

No. 713,566.

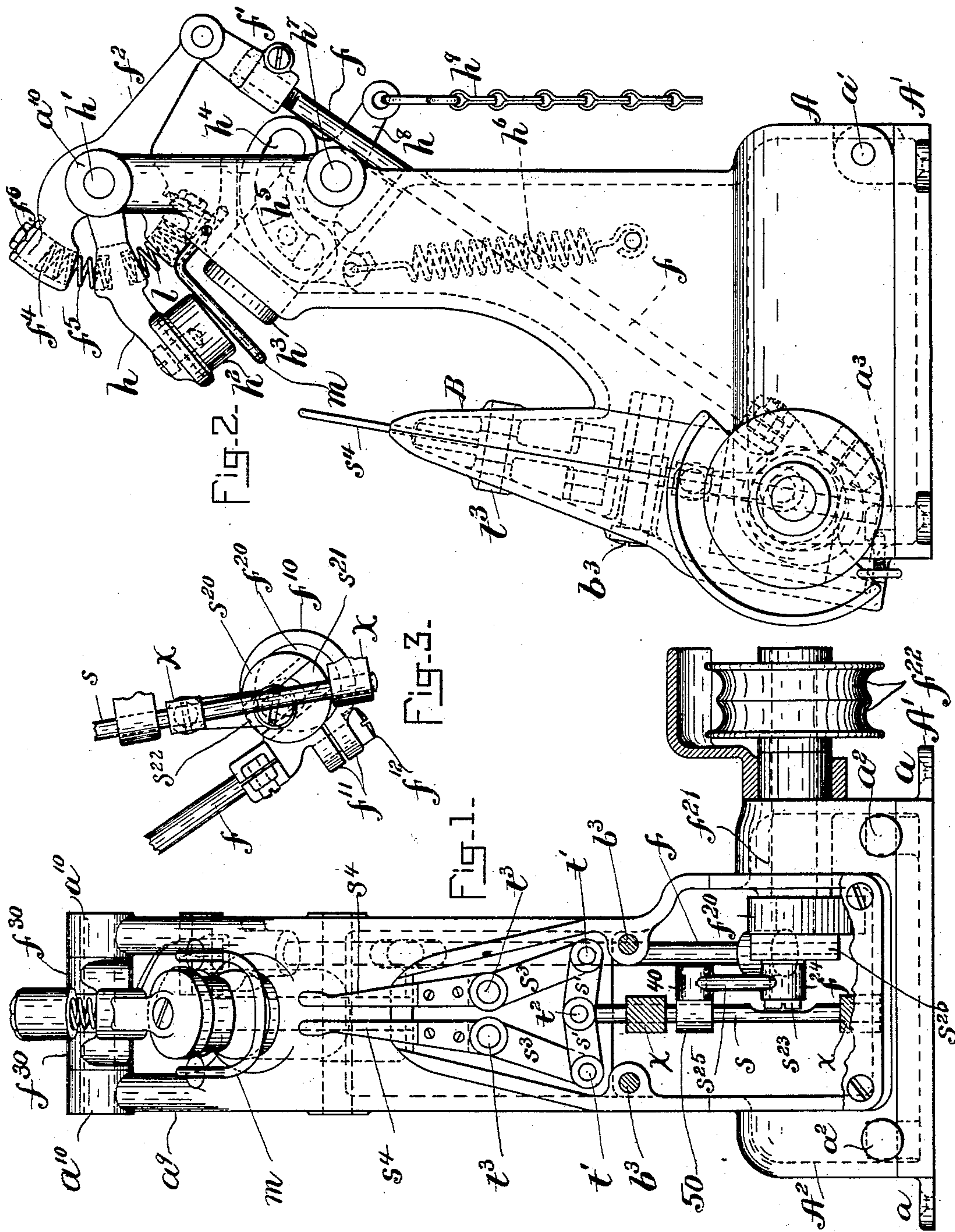
Patented Nov. 11, 1902.

G. S. HILL.

BEADING AND TURNING MACHINE.

(Application filed Oct. 17, 1894.)

(No Model.)



WITNESSES:

H. D. Hanson
Rollin Abell.

INVENTOR:

George S. Hill
 & Wright, Brown & Purdy
 his Attorneys

UNITED STATES PATENT OFFICE.

GEORGE S. HILL, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JAMES H. MURRAY, OF HAVERHILL, MASSACHUSETTS.

BEADING AND TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 713,566, dated November 11, 1902.

Application filed October 17, 1894. Serial No. 526,127. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. HILL, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Beading and Turning Machines, of which the following is a specification.

My invention relates to an improvement in beading and turning machines in which is comprised an improved mechanism for operating the turning irons or fingers and an improved hammer and anvil for pounding out the seams after they have been turned.

My invention consists in certain novel features of construction and arrangement of parts, which will be fully hereinafter described, and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, and the characters marked thereon, which form a part of this specification, like characters designating like parts or features, as the case may be, wherever they occur.

In the drawings, Figure 1 is a front view of a machine embodying my invention. Fig. 2 is a side view thereof. Fig. 3 is a detail view of the connections between the driving-shaft and the pitmen that operate the turning-irons and the hammers.

A' represents the base of the machine, which may be fastened to a bench or other support by means of screws a .

A is the general frame of the machine, mounted upon the bed A' and pivoted thereto at one side by pivots a' . The base A' is provided with lugs a^3 . Locking-screws a^2 in the frame A are arranged to take under these lugs to fasten the frame A securely to the base. When it is desired to inspect the interior mechanism, these screws are unloosened and the frame tilted back on its hinges.

f^{22} represents tight and loose pulleys mounted upon a shaft f^{21} projecting from the main frame. On this shaft is mounted an eccentric f^{20} , upon which fits a sleeve f^{10} , locked upon said eccentric by a screw f^{12} and fastened through ears f^{11} on said sleeve. To this sleeve is secured in any desired manner a pitman f , which connects at its upper end f' with one end of a pivoted lever f^2 , pivoted upon the shaft h' at the top of the frame.

The other end of this pivoted lever is provided with a socket f^4 , closed at one end by an adjustable screw and containing a coiled spring f^5 . h is a vibratory hammer also mounted upon the shaft h' by means of ears f^{30} , which straddle the pivoted lever f^2 . (See top of Fig. 1.) This hammer is provided with a removable striking portion h^2 and with depressions between this striking portion and its pivotal point upon its upper and under side, the spring f^5 resting in the depression on its upper side and a spring l arranged in the depression on its under side and secured at its other end to the adjacent frame of the machine.

h^3 represents an adjustable anvil secured on the frame of the machine in suitable position and engaged by the striking portion h^2 of the vibratory hammer. This anvil may be adjusted up and down by means of a block h^5 on said anvil, projecting into the cam-slot h^4 in the lever h^8 , pivoted at h^7 to the frame of the machine. This lever is provided at the end opposite the cam-slot with a chain, connecting it with a treadle or any other suitable means for operating the lever. A spring h^6 , secured at one end to the frame of the machine and at the other end to the portion of the lever containing the cam-slot, exerts a strain opposite to that exerted by the chain h^9 , so that when the chain h^9 is released the spring will draw the lever down and pull the block down by means of the cam-slot, thus drawing the anvil away from the hammer. The anvil is pushed toward the hammer by pulling down on the chain h^9 , as will be evident.

Upon the end of the shaft f^{21} is a disk s^{20} , provided with an undercut groove. In this groove fits a block s^{22} , provided with a set-screw s^{23} , by means of which it may be secured in any desired position in said groove. Over this portion of the machine there is an iron or inclosed case B, made in two sections held together by screws b^3 and still further by pivots t^3 , upon which the irons or turning-fingers s^4 are pivoted, these fingers projecting from the top of the iron, as shown in Fig. 2. These turning-irons are pivoted in the same plane at a point intermediate of their two ends. The lower ends s^3 of said irons

are pivoted at t' to levers s' , which are connected to a common pivot t^2 in a sleeve on the end of a vertically-movable rod s , capable of sliding in lugs x , secured to the framework of the machine.

s^{25} is a pitman provided at one end with a sleeve f^{24} , mounted on the screw s^{23} , and at its other end provided with a sleeve 40, mounted on a pin projecting from a lug 50, fast on the rod s .

From the foregoing it will be seen that upon motion being imparted to the shaft f^{21} the rod s will be reciprocated vertically, and through the medium of the connecting-levers s' , this will give a rapid to-and-fro motion to the irons or fingers s^4 . These inserted in a well-known way in the scallops or other sewed portions of the shoe smooth out the seams. The motion of the shaft also causes reciprocation of the pitman f , and through it motion is communicated to the lever f^2 . Now by means of the springs l and f^5 the motion of the lever f^2 imparts to the hammer h a rapid vibratory movement. This arrangement is of particular advantage over a construction which would impart a solid stroke, such as would happen if the hammer were rigidly connected with the lever, and said arrangement imparts a stroke more nearly approaching that given by a hammer held in a human hand. A guard m serves to protect the fingers.

After the shoes have been removed from the irons s^4 they are laid upon the anvil and hammered or pounded flat at the points where the irons have worked, this anvil being adjustable up and down to suit the thickness of the particular material to be operated upon.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim, and desire to secure by Letters Patent, is—

1. In a leather-turning machine, in combination,

a pair of laterally-vibrating fingers pivoted intermediate of their ends arranged to vibrate in the same plane, links joining the ends of said fingers to a common pivot t^2 , a main shaft, and connections including a pitman between said shaft and said pivot t^2 , substantially as and for the purpose described.

2. In a leather-turning machine, in combination, a pair of laterally-vibrating fingers pivoted intermediate of their ends arranged to vibrate in the same plane, links joining the ends of said fingers to a common pivot t^2 , a main shaft provided with a grooved disk, and an adjustable connection including a pitman between said disk and pivot t^2 , substantially as and for the purpose described.

3. In a leather-turning machine, in combination, a main shaft, a pivoted lever f^2 , a hammer connected to said lever, a pivoted lever h^8 provided with a cam-slot, an anvil provided with a block arranged in said slot, means for operating said lever h^8 , and connections between said shaft and lever f^2 , substantially as and for the purpose described.

4. In a leather-beading machine, in combination, a vibrating hammer, a movable member provided with a cam-slot, and an anvil provided with a block arranged in said slot, substantially as and for the purpose set forth.

5. In a leather-beading machine, in combination, a vibrating hammer, an adjustable member provided with a cam-slot, an anvil provided with a block arranged in said slot, and means for retaining said block in any desired adjustment, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of October, A. D. 1894.

GEORGE S. HILL.

Witnesses:

A. D. HARRISON,
ROLLIN ABELL.