

F. C. FEICKER.

MACHINE FOR SAWING KNIFE HANDLE BLANKS.

No. 521,608.

Patented June 19, 1894.

Fig. 1.

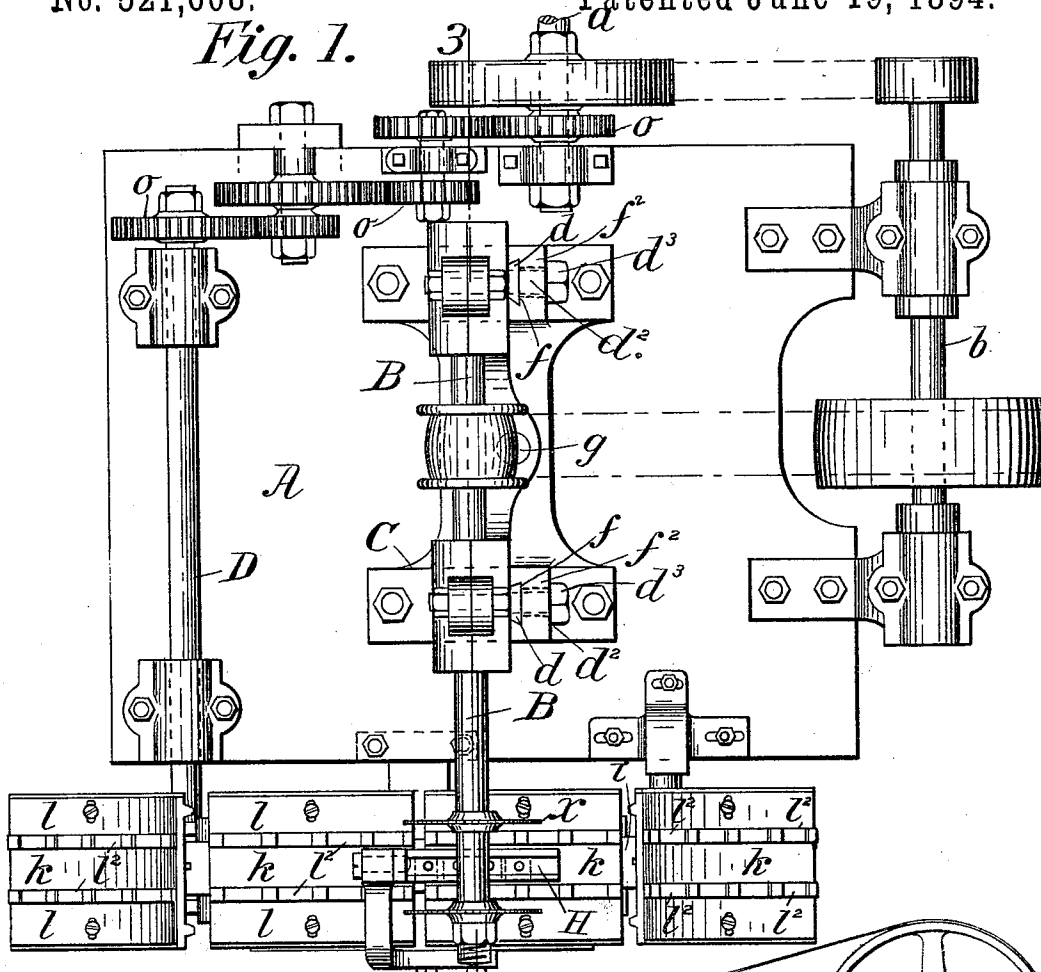
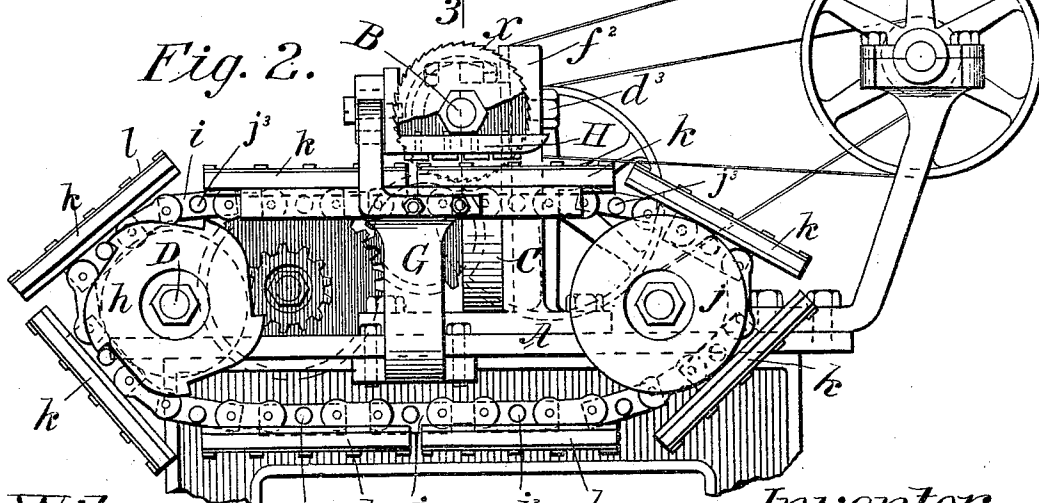


Fig. 2.



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Fig. 3.

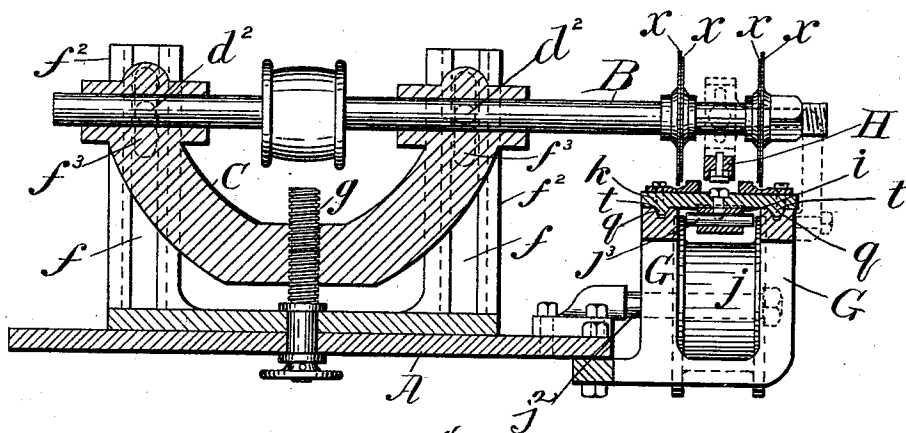


Fig. 5.

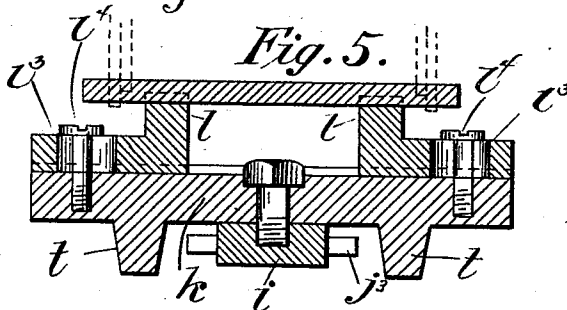


Fig. 4.

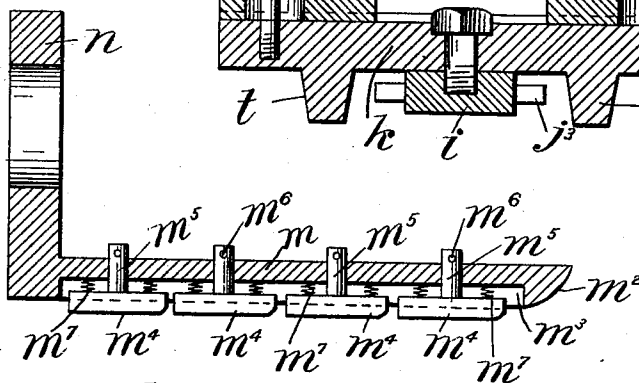
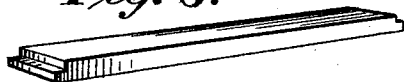


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDRICK C. FEICKER, OF NORTHAMPTON, MASSACHUSETTS.

MACHINE FOR SAWING KNIFE-HANDLE BLANKS.

SPECIFICATION forming part of Letters Patent No. 521,608, dated June 19, 1894.

Application filed August 2, 1893, Serial No. 482,156. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK C. FEICKER, a citizen of the United States, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented new and useful Improvements in Machines for Sawing Knife-Handle Blanks, of which the following is a specification.

This invention relates to improvements in machines for sawing off the ends of scales or blanks employed for the production of handles of table knives and forks.

The object of the invention is to produce a machine by the use of which the small blanks or strips of hard wood, bone, &c., may be very rapidly sawed and discharged from the machine,—this work being sometimes referred to as “cropping,”—it being only necessary for a boy to properly place them on the carriers,—their conveyance thence to the saws and their sawing and discharge requiring no attention; and to this end the invention consists in a machine for the purpose indicated, in various novel combinations or arrangements of parts, all substantially as will hereinafter fully appear and be set forth in the claims.

In the drawings, Figure 1 is a plan view of the machine, and Fig. 2 is a side elevation thereof. Fig. 3 is a cross sectional view on line 3—3, Fig. 1. Fig. 4 is an enlarged longitudinal sectional view of the presser foot. Fig. 5 is an enlarged cross sectional view of one of the tubes and the rests for the blank, a blank being shown in place thereon, and Fig. 6 is a perspective view representing one of the scales. It will be perceived that in the scale here shown the sawed off ends are of stepped form.

Corresponding characters of reference indicate like parts in all of the views.

In the drawings, A represents the main table of the machine supported by which is the driving shaft, *a*, and the counter shaft, *b*, belted thereto.

B represents the saw-shaft which is mounted in the journal bearings of a yoke, C. This yoke is vertically adjustable by means as follows, see Fig. 3:—The yoke has at its rear side dovetailed members, *d*, *d*, which have guiding engagements within the ways, *f*, *f*, in the standards, *f*², rising from the table; the yoke also has the rearwardly projected ten-

ons or studs, *d*², which project through the slots, *f*³, in the said standards receiving the screw-nuts, *d*³, which serve to clamp the yoke to the standards. The vertical adjusting screw, *g*, is rotatably mounted in the table its upwardly extended screw-threaded portion screw engaging the yoke. The saws are mounted in an adjustable support, substantially as described, so that when they are reduced in diameter, as occurs after repeated refiling, they may have their lower working edges always at the proper height, relative to the work carriers. The shaft is rapidly driven by belt from the aforesaid counter shaft, *b*.

At the forward side of the machine, the rigidly supported saw shaft carries the pair of saws, *x*, (or double pair of saws) subject to which the blanks or scales are brought to have their ends sawed off, and all reduced to uniform length and to usually receive the saw-cuts partially through the thickness of the scale next to the ends to bring its end portions to the step form aforementioned.

The feeding mechanism or carriers for receiving the blanks and carrying them to the action of the saws will be now described:—Near the front end of the machine there is a shaft, D, which projects beyond the front side and has on its end a wheel, *h*, with ratchet like teeth around which passes the endless linked carrier, *i*, the carrier also having a support at the rear on the roller, *j*, which is mounted on the stud, *j*², horizontally projected beyond the edge of the main table, A. Certain of the linked members of the carrier have the studs, *j*³, which are engaged by the aforesaid drive wheel, *h*. The links, at proper intervals, have the tables or supports, *k*, rigidly secured thereto so as to travel therewith and to break around the support-wheels, *h* and *j*.

There is at the edge of the main table, A, a yoke, G, having in the tops of its separated members the longitudinal trough-ways, *q*, *q*, in which have sliding engagements, as they travel forward, the depending ribs, *t*, of the sectional tables, *k*. This manner of engagement of the tables, under the saws, with the fixed yoke or bracket, G, insures the true presentation of the work to the saws, as well as the substantial support thereof to properly resist the sawing action. These tables have arranged on top thereof in parallelism, and

separation and extending in the direction of their travel the bars, l, l , which have the cross-wise depressions or rests, l^2 , in which the blanks or scales are set to be thereby carried crosswise of their lengths with certainty to and past the saws. Each of these bars, l , is transversely of stepped or angular form, the foot-piece having the transverse slots, l^3 , through which are passed the headed screws, l^4 , the shanks of which screw engage in the carrier tables. By temporarily loosening the screws the bars may be adjusted nearer or farther from each other to accord with the length of scale desired, the saws being correspondingly adjusted in their separation.

In Fig. 5 the position of the blank on the rest therefor is shown, as also the relations of the ends of the blank to the saws, one of which is a cutting-off saw, while the other penetrates only part of the thickness of the material next to the cut-off ends to produce the step. It will be perceived that the positions of the saws are quite near the rests for the blanks, as insuring better results, as manifest. As the scales are brought into proximity to the saws, they are at the same time brought subject to the action of a presser foot whereby they may not be caused to jump or be thrown out from their rest depressions, when they strike the saws. This presser foot is seen at H ranging longitudinally relative to the travel of the carriers midway between the saws, and, as particularly seen in Fig. 4, consists of the vertical support member, n , and the longitudinal foot member, m , with the end which is first reached by the blanks beveled, as seen at m^2 ; the foot has, in its under side, the longitudinal channel, m^3 , in which are a series of pressure blocks, m^4 , having the vertical studs, m^5 , which pass, for guiding movements, through holes in the foot, m , the downward movement of the blocks being limited by the shoulders constituted by the cross pins, m^6 . The springs, m^7 , downwardly force the blocks, and permit them to yield to accommodate the inequalities in the thicknesses of the blanks. The presser foot is vertically adjustable on the bracket-arm therefor by having the said slot and bolt connection indicated in the drawings, whereby the machine may be prepared for work upon scales of greater or less thicknesses, as desired.

The shaft, D, is driven by the shaft, a , at a much slower rate of speed, for the proper rapidity of movement of the carrier tables, k, k , by the gearing shown generally at o, o , in Fig. 1.

The attendant stands just opposite the rear of the presser foot, and places the blanks in the rest depressions of the tables as the latter come up around the roller, j ; no further attention or action is necessary by the attendant

for by the positive and invariable movements of the carriers to and by the speeded saws, all of the blanks will be sawed to uniform lengths, and also brought to the step-form shown, and as the tables swing down around the wheel, h , the blanks will be permitted to fall off into a receptacle properly located to receive them.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for sawing knife scales, the combination with the saws of an endless carrier having a series of tables each with bars thereon which are adjustable transversely of the direction of travel of the carrier and provided with transverse depressions or rests for holding the scales horizontally at right angles to said direction of travel, substantially as described.

2. In a machine for sawing knife scales, the combination with the saw-shaft and the saws and the support in which the saw-shaft is journaled which is vertically adjustable, of the endless carrier with the series of tables having the bars, with depressions for receiving the scales, which bars are transversely adjustable, and the vertically adjustable presser foot with yielding bottom bearing sections, substantially as described.

3. In a machine for sawing knife scales, the combination with the main table of the machine having the standards, f^2 , with vertical ways, f, f , and vertical slots, f^3 , and the endless carrier and series of tables, k , thereon for receiving and conveying the scales to be sawed, of a yoke in which the saw-shaft is journaled provided with the members which have guiding engagements in said vertical ways and the studs or tenons which pass through said slots and receive confining nuts, and the vertical screws, g , rotatably mounted in the main table and having a screw engagement with said yoke, substantially as described.

4. In a machine for sawing knife scales, the combination with the main table having the yoke, G, comprising the separated members with the longitudinal trough-ways, q, q , in their tops, of the wheel, h , with ratchet-like sides, and the roller with side flanges, the endless link-formed carrier having the outwardly projected studs, j^3 , to be engaged by the teeth of said wheel and having the series of tables, k , with the longitudinal ribs, t, t , on their bottoms, and carrying the bars, l , with the transverse rest depressions, and the saws, all substantially as described.

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