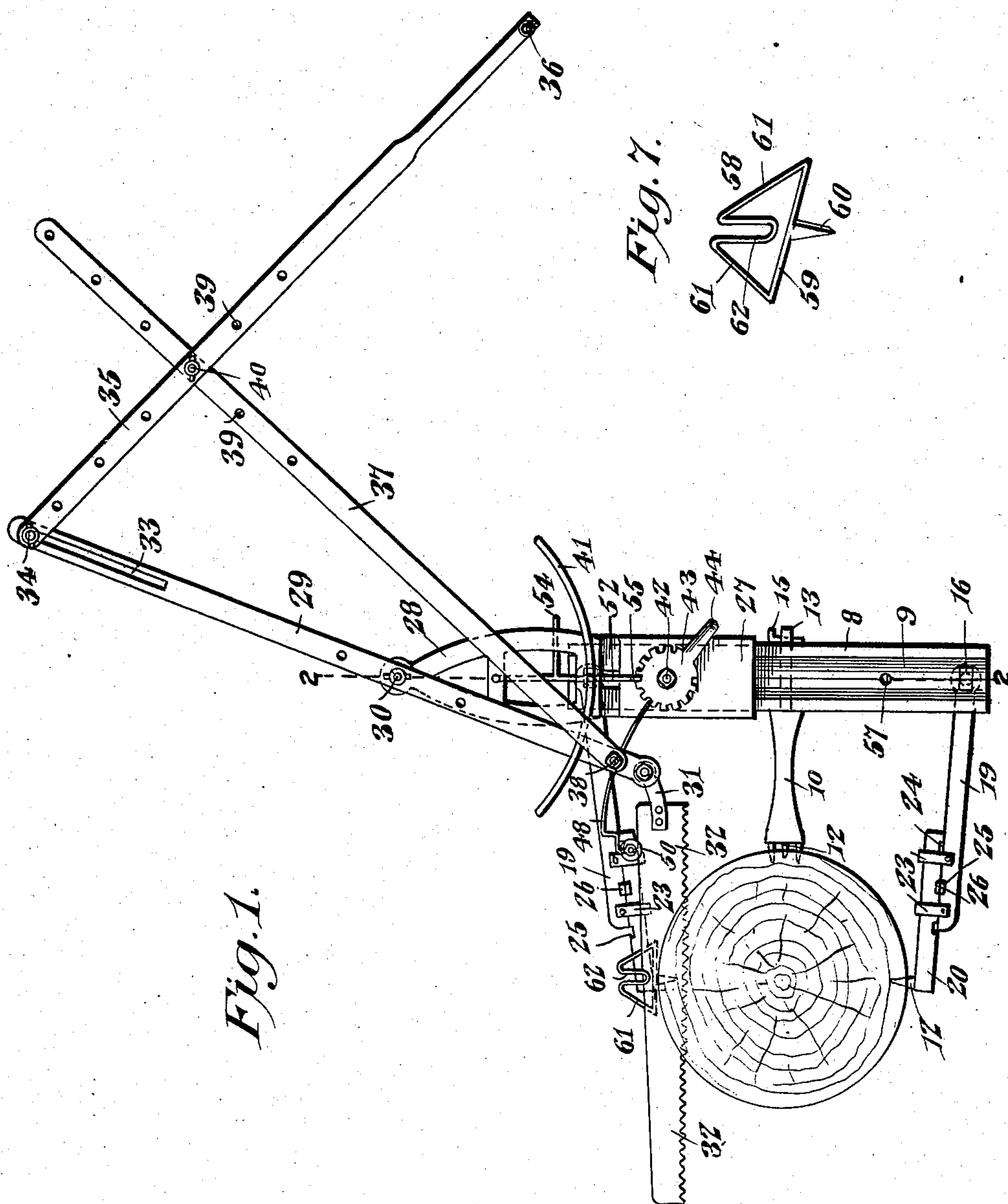


No. 866,905.

PATENTED SEPT. 24, 1907.

H. ANDERSON.
SAWING MACHINE.
APPLICATION FILED OCT. 5, 1906.

2 SHEETS—SHEET 1.



Henry Anderson, Inventor

By

E. G. Siggers

Attorney

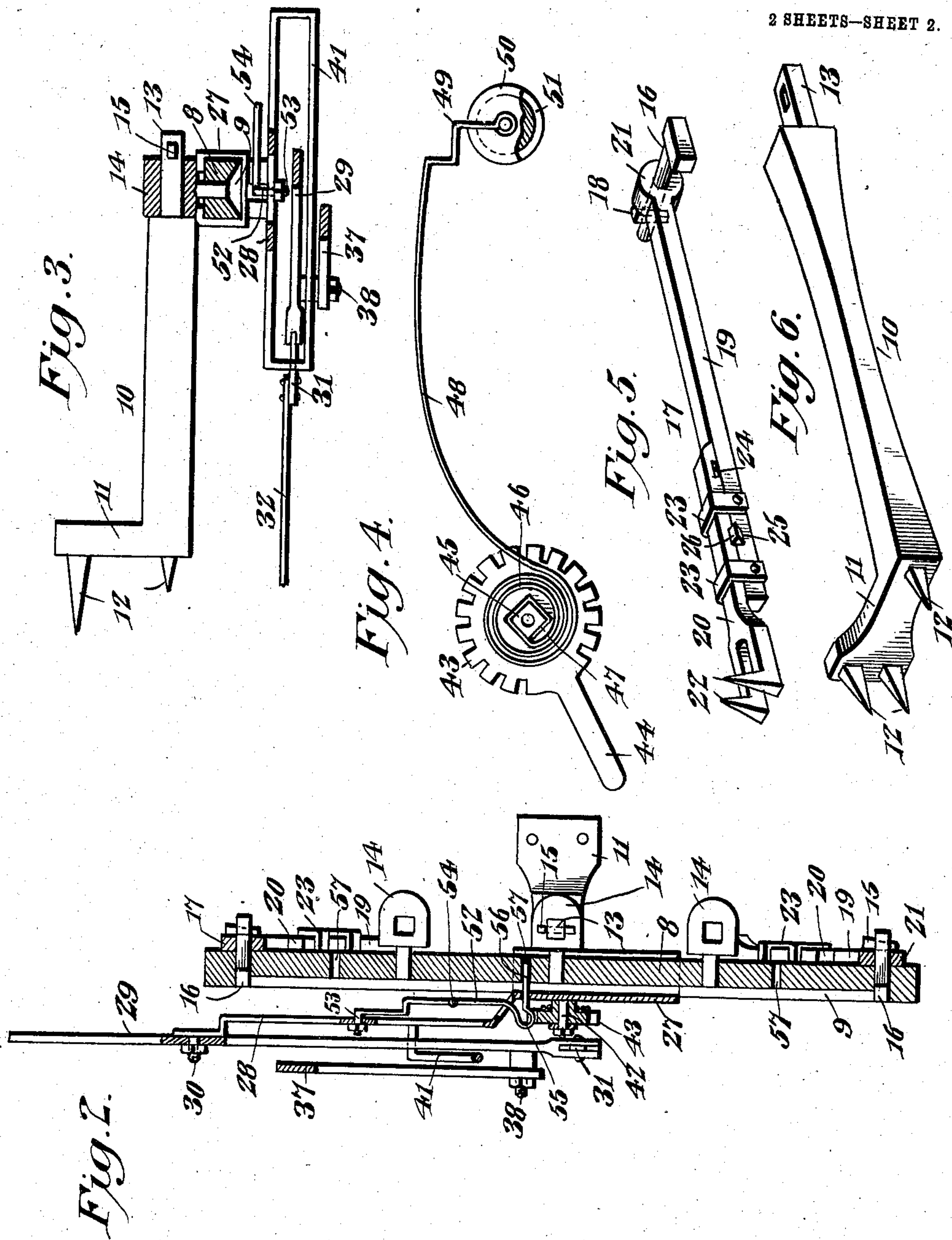
Witnesses
Jas. E. McLaughlin
B. J. Foster.

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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY ANDERSON, OF VEGA, WASHINGTON.

SAWING-MACHINE.

No. 866,905.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed October 5, 1906. Serial No. 337,649.

To all whom it may concern:

Be it known that I, HENRY ANDERSON, a citizen of the United States, residing at Vega, in the county of Pierce and State of Washington, have invented a new and useful Sawing-Machine, of which the following is a specification.

This invention relates more particularly to manually operated sawing machines, and the principal object is to provide a light easily transported machine, which can be readily applied either to standing or prostrate timber, is easily adjustable to trees, logs or beams of different sizes, and will properly hold the saw to its work throughout the extent of the cutting operation.

The preferred form of construction is illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of the machine, showing the same applied to a tree. Fig. 2 is a longitudinal sectional view on the line 2—2 of Fig. 1. Fig. 3 is a cross sectional view. Fig. 4 is a detail view of the means for holding the saw to its work. Fig. 5 is a detail perspective view of one of the clamping arms. Fig. 6 is a detail perspective view of the bearing arm. Fig. 7 is a detail perspective view of the saw guide.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a support is employed, that is in the form of a guide bar 8, having one side provided with a longitudinal groove 9. Means are employed for securing this guide bar to the timber to be cut. A bearing arm 10 is provided at one end with an offset head 11, said end and head being provided with longitudinally projecting spurs 12. The other end of the head has a reduced squared stem 13 that is arranged to be passed through any of a series of ears 14, projecting from the rear side of the guide bar 8. A pin 15, or other suitable fastener, serves to secure the stem in the ear. Headed bolts 16 are located in the ends of the guide bar 8, and project from the rear sides thereof. On these bolts are pivotally mounted clamping arms 17, held in place by pins 18, or other suitable fasteners. Each of the arms 17 comprises slidably associated sections 19 and 20, the section 19 having at its inner end an eye 21 to receive the bolt 16, the other section having its outer end bifurcated and provided with offset spurs 22, the inner section 19 furthermore being provided with guide stirrups 23, in which the outer section 20 is slidably mounted. Said outer section has on its inner face a plurality of transverse recesses 24. The section 19 is provided between the guide stirrups 23 with a recess 25, and a holding pin 26 is arranged to engage in the recess 25 and any of the recesses 24, thus maintaining the sections against their sliding movements. The clamping arms, as clearly shown in Fig. 1, are disposed on opposite sides of the bearing arm, and their spurs 22 are arranged in opposing relation. Therefore to clamp the supporting or guide bar 8 to a timber,

it is only necessary to drive the spurs 12 of the bearing arm into one side of the same, properly adjust the lengths of the arms 17, and drive the spurs 22 into diametrically opposite portions of the timber. This it is believed, will be clear by reference to Fig. 1.

Slidably mounted on the supporting guide 8 is a carrier 27 that embraces the bar 8, and has at one end an offset longitudinally disposed bracket 28. A lever 29 is fulcrumed between its ends on the free end of the bracket. The lever 29 is adjustable on said fulcrum bolt, as will be apparent by reference to Fig. 1. To the inner end or arm of the lever 29 is pivoted a clip 31 that is secured to the saw 32. The other arm of the lever 29 has a longitudinally disposed slot 33 in which a bolt 34 is adjustable. This bolt 34 constitutes means for securing one end of an actuating bar 35 to the outer arm of the lever. The other end of said link has a cross handle grip 36. A brace 37 is pivoted, as shown at 38 to the inner arm of the lever directly adjacent to the saw-engaging clip 31, while its outer portion extends across an intermediate portion of the actuating bar 35, said bar and the brace being provided with openings 39, through any of which a holding bolt 40 is adapted to be passed. A curved guide 41 is secured to the inner portion of the bracket 28, directly adjacent to this offset, and the inner arm of the lever 29 operates in said guide.

Rotatably mounted on the carrier 27 by a suitable bolt 42 is a toothed or ratchet wheel 43, having a handle 44 projecting from one side. The wheel on its inner side has a central angular boss 45, and a spring 46, surrounding said boss, has an inner angular terminal 47 that engages the same. The outer portion 48 of the spring extends to one side of the carrier, and has an angular offset end 49 on which is journaled a saw engaging roller 50 provided with a peripheral groove 51. Tension on the spring is maintained by a dog, which, as shown clearly in Fig. 2, comprises an arm 52 secured at one end, and as shown at 53 to the bracket 28. The arm 52 has an offset handle portion 54, and at its free end is bowed or looped, as illustrated at 55 to provide a tooth which coacts with the teeth of the ratchet wheel 43, being movable to positions between said teeth of said ratchet wheel. The terminal of the arm or dog slidably passes through the carrier 27, and constitutes a tooth 56 that is movable into and out of different openings 57 formed in the supporting guide 8. The dog therefore performs a double function, preventing the rotation of the ratchet wheel upon the carrier and normally holding said carrier against its reciprocatory movement on the guide 8. The roller, as illustrated in Fig. 1, bears against the rear edge of the saw, said rear edge operating in the groove 51 of the roller.

In connection with the mechanism above described, a saw guide is preferably employed that is in the form of a substantially triangular bracket 58 having a base 59 provided with a spur 60 that is adapted to be driven

into the timber to be cut. The bracket 58 has convergently disposed side arms 61 terminating in an offset inwardly extending loop 62. The saw is adapted to operate between the arms 61 and loop 62.

- 5 In using the machine, the support is first clamped upon the timber to be cut in a position that will permit the saw to operate on the desired line of the cut. The saw guide 58 is then fastened, the desired relation of the lever 27, the actuating bar 35 and the brace 37 is
10 secured in order that the proper power can be obtained. Thus in soft wood, the leverage necessary to operate the saw can be made considerably less than in hard wood, in which power is required and speed must be sacrificed. The carrier 27, having been properly positioned upon
15 the support 8, tension is applied to the spring 48 by turning the ratchet wheel 42, after which the wheel and carrier are locked by the dog. The operator has then only to oscillate the handle grip 36, whereupon the saw will be caused to move back and forth, and as rapidly
20 as it cuts its way through the timber, the spring 48 will feed it into the wood.

It will be evident that the structure is simple, that it may be made light enough so that it can be easily transported, and furthermore that it is adjustable to
25 work of different sizes.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

- 30 1. In a sawing machine, the combination with a supporting guide bar having a guide-way in one side, of swinging clamping arms pivotally mounted on the ends of the guide bar and on the opposite side from the guide-way, said arms having oppositely disposed spurs, a carrier slidably mounted in the guideway and being independent of the
35 arms, a bracket secured to the carrier, saw actuating means movably mounted on the bracket, and means mounted on the carrier for yieldingly holding the saw to its work, said saw actuating means and yielding holding means being movable with the carrier.
- 40 2. In a sawing machine, the combination with a supporting guide, of means connected directly to the guide for mounting the same in fixed relation to the work, a carrier slidably mounted on the guide, independently of said mounting means, a bracket secured to the carrier,
45 saw actuating means movably mounted on the bracket, and means mounted on the carrier for yieldingly holding the saw to its work, said saw actuating means and yielding holding means being movable with the carrier.
- 50 3. In a sawing machine, the combination with a supporting device, of a lever fulcrumed between its ends, and supported on the device, saw engaging means connected to one arm of the lever, an actuating bar adjustably mounted at one end on the other arm of the lever, and having a
55 handle at its free end and a brace connecting the first mentioned arm of the lever and the bar between the handle and the connection of said bar with the lever.
- 60 4. In a sawing machine, the combination with a supporting device, of a bracket mounted on the supporting device, a lever adjustably fulcrumed between its ends on the bracket, a saw engaging clip pivoted to one arm of the lever, the other arm of said lever having a longitudinal slot, an actuating bar, a bolt carried by one end of the actuating bar and engaging in the slot to hold said end

at different positions on the lever, a cross handle grip connected to the other end of the bar, a brace pivoted to the arm of the lever that has the saw engaging clip, said brace being disposed transversely of the actuating bar and being adjustable longitudinally thereof, the actuating bar being likewise adjustable longitudinally of the brace, and a bolt adjustably connecting the bar and brace for holding
65 them in different relative positions. 70

5. In a sawing machine, the combination with a supporting guide, of a carrier slidably mounted thereon and having a bracket, a saw actuating lever fulcrumed on the bracket, means for holding the saw to its work, said
75 means being arranged on the carrier, and a dog mounted on the bracket and engaging the saw holding means to prevent its movement on the carrier, said dog also engaging the supporting guide to hold the carrier against movement thereon. 80

6. In a sawing machine, the combination with a support, of a carrier movably mounted on the support, saw actuating mechanism, means movably mounted on the carrier for holding the saw to its work, and a common device for holding said means against movement on the carrier and
85 for holding the carrier against movement on the support.

7. In a sawing machine, the combination with a supporting guide, of a carrier slidably mounted thereon, saw actuating means mounted on the carrier, a saw engaging roller, a spring carrying the same and having a rotatable
90 mounting on the carrier, a ratchet wheel associated with the spring, and a dog mounted on the carrier, said dog engaging the ratchet wheel to prevent its rotation, and engaging the supporting guide to prevent the sliding movement of the carrier. 95

8. In a sawing machine, the combination with a supporting bar, of saw actuating means movably mounted on one side of the same, and means mounted on the other side of the bar for securing the same to its work, said means comprising a bearing arm mounted on an intermediate
100 portion of the supporting bar and projecting from one side of the same, said bearing arm being adjustable longitudinally of the supporting bar and clamp arms pivoted to the supporting bar on opposite sides of the bearing arm, said clamp arms each comprising slidably associated sections, the outer sections of the arms having oppositely extending
105 spurs, and means for normally holding the sections against their sliding movements.

9. In a sawing machine, the combination with a supporting guide, of a bearing arm projecting from one side of the same, clamping arms pivoted to the guide on opposite sides of the bearing arm, a reciprocatory carrier slidably mounted on the guide and having an offset bracket, a lever fulcrumed on the bracket, an actuating bar pivoted to one end of the lever, saw engaging means pivoted to the other
115 end of the lever, a brace adjustably connecting the latter end of the lever and the actuating bar, a saw engaging roller, a spring carrying the same, and having a rotatable mounting on the carrier, a ratchet wheel associated with the spring, and a dog movably mounted on the carrier, said
120 dog engaging the ratchet wheel to normally prevent its rotation and engaging the supporting guide to prevent the sliding movement of the carrier thereon.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two
125 witnesses.

his
HENRY X ANDERSON.
mark.

Witnesses:

J. M. DULEY,
F. A. LATCHAM.