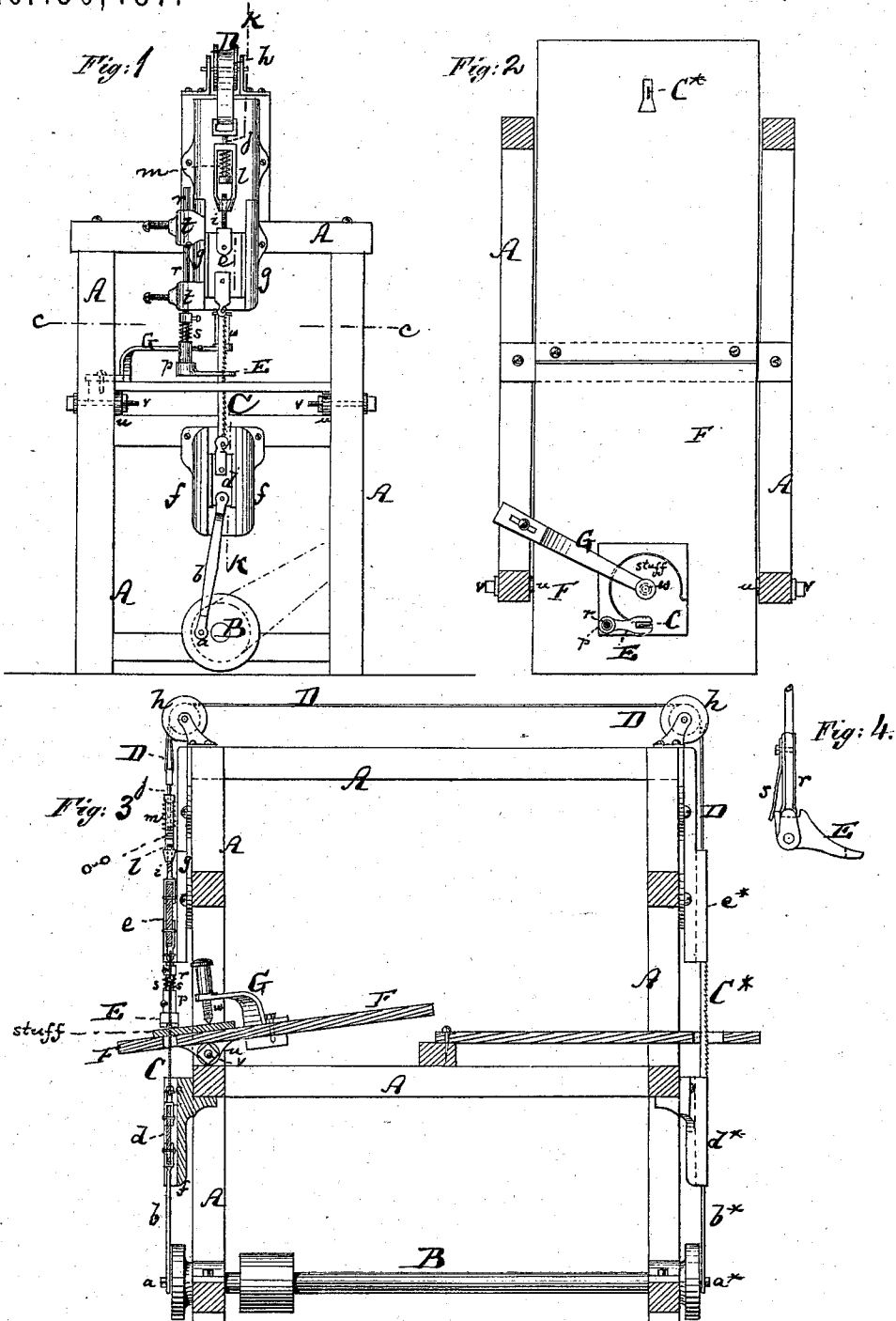


A. G. SCHMIDT.
Gig Sawing-Machines.

No. 150,487.

Patented May 5, 1874.



Witnesses:
H. Eichling
Chas. Reithig

A. G. Schmidt
by his attorney
A. B. Briesen

UNITED STATES PATENT OFFICE.

AUGUST G. SCHMIDT, OF GREEN POINT, NEW YORK.

IMPROVEMENT IN GIG-SAWING MACHINES.

Specification forming part of Letters Patent No. **150,487**, dated May 5, 1874; application filed February 10, 1874.

To all whom it may concern:

Be it known that I, AUGUST GEORGE SCHMIDT, of Green Point, in the county of Kings and State of New York, have invented a new and Improved Gig-Sawing Machine, of which the following is a specification:

Figure 1 is a front elevation of my improved sawing-machine. Fig. 2 is a horizontal section of the same on the line *c c*, Fig. 1; Fig. 3, a vertical longitudinal section thereof on the line *K K*, Fig. 1, and Fig. 4 a detail side view of a modified form of presser-foot.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to various improvements in sawing-machines of that class in which reciprocating motion is imparted to single saws for purposes of scroll-sawing, or other light or heavy work. My invention consists in an improved manner of adjusting the strain of the saw, and providing a strain-indicator; in a new adjustable center-pin for circular cutting; and other improvements, all as hereinafter more fully described.

In the accompanying drawing, the letter *A* represents the supporting frame-work of my sawing-machine. In the lower or any other part thereof is hung the driving-shaft *B*, which carries a wrist-pin, *a*, at one end, and is, by said wrist-pin and a pitman, *b*, connected with the lower slide *d* of the saw. *C* is the saw, provided with pins at its ends, so that it can be hooked into the two slides *d* and *e* in the customary manner. These slides work in proper guides *f g*, respectively, that are secured to the frame *A*. The upper slide *e* I prefer to connect by a steel band, belt, or equivalent flexible strap, *D*, with the upper slide *e** of another saw, *C**, at the opposite end of the frame *A*, the band or strap *D* passing over one or more rollers, *h h*, that hang in the frame *A*, as is clearly shown in Fig. 3. If the second saw *C** is, in the manner mentioned, connected with the saw *C* by the strap *D*, I prefer to also connect the lower slide *d** of the saw *C** by a pitman, *b**, with a wrist-pin, *a**, at the opposite end of the shaft *B*, as shown, so that, by the shaft, both saws will be simultaneously operated in opposite directions. I believe this invention of working two saws that are connected like the heddles of a loom

at their upper ends to be very advantageous, as it balances the power in a very satisfactory manner. The connection between the upper slide *e* and the band *D* is effected by a screw, *i*, a link-shaped nut, *l*, and a pin, *j*, as in Fig. 1. The screw *i* projects upwardly from the slide *e* into the nut. The pin *j* is fastened to the band *D*, and passes through the upper part of the nut, and has a head at its lower end. A spring, *m*, embraces the pin *j* between the head of the same and the nut *l*, as shown. The more the nut is turned downward the more will the spring *m* be contracted, and the greater, therefore, the strain on the saw; while the strain on the saw is lessened by screwing the nut upward and expanding the spring. The spring is of great use in straining the saw, as it is not rigid, but will yield if necessary. I have found that, for hard wood, the saw must be strained more than for soft; and, also, that the thicker the wood the greater should be the tension of the saw. Therefore, in order to perform a certain kind of work with the saw, I must first adjust its tension accordingly. By the nut *l*, I can easily do this; but, still, the nut alone would not be so very valuable, as it would require an expert hand to properly set it for every kind of work. I, therefore, in order to let boys or uneducated men manage the machine, apply a graduated scale to the side or face of the nut, as indicated at *o o* in Fig. 3. The head of the pin *j* will be the pointer for this scale. It will now be easy to let every line of the scale stand for a particular thickness of particular kinds of wood, and to arrange tables or lists from which the adjustment will be a mere matter of copy. *E* is the presser-foot of the machine. This foot, in order to make it self-adjusting on uneven stuff, I have made with a hollow shank, *p*, and allowed it to slide on its stem *r*, a spring, *s*, bearing upon the shank. This spring holds the foot down upon the stuff, but allows it to yield upwardly if on thicker stuff. The stem or rod *r*, however, does not take part in this self-adjustability of the foot *E*, though it can, by set-screws, be secured in a higher or lower position in the eyes *t t* of the frame that guide and hold it. The presser-foot, instead of being made sliding on the stem *r*, may be pivoted thereto, as in Fig. 4; the spring *s*, in that

case, bearing against its heel to press it down, but permitting it to swing upward and accommodate itself to a thicker board. The table is, in the drawing, shown to be in two parts—one for each saw—the part F, for the saw C, being, by downwardly-projecting lugs *u u*, and by pins *v v*, pivoted in the frame A, so that it can be tilted, as in Fig. 3. This will enable the saw C to cut the stuff at any desired angle to the surface. Finally, G is an attachment to the table F for facilitating the cutting of circular shapes by the saw. This attachment consists of a shank or bar, which is secured upon the table, and carries a screw-pin, *w*, that serves to center the stuff, as shown. By the screw-pin and an upward bend of the shank G, stuff of suitable thickness can be centered, and the shank can be secured upon

the table or to the frame in any suitable position to bring the centering-pin *w* at suitable distance from the cutting-saw C, to enable the production of larger or smaller circles.

I claim as my invention—

1. The screw *i*, nut *l*, pin *j*, and spring *m*, combined with the band D and saw-slide *e*, substantially as specified.

2. The presser-foot E for a saw, made self-adjusting by being fitted upon the stem *r*, and combined with the spring *s*, as set forth.

3. The centering attachment G *w*, arranged substantially as herein shown and described.

AUGUST GEORGE SCHMIDT.

Witnesses:

A. V. BRIESEN,

H. EICKLING.