G. D. TROGDON.

FEED ATTACHMENT FOR HAND JOINTERS.

APPLICATION FILED AUG. 17, 1908.

945,062.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

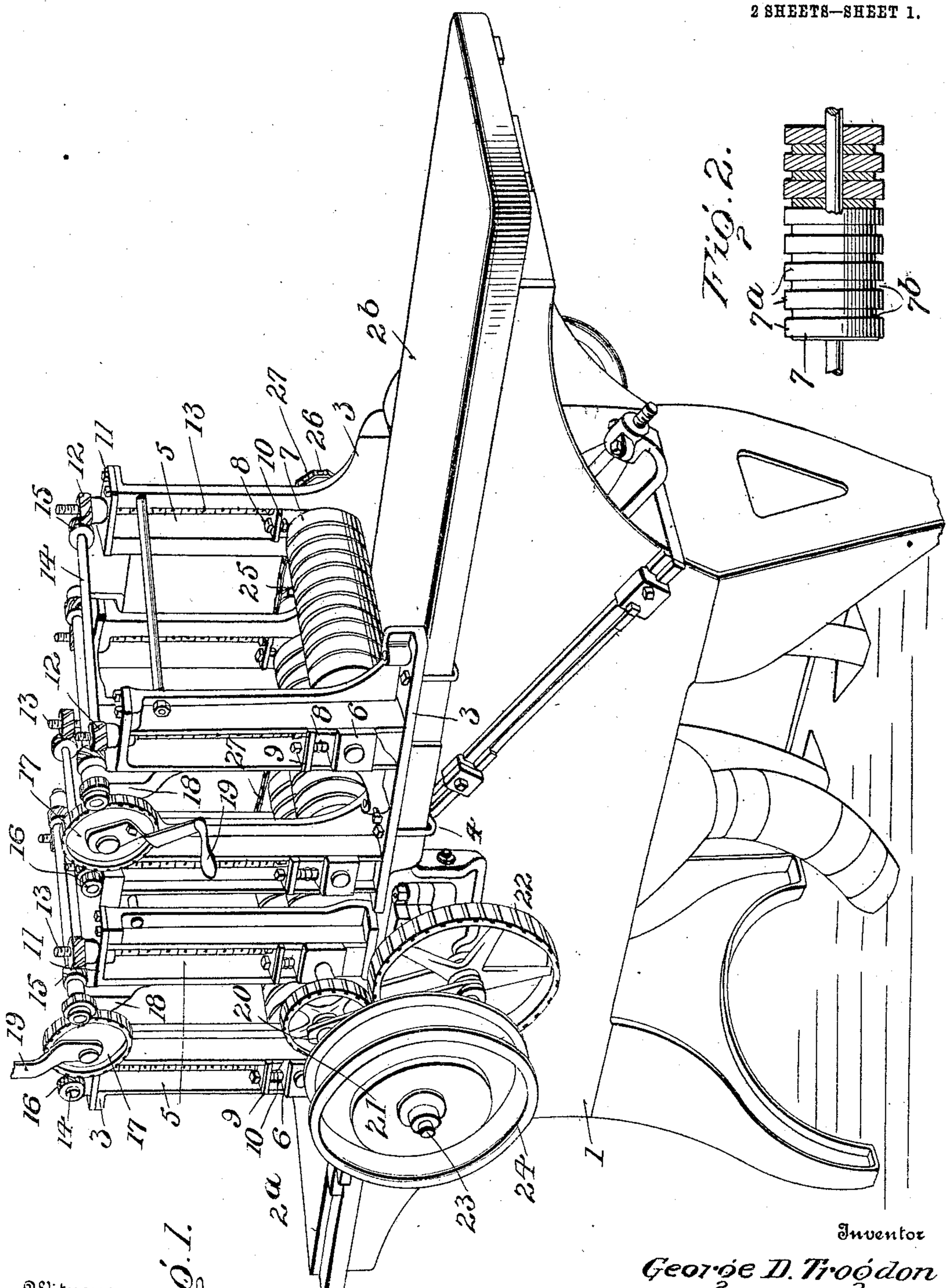

Fig. 1.

Fig. 2.

Witnesses

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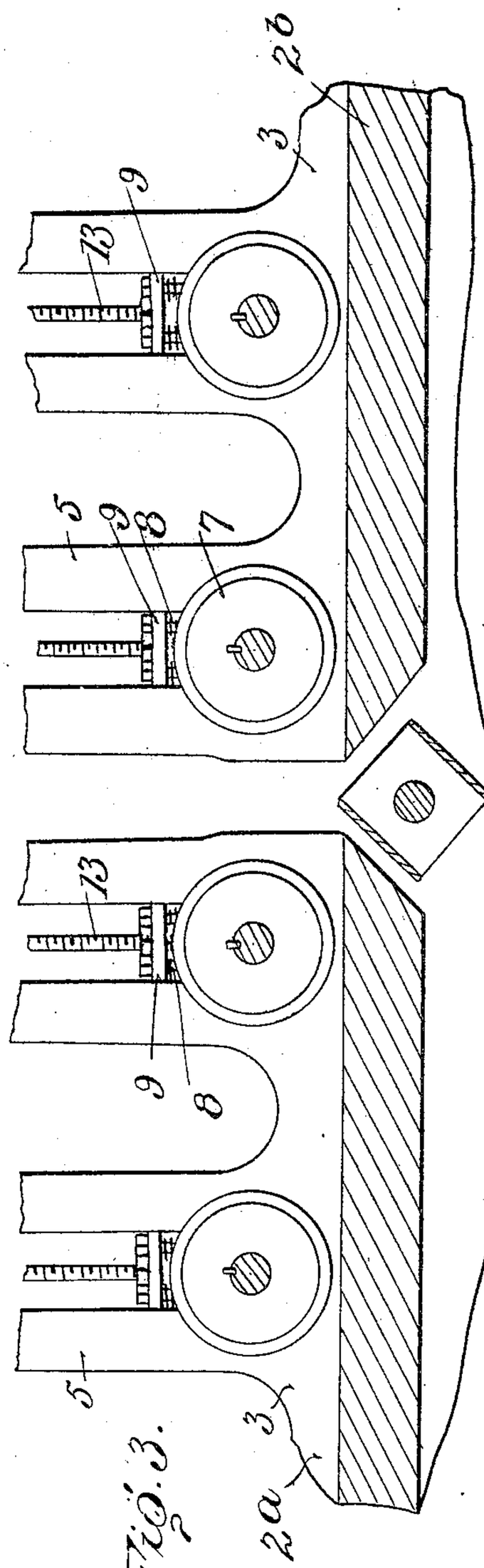

Fig. 3.

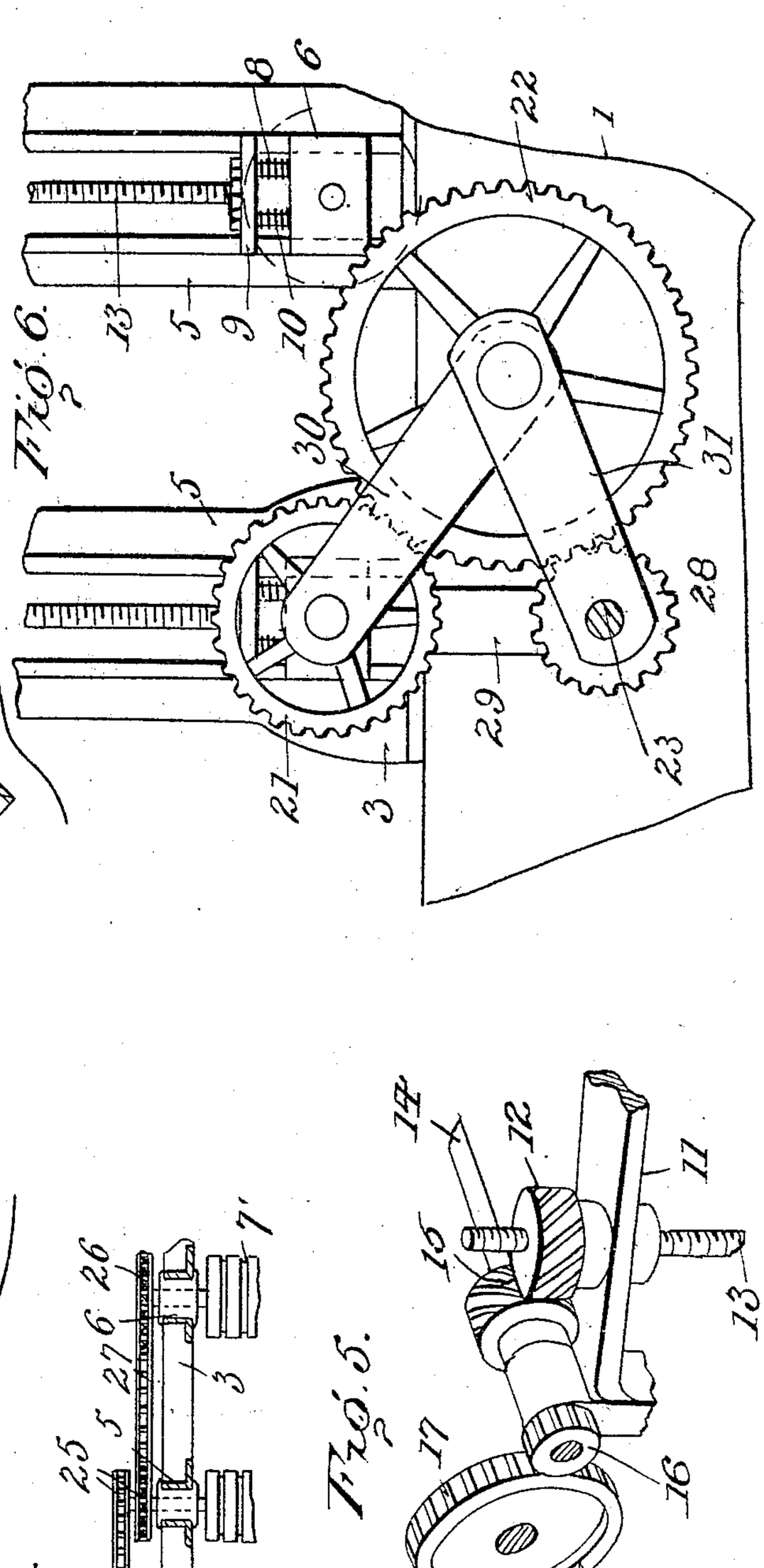

Fig. 2.

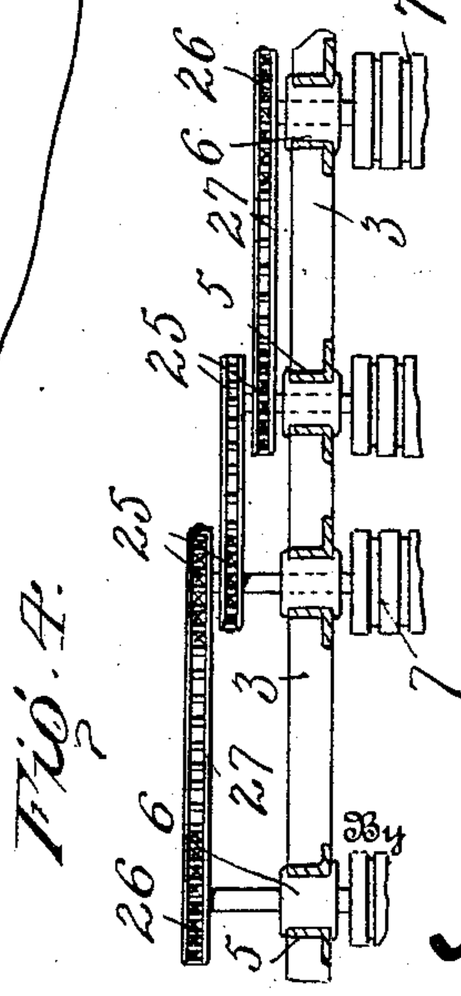

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE D. TROGDON, OF SPARTANBURG, SOUTH CAROLINA.

FEED ATTACHMENT FOR HAND-JOINTERS.

945,062. Specification of Letters Patent. **Patented Jan. 4, 1910.**

Application filed August 17, 1908. Serial No. 448,870.

To all whom it may concern:

Be it known that I, GEORGE D. TROGDON, citizen of the United States, residing at Spartanburg, in the county of Spartanburg and State of South Carolina, have invented certain new and useful Improvements in Feed Attachments for Hand-Jointers, of which the following is a specification.

The present invention relates to a power feed attachment for hand jointers and the like and the object of the invention is the provision of a power feed device which can be readily applied to any of the machines in common use and which will greatly increase the capacity of the machine without in any manner decreasing the quality of the lumber.

The invention further contemplates a feed attachment which will fully protect the operator and render an accident to him practically impossible, such a construction being a great improvement upon the common hand jointer which is a very dangerous machine, being without the slightest protection to the operator's hands and fingers.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view showing the improved power feed attachment as applied to a hand jointer. Fig. 2 is a detail view of a portion of one of the feed rollers, portions being broken away. Fig. 3 is a longitudinal sectional view through the machine, portions being removed, Fig. 4 is a horizontal sectional view through one side of the attachment, Fig. 5 is a detail view of the gearing at the upper end of one of the standards, and Fig. 6 is a side elevation of a portion of the machine showing the gearing between the drive pulley and one of the feed rollers.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

For the purpose of illustration the feeding attachment embodied in the present invention is shown as applied to a hand jointer 1 which is provided with the usual cutting mechanism and has a table formed in two section 2^a and 2^b, the section 2^b being adjustable with respect to the section 2^a. Detachably applied to opposite sides of each of the table sections is a standard 3, the standards being shown in the present instance as held in position by means of hook bolts 4 which engage the edges of the table. Each of the standards 3 is formed with a pair of vertical guide ways 5 and slidably mounted within each of the guide ways is a bearing block 6.

A feed roller 7 is journaled between the bearing blocks of each corresponding pair of the vertical guide ways 5 and these feed rollers are spaced from the table top and are designed to coöperate therewith to feed the lumber to the cutting mechanism of the jointer. In the specific construction of the feed rollers 7 it will be observed that they are each formed of a series of disks 7^a of some yielding material such as rubber, metallic washers being interposed between the various rubber disks and the washers 7^b having a diameter somewhat less than that of the disks. It will thus be apparent that the peripheral portions of the rubber disks are spaced from each other and such a construction has the advantage of enabling the rubber to be readily compressed to accommodate slight inequalities in the thickness of the lumber being operated upon. A pair of bolts or pins 8 project upwardly from each of the bearing blocks 6 and pass loosely through the slides 9 which are also mounted within the guide ways 5, coil springs 10 being interposed between the various slides and the respective bearing blocks. It will thus be obvious that the feed rollers are not only formed of yielding material but are also yieldingly mounted so that they can move vertically through a limited amount of space and automatically accommodate themselves to slight variations in the thickness of the lumber.

The upper end of each of the vertical guide ways 5 is closed by a cross bar 11 and swiveled upon each of these cross bars is a nut 12 having an adjusting rod 13 threaded therein, the lower end of the rod having an operative connection with the respective slide 9. The corresponding guide ways upon opposite sides of the table have the transverse shafts 14 journaled upon their upper portions and these shafts are connected to the nuts 12 by the oblique toothed gearing 15. Each of the transverse shafts 14 terminates at one end in a pinion 16 and the pinions upon each pair of the standards 3

mesh with a gear wheel 17 which is journaled upon a transverse bar 18 connecting the guide ways. The two gear wheels 17 are each provided with a crank handle 19 and it will be obvious that by turning these crank handles the feed rollers 7 may be raised or lowered as required by the thickness of the lumber to be operated upon.

The shaft of one of the intermediate feed rollers 7 projects outwardly upon one side of the machine as indicated at 20 and terminates in a gear wheel 21 meshing with a second gear wheel 22 receiving motion from a third gear wheel 28 mounted upon a stub shaft 23 projecting from a bracket 29 secured to the hand jointer. This third gear wheel 28 is rigid with a pulley 24 which is designed to receive power from any suitable source. The axis of the second gear wheel 22 is loosely connected to the axis of the first gear wheel 21 by an arm or strap 30 and to the stub shaft 23 by a second arm or shaft 31, such a construction admitting of the gear wheels remaining in mesh while the first gear wheel 21 and the third gear wheel 28 are moved to different points upon the circumference of the second or middle gear wheel 22. It will thus be obvious that as the feed rollers are raised and lowered, the first gear wheel 21 which is rigid with one of the intermediate feed rollers, will also be raised and lowered but will always receive motion through the medium of the gear wheels 22 and 28 from the drive pulley 24. At the opposite side of the machine the two intermediate feed rollers are each provided with a pair of sprocket wheels 25 while the end feed rollers are provided with a single sprocket wheel 26, the various sprocket wheels being connected by the chains 27 so that all of the feed rollers will turn in unison.

In the operation of the device the cutting mechanism is driven in the usual manner and the lumber to be operated upon is fed thereto between the feed rollers and the table.

Having thus described the invention, what is claimed as new is:

1. In a device as specified the combination with a hand jointer of a feed attachment adjustably disposed on the same, said feed attachment comprising detachable standards having vertical guides disposed in pairs on said jointer, blocks slidably mounted in the guides in said standards, rollers journaled in the opposite of said blocks, means carried by said jointer for actuating said rollers, slides disposed in the guides, bolts rigidly carried by said blocks and extended upwardly therefrom to engage loosely through said slides, springs interposed between said blocks and said slides, threaded rods swivelly disposed on said slides and upwardly extended therefrom, nuts mounted on said standards and engaged with said rods and means connected to said nuts for actuating the same to move said rods.

2. In a device as specified the combination with a hand jointer of a feed attachment applied thereto, said feed attachment comprising detachable and adjustable standards carried by said jointer, blocks slidably carried by said standards, rollers journaled in said blocks, sprockets carried by said rollers, chains carried by said sprockets for communicating motion between said rollers, a gear carried by one of said rollers and connected to said jointer for actuating said rollers, and adjustable and resilient means carried by said standards and connected to said blocks for adjusting said rollers to receive boards of various thicknesses.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE D. TROGDON. [L. S.]

Witnesses:
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