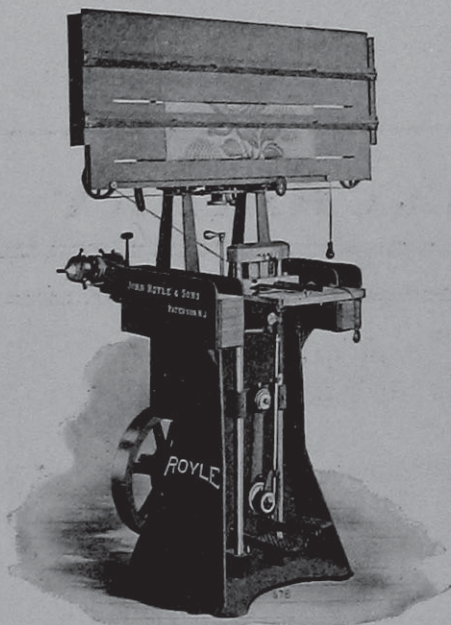
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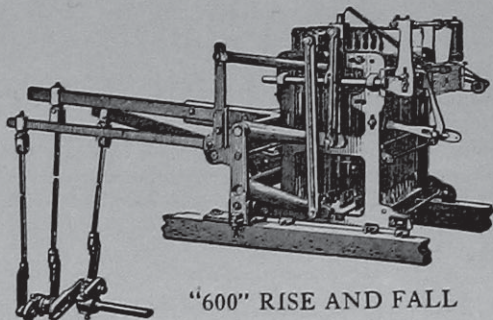
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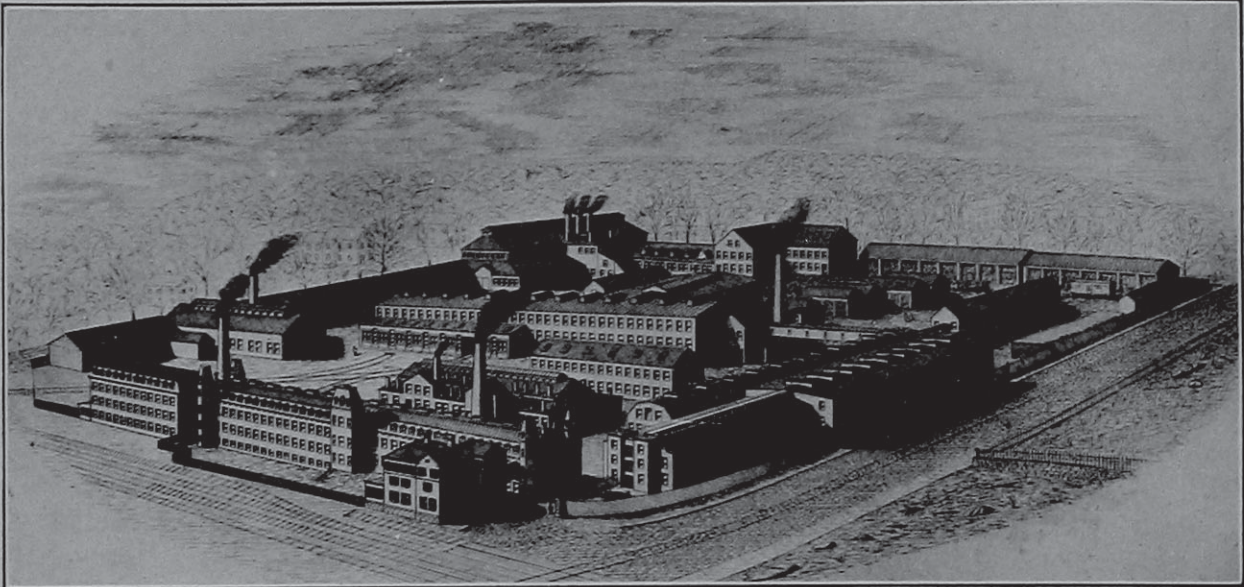
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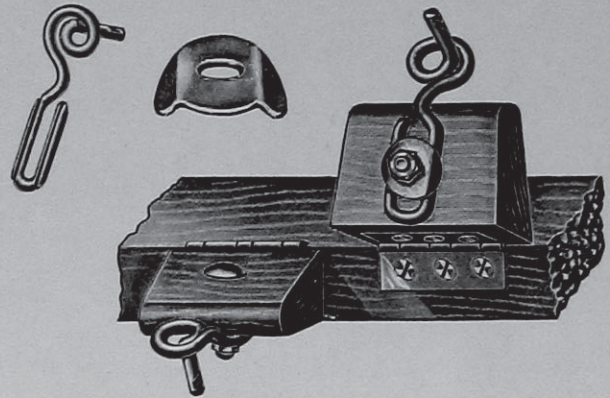
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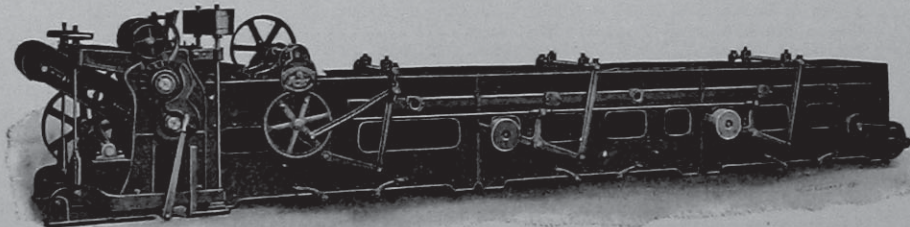
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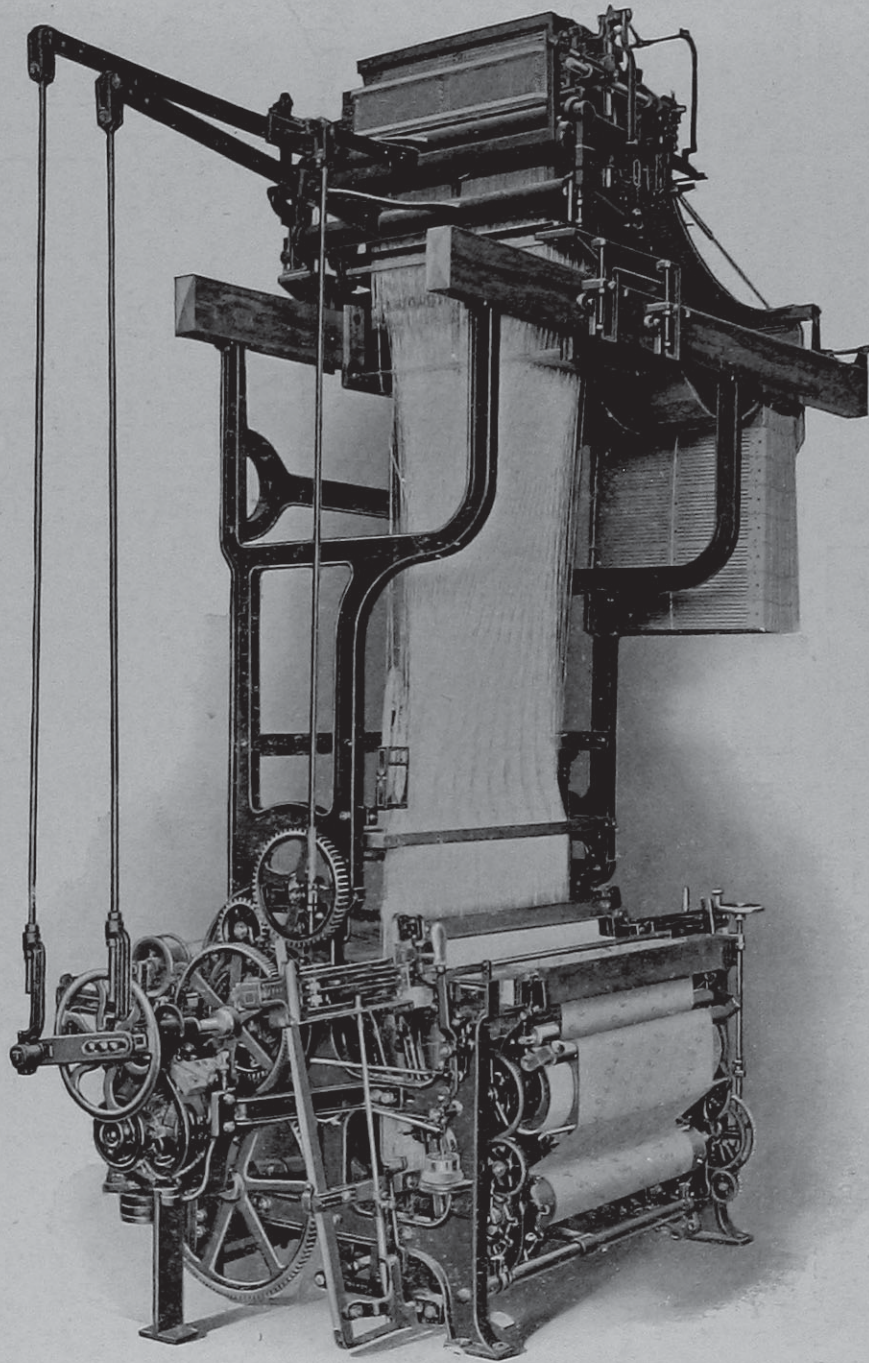
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Posselt's Textile Journal

Vol. IV.

May, 1909.

No. 5.

JACQUARD DESIGNING.

(Continued from page 38.)

ONE SYSTEM WARP AND TWO SYSTEMS FILLING;

the Filling to form face and back of fabric, the Warp resting embedded between the two systems of filling.

This system of designing finds extensive use for an endless variety of fabrics, like Bed Blankets, Steamer Rugs, Horse Blankets, Draperies, Upholstery fabrics, etc.

To explain the principle of designing, and card stamping for this system of fabric structures, we selected the construction of *Figured Bed Blankets*, *i. e.*, Bed Blankets having a figured border at their

The weave most generally used is the $\frac{1}{3}$ 4-harness twill, combined with the $\frac{1}{1}$ 4-harness twill, arranged one pick face to alternate with one pick back; however any other weaves, like for example, the 4-harness broken twill, warp and filling effects may be used; the principle of designing and card stamping remaining identical, the only change to be made by the designer being the painting of two different weaves over figure and ground effect on the point paper.

The use of a 4-harness and 8-pick weave, for interlacing the fabric is correct for the number of needles and cards previously referred to, *i. e.*, the number of needles (384) required for the construction



FIG. 57

two ends, the centre of the blanket being plain white. The best grades of these blankets are made in all wool, cheaper grades being made with cotton warp and wool or Merino filling, all cotton fabrics being also made on this principle of fabric structure.

Fig. 57 shows us a sketch, one sixteenth actual fabric size, hence one repeat of figure, as now measuring 3 inches in its width in our sketch, will measure 12 inches in the fabric.

Texture: 32 warp threads and 64 picks (32 face and 32 back) per inch.

The size of one repeat of design is 3 inches wide by $3\frac{3}{8}$ inches high, and what equals in fabric 12 inches wide by $13\frac{1}{2}$ inches high, thus:

$32 \times 12 = 384$ needles of a 400 Jacquard machine are required for the execution of this fabric; and

$32 \times 2 = 64 \times 13\frac{1}{2} = 864$ cards are required for weaving the border.

of the fabric is evenly divisible by 4 (the repeat, warp ways, of the weave as used for interlacing) and in the same way is the number of cards (864) required for weaving border, evenly divisible by 8 (the repeat, filling ways, of the weave as used for interlacing).

It would be impossible for the designer to produce his design on the point paper analyzed, *i. e.*, how warp and filling interlace, hence this must be done by means of the peculiar manner of stamping the cards from the design, on the *Royle Piano Machine*.

When planing the point paper design, remember that every pick on the point paper stands for two picks in the fabric.

The principle of the designing and card stamping for this class of fabrics will be readily understood by means of illustrations Figs. 58, 59 and 60, representing respectively the design and its analysis (card

stamping) for that part of the sketch Fig. 57 indicated in the left hand upper corner by rectangle *a*, *b*, *c* and *d*, calling for 96×144 squares for the design, and 96 warp threads and 288 picks for the analysis of the fabric structure, *i. e.*, the card stamping. A sufficient portion of the complete design is given, to thoroughly explain the subject.

the figure, forms the ground on the reverse side of the fabric and vice versa.

This, as previously referred to, gives us one row of squares, in a horizontal direction on the point paper, to represent two picks (solved by means of the card stamping), thus our part *a*, *b*, *c*, and *d* of sketch Fig. 57 calls for:

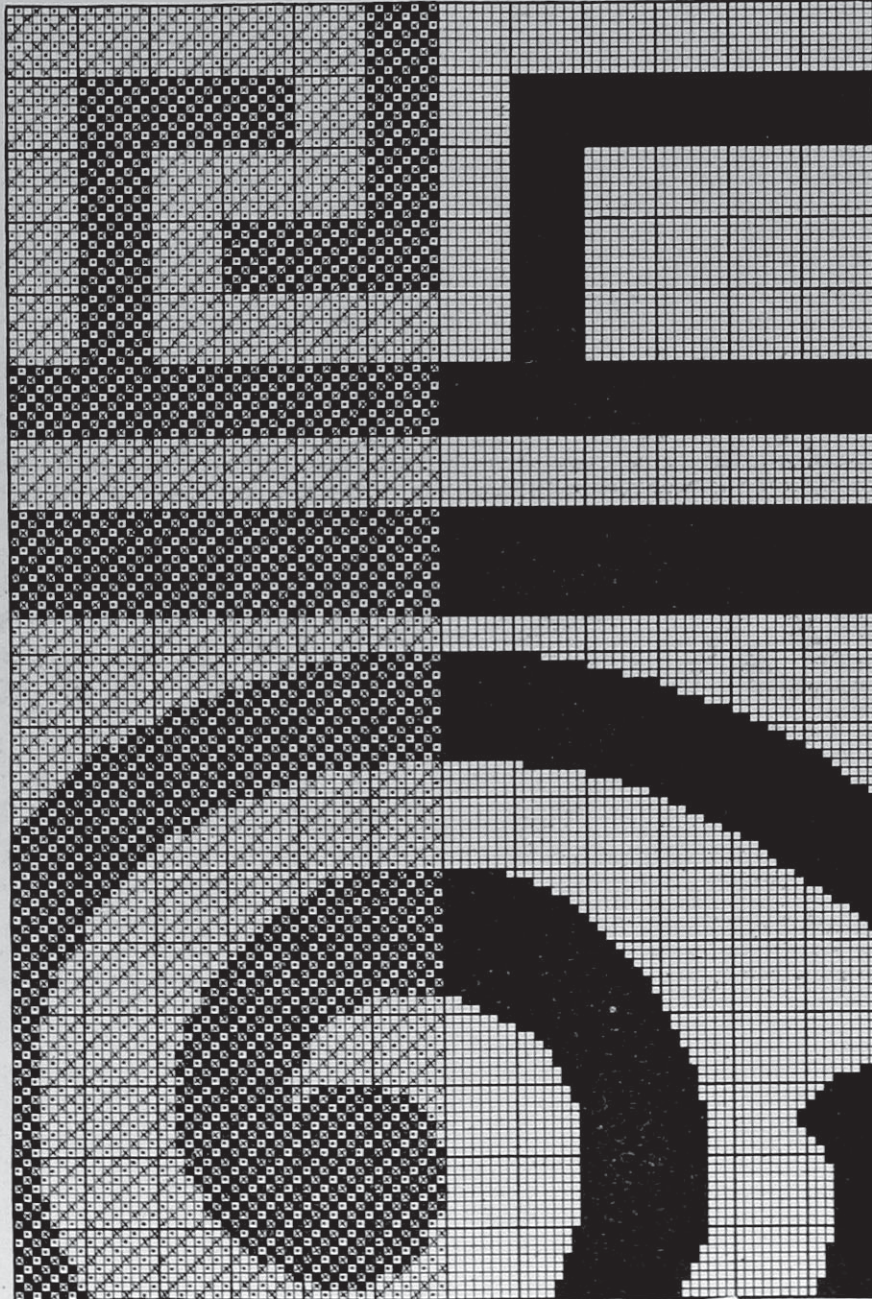


FIG. 59

FIG. 58

How to Prepare the Design.

For this, only the two effects of the design, ground and figure, are to be taken into consideration. Where one of the picks forms figure, its mate pick forms ground, and vice versa, resulting in the required reversible fabric. The color which on one side forms

96 rows of squares in a vertical direction on the point paper and

144 rows of squares in a horizontal direction on the point paper.

The next process is to transfer fabric-sketch to its proper size on the point paper (96×144) and

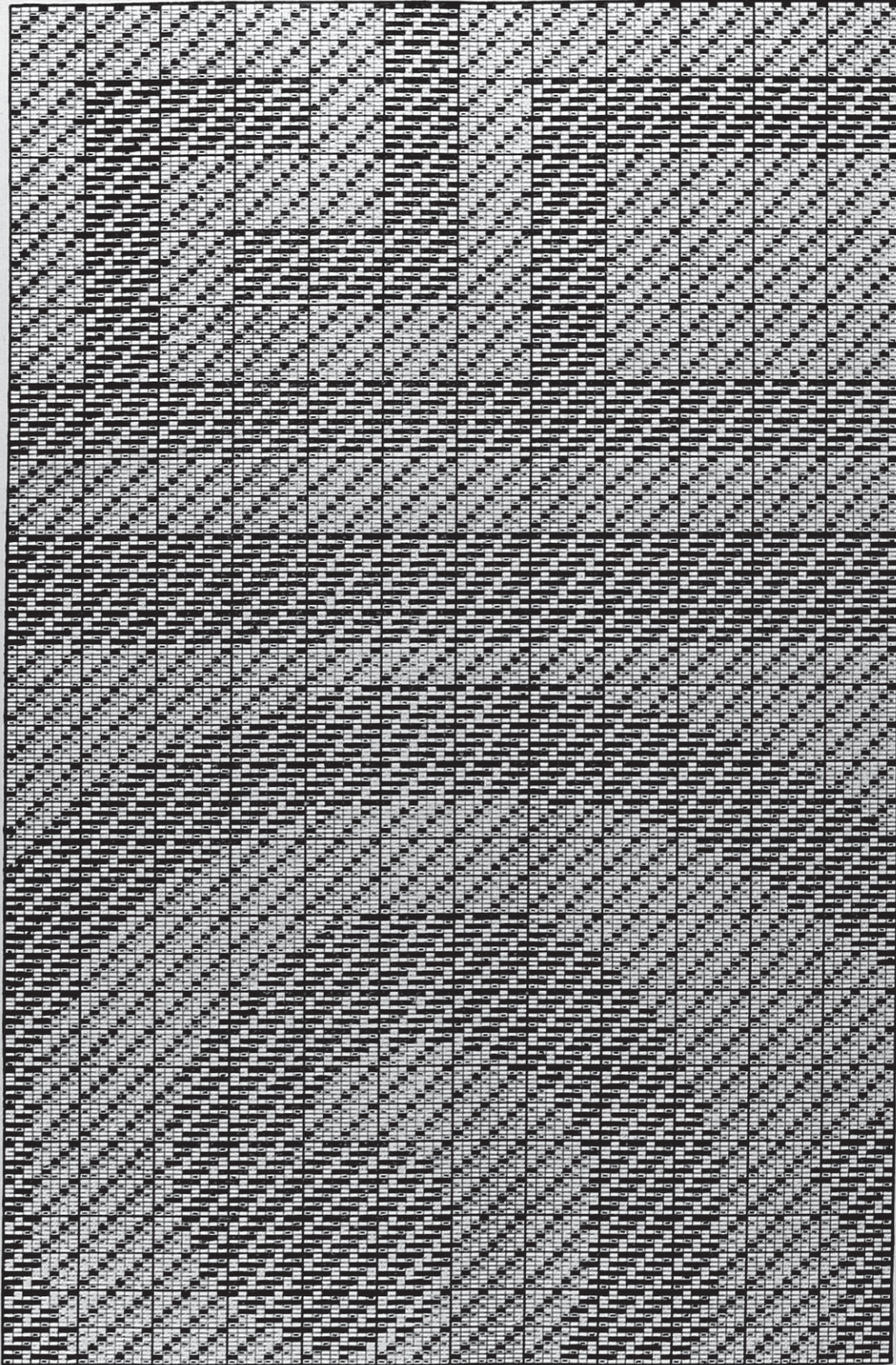


FIG. 60

paint figure in a yellow paint (see *full type*). Fig. 58 shows this procedure.

Next place in red paint (see *cross type*) the $\frac{1}{3}$ 4-harness twill all over the repeat of the design, ground as well as figure.

Now paint this same $\frac{1}{3}$ 4-harness twill, two squares out of the way from the first twill (*i. e.*, in the centre of the first twill) again all over the repeat of the design, ground as well as figure, but this time in a different color, say black for example, (represented by *dot type* in our point paper design) and when the design is complete for the card stamper. Fig. 59 illustrates subjects.

How the Card Stamping is Done.

Cut two cards from each horizontal row of squares of the point paper design.

1st. Card cut *cross* and *empty* squares.

2d. Card cut *cross* and *full* squares, and the result is the analysis Fig. 60, showing the actual interlacing of rectangle *a*, *b*, *c* and *d* of fabric sketch Fig. 57, calling for 96 warp threads and 288 picks.

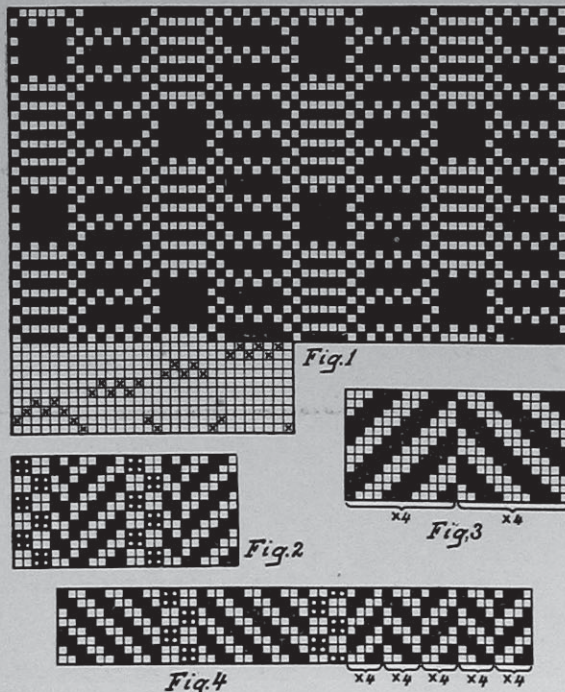
The centre part of the blanket is woven with the 4 by 8 combination weave of the 4-harness uneven sided twills, warp and filling effect combined pick and pick, as shown if considering either ground or figure only of the analysis Fig. 60.

NOVELTIES IN DRESSGOODS.

FROM ABROAD

Figured Bedford Cord (*Piece Dye*).

Warp: 4250 ends, $2/64$'s worsted, in the grey; 10 sections, with 425 ends to each section.



Weave: See Diagram Fig. 1; Repeat 30 warp threads and 18 picks; 10-harness fancy draw.

Reed: 22 @ 4, 4, 4 and 3 ends in one dent, *i. e.*, 15 ends in every four dents; 52 inches wide in reed.

Filling: 80 picks per inch, $1/48$'s worsted, in the grey.

Finish: Scour well, dry and singe; dye in piece navy blue, reseda, or any other fashionable color; wash, dry, shear and press; 44 inches wide.

Cheviot Dressgood (*Stripe Effect*).

Warp: 2400 ends, $2/36$'s worsted.

Weave: See Diagram Fig. 2; Repeat 48 warp threads and 4 picks; 4, 8 or 12-harness fancy draw.

Reed: 14 @ 3 ends per dent, 57 inches wide.

Dress: 12 ends light gray mix.

12 " black.

12 " light gray mix.

12 " medium gray mix.

—
48 ends in repeat of pattern.

5 Sections, with 480 ends; 10 patterns to each section.

Filling: 42 picks per inch, $2/32$'s worsted, steel blue mix.

Finish: Cheviot finish, 48 inches wide.

Cheviot Dressgood (*Broad Stripe*).

Warp: 2208 ends, $2/32$'s worsted.

Weave: See Diagram Fig. 3; Repeat 96 warp threads and 6 picks; 6 or 12-harness fancy draw.

Reed: 13 @ 3 ends per dent, $56\frac{1}{2}$ inches wide.

Dress: 48 ends $2/32$'s worsted, in the grey.

48 " " " , black.

—
96 ends in repeat of pattern.

5 Sections; three with 480 ends, *i. e.*, 5 patterns to each section, and two with 384 ends, *i. e.*, 4 patterns to these two sections.

Filling: 40 picks per inch, $2/32$'s worsted, in the grey.

Finish: Cheviot finish; scour well, piece dye fashionable light shade, scour well, dry, clip on shear, press; 50 inches wide.

Fancy Dressgood (*Gray mix*).

Warp: 4202 ends, $2/60$'s worsted.

Weave: See Diagram Fig. 4; Repeat 191 warp threads and 4 picks; 8 or 12-harness fancy draw.

Reed: 20 @ 4 ends per dent, $52\frac{1}{2}$ inches wide.

Dress: 11 ends light gray.

4 " dark gray.

12 " light gray.

4 " dark gray.

4 " light gray

12 " dark gray } 6 times.

8 " light gray

8 " dark gray } 4 times.

—
191 ends in repeat of pattern.

11 Sections, with 282 ends; 2 patterns to each section.

Filling: 70 picks per inch, $1/36$'s worsted, green-gray mix.

Finish: Worsted dressgoods, 48 inches wide.

MOTIVES FOR STRIPES FOR HARNESS WORK.*(Continued from page 44.)*

In the accompanying plate of designs are given 28 new reproductions of stripes, suitable for all classes of Textile fabrics. They are a continuation of the collections respectively given in the November, January and February issues of the Journal, reproduced in the interest of the designer for figured harness work, cotton, worsted and silk dress goods, shirtings, ribbons, tapes, edgings etc., and where the harness capacity of the loom is limited.

They refer more particularly to fabrics constructed with one system of filling and two systems of warp, viz.: a ground warp and a figure warp, the designs referring to the interlacing of the latter system. Under certain conditions, and with a few modifications, some of the designs are also applicable for being used in connection with one system of warp and two systems of filling, viz.: ground and figure picks, the design then referring to the latter system considering in this instance *empty* squares for risers and *full* squares for sinkers; again, designs given can be also



The bordering stripes, as well as edges, shown in connection with the various designs, will in most instances be omitted in practical work, they having been added only to more properly separate the collection of designs. If bordering stripes however are desired, they will require tying down of these warp threads by means of satin weaves, or other arrangements; a feature which will call for the use of additional harnesses, the various designs themselves being constructed with the object in view to use as few harnesses as possible, designs given, calling only for from 1 to 13 harnesses respectively (not considering bordering stripes or edges neither the ground structure of the fabric) for their execution on the loom.

As will be readily understood, designs given may be enlarged to suit the texture of the fabrics they are to be used for.

applied to double cloth structures, in fact, as we may say, their use is unlimited in the textile art.

One hundred and fourteen of these Designs for Stripes in Harness work have thus far been given.

152,859 Northrop Looms Ordered

up to January 1st., 1909.

The following sub-division of the List of *Northrop Looms* ordered up to January 1st, will be of interest to Textile Manufacturers and speaks Volumes for this Loom.

New England States	55,779
Middle and Western States	4,013
Southern States	93,067

Grand Total of Northrop Looms running 152,859

NOVELTIES IN MEN'S WEAR.

FROM ABROAD.

Worsted Trousering.

Warp: 4320 ends, 2/60's worsted.

Weave: See Diagram Fig. 1; repeat 4 warp threads and 8 picks; 8, 12 or 16-harness straight draw.

Reed: 16½ @ 4 ends per dent, 66 ends per inch, 65½ inches wide in reed.

Dress: 8 ends 2/60's worsted, black and white twist.

4 " 2/60's worsted, black.

12 ends in repeat of pattern.

10 Sections @ 36 patterns, or 432 ends to each section.

Filling: 98 picks per inch, arranged thus:

1 pick 2/52's worsted, light gray mix.

1 " " " , black.

2 picks in repeat of pattern.

Finish: Worsted finish, 56 inches wide.

Worsted Trousering.

Warp: 4032 ends, 2/60's and 2/32's worsted.

Weave: See Diagram Fig. 3; repeat 63 warp threads and 3 picks; 9-harness fancy draw.

Reed: 15½ @ 4 ends per dent, 62 ends per inch, 65 inches wide in reed.

Dress:

2 ends 2/32's worsted, black.

1 end 2/60's worsted, light gray and black.

1 " " " , dove gray.

1 " " " , black.

1 " " " , dove gray.

1 " " " , light gray and black.

2 ends 2/32's worsted, black.

1 end 2/60's worst., lt. gray & blk. } 9 times.

1 " " worsted, dove gray.

1 " " " , black.

3 ends " " , dark gray.

2 " " " , dove gray.

1 end " " , light gray and black.

1 " " " , dove gray.

2 ends 2/32's worsted, black.

1 end 2/60's worsted, light gray and black.

1 " " " , dove gray.

1 " " " , light gray and black.

1 " " " , dove gray.

3 ends " " , dark gray.

1 end " " , black.

1 " " " , lt. gray & blk. } 9 times.

1 " " " , dove gray.

63 ends in repeat of pattern.

8 Sections @ 8 pattern, or 504 ends to each section.

Filling: 52 picks per inch, 2/48's worsted, black.

Finish: Worsted finish, 56 inches wide.

Worsted Trousering.

Warp: 4080 ends, 2/36's and 2/40's worsted.

Weave: See Diagram Fig. 2; repeat 6 warp threads and 4 picks; 12-harness straight draw.

Reed: 15½ @ 4 ends per dent, 62 ends per inch, 65½ inches wide in reed.

Dress:

2 ends 2/40's worst., pearl & black tw. } 4 times.

1 end 2/36's worsted, dark gray.

2 ends 2/36's worsted, black.

1 end 2/36's worsted, dark gray.

2 ends 2/40's worsted, medium gray. } twice.

1 end 2/36's worsted, dark gray.

2 ends 2/36's worsted, black.

1 end 2/36's worsted, dark gray.

24 ends in repeat of pattern.

10 Sections @ 17 patterns, or 408 ends to each section.

Filling: 60 picks per inch, 2/36's worsted black.

Finish: Worsted finish, 56 inches wide.

Worsted Suiting.

Warp: 4536 ends, 2/48's worsted.

Weave: See Diagram Fig. 5; repeat 126 warp threads and 4 picks; 8, 12 or 16-harness fancy draw.

Reed: 17¼ @ 4 ends per dent, 69 ends per inch, 65½ inches wide in reed.

Dress:

2 ends blue mix

6 " olive mix

1 end brown

6 ends olive mix

2 " blue mix

4 " olive mix

6 " blue mix

4 " olive mix

2 " blue mix.

4 " olive mix.

6 " brown.

4 " olive mix.

2 " blue mix.

4 " olive mix.

1 " blue mix.

1 " black and cinnamon tw. } times 3.

4 " olive mix.

2 " blue mix.

4 " olive mix.

6 " brown.

4 " olive mix.

2 " blue mix.

4 " olive mix.

6 " blue mix.

4 " olive mix.

126 ends in repeat of pattern.

12 Sections @ 3 patterns, or 378 ends to each section, or

9 Sections @ 4 patterns, or 504 ends to each section.

Filling: 64 picks per inch, arranged thus:
 2 picks 2/48's worsted, blue mix.
 4 " " " , dark olive mix.
 6 " " " , blue mix.
 4 " " " , dark olive mix.
 2 " " " , blue mix.
 22 " " " , dark olive mix.

40 picks in repeat of pattern.
Finish: Worsted finish; 56 inches wide.

Worsted Suiting.

Warp: 4320 ends, 2/48's worsted.
Weave: See Diagram Fig. 4; repeat 160 warp threads and 8 picks; 8, 12 or 16-harness fancy draw.
Reed: 16½ @ 4 ends per dent, 66 ends per inch, 65½ inches wide in reed.

Dress: 2 ends dark slate times 15.
 2 " black }
 1 end light & dark gray }
 1 " dark slate }
 1 " light & dark gray } twice.
 1 " dark slate }
 1 " light & dark gray }
 5 ends black }
 4 " dark slate } times 9.
 4 " black }
 4 " dark slate. }
 1 end light blue & black twice.
 1 " black

160 ends in repeat of pattern.
 9 Sections @ 3 patterns, or 480 ends to each section.

Filling: 60 picks per inch, 2/48's worsted, black.
Finish: Worsted finish, 56 inches wide.

Worsted Suiting.

(Large Check Effect.)

Warp: 4640 ends, 2/48's worsted.
Weave: See Diagram Fig. 6; repeat 160 warp threads and 4 picks, 8, 12 or 16-harness fancy draw.
Reed: 17½ @ 4 ends per dent, 70 ends per inch, 66 inches wide in reed.

Dress: 52 ends black.
 1 end dark gray mix } times 14.
 1 " black }

80 ends in repeat of pattern.
 9 Sections @ 6 patterns, or 480 ends to each section and
 1 Section @ 4 patterns, or 320 ends to this section.

Filling: 66 picks per inch, all 2/48's worsted, arranged thus:

1 pick dark gray mix } times 14.
 1 " black }
 72 picks black.

100 picks in repeat of pattern.
Finish: Worsted finish; 56 inches wide.

Woolen Cheviot Cloaking.

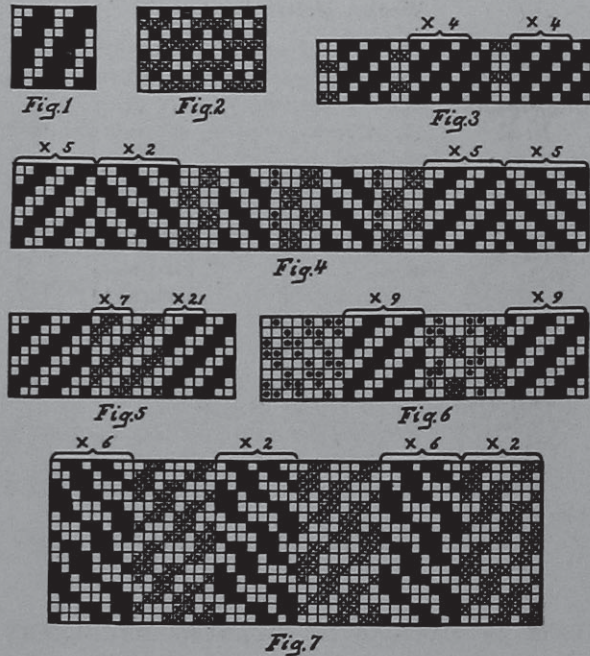
Warp: 2592 ends, 2 ply 6½ run and 4 run woolen yarn.

Weave: See Diagram Fig. 7; repeat 144 warp threads and 8 picks; 8-harness fancy draw.

Reed: 19 @ 2 ends per dent, 38 ends per inch, 68½ inches wide in reed.

Dress: 1 A, 1 B, 11 times=22 ends.
 1 C, 1 B, 2 " " 4 "
 1 A, 1 B, 15 " " 30 "
 3 C, 1 B, 4 " " 16 "
 1 A, 1 B, 15 " " 30 "
 1 C, 1 B, 2 " " 4 "
 1 A, 1 B, 19 " " 38 "

Repeat of pattern: 144 ends.



Descriptions of Yarns to use:

A: 2 ply 6½ run woolen yarn, white, and medium gray, twist.

B: 4 run woolen yarn, white.

C: 20's cheviot worsted, white, and 6 run woolen yarn, dark gray, twist.

Filling: 42 picks, 4 run woolen yarn, black.

Finish: Cheviot finish, 56 inches wide.

Woolen Melton Suiting.

(Stripe effect.)

Warp: 4224 ends, 5½ and 6 run woolen yarn.

Weave: 4-harness cassimere twill; repeat 4 warp threads and 4 picks; 8 or 12-harness straight draw.

Reed: 15½ @ 4 ends per dent, 62 ends per inch, 68 inches wide in reed.

Dress: 1 end 6 run woolen yarn, white } times 21.
 1 " 5½ " " " , black }
 2 ends silk, white }
 2 " 5½ run woolen yarn, black } twice.

1 end 6 run woolen yarn, white }
 1 " 5½ " " " , black } times 21.
 1 " 2/32's worsted black & }
 white twist } twice.
 1 " 5½ run woolen yarn, black }

96 ends in repeat of pattern.

11 Sections @ 4 patterns, or 384 ends to each section.

Filling: 56 picks per inch, arranged thus:
 1 pick 6 run woolen yarn light gray mix.
 1 " 5½ run woolen yarn black.

2 picks in repeat of pattern.

Finish: Woolen Melton finish, 56 inches wide.

Woolen Melton Suiting.

Warp: 2880 ends, 3¾ and 4 run woolen yarn.

Weave: 4-harness cassimere twill, repeat 4 warp threads and 4 picks; 8-harness straight draw.

Reed: 14 @ 3 ends per dent, 42 ends per inch, 68½ inches wide in reed.

Dress: 4 ends 3¾ run woolen yarn black }
 4 " 4 " " " lt. gray } times 5.
 4 " 3¾ " " " black. }
 1 end 4 " " " lt. gray }
 1 " 3¾ " " " black } times 7.
 1 " 3¾ " " " black }
 1 " 4 " " " lt. gray } times 7.

72 ends in repeat of pattern.

8 Sections @ 5 patterns, or 360 ends to each section.

Filling: 36 picks per inch, all 3¾ run woolen yarn, black.

Finish: Woolen Melton finish, 56 inches wide.

LATE INVENTIONS IN WEAVING MACHINERY.

Improved C. & K. Centre Filling Stop Motion

The object of the improvement is to prevent the action of the filling fork of the Crompton & Knowles Center Filling Stop Motion, more particularly in connection with Weft Replenishing Looms, to stop the latter, when a new bobbin is inserted in the running shuttle and the filling in its passage through the shed takes a position near the reed, so that, although the lay and reed will beat up the filling in the proper manner, the fingers of the stop motion will not touch said pick, and but for the new device would stop the loom in the same manner as if there had been no filling laid in the shed, or as if the filling was broken.

By means of the new device, the pick thus inserted, is moved ahead of the reed as the lay beats up, and thus carried under the filling fork, preventing the dropping down of the filling fork into its operative position, to stop the loom, in case the pick is intact.

The new device consists of a blade pivotally supported beside the filling fork of the centre stop motion, and when the latter moves downward, said

blade will be engaged by a trip finger on the filling fork, causing the blade to be raised, and positively engaging the filling, after the shuttle has been picked through the shed, and carrying the filling toward the front of the lay, and under the filling fork of the centre stop motion, preventing said fork from dropping down, and operating to stop the loom.

THE CONSTRUCTION AND OPERATION OF THE NEW DEVICE is shown in Diagram Fig. 1; representing lay, reed, and breast beam of a loom in section, showing the stop motion in outlines.

When the loom is running, the passage of the filling under the detector wires 1 of the filling fork, will prevent said wires from dropping down, and will hold the dagger 2 out of engagement with the lever 3, so that the loom will continue to operate until an exhausted or broken pick allows the detector wires 1 to drop down, and the dagger 2 to engage the lever 3, to operate the lever 4, and in turn stop the loom.

THE PURPOSE OF THE NEW DEVICE. In case the filling is not broken or exhausted, but does not extend under the detector wires 1 so as to hold said detector wires in their raised position, the dropping down of the latter will cause a trigger 7, to engage lever 5, and raise blade 8, causing the latter to engage the pick 6 (which may be anywhere between the reed and the ends of the wires 1), and move said pick forward under the detector wires 1, as the lay beats up, thus holding said wires in their raised position, and also the dagger 2, in turn preventing the loom from stopping.

As the lay continues to beat up the filling, the continued raising of the detector wires 1 by the pick 6, will cause the trigger 7 to pass by the lever 5, and allow the spring 9 to act, and return said lever 5 and blade 8 to their normal position.

Buckler's Shuttle.

The object aimed at in the construction of this shuttle consists in providing efficient means for receiving and retaining the bobbin or cop on the spindle.

The accompanying illustration is a longitudinal sectional view of this shuttle, showing by dotted lines the position of the bobbin receiving means, when it is removed from within the bobbin receiving chamber.

Examining our illustration, we find that the body of the shuttle 1 has formed therein a recess 2, through which extends a transversely arranged pin 3, pivotally mounted on which is the basal end 4 of a spindle 5.

Surrounding this spindle, near the basal end thereof, is a bobbin receiving member 6, projecting fixedly from a collar 7 which surrounds the spindle 5. Said bobbin receiving member 6, is made of spring metal, and is provided throughout its length with a longitudinal slit 8.

Extending from the collar 7 is an arm 9, which extends back over the basal end 4 of the spindle 5, beneath a transverse pin 10, the free end of said arm being bent upward between the pin 10 and an inclined wall 11 of the recess of the shuttle body 1.

The pin 10 and the wall 11 are so located with relation to each other and to the pin 3, that when the spindle 5 is moved to the position shown by dotted

lines in our illustration, the upwardly bent end of the arm 9 will engage the wall 11, and project the member 6 toward the free end of the spindle 5, and thus permit it to contract by its own spring action, to free the bobbin; whereas, when the spindle 5 is moved into the bobbin receiving chamber 12, the upwardly bent end of the arm 9 engages the pin 10 and draws the member 6 toward the base of the spindle 5, and thus causes the tapering portion of the spindle to expand the member 6 and engage and bind the bobbin.

When it is desired to use bobbins having the paper core or tube extend the entire length of the bobbin, it will be found advisable to extend the bobbin receiving member 6 the entire length of the bobbin.

When, however, this paper core extends only part way through the bobbin, it will be found advisable to have the spindle 5, project beyond the bobbin receiving member 6.

New Threading Devices for Hand-Threading Shuttles.

In threading loom shuttles by hand, the thread is first pulled from the bobbin over the hand threading mechanism of the shuttle. As usually constructed, the threading mechanism requires that the thread be depressed between the end of the bobbin and the threading mechanism, so as to bring the thread into the entrance opening of the threading mechanism.

In the new shuttle, in drawing the thread from the bobbin over the hand threading mechanism, the thread is automatically depressed into the threading mechanism, and adjusted by turning the device on its axis.

To illustrate the construction and operation of this new shuttle threading device, illustrations Figs. 3 and 4 are given, and of which Fig. 3 is a top plan view of the thread delivery end of this new shuttle and Fig. 4 an enlarged (as compared with Fig. 3) transverse sectional view through the shuttle, taken on line x — x of Fig. 3.

In both illustrations, 1 indicates the hand threading mechanism, 2 the adjustable auxiliary threading device located in the throat 3, intermediate the end of the bobbin and the hand threading mechanism 1.

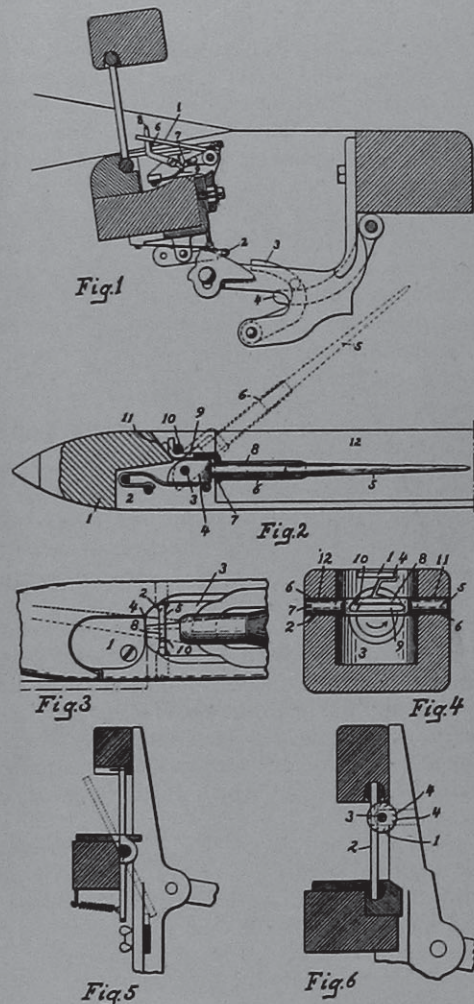
This auxiliary threading device 2 consists of a round pin 5, having round ends 6 in one of which is a transverse slot 7, and the flattened central portion 8 in which is a longitudinal slot 9 and an inclined slit 10. The pin 5 is driven through holes 11 and 12 in the side walls of the shuttle, in a position to bring the flattened portion 8 in the throat 3, and to bring the inclined slit 10 in an upward position.

The auxiliary threading device may now be adjusted to bring the slit 10 into the required position to catch the thread, by inserting a tool into the slot 7 and turning the pin 5 on its axis.

The threading mechanism 1 has the entrance opening 4 for the thread which is manipulated by hand through the threading mechanism 1, to bring the thread out of the usual delivery eye (not shown) in the side of the shuttle.

In the operation of the new auxiliary threading device, the thread is pulled off the end of the bobbin over the auxiliary threading device 2, and over the

threading mechanism 1, as shown in light broken lines in Fig. 3. The thread, as it is pulled from the bobbin, whips around the end of the bobbin in the direction of the arrow shown in Fig. 4, and catches in the slit 10, passing downward through this slit into the longitudinal slot 9. The thread is now depressed or forced downward, by the auxiliary threading device 2, in the throat 3 and into the entrance opening 4 of the threading mechanism 1, as shown in the heavy dotted lines in Fig. 3; from which point the thread is easily and quickly manipulated through the threading mechanism 1 and out of the regular delivery eye of the shuttle. The auxiliary threading device 2, prevents excessive ballooning of the thread and also exerts a slight tension on the thread.



A New Construction of a Loom Reed.

The same is a late invention, being referred to in the Journal only on account of the peculiarity of the gist of the idea.

The dents in the new reed are disconnected from each other at one end (see dotted lines) to permit the thus separated upper ends of the dents to be exposed, for the dropping of the warp threads thereinto, thus doing away with the necessity of having