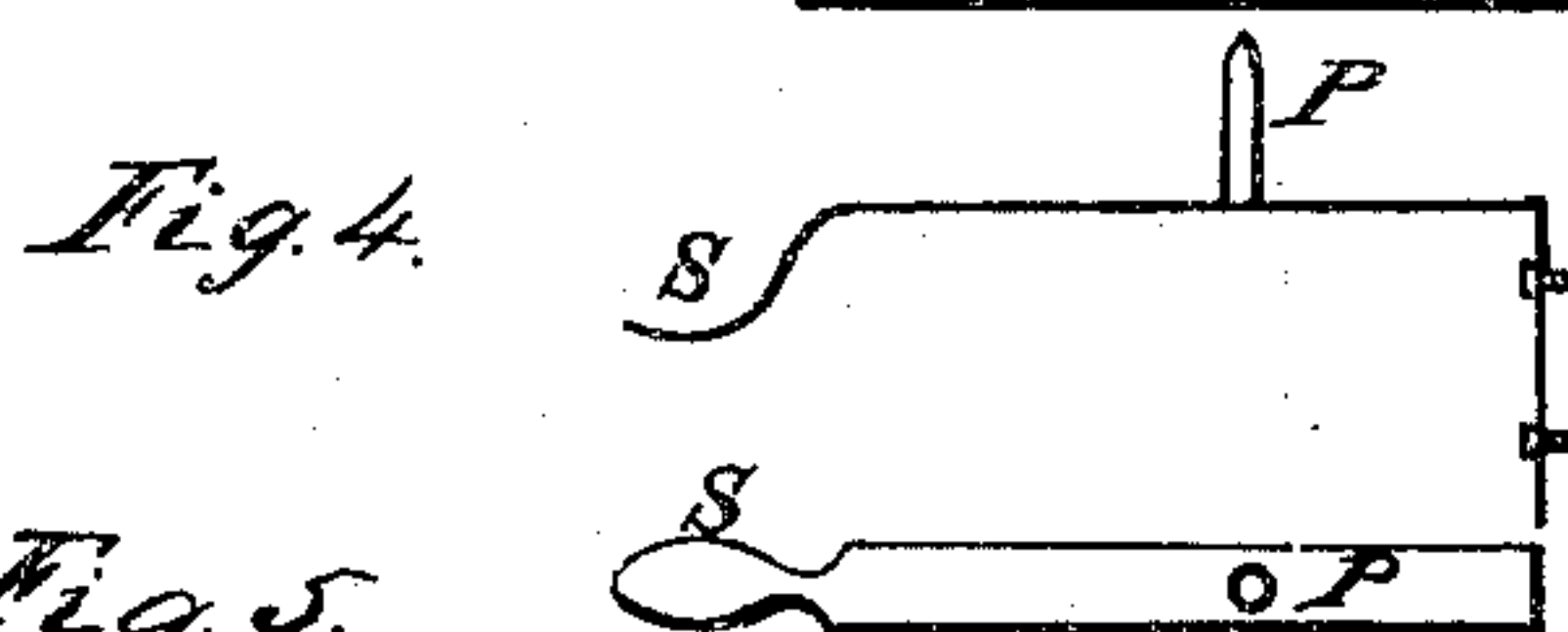
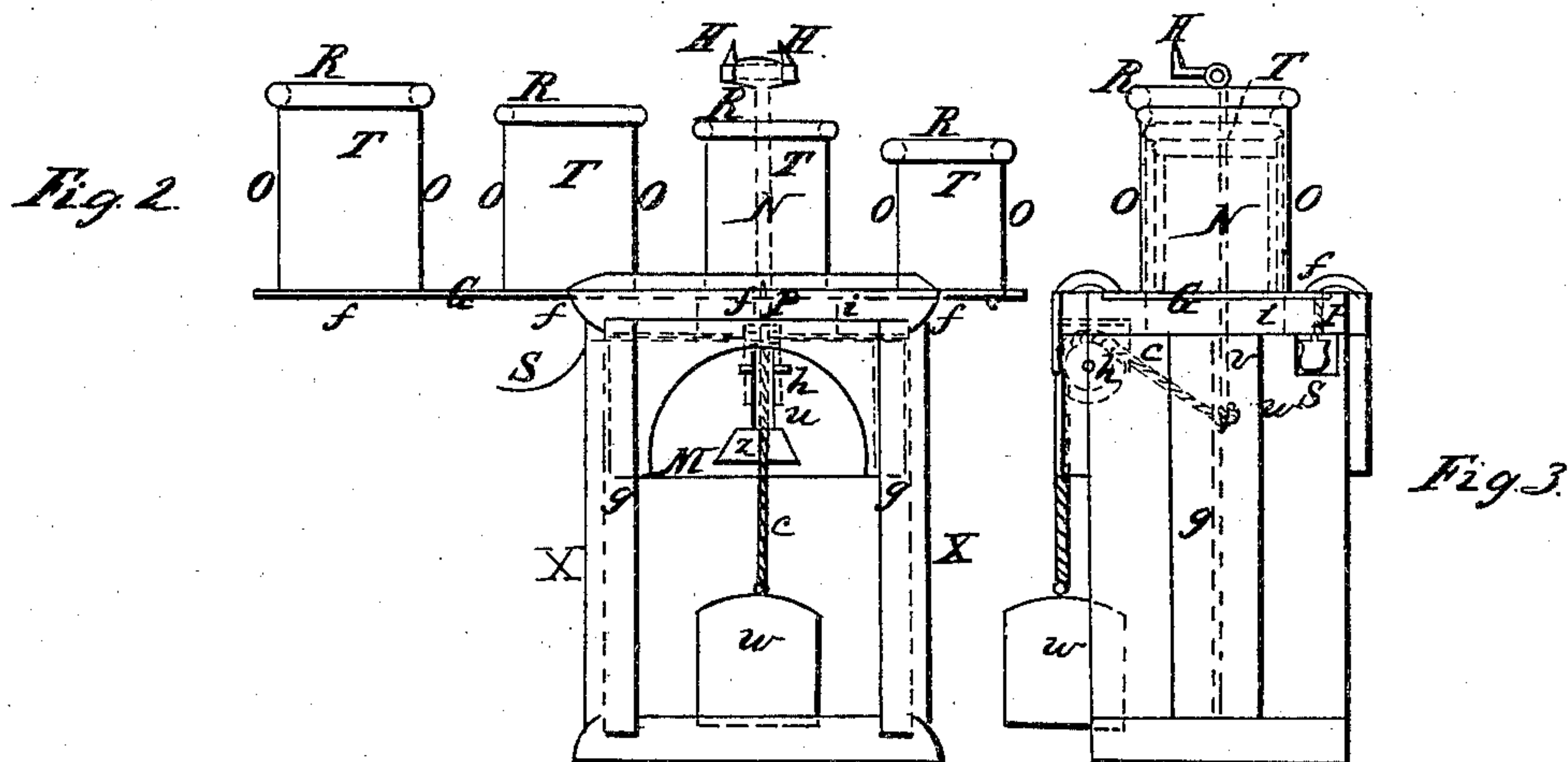
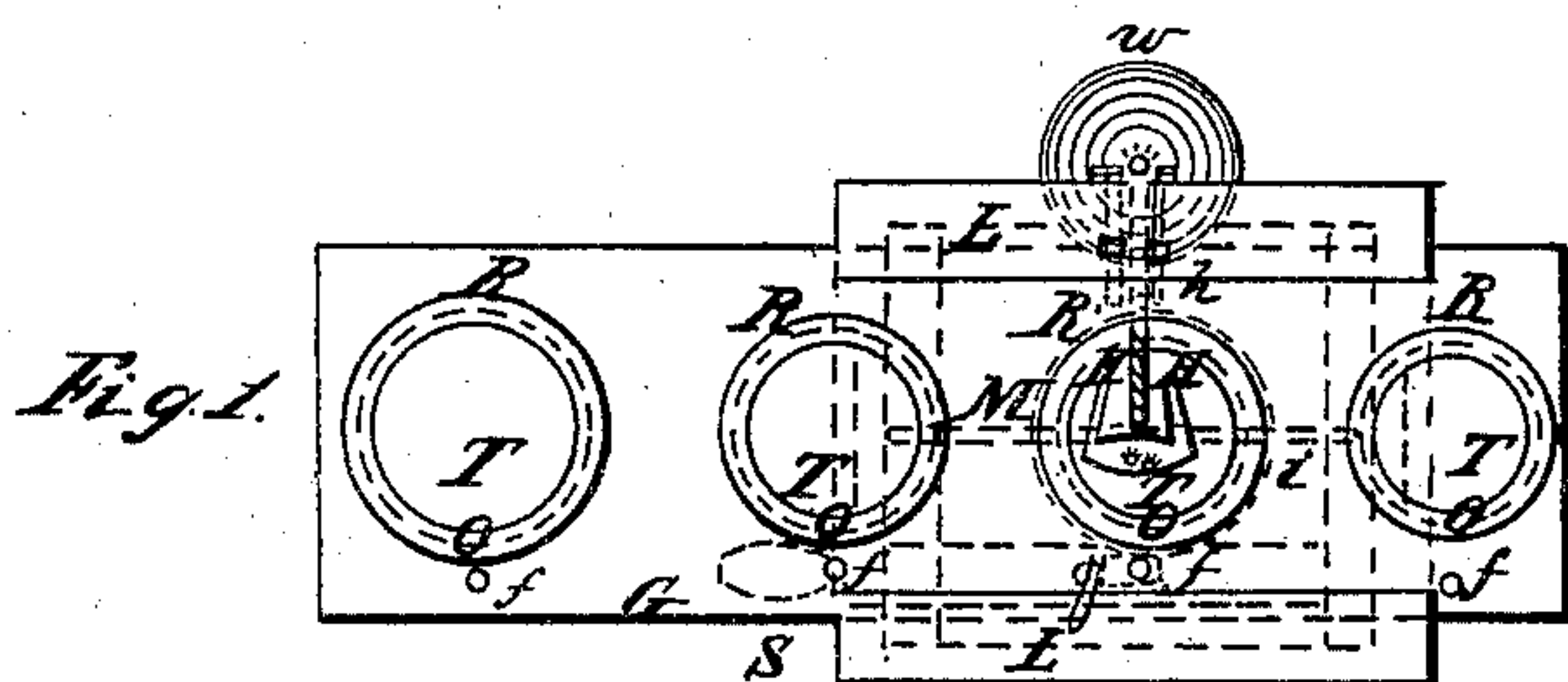


A. RANSOM.
MACHINE FOR TURNING BOOT LEGS.

No. 31,281.

Patented Jan. 29, 1861.



Witnesses:

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A. RANSOM, OF MANHEIM, NEW YORK, ASSIGNOR TO HIMSELF, AND GEORGE R. COMSTOCK,
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MACHINE FOR TURNING BOOT-LEGS.

Specification of Letters Patent No. 31,281, dated January 29, 1861.

To all whom it may concern:

Be it known that I, ANDREW RANSOM, of the town of Manheim, county of Herkimer, and State of New York, have invented a new and useful Improved Machine for the Turning of Boot-Legs after their Side Seams have been Seamed Up; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, forming a part of this specification, in the several figures of which similar letters of reference denote the same parts.

Figure 1 is a plan of the machine here considered showing the parts of the machine when viewed from the top. Fig. 2 is a front side elevation of the same. Fig. 3 is an end elevation showing construction of the machine as viewed from the end. Fig. 4 is a section showing the spring and pin as it is constructed and its fastenings before put into the machine. Fig. 5 is a section top view of spring, showing handle, width and location of stop pin.

The character of the machine here considered is in so constructing a machine for turning the legs of boots after they have been seamed as to both save time and labor in the turning and at the same time to perform the labor in a superior manner.

The nature of my invention consists in a horizontal, movable, base furnished and combined with a series of metallic tubes of different dimensions to accommodate the various sized boot legs to be turned and a peculiar constructed spring and stop pin combined in combination with the moving base and its several tubes.

The invention consists in the combination with the tubes of a peculiar rim so constructed as to prevent friction on and in the shells of the tubes and so formed as to form a chamber on the inner and outer sides of the shell below the combination of the rim and tubes, which will also be described. And further the invention consists of a rod with two hooks attached to its upper end formed and intended to move the leg of the boot over the rim down into the tube and not to become disconnected from the straps of the boot leg until disengaged by the hand of the operator in combination with a device to produce a working of the rod and its hooks.

The detail of its construction and oper-

ation will be understood by the following description.

In the drawings X, X, represent the form of the frame or case of the machine.

i, refers to the dotted lines in Figs. 1, 2, and 3, which indicate the hole in center of the top piece of the machine that underlies the sliding base G, and gibs L, and to which gibs L, are fastened. The hole *i* is to accommodate the ascent and descent of hook rod N, and further to allow the top of the boot leg to descend through it when its length requires it. The size of this hole is that of the inside of the largest tube T, connected to the base G.

In the drawings G, represents the sliding base of the tubes T, and with which said tubes are firmly connected and combined to sliding base G, it being pierced with holes to receive the tubes T, which tubes are firmly fastened in the hole so pierced in base G, for the purpose of receiving the lower ends of the tubes T. The sliding base G, and its tubes T, are supported on top piece of frame X, which underlies it. Also to said top piece of machine is attached gibs L, one on each side of base G, to secure it to top piece which directs and guides its horizontal movement to and from as required. This horizontal movement of base G, to tubes T, is for the purpose of passing the different sized tubes directly over the hole *i* in the top piece of frame X, that the hook rod N, may ascend and descend through any one of the tubes thus combined with their base G, enabling the operator thus to turn any sized boot leg by having different sized tubes combined with an adjustable base with hook rod and cross head and its hooks as hereinafter described. Further the sliding base G, is perforated with holes at *f*, as will be seen in Figs. 1, 2, and there those holes are made to and do receive a stop pin P, when any one of the tubes T, combined with the base G, desired to be used shall have been passed directly over the hole *i*, in top piece of frame X, the proper position for it to occupy when it is to be used. This stopping pin P, is combined with and attached to top of spring S, which gets its fastening inside of end piece under top piece of frame X, and its pin P, passes up through a slot *g*, in top piece of frame X, and into hole *f* in sliding base G, thus securing it and its combination.

of tubes the one desired to be used in its true and proper position of labor. When a different sized tube is required to be used the spring S, is to be depressed causing stop pin P attached to it to descend out of hole *f*, and by then moving down cross head M, to its lowest point of descent and the hook rod N, is carried below the sliding base G, and its base G, with its tubes is free to be horizontally moved to another of its tubes T, over the hole in top piece of frame X, for use when so moved the spring S, with its stop pin P from the elasticity of said spring is instantly raised again into its hole *f* in sliding base G, and the machine is again in readiness to perform its labor.

T represents in the drawings metallic tubes. These are formed with each a rim R, and in the drawing O, indicates the shell of the tube T. The rim R, is formed on the top end of tubes T, in the following manner and for the following purposes. The shell O, is united by brazing or soldering.

The rim R, formed of brasier rod or wire of sufficient size incased by the upper end of the shell O, in a manner so that the center of said rod or wire may stand directly over and above the center of shell O, of tubes T. When so incased rim R, is to be smoothly finished. It will be seen by referring to the drawings that this formation in fact forms a practical chamber below the rim R, to the sliding base G, of tubes T, both on its inner and outer sides. The object and effect of those chambers so formed by rim R, producing from its size and projecting inside and outside of shells O, at the tops of tubes T combined with base G, is to lessen the friction on the out and inside of the shells O, of tubes T, and at the same time to force the boot-leg in turning over a larger rim R, this preventing the possibility of wrinkling at the turning point which is at and over the rim R.

As it is clear that as the boot-leg to be turned must fit both the inside and outside of either of the tubes T, on and into which it may be turned over rim R, and it is plain that the friction must be much less than it otherwise inevitably would if conveyed along the entire surface of the shell of tubes T, in the drawings M, represents a cross-head that is free to move from the bottom of top piece of machine X to the top of bottom piece of machine. This crosshead moves and is guided in its movement in grooves *g*, in end pieces of machine. To this crosshead is attached at *v*, the hook-rod N with hooks H, formed on its upper end to receive the straps of the boot-legs which they the hooks H are intended to take hold of. This hook-rod N, rises high enough above the cross-head M, so that when the cross-head has been run to its highest point of ascent, the hooks H on rod N, stand above tubes T, the hooks H,

turn out at right angles with hook-rod N, extending far enough to receive the straps of boots and again rise perpendicularly nearly approaching each other as they rise to their termination. The object and effect of the forming the end of the hooks H, in this manner is to prevent the straps on legs of boots from becoming disengaged when the crosshead M, is drawn up, combined with hook rod N, and carries with it again to the top of tube T, the boot-leg which has been turned over and into tube T. The carrying up of the cross-head M, and its combined hook-rod N, is accomplished by means of the cord *c*, being attached to cross-head M, at *u*, cord *c*, passing up over the edge of pulley *h*, and its opposite end descending is united to the weight W. When the cross-head M, is carried to its lowest point of descent the weight W, is raised from the bottom of machine to the pulley *h*, and by removing the foot of the operator from the stirrup *z*, in crosshead M, the weight descends transmitting the power produced by the descent of its falling gravity through the combined action through mediumship of cord *c*, and pulley *h* to crosshead M, and its combined hook-rod N, raising the hooks H, thereby to their highest point of ascent and holding them there for the convenience of the operator to remove the already turned boot-leg and adjust another leg connecting its straps to hook-rod N, and hooks H, through and from effect produced by weight W, through cord *c*, in combination with pulley *h*, which effect is always to raise and hold hooks H, above tubes T, to receive the straps of legs where they are seen standing in the drawing. The straps of the boots are hooked to hooks H, the foot of the operator applied to the stirrup *z*, in crosshead M, the hands being passed around the immediate upper edge of boot-leg to aid in its even commencement in commencing to turn from outside to inside of tube T, over rim R which it does the instant the pressure is applied by the foot of operator at *z* to crosshead M. As the leg begins to turn by the pressure being applied to the crosshead the hands of the operator are dropped to the foot of the leg as the leg is turned by being drawn into the tube as the foot of the leg arises at the top of the tube T, it is in an instant turned in its then even position on and in the tube T, thus the leg is evenly and quickly turned. To move another sized one of the tubes T, over the hole at *i* in top piece of machine frame X, the handle of S, is borne down by the hand depressing the spring S, causing its stopping pin P, to descend in its slot *q* and leave the hole *f* in sliding base G, and by applying slight pressure by the foot to crosshead M, the hooks H, instantly descend below the bottom of sliding base G, the base G, with its required tube is moved directly over

the hole *i* of top piece of frame X. When thus moved to its proper position the spring S, forces up its stop pin P, into the hole *f*, and again holds it in position of labor. The foot at this time being removed from *z*, in crosshead the weight W, through its combined attachment immediately raises hooks H above tubes T, holding them in their required position to receive the straps of boots to be turned. Any number of tubes may be combined with base G, and of any peculiar desired size or length and in this manner all worked by the within described machine.

It is well known that all boot legs or nearly all are seamed together the mean side seams of the legs inside out to bring the seam when the boot is finished inside of the boot. To accomplish this after it has been seamed it must be turned and it is equally well known that the turning of boots after seaming is most fatiguing and time devouring part of the boot maker's labor as it often takes the boot maker with the most fatiguing labor forty minutes to turn a pair of boots where with the aid and use of my implement and improved machine the same labor may be better performed with ease in one minute this being the scope in the effect of my invention.

The operation of this hereinbefore described machine is substantially as follows: To turn the boot-leg with the aid of this machine after it has been seamed up, the leg is put over one of the tubes T, that it will fit snug enough to the rim R, of tube T, to prevent the possibility of its wrinkling at

its turning point which is at the top of the rim R, of tube T, the foot of the leg down the front of the leg to the front of machine supposing the tube T, with its combined sliding base G, to stand in proper position over the hole *i* in top of machine X, to turn the leg of boot already described put on tube T, properly for its turning. The hooks H standing in their ready position at the top of tube T to receive the straps of boot-leg for turning in combination and through the connection of hooks H with hook rod N, and its connection with cross head M, and the further combined effect transmitted to crosshead M. The foot of the operator placed into the stirrup *z*, and the crosshead pressed down carrying with it the hook-rod N and hooks H, and drawing the boot leg down to the counter of the boot leg, over the rim, depress with the hand the toe of the boot leg and with the hand turn the counter up and the act is finished in turning which is done as fast as the movement of the hand and foot can take place.

I claim—

The series of tubes T, T, T, T, constructed and combined with their rims, R, R, R, R, substantially as set forth in combination with the sliding base G, with its holes *f*, *f*, *f*, *f*, and stop pin P combined with spring S, or their equivalents.

Dated this 3d day of December 1860.

ANDREW RANSOM.

In presence of—

O. D. EMPIC,
D. W. LADUE.