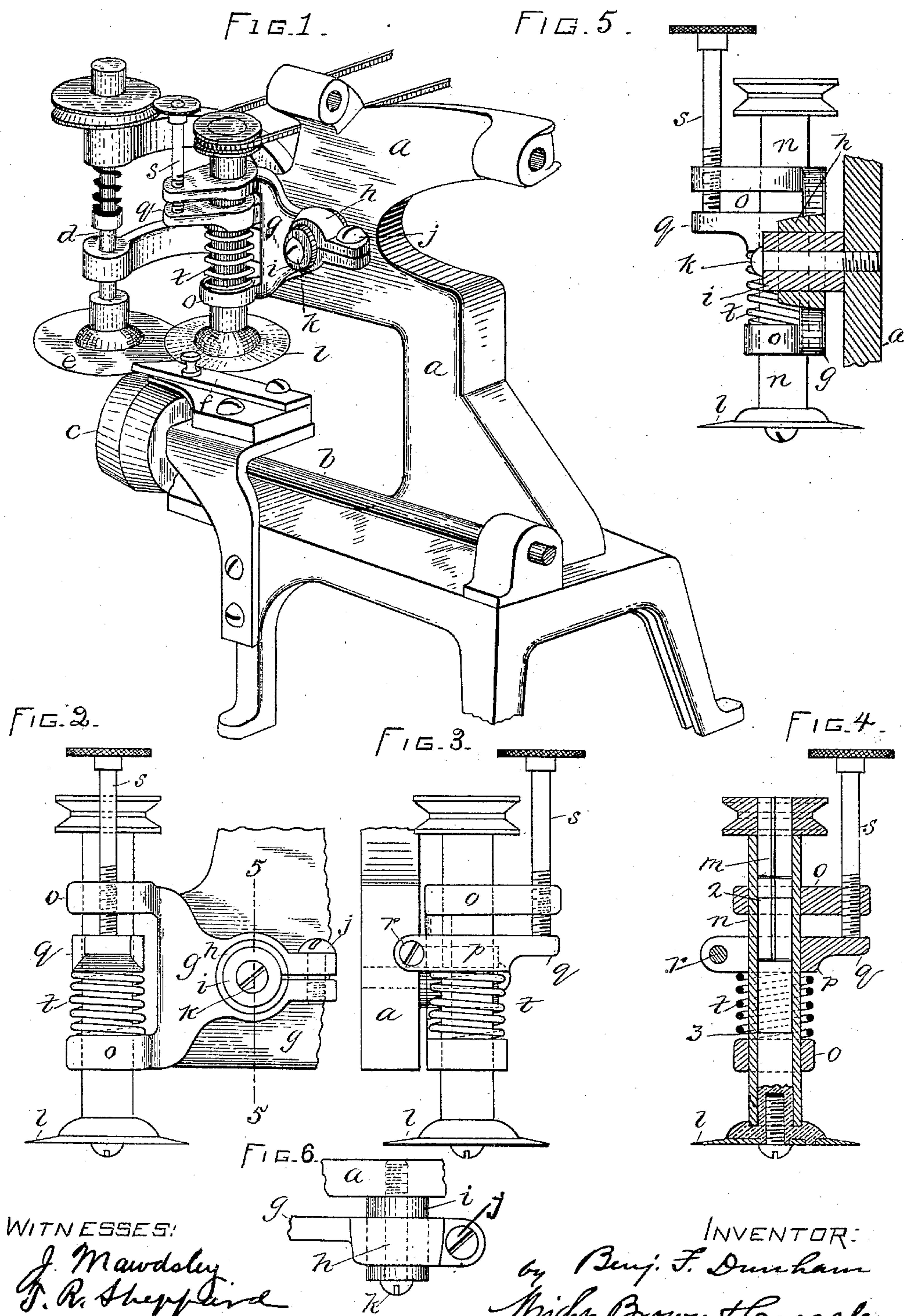


(No Model.)

B. F. DUNHAM.  
SKIVING MACHINE.

No. 452,996.

Patented May 26, 1891.





# UNITED STATES PATENT OFFICE.

BENJAMIN F. DUNHAM, OF BROCKTON, MASSACHUSETTS.

## SKIVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,996, dated May 26, 1891.

Application filed January 22, 1891. Serial No. 378,653. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. DUNHAM, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain  
5 new and useful Improvements in Skiving-Machines, of which the following is a specification.

The invention has relation to skiving-machines generally, and particularly to the kind  
10 or class of machines commonly known as the "Amazeen skiving-machines."

It is the object of the invention, first, to provide such improvements as will absolutely prevent strips or pieces of skivings from winding upon the knife-shaft, and which will obviate the necessity of employing specially-designed guards to protect the knife-shaft against happenings of the kind mentioned; second, to provide such improvements in the  
15 means for adjusting the knife-bracket as will greatly simplify the construction of the machine so far as it relates to this and immediately-connected parts, and at the same time render such adjustment more ready of accomplishment than heretofore, and, third, to provide improved means for adjusting the  
20 knife vertically to regulate the depth of scarf.

To these ends my invention consists of the combinations of devices constructed, arranged,  
30 and related, as I will now proceed to describe and claim, reference being had to the annexed drawings and letters and figures of reference marked thereon, forming a part of this specification, the same letters and figures designating the same parts or features, as the case  
35 may be, wherever they occur.

Of the said drawings, Figure 1 is a perspective view of so much of an Amazeen skiving-machine as it is thought necessary to show, having my improvements applied thereto.  
40 Fig. 2 is a front view of my improvements detached drawn to an enlarged scale. Fig. 3 is a front end view of the same. Fig. 4 is a central vertical sectional view of the same. Fig.  
45 5 is a rear end view, partially in section on the line 4 4 of Fig. 2. Fig. 6 is a detail view showing in top plan the means for adjusting the knife-bracket.

In the drawings, *a* designates the frame of the machine. *b* designates the rotary feed-shaft. *c* is the feed-roll. *d* is the rotary feed-disk shaft. *e* is the feed-disk, and *f* is the

guide. These parts may be of the form and arrangement herein shown, or of any other suitable construction and arrangement. 55

In carrying out my improvements I provide a knife-bracket *g* of suitable material, having a split or pinch collar bearing *h* formed on the end thereof, which is adapted to embrace and to be clamped upon a journal *i* by  
60 means of a clamp-screw *j*. The journal *i* is secured to the frame *a* by means of a screw *k*, passing centrally through the same and at its inner end tapped into the frame, as is clearly shown in Fig. 5. The journal *i* is  
65 elongated so that the bracket *g* may be adjusted nearer to or farther from the frame in order to properly regulate the position of the knife *l*, as the same becomes worn, with respect to the feed-roll and feed-disk, and the  
70 bracket may be axially adjusted on the journal *i*, so as to regulate the inclination of the rotary-knife 1 to cut a flat, wide, or "stunted" scarf, as may be desired.

It is to be particularly noted that both of the adjustments of the knife mentioned are accomplished by the operation of the single clamping-screw *k*, the construction and use of the machine having by these means been materially simplified and its cost of manu-  
80 facture considerably lessened.

*m* designates the rotary knife shaft, which is supported in a non-rotary sleeve *n*, in turn supported in ears or projections *o* of the bracket *g*. The sleeve *n* is at its lower end  
85 set into the hub which supports the knife, as is best shown in Fig. 4.

By supporting the knife-shaft in a non-rotary sleeve, as shown, skivings or strips trimmed off by the knife 1, cannot become  
90 wound upon the said shaft or any other part of the machine, and hence all liability of damage to the material being operated upon arising from the source mentioned is avoided and necessity for the employment of guards  
95 is entirely obviated. This is an important feature of the invention.

As is shown in Fig. 4, the knife-shaft *m* is turned down along its central part, as from 2 to 3, so as to limit its bearing in the sleeve  
100 *n* to its upper and lower parts, and to lubricate the said knife-shaft I may drill a hole 4 down through the shaft from its top and form holes 5 6 in the shaft from the sides, inter-



secting the hole 4, so that oil poured or fed into the latter hole may flow out through the intersecting holes and lubricate the bearings of said shaft.

5 *p* designates a pinch-collar provided with a lug or projection *q*, which pinch-collar is clamped upon the sleeve *n* by means of a clamp-screw *r*.

10 *s* designates a thumb or set screw tapped through the lug *o*, and bearing at its lower end upon the pinch-collar *p*, a spring *t* being interposed between the pinch-collar and lower lug *o* for the purpose of raising the knife-shaft *m* and sleeve *n* as high as the point of  
15 the set-screw *s* will permit. These means provide for a ready and certain adjustment of the knife 1 vertically, so as to regulate the depth of the scarf to be made, the knife responding to the least change in position or  
20 adjustment of the screw *s*.

It is obvious that changes may be made in the form and arrangements of parts comprising my invention without departing from the nature or spirit thereof, and gears, as well as  
25 belts and pulleys, may be employed to impart motion to the moving parts. Again, the bearing *i* may form an integral part of the frame *a* or be secured to the frame by other means than the screw *k*, and other means than the  
30 clamp-screw *j* may be employed for adjusting the bracket on the bearing.

Having thus ascertained the nature of the invention, and described a way of constructing and mode of using the same, though not  
35 attempting to explain the various modified forms which may be given to the several devices, I declare that what I claim is—

1. The knife-bracket *g*, the sleeve *n*, sup-

ported by the said bracket, the rotary knife-shaft in the said sleeve, pinch-collar *p*, set-screw *s*, and spring *t*, all combined and operating as set forth. 40

2. A skiving-machine embracing in its construction a knife-bracket *g*, provided with projecting lugs *o*, a vertically-arranged non-rotating sleeve supported in said lugs, a rotary knife-shaft *m*, supported in the said sleeve, and a horizontally-arranged knife supported on the lower end of the said shaft, all combined and operating as set forth. 50

3. In a skiving-machine embracing in its construction a supporting-bracket *g*, vertically-arranged non-rotating sleeve, a knife on the said shaft *n*, supported in said bracket, a rotary knife-shaft *m*, supported in the said sleeve, a horizontally-arranged knife provided with a supporting-hub connected with the end of the said shaft, the said sleeve *n* being set into the said hub, as described, all combined and operating as set forth. 60

4. In a skiving-machine, the non-rotary sleeve *n*, the bracket supporting the same and the rotary knife-shaft in the said sleeve, and a knife on the said shaft, the said shaft being turned down or reduced at its central part and provided with the oil channels or holes 4 5 6, as set forth. 65

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of January, A. D. 1891. 70

BENJAMIN F. DUNHAM.

Witnesses:

CLARENCE L. RANDALL,  
FRED W. BIXBY.