

(No Model.)

3 Sheets—Sheet 1.

T. W. HAMLIN.
MACHINE FOR POINTING SKEWERS.

No. 570,630.

Patented Nov. 3, 1896.

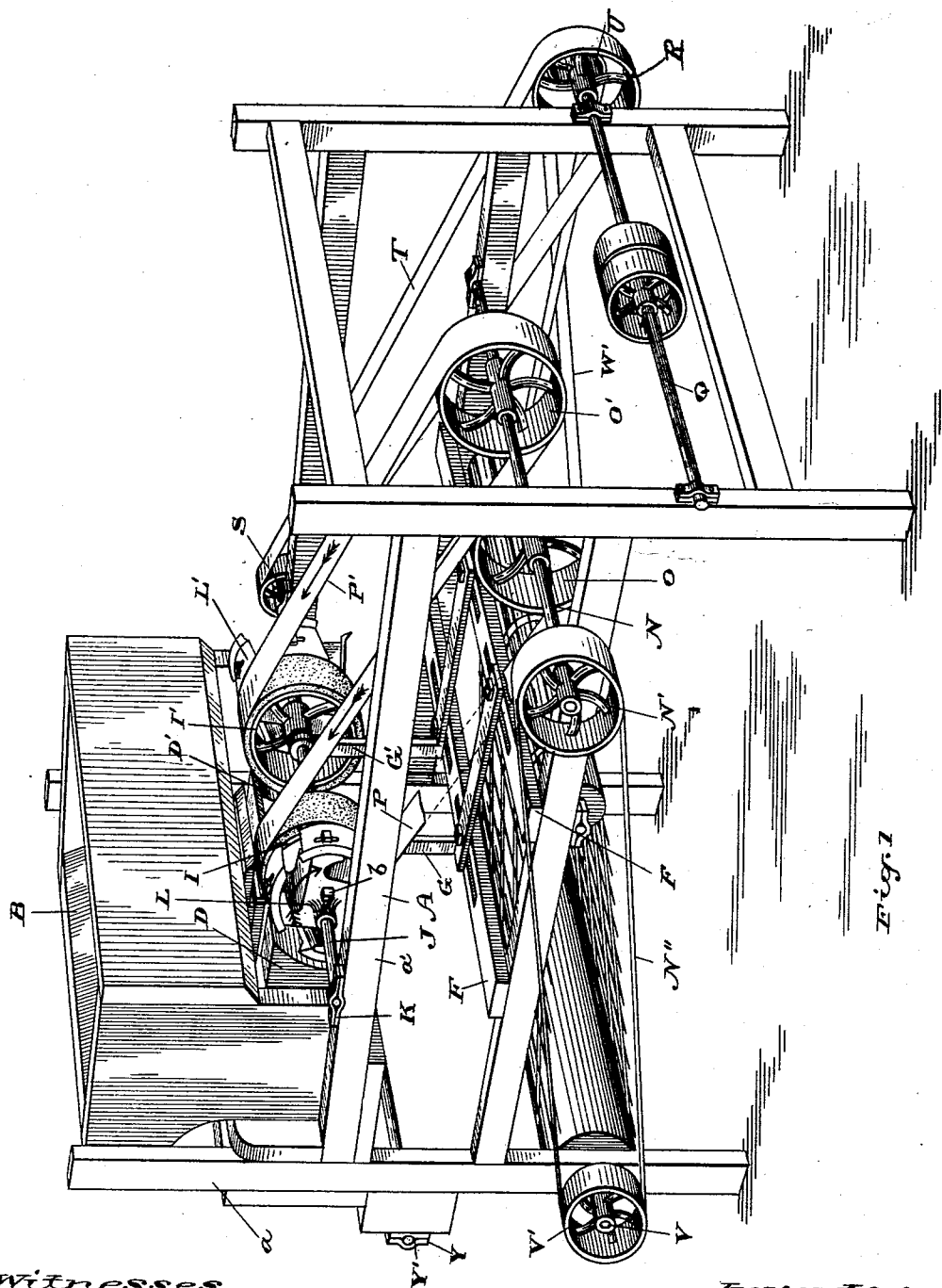


Fig. 1

Witnesses

J. E. Cameron
W. H. Ferguson

Inventor

Thos. W. Hamlin
by Corrich
his attorney

(No Model.)

3 Sheets—Sheet 2.

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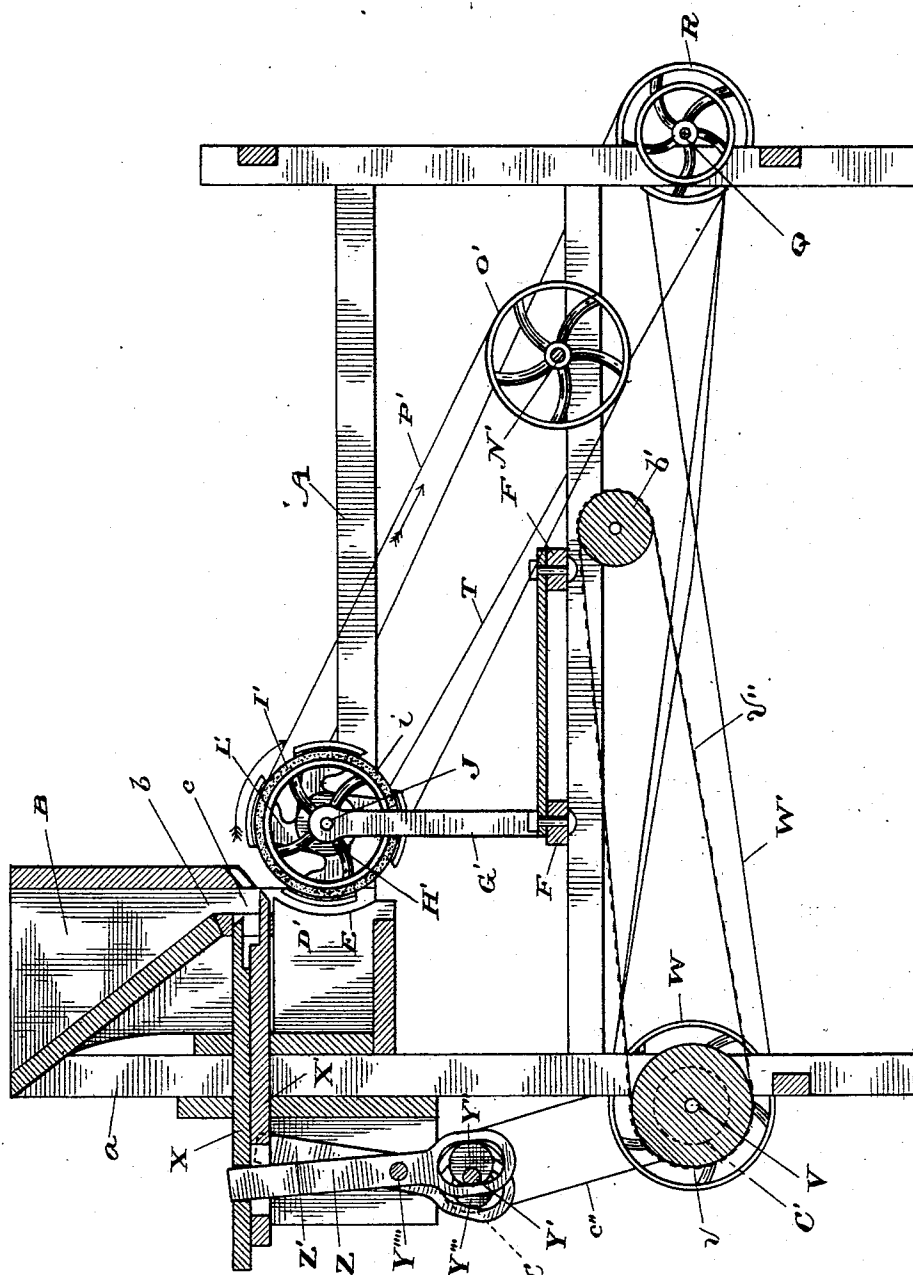


Fig. 2

Witnesses

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Inventor

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by C. S. Riches
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(No Model.)

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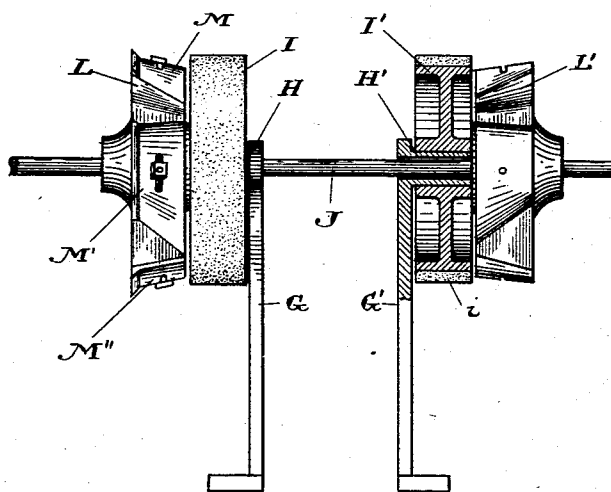


Fig. 3

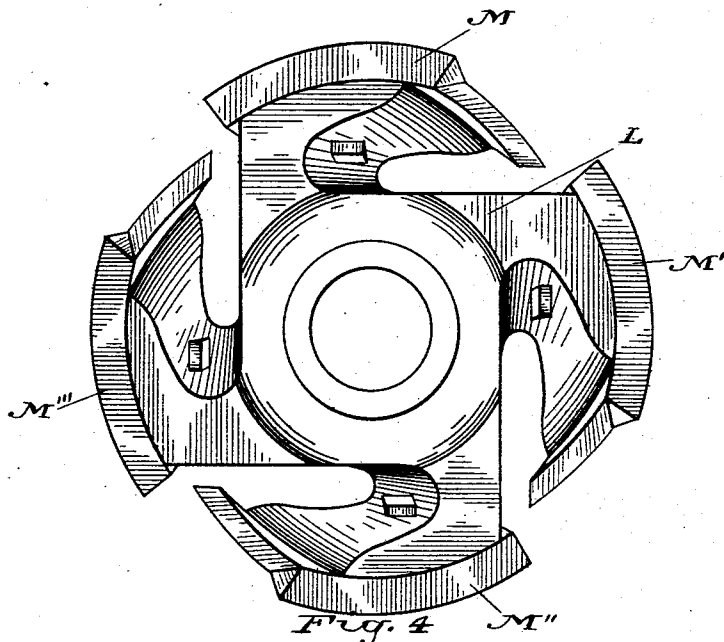


Fig. 4

Witnesses

J. C. Cannon
H. B. Thurston

Inventor

Thos. W. Hamlin
by C. St. Riche
his Attorney

UNITED STATES PATENT OFFICE.

THOMAS W. HAMLIN, OF SARAWAK, CANADA.

MACHINE FOR POINTING SKEWERS.

SPECIFICATION forming part of Letters Patent No. 570,630, dated November 3, 1896.

Application filed January 22, 1896. Serial No. 576,470. (No model.)

To all whom it may concern:

Be it known that I, THOMAS WALROND HAMLIN, of the township of Sarawak, in the county of Grey and Province of Ontario, Canada, have invented certain new and useful Improvements in Machines for Pointing Skewer-Blanks; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in machines for pointing skewer-blanks, and relates more particularly to the means employed for continuously feeding the skewer-blanks from the hopper to the cutter-knives; and the object of the invention is to so arrange the machine that the skewer-blanks can be fed regularly and continuously to the cutter-knives; to so arrange the cutter-knives that the knives will, during the passage of the skewer-blanks from the hopper to the delivery-table, shave the skewer-blanks from heel to point of the taper; to provide a concaved course for the skewer-blanks concentric with the cutter-heads; and the invention consists, essentially, of the device hereinafter more fully set forth, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the complete machine. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a view, partly in section, of the cutter-heads and shaft. Fig. 4 is a side elevation of the cutter-heads.

Like letters of reference refer to like parts throughout the specification and drawings.

At the head of the frame A is located a hopper B to temporarily hold the skewer-blanks, and at the bottom of the hopper B is an opening *b*, through which the skewers are delivered into a vertical chute *c*. Located below the hopper B are two horizontally-movable tables D D'. Each of the tables D D' has a concaved face E. Connected to the sides *a'* of the frame A, in front of the tables D D', are two cross-beams F, each of which is slotted longitudinally. Mounted on the cross-beams F, opposite the space intervening between the tables D D', are two standards G G', respectively, each provided with bolts *g*, passing through the slots in the cross-beams. By means of the slots and bolts the standards can be moved laterally into any adjusted position. Connected to the top of the outer side of the

standards G is a sleeve H, on which is loosely mounted an idler I. The idler I is opposite the table D, the concavity of which is concentric with the perimeter of the said idler. Secured to the outer side of the standard G' is a similar sleeve H', on which is mounted an idler I', opposite the table D'. The concavity of the table D' is concentric with the perimeter of the idler I'. Journaled in the sleeves H H' is a horizontal shaft J, the ends of which are journaled in bearings K, mounted on the top of the sides *a'*. The shaft J revolves loosely in the sleeves H H'. Rigidly mounted on the shaft J are two cutter-heads L L', respectively. The cutter-head L is located contiguous to the outer side face of the idler I, while the cutter-head L' is located contiguous to the outer side face of the idler I'. The cutter-heads L L' are rigidly mounted on and revolve with the shaft J. Each of the cutter-heads L L' is provided with a series of adjustable knives M M' M'' M'''. The cutting edge of each of the knives M M' M'' M''' is arranged obliquely to the plane of the revolution of the cutter-head, the point of each of the knives being upturned, so that the knife will shave the skewer-blank from the heel to the point of the taper.

Journaled in the sides *a'* of the frame A in front of and below the shaft J is a shaft N, and rigidly mounted on the shaft N are two pulleys O O', which are located in alinement with the idlers I I', respectively. Passing around the idler I and the pulley O is a rubber belt P, and passing around the idler I' and pulley O' is a rubber belt P'. The belts P P' are a distance remote from the concaved faces of the tables D D', respectively, approximately equal to the diameter of the skewer-blank. Journaled in the lower part of the foot of the machine is a counter-shaft Q, and mounted on the shaft Q is a pulley R. Mounted on the shaft J is a pulley S on the same side of the machine as the pulley R. Passing around the pulleys R and S is a belt T. Mounted on the shaft Q is a pulley U, of a lesser diameter than the pulley R, and journaled in the head of the machine is a shaft V. Mounted on the shaft V is a pulley W. The pulley W is of a greater diameter than the pulley U, and passing around the pulleys U and W is a belt W'. Mounted on the opposite end of the shaft V is a pulley V', of a

smaller diameter than the pulley W, and mounted on the shaft N is a pulley N', of a greater diameter than the pulley V', and passing around the pulleys V' N' is a belt N''.

5 Motion is transmitted to the counter-shaft Q, and from the counter-shaft Q motion is transmitted to the shaft J by means of the belt T. As the pulley R is of a greater diameter than the pulley S, the shaft J will revolve at a much higher rate of speed than the counter-shaft Q. Motion is also transmitted from the counter-shaft Q to the shaft V by means of the belt W'. As the pulley U is of a lesser diameter than the pulley W, the shaft 10 V will revolve at a lower rate of speed than the shaft Q, and motion is transmitted from the shaft V to the shaft N by means of the belt N'', and as the pulley V' is of a lesser diameter than the pulley N' the shaft N will revolve at a slower rate of speed than the shaft V. It will therefore be seen that the shaft N will revolve at a much slower rate of speed than the counter-shaft Q. The belts P P' move in the direction indicated by arrows and 25 carry the skewer-blanks down the concaved faces of the tables D D'. The cutter-knives revolve in the direction indicated by arrows, that is, reverse to the belts P P', and work against the skewers while they are passing down the concaved surfaces of the table and 30 shave the skewers from the heel to point.

To regulate the delivery of the skewer-blanks from the hopper, I provide two slides X X', located one about one-quarter of an inch above the other, and entering the side of the chute slightly below the opening b at the bottom of the hopper. Mounted in bearings Y in the head of the machine is a horizontal shaft Y', and mounted on the shaft Y' are cams Y'' Y'''. Mounted on a shaft Y''', journaled in the framework, are two rocking levers Z Z', operated, respectively, by the cams Y'' Y'''. The lever Z moves the slide X, while the lever Z' moves the slide X'. The operation of the levers Z Z' is alternate, in order 45 that the slides X X' will be alternately moved. The lever Z moves the slide X to allow of the delivery of one skewer-blank to the top of the slide X'. The lever Z then returns the slide 50 X to arrest the delivery of the skewer-blanks until the lever Z' has moved the slide X' to deliver the said skewer-blank to the concaved surfaces of the table, this action being continued during the operation of the machine. 55 By means of these slides and levers the skewer-blanks are delivered regularly and continuously to the concaved surfaces of the tables to allow of the cutter-knives shaving. Mounted on the end of the shaft Y is a pulley C, and mounted on the corresponding end of the shaft V is a pulley C', and passing around the pulleys C C' is a belt c'', by means of which motion is transmitted from the shaft V to the shaft Y.

65 As the skewer-blanks vary in diameter, it is necessary to provide a means for increasing under pressure the width of the space be-

tween the concaved faces of the tables and the adjacent faces of the rubber belts. To accomplish this result, I provide the periphery 70 of each of the idlers I I' with a circular rubber cushion z. Mounted on the shaft V is a drum v, and journaled in the sides a' of the frame A is a drum b', and passing around the drums v b' is a belt v'', on which the skewers 75 drop from the tables.

The action of the machine is as follows: Motion is transmitted to the various parts by means of the belts and pulleys hereinbefore described. The skewer-blanks are placed in 80 the hopper and are fed to the tables, passing down between the rubber belts P P' and the concaved faces of the tables D D'. During their passage down their course they are operated on by the knives of the cutter-heads, 85 and are afterward delivered to the belt v'', which is continually moving around the drum v, and are delivered from the belt into receptacles placed to receive them.

Having thus fully described my invention, 90 what I claim as new, and desire to secure by Letters Patent, is--

1. In a skewer-pointing machine, the combination with the hopper of a feeding apparatus consisting of two slides one located 95 above the other, a shaft journaled in the frame, cams mounted on the shaft, levers operated by the cams, arranged to work the slides alternately, to allow of the delivery only of one skewer-blank at a time from the hopper, skewer-supporting tables, a concaved 100 face for each of the tables, a horizontal shaft opposed to the tables journaled in the frame, pillow-blocks opposite the interval between the tables, sleeves supported by the pillow-blocks encircling the shaft, idlers mounted 105 on the sleeves opposed to and concentric with the concaved faces of the tables, cutter-heads mounted on the shaft on the sides of the said idlers, a second shaft, pulleys mounted on 110 the second shaft, belts passing around the said pulleys and idlers, and means for imparting motion to the machine, substantially as specified.

2. In a machine for pointing skewer-blanks, 115 the combination of a hopper, an opening through the bottom of the hopper, two alternately-working slides one located above the other, adapted to permit of the delivery of one skewer-blank at a time from the said hopper, a rock-shaft, two levers mounted on the rock-shaft, each lever engaging with its 120 respective slide, an eye in the lower end of each of the said levers, a shaft passing through the eyes, cams mounted on the said shaft operating the said levers, and means for imparting 125 motion to the said shaft, substantially as specified.

Toronto, December 23, A. D. 1895.

THOS. W. HAMLIN.

In presence of—

M. A. WESTWOOD,
C. H. RICHES.