(No Model.)

J. R. SCOTT.

SKIVING MACHINE.

No. 453,944. Patented June 9, 1891.

Fig. 1.

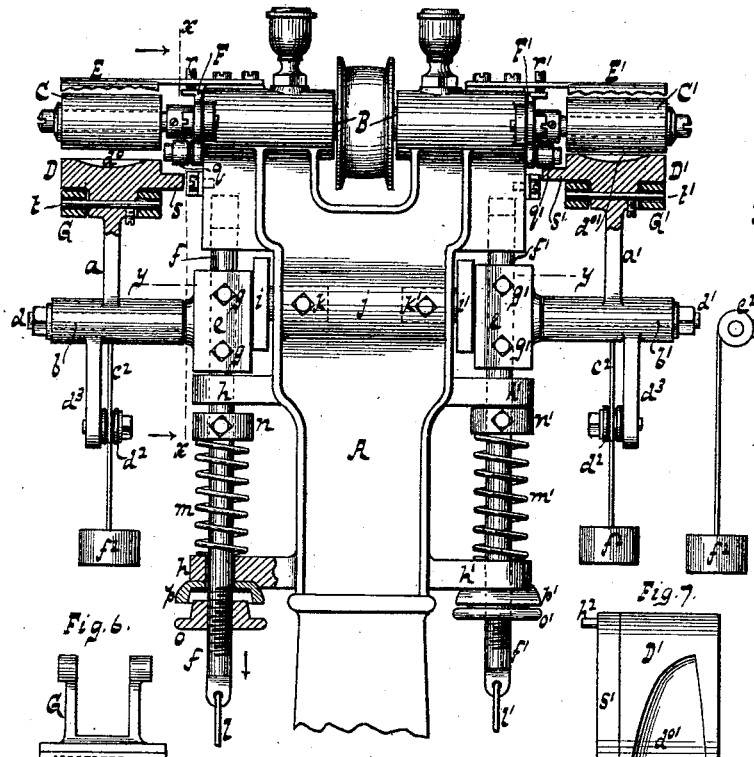


Fig. 2.

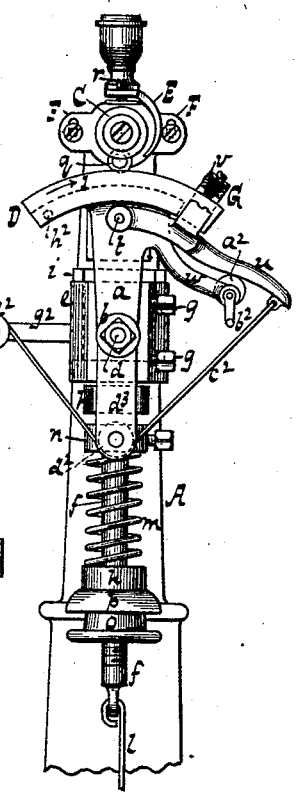


Fig. 6.

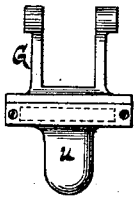


Fig. 7.

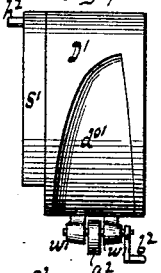


Fig. 3.

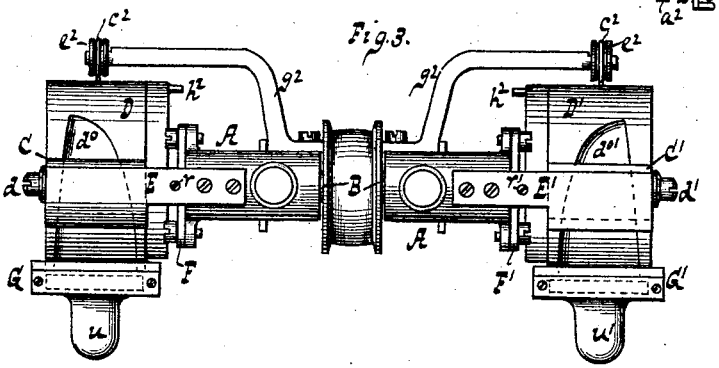


Fig. 4.

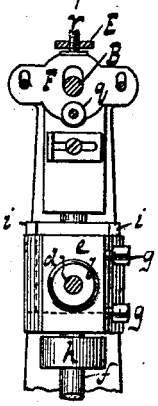
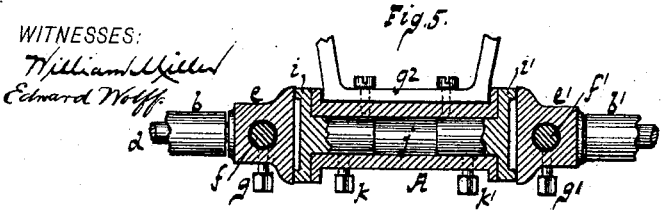


Fig. 5.



WITNESSES:
William Miller
Edward Wolff.

INVENTOR:
Jacob R. Scott
BY
Van Santvoord & Hauff
ATTORNEYS

UNITED STATES PATENT OFFICE.

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

SKIVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 453,944, dated June 9, 1891.

Application filed February 26, 1891. Serial No. 382,965. (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 certain improvements in skiving-machines as pointed out in the following specification and claims and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation, partly in section. Fig. 2 is a side elevation. Fig. 3 is a plan or top view. Fig. 4 is a transverse vertical section in the plane *x x*, Fig. 1. Fig. 5 is a horizontal section in the plane *y y*, Fig. 1. Fig. 6 is a plan view of the clamp detached. Fig. 7 is a plan view of one of the tables detached.

In the drawings, the letter A designates a frame or standard, which forms the bearings for a shaft B, on which are mounted the cutters C C′. These cutters co-operate with tables D D′, which are movable toward and from the cutters and also in a direction at right angles to the axles of said cutters. In the example shown in the drawings said tables are made in the form of segments of a circle and each is provided with a shank *a a′*, having an eye *b b′*, respectively, said eyes being bored out to fit screw-studs *d d′*. These screw-studs are secured in or extend from slides *e e′*, which are adjusted on rods *f f′* by means of set-screws *g g′*. Said rods slide up and down in eyes *h h′*, formed on arms which extend from the standard A. The slides *e e′* bear against face-plates *i i′*, the shanks of which fit into a socket *j* in the standard A and are adjusted therein by means of set-screws *k k′*. (Best seen in Fig. 5.) The lower ends of the rods *f f′* connect wires *l l′* with treadles (not shown in the drawings) and they are exposed to the action of springs *m m′*, the upper ends of which bear against collars *n n′*, which can be adjusted upon the rods *f f′* by set-screws, so that when the treadles are depressed the tables D D′ are moved away from the cutters C C′ and when the treadles are released the tables are forced toward the cutters.

In Fig. 1 of the drawings the table D is shown in its lowest position away from the cutter, and the table D′ is shown in its working position close to the cutter. The lower ends of the rods *f f′* are provided with screw-threads to receive nuts *o o′*, by means of which the upward movement of the tables can be adjusted. When the rods *f f′* are permitted to follow the action of the springs *m m′*, the nuts *o o′* enter into cups *p p′*, provided on the arms having the eyes *h h′*, for the purpose of preventing chips, impurities, and other matter from lodging upon the nuts.

On the top of the standard A are secured guard-plates E E′, which extend over the cutters C C′, and on the sides of the standard A are secured slides F F′, (best seen in Fig. 4,) which carry rollers *q q′*, and which can be adjusted by means of set-screws *r r′*, tapped into the guard-plates E E′. The rollers *q q′* stand opposite the tracks *s s′*, formed on the inner edges of the tables D D′, and the slides F F′ are adjusted so that the tables can approach the cutters to the exact distance desired.

Each of the tables is provided with a clamp G G′, a detached plan view of one of which is shown in Fig. 6. These clamps swing on pivots *t t′*, Figs. 1 and 2, and each is provided with a handle *u u′* and with a clamping-pad *v* of rubber or other suitable material. From the tables extend arms *w w′*, Figs. 2 and 7, which form the bearings for a rock-shaft carrying an eccentric a^2 and a crank b^2, and when this crank is turned to the position shown in Fig. 2 the clamp is raised so as to release the work; but if the crank is reversed the clamp can be depressed so as to retain the work firmly upon the table. From the handle *u u′* of each clamp extends a rope c^2 under a pulley *d* and over a pulley e^2, and from each rope is suspended a weight f^2, Figs. 1 and 2. After the work has been properly adjusted on each table the eccentrics a^2 are turned, so as to allow the clamps to move downward, and the weight f^2 draw the clamps up tight against the work, and at the same time the tables are caused to swing by the action of said weights in the direction of arrow 1, Fig. 2, so as to draw the work forward while exposed to the action of the cutters. A stop h^2 limits this

motion of the tables. The pulleys e^2 are mounted in a bracket g^2, which is secured to the standard A, and the pulleys d^2 are mounted in arms d^3, extending from the eyes $b\,b'$. The surfaces of the tables D D′ are provided each with a cavity d^0 $d^{0\prime}$, respectively, the shape of which depends upon the article to be skived.

The machine illustrated in the drawings is intended particularly for skiving counter-stiffeners, and the cavities d^0 $d^{0\prime}$ are inverted, so that after one half of a counter-stiffener has been skived on the table D, said stiffener can be reversed and its remaining half can be finished on the table D′.

From this description it will be seen that by means of my machine a single person is enabled to skive simultaneously two counter-stiffeners or other articles, since the tables, after the work has been adjusted and clamped upon them, are drawn forward under the cutters automatically by the action of the weights f^2, and all that the attendant has to do is to lower the tables and to adjust the work on the same.

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

1. The combination of a standard, a shaft mounted thereupon and provided with a cutter, a work-supporting table movable toward and from the cutter and also at right angles to the axis of the same, a work-clamp carried by the table, and automatically-operating devices, substantially as described, which move the table in one direction and simultaneously therewith actuate the work-clamp to clamp the work on the table.

2. The combination of a standard, a shaft mounted thereupon and provided with a cutter, a work-supporting table movable toward and from the cutter and also at right angles to the axis of the same, a work-clamp carried by the table, a cable connected with the work-clamp, cable-guides, and means acting upon the cable to pull it lengthwise, and thereby move the table in one direction and simultaneously therewith cause the work-clamp to clamp the work on the table, substantially as described.

3. The combination, with the cutter C and the table D, of the guard-plate E, the slide F, the roller q, mounted in said slide, the set-screw r, mounted in the guard-plate, and the track s, formed on the table, substantially as described.

4. The combination, with the standard A and with the shaft B, of a cutter mounted on said shaft, the oscillating table D, mounted on the stud d, the clamp G, connected to the table by a pivot t, the pulleys d^2 e^2, and the weight f^2, suspended from a rope c^2, which is connected to the handle u of the clamp and extends beneath the roller d^2 and over the roller e^2, substantially as described.

5. The combination, with the work-supporting table, of a clamp connected to the table by a pivot, a weight for swinging the clamp toward the table to clamp the work, and a cam or eccentric carried by the work-table for moving said clamp away from the table, substantially as described.

6. The combination, with the cutter and with the vertically-moving table, of a spring, a collar for adjusting the upward thrust of the spring, an adjusting-nut for limiting the upward movement of the table, and an over-hanging cup which receives and protects the nut against impurities, substantially as described.

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

JACOB R. SCOTT.

Witnesses:
WM. C. HAUFF,
E. F. KASTENHUBER.