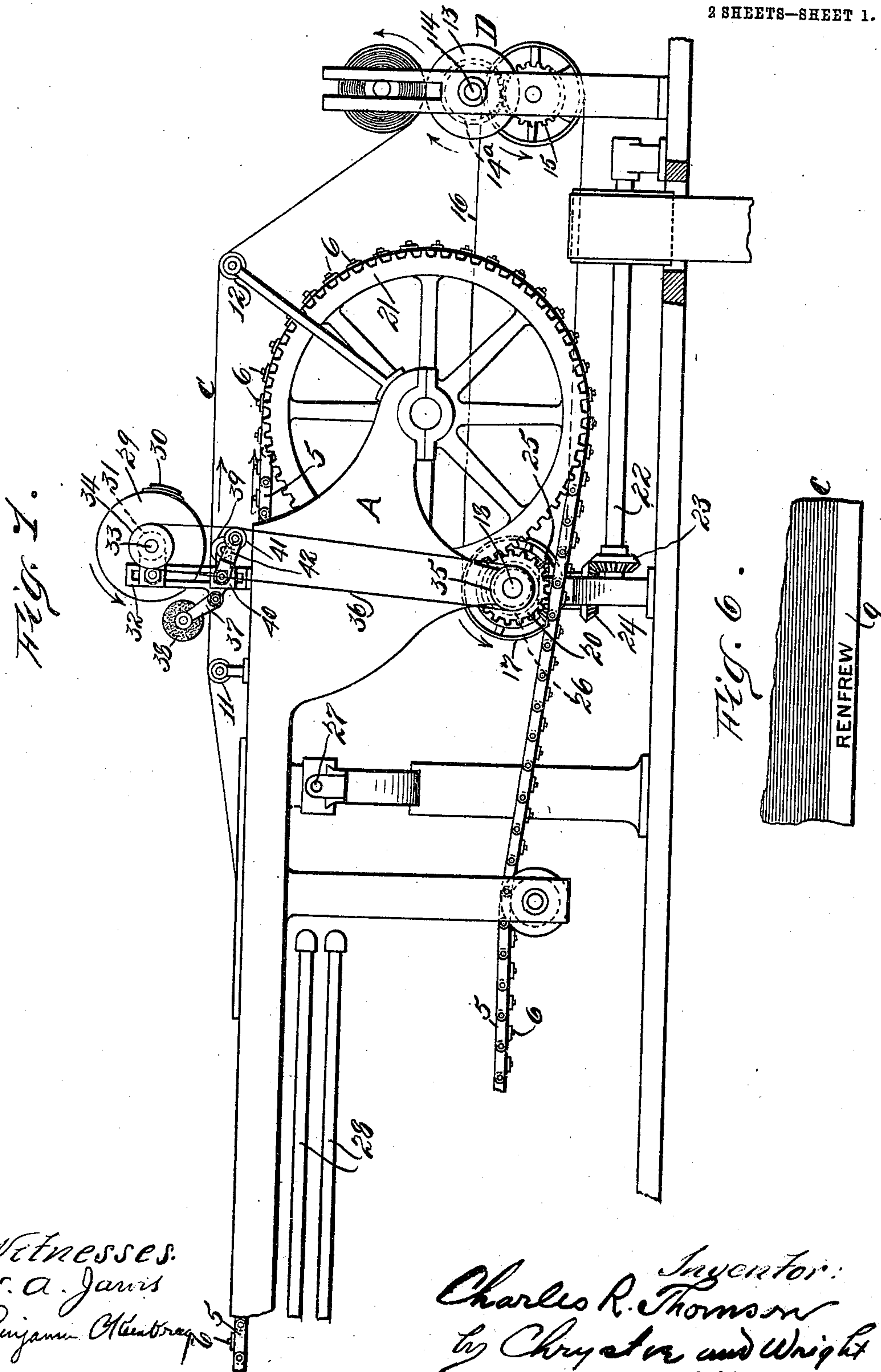


C. R. THOMSON.
SELVAGE PRINTING MECHANISM.
APPLICATION FILED FEB. 9, 1910.

960,439.

Patented June 7, 1910.

2 SHEETS—SHEET 1.



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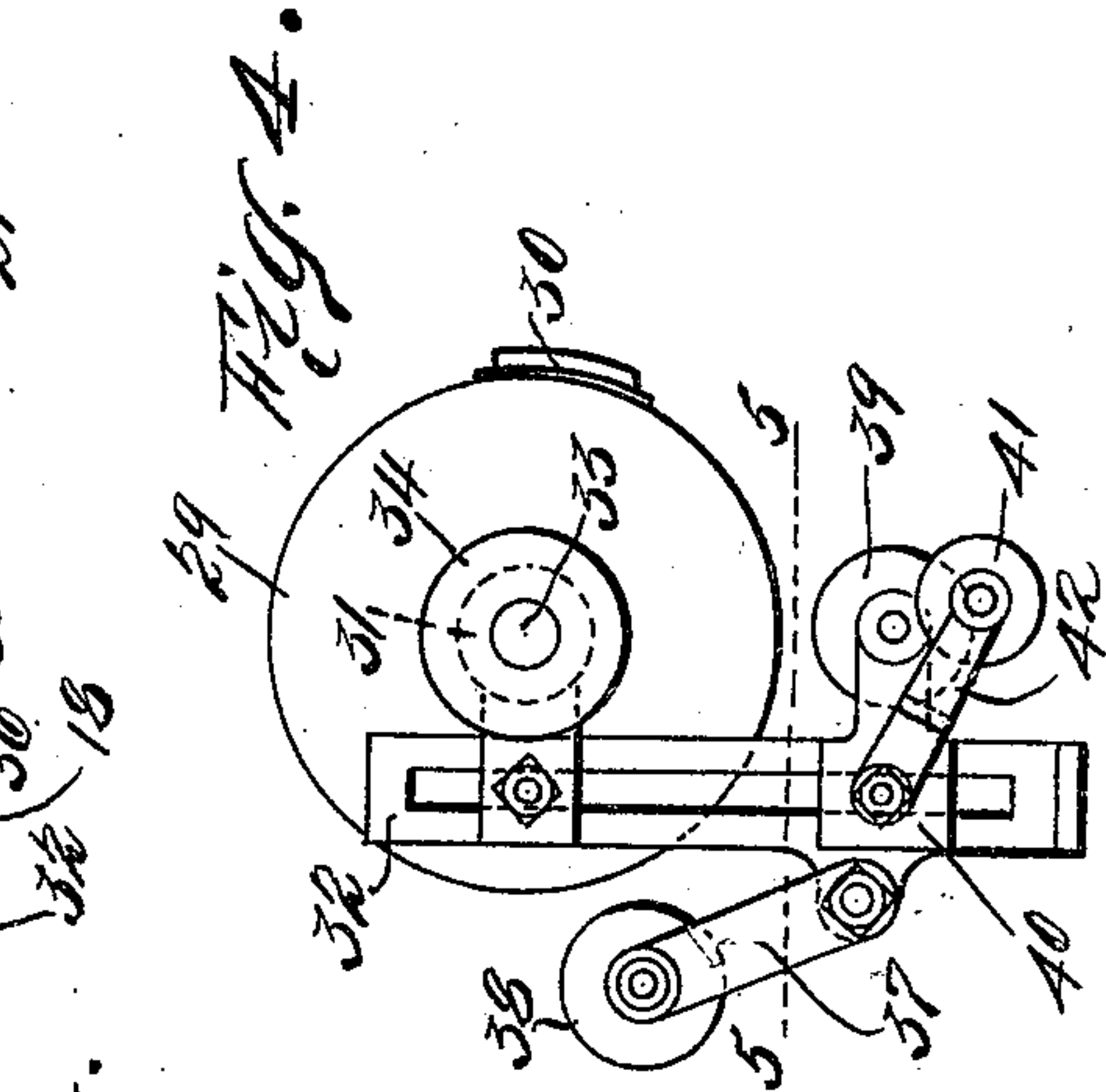
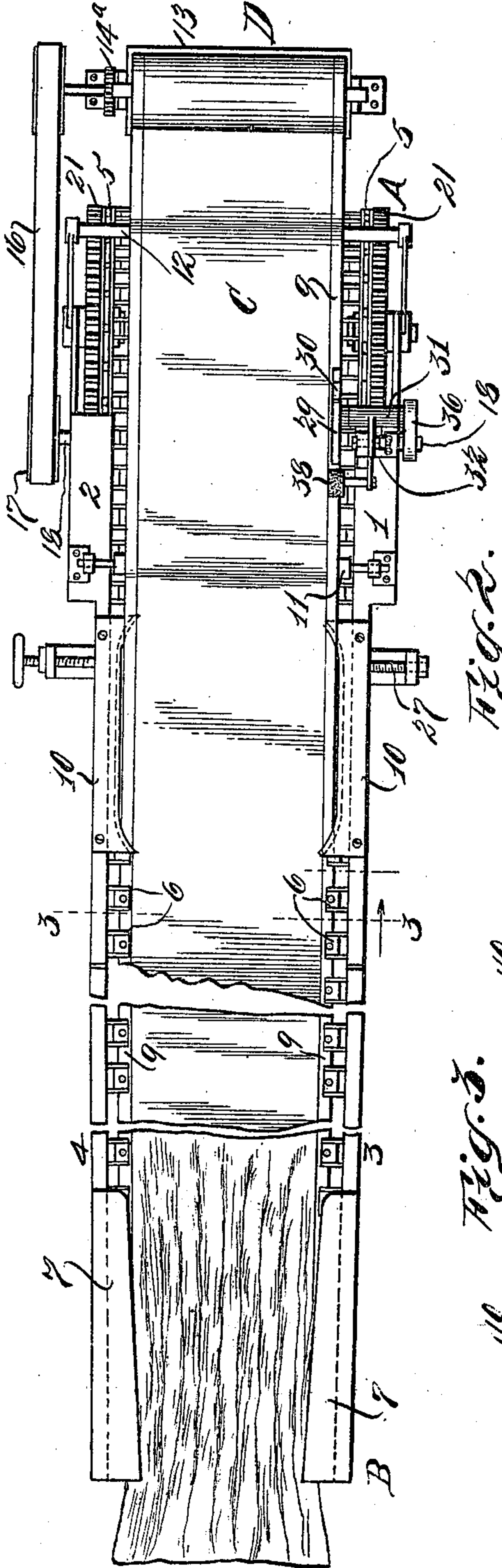
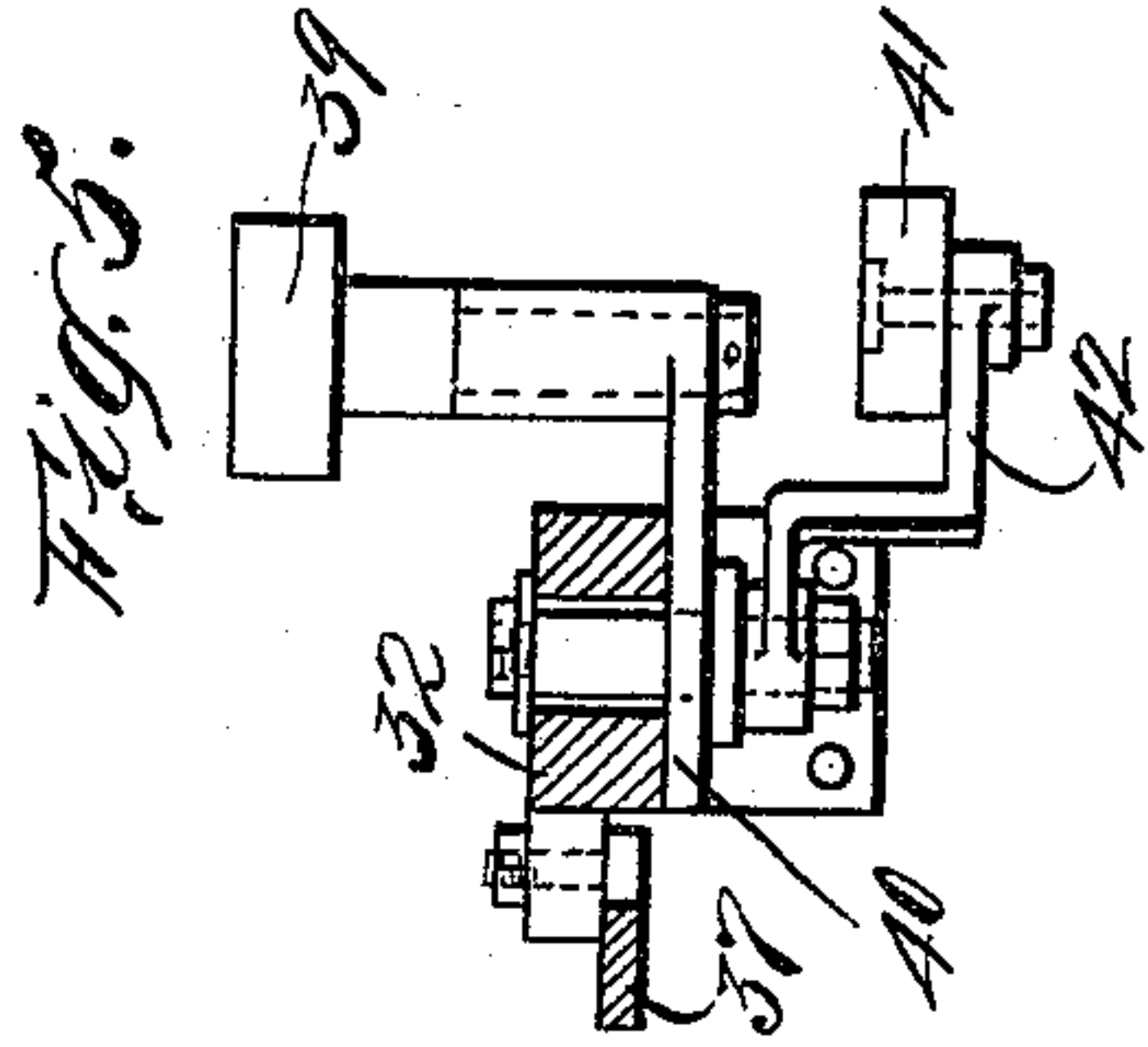
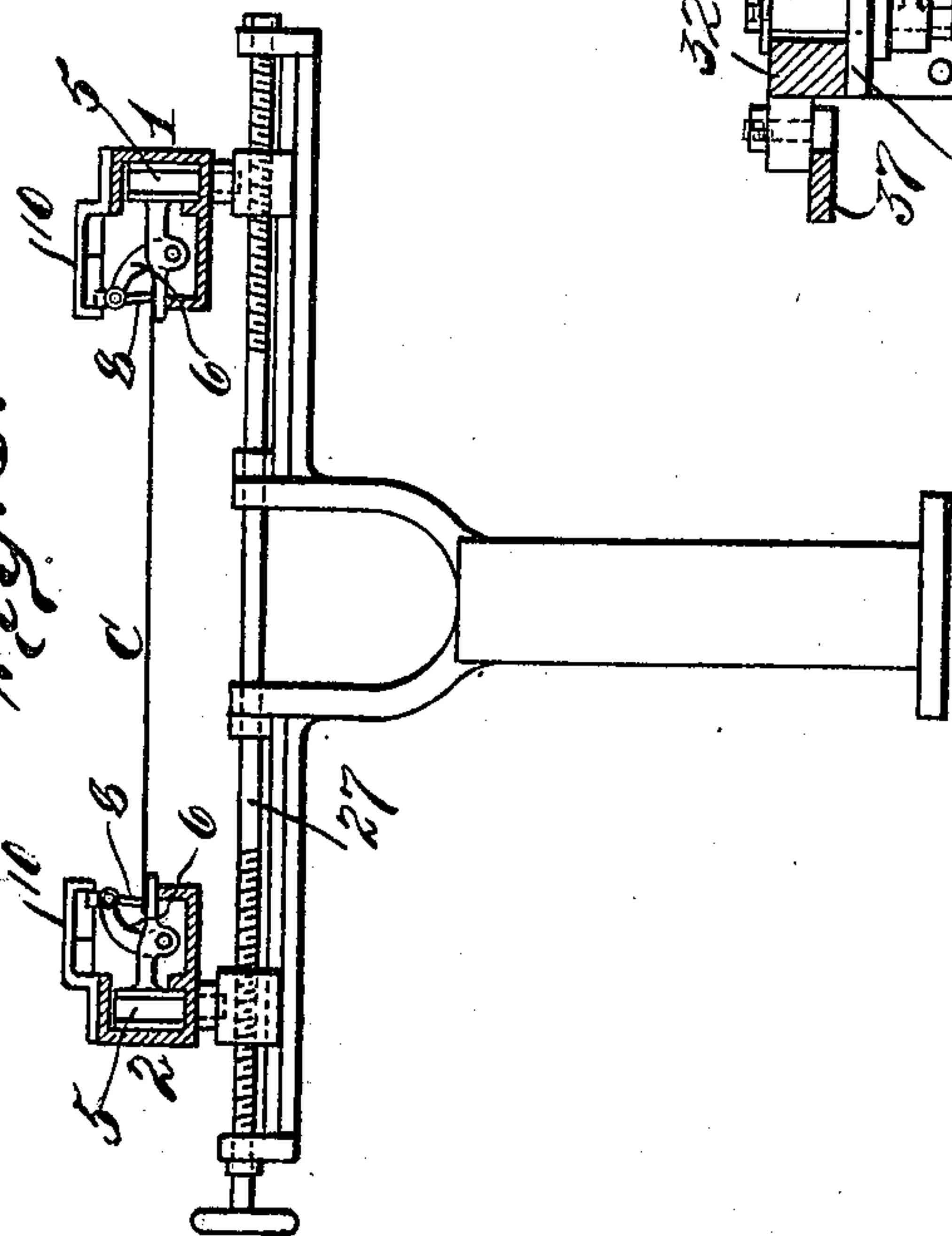


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES R. THOMSON, OF ADAMS, MASSACHUSETTS, ASSIGNOR TO RENFREW MANUFACTURING COMPANY, A CORPORATION OF MASSACHUSETTS.

SELVAGE-PRINTING MECHANISM.

960,439.

Specification of Letters Patent.

Patented June 7, 1910.

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To all whom it may concern:

Be it known that I, CHARLES R. THOMSON, a citizen of the United States, residing at Adams, in the State of Massachusetts, have
5 invented certain new and useful Improvements in Selvage-Printing Mechanism, of which the following is a clear, full, and exact description.

This invention relates to improved means
10 for printing trade marks, trade names, symbols or the like, upon the selvage of textile goods, during their process of manufacture, whereby such printing can be done without additional cost in handling or in space occupied.
15

Not limiting myself thereto, nevertheless a part of my invention consists in adapting such printing apparatus to a tentering frame, and particularly so adapting it to a tentering frame of the clamp class as distinguished
20 from the pin or hook class.

A further object is to insure the regular printing of the name, mark or symbol upon the selvage at a uniform distance from the
25 edge.

In carrying out this invention, I provide a tentering machine of any well known class, provided with heating coils to drive out of the wetted material the moisture, and I
30 locate preferably on the tentering frame itself the printing mechanism hereinafter described at that point where the cloth has left the pins, hooks or clamps, so that the printing can be accomplished while the cloth
35 is still warm, and quick drying without offset secured, permitting the goods to be immediately rolled or folded as may be desired by the rolling or folding machine. There is an additional reason for locating
40 the printing mechanism at the point indicated. A definite uniform position of the selvage is found at this point, which is not true after the cloth has passed to or near the rolling or folding mechanism.

Heretofore it has been the custom to pass the goods through a marking machine after the goods have been taken from the tentering machine. This practice is not entirely satisfactory, as it is somewhat difficult to
50 keep the selvage in perfect alinement with the marking element, to say nothing of the labor and time consumed to carry out this extra operation.

As the fabric leaves the tenter pins, hooks

or clamps, it is wound up to form a roll, or
55 folded to form a bolt, consequently in order to apply an identifying mark to the selvage thereof, one in every yard for instance, necessitates the rewinding of the said roll, or bolt. As there are some hundreds of
60 yards in a roll, or bolt, it is quite evident that considerable time is consumed and wasted. To save the above described second operation, and time consumed thereby, is one of the chief objects of my invention.
65

In practice I prefer to place the marking device as near the take-off, or point where the tenter-hooks are caused to leave the fabric as practical in order that the identifying mark may be applied to the fabric while
70 the said fabric is still warm whereby the ink will dry almost immediately, or at any rate before the said mark can come in contact with its adjacent convolution of the roll or bolt. A further advantage is gained
75 by placing the marking device as above described, the said advantage being that the mark is applied after the fabric has been stretched to the maximum, and as the said fabric will be dry, and slightly heated, the
80 chances of the mark becoming distorted are obviated. As the modern tentering machine is designed for transverse adjustment, whereby the amount of stretching of the fabric can be varied, I preferably mount
85 the marking device upon one of the adjustable members of the machine, whereby the position of the marking device, relative to the selvage of fabric, will remain constant. The marking device which I employ
90 in combination with a tentering machine, is particularly adapted for placing a mark upon the selvage of fabric, while the fabrics are passing through the tentering process, the position of the device being also
95 of importance, as it would not be practical to place the mark upon the fabric before the said fabric has been stretched to the maximum.

In the drawings, Figure 1 illustrates, in
100 side elevation, the front or take-off end of a tentering machine having a marking device applied thereto. Fig. 2 illustrates, on reduced scale, a plan view of a tentering machine broken away intermediate the ends
105 thereof. Fig. 3 is a cross-sectional plan view taken on a line 3—3 in Fig. 1. Fig. 4 is an enlarged side elevation of the print-

ing or marking device. Fig. 5 is a cross-sectional plan view taken on a line 5—5 in Fig. 4, and Fig. 6 is a fragmentary detail view illustrating a piece of fabric having an identifying mark upon the selvage thereof.

Referring to the drawings, the tentering machine illustrated thereby is a well known form and consists of side frames 1, 2, 3 and 4. The tentering machine is made up of a plurality of these side frames, each frame being transversely adjustable in order that a requisite amount of pull or tension may be applied to the goods. For lack of space the take-off and receiving ends only of such a machine are illustrated in Fig. 2. The take-off end being indicated by A and the receiving end by B, the operation of the tentering machine will be described in a general way, only, in order that the object of my invention will be understood. As can be seen in Fig. 2, the receiving end B of the tentering machine is contracted, the frames thereof being angularly disposed relative to center line drawn longitudinally of the machine. The side frames of the machine continue in this angular direction to a certain predetermined point intermediate the ends A and B.

To cooperate with the side frames, chains 5 are employed, each link thereof being provided with hooks 6 and plates 8, (see Fig. 3) which are adapted to grip the fabric and cause the said fabric to stretch as it is carried from the receiving end of the machine to the take-off end.

The fabric, which is indicated by C, is first wet. After the fabric has been wet one end thereof is placed in the receiving end B of the machine and pulled ahead to a position where the hook-close cam-frame 7 will close the hooks 6 and cause the gripper-plate 8 thereon to contact with the fabric C at the selvage 9 thereof (see Fig. 2). As shown in Fig. 2, the fabric, at the receiving end B, is gathered, but when the hooks or plates 8 grip the fabric the said fabric will be pulled transversely and gradually stretched as the sprocket chains 5 are caused to gradually diverge to the angularly disposed side frames of the machine.

As the hooks 6 reach the opening cam-frames they are successively opened, thereby releasing the fabric. The fabric thus travels upwardly over a roller 11 to and over another roller 12 to a rolling device D, which comprises a rotatable drum 13, the shaft 14 of which is provided with a gear 14^a which in turn is operated by a pinion 15 driven by a belt 16 from a pulley 17. The pulley 17 is carried by an intermediate shaft 18 provided with pinions 20, one only being shown. The pinions 20 operate the gears 21 which in turn are provided with sprocket wheels by which the chains 5 are operated. The shaft 18 is operated by a

counter shaft 22 having a pinion 23, which, with the aid of the gears 24, 25 and 26 operate the said shaft 18.

When the fabric reaches the cam-frames 10 it will have been stretched to the desired extent, but should it be desirable to stretch it farther the frames 1 and 2 may be moved outwardly or apart by means of the threaded adjusting spindle 27, (see Fig. 3.)

As the wet fabric travels from the end B to the end A of the machine, it is gradually dried out by means of heat emanating from the steam coils 28 which are placed under and adjacent to the fabric as shown in Fig. 1. The above described machine is a device well known to those skilled in this art, therefore a detailed description thereof has been omitted. By referring to Fig. 1, it will be seen that the marking device which I employ is carried by the adjustable frame 1 and is positioned intermediate the rollers 11 and 12, and at such a position the mark is applied to the selvage 9. The heat absorbed by the fabric C, while it is traveling above the steam coils 28, will not be entirely carried away by the air between the points at which the fabric leaves the hooks 6 and the point at which the mark is applied, therefore the mark will be applied while the fabric is warm and will very quickly dry. It is also evident that the marking device will always remain in the same position, relative to the selvage 9 of the fabric C, as the said device is carried by one of the adjustable elements which stretches the said fabric.

Referring to the marking device, it consists of a disk 29 provided with a stamp 30 carrying an identifying mark; in this instance the word "Renfrew". In this instance the disk 29 is adapted to apply the mark once in every yard during the travel of the fabric, and is rotatably supported in a bearing 31, adjustably mounted on a standard 32, carried by the frame 1, the shaft 33, of the disk 29, is provided, at the outer end thereof, with a pulley 34, which in turn is rotated by a pulley 35, on the shaft 18, by means of a belt 36. The standard 32 also carries an adjustable arm 37, which supports an ink carrying roller 38 made out of felt or any other ink retaining element. Under the fabric C and adjacent to the disk 29 I provide a roller 39 which is carried by a bracket 40 adjustably mounted on the standard 32. The roller 39 supports the fabric when the stamp 30 is in contact therewith. To tighten the belt 36 I employ an idle pulley 41 carried by an adjustable arm 42 secured to the bracket 40.

When the machine is in operation the disk 29 will rotate and cause the stamp 30 thereon to contact the fabric C, at the selvage 9 thereof, once in every yard. Before contacting the fabric the stamp 30 will take ink from the inking roller 38. The various ar-

rows indicate the direction of travel of the different elements.

5 In carrying out this invention, details of construction may be varied from those shown, and yet the essence of the invention be retained; some parts might be employed without others, and new features thereof might be combined with elements old in the art in diverse ways, although the herein described type is regarded as embodying substantial improvements over such modifications.

15 As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense.

25 It is furthermore desired to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim as my invention:

30 1. A tentering machine having a pair of oppositely disposed side frames, transversely adjustable cloth holding devices, a winding device for the cloth passing from the frame in combination with a printing mechanism

located upon one of the side frames at a point after and adjacent to the place where the holding devices let go the cloth. 35

2. In combination a tentering frame transversely adjustable a winding device, a heating device for the goods passing through the tentering frame and a printing mechanism located upon the frame at that point where the goods are still warm said printing mechanism comprising a standard mounted upon and partaking of the transverse adjustment of the tentering frame, a printing roll carried thereby and driving mechanism operated from the tentering frame shaft for rotating it, an inking device and a platen. 40 45

3. A tentering frame transversely adjustable its cloth holding devices, a winding device for the cloth passing from the frame in combination with a printing mechanism located upon the frame at a point after and adjacent to the place where the holding devices let go the cloth said printing mechanism comprising a standard mounted upon and partaking of the transverse adjustment of the tentering frame, a printing roll carried thereby and driving mechanism operated from the tentering frame shaft for rotating it, an inking device and a platen. 50 55 60

Signed at Adams, State of Massachusetts this 2nd day of February 1910.

CHAS. R. THOMSON.

Witnesses:

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