(No Model.)

J. R. SCOTT.

SKIVING MACHINE.

No. 470,015. Patented Mar. 1, 1892.

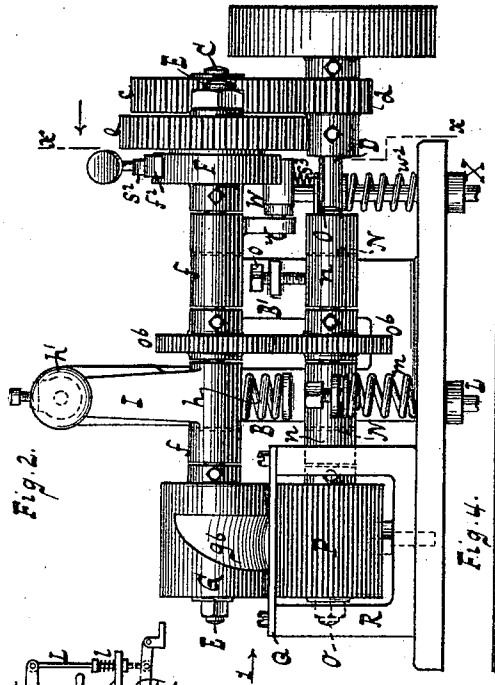

Fig. 2.

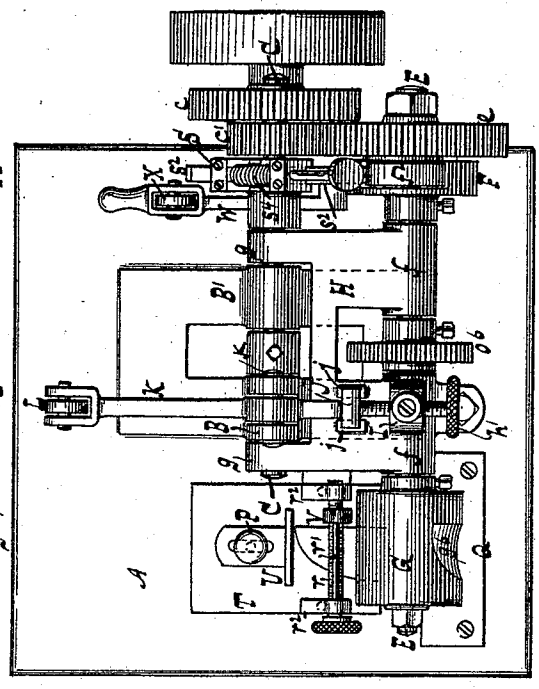

Fig. 4.

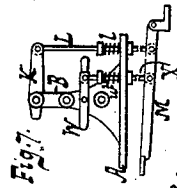

Fig. 7.

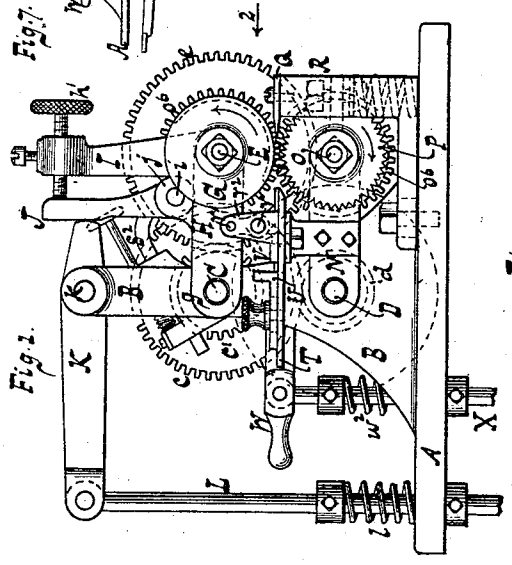

Fig. 1.

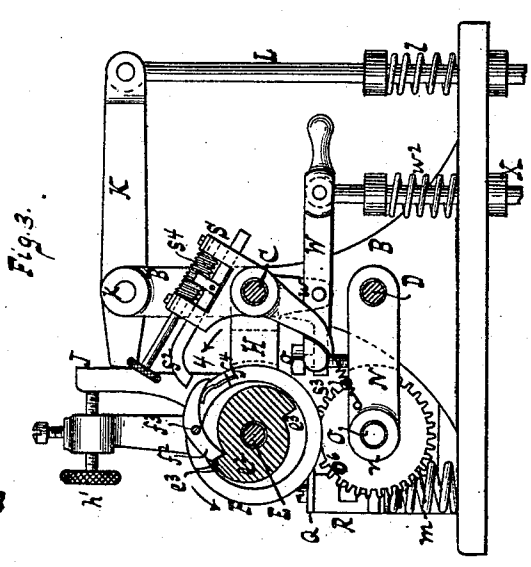

Fig. 3.

WITNESSES:

William Miller

Edward Wolff.

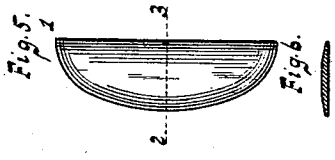

Fig. 5. Fig. 6.

INVENTOR:

Jacob R. Scott

BY

Van Santvoord & Hauff

his ATTORNEYS

UNITED STATES PATENT OFFICE.

JACOB R. SCOTT, OF NEW YORK, N. Y.

SKIVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 470,015, dated March 1, 1892.

Application filed October 8, 1891. Serial No. 408,203. (No model.)

To all whom it may concern:

Be it known that I, JACOB R. SCOTT, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Skiving-Machines, of which the following is a specification.

This invention relates to a skiving-machine which is intended particularly for preparing counter-stiffeners for boots and shoes, but which can also be used for other articles.

The improvements which form the subject-matter of my present invention are pointed out in the following specification, and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view looking in the direction of arrow 1, Fig. 2. Fig. 2 is a front view looking in the direction of arrow 2, Fig. 1. Fig. 3 is a vertical section in the plane *x x*, Fig. 2. Fig. 4 is a plan or top view. Fig. 5 is a plan view of a counter-stiffener such as may be produced on my machine. Fig. 6 is a transverse section of the same in the plane 2 3, Fig. 5. Fig. 7 is a detached view showing the treadle connection on a smaller scale than the previous figures.

In the drawings, the letter A designates the bed-plate, from which rise two standards B B′, which form the bearings for the counter-shaft C and for the driving-shaft D. These two shafts are geared by cog-wheels *c d*, Figs. 1 and 2, and on the shaft C is also mounted a cog-wheel *c′*, which meshes into a cog-wheel *e*, which is loosely mounted on the shaft E, which carries the clutch F and the roller-die G. The shaft E has its bearings in eyes *f f*, formed on a frame H, which swings on the shaft C, being provided with eyes *g g*, which engage said shaft, as shown in Fig. 4. A spring *h*, Fig. 2, has the tendency to force the eyes *f f* of the frame H, together with the shaft E and roller-die G, upward; but the roller-die is held down in its working position by the following means: From one of the eyes *f* rises the arm I, which carries a set-screw *h′*, that serves to adjust a tappet-arm J, which swings on a pivot *i*, secured in lugs *j j*, formed on the frame H, Figs. 1 and 4. This tappet-arm bears against the end of a lever K, which has its fulcrum on a pivot *k*, secured in the upper forked end of the standard B. The outer end of this lever connects by a rod L with a treadle M, Figs. 1, 3, and 7, and this rod is exposed to the action of a powerful spring *l*, which has a tendency to retain the lever K in the position shown in Figs. 1 and 3, thereby retaining the roller-die G in its working position against the action of the spring *h*. When the treadle M is depressed, the inner end of the lever K moves upward and the roller-die G is forced upward by the spring *h*. If the parts are in the position shown in Fig. 1 and the roller-die is locked down in its working position, this position can be adjusted by means of the set-screw *h′*. If this set-screw is turned outward, the roller-die is permitted to rise, and vice versa.

On the driving-shaft D swings a frame N, provided with two eyes *n n*, which form the bearings for the shaft O of the feed-roller P. A spring *m* has a tendency to force the feed-roller upward, and a set-screw *o* serves to adjust the position of the feed-roller in regard to the roller-die. The shaft O is geared with the shaft E by cog-wheels o^6 o^6.

The knife Q is firmly secured to a standard R, which is fastened to the bed-plate by one or more screws and the cutting-edge of which extends between the two rollers and in line with the bite or meeting line of said rollers. Behind the rollers is situated a table T, provided with an adjustable end gage U and with an adjustable edge gage V. The end gage U is secured to the table by a set-screw *p*, and the edge gage V is in screw-threaded engagement with a screw-shaft *r*, having its bearings in brackets r^2, secured to the table T, Fig. 4. The edge gage V is prevented from turning with the screw-shaft *r* through the medium of a rod *r′*, supported by one of the brackets r^2, in such manner that by rotating the screw-shaft the edge gage V can be adjusted from one side of the table T to the opposite side thereof, so that when the first half of the counter or stiffener has been skived the edge gage can be adjusted into position for the skiving operation of the second half of the counter or stiffener.

The clutch F consists of a drum, which is firmly mounted on the shaft E of the roller-die and the rim of which extends over the hub e^2 of the cog-wheel *e*, Fig. 3. This hub is provided with one or more teeth e^3, and on

the clutch is mounted a pawl f^2, which swings on a pin f^3 and is subjected to the action of a spring f^4. When the pawl is free to follow the action of this spring, it engages one of the teeth e^3, and the shaft E is set in motion; but when the pawl f^2 is thrown out of gear with the hub of the wheel e the motion of the shaft E stops.

For the purpose of throwing the pawl f^2 out of gear I use a dog s^2, which is adjustably fitted into the head of a lever S, which swings freely on the counter-shaft C and the tail of which is exposed to the action of a spring s^3, which has a tendency to retain said lever in the position shown in Fig. 3. The tail of the lever S is exposed to the action of a lever W, which swings on a pivot w, so that when the rear end of this lever is depressed the lever S is caused to swing in the direction of arrow 4, Fig. 3, and as the dog s^2 strikes the tail of the pawl f^2 the latter is thrown out of gear with the hub e^2 of the cog-wheel e and the motion of the shaft E stops. The dog s^2 can be adjusted by means of a worm-screw s^4, so that it acts upon the pawl f^2 at an earlier or later period, and the time when the motion of the shaft E is stopped can be adjusted according to the length of the article to be skived. The lever W connects by a rod X with the treadle M, Fig. 7, and said rod is exposed to the action of a spring w^2, which has a tendency to retain the lever W in the position shown in Fig. 3 and to throw the dog s^2 out of engagement with the pawl f^2. When the treadle M is depressed, the shaft E is raised and at the same time its motion is stopped.

The machine illustrated in the drawings is constructed for skiving counter-stiffeners, and for this purpose the roller-die G is provided with a cavity g, corresponding in its contours, depth, width, and length to one-half of the length of the counter-stiffeners to be prepared—that is to say, to that portion of the article shown in Fig. 5 which is contained between the tip 1 and the line 2 3. The gages T and V are adjusted to correspond to the article to be produced. The roller-die is raised and the blank is introduced so as to bear with its end against the gage U and with its edge against the gage V. Then the roller-die is lowered and the machine is set in motion. As the two rollers are rotated in the direction of the arrows marked on them in Fig. 1 the blank is forced out against the cutting-edge of the knife G and those portions which project over the sides and end of the cavity g^6 are cut off, thereby finishing one half of the counter-stiffener. In order to finish the other half the edge gage V has to be adjusted near the opposite side of the table T, and then the remaining half of the blank is treated in the manner above described.

I do not claim in this specification the devices shown and described in an application for a patent filed by me August 20, 1891, Serial No. 403,231.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the feed-roller, the roller-die, and the stationary knife situated on one side of the rollers, of a table situated on the opposite side of said rollers, an end gage U, adjustable on the table, an edge gage V, a transverse screw-shaft r, supported in brackets on the table and in screw-threaded engagement with the edge gage, and means for preventing the edge gage from turning when the screw-shaft is rotated to adjust such edge gage from one side of the table to the opposite side thereof, substantially as described.

2. The combination, with the feed-roller, the roller-die, and the stationary knife situated on one side of the rollers, of a table situated on the opposite side of said rollers, a pair of brackets r^2, secured to the table, a transverse screw-shaft r, supported by the brackets, an edge gage V in screw-threaded engagement with the screw-shaft, and means for preventing the edge gage from turning when the screw-shaft is rotated to adjust such edge gage from one side of the table to the opposite side thereof, substantially as described.

3. The combination, with the feed-roller, the roller-die, and the stationary knife situated on one side of the rollers, of a table situated on the opposite side of the rollers, a pawl and clutch for throwing the rollers in and out of gear with the driving-shaft, mechanism for raising and lowering the roller-die, a lever for actuating the pawl, and the mechanism for raising and lowering the roller-die, substantially as described.

4. The combination, with the feed-roller, the roller-die, and the stationary knife, of a swinging frame H, the bearings $f\,f$ for the shaft of the roller-die, formed in the free end of said frame, the spring m, acting on said frame, the arm I, extending from one of these bearings, the set-screw h', carried by said arm, the tappet-arm J, pivoted to the frame H, the lever K, and means for actuating this lever, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JACOB R. SCOTT.

Witnesses:
J. VAN SANTVOORD,
W. HAUFF.