

A. O. VICK.
MORTISING MACHINE.
APPLICATION FILED JULY 15, 1910.

990,316.

Patented Apr. 25, 1911.

4 SHEETS—SHEET 1.

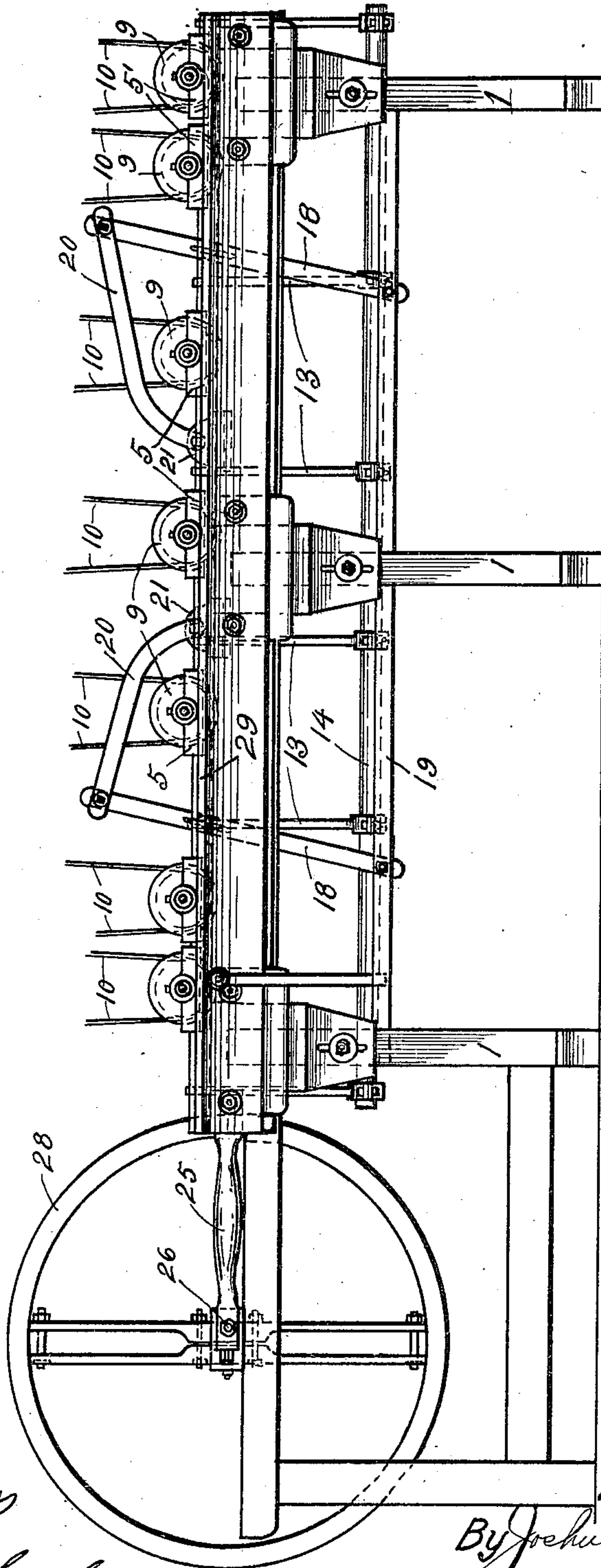


Fig. 1

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B. G. Richards

Inventor:

August O. Vick,

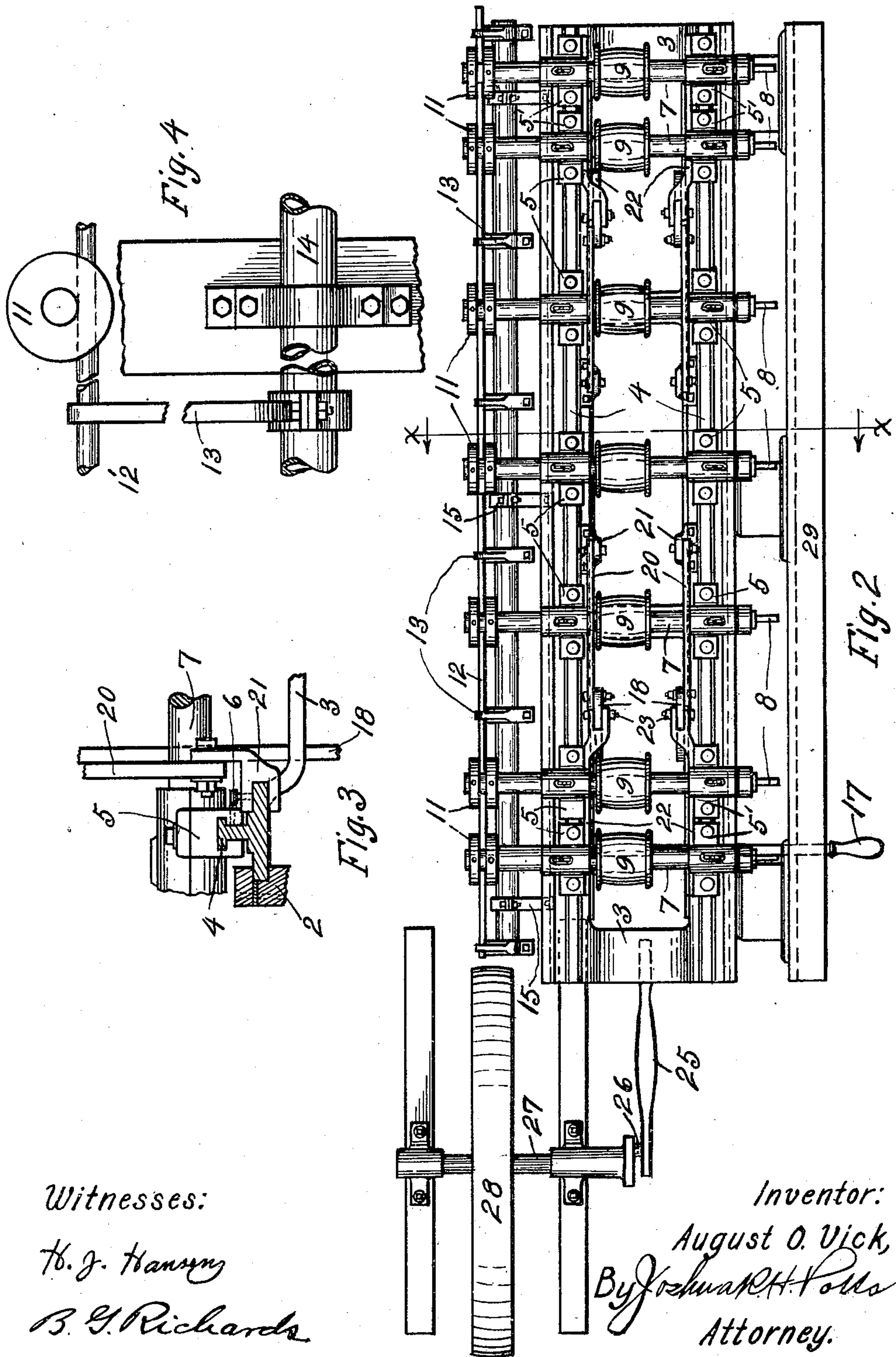
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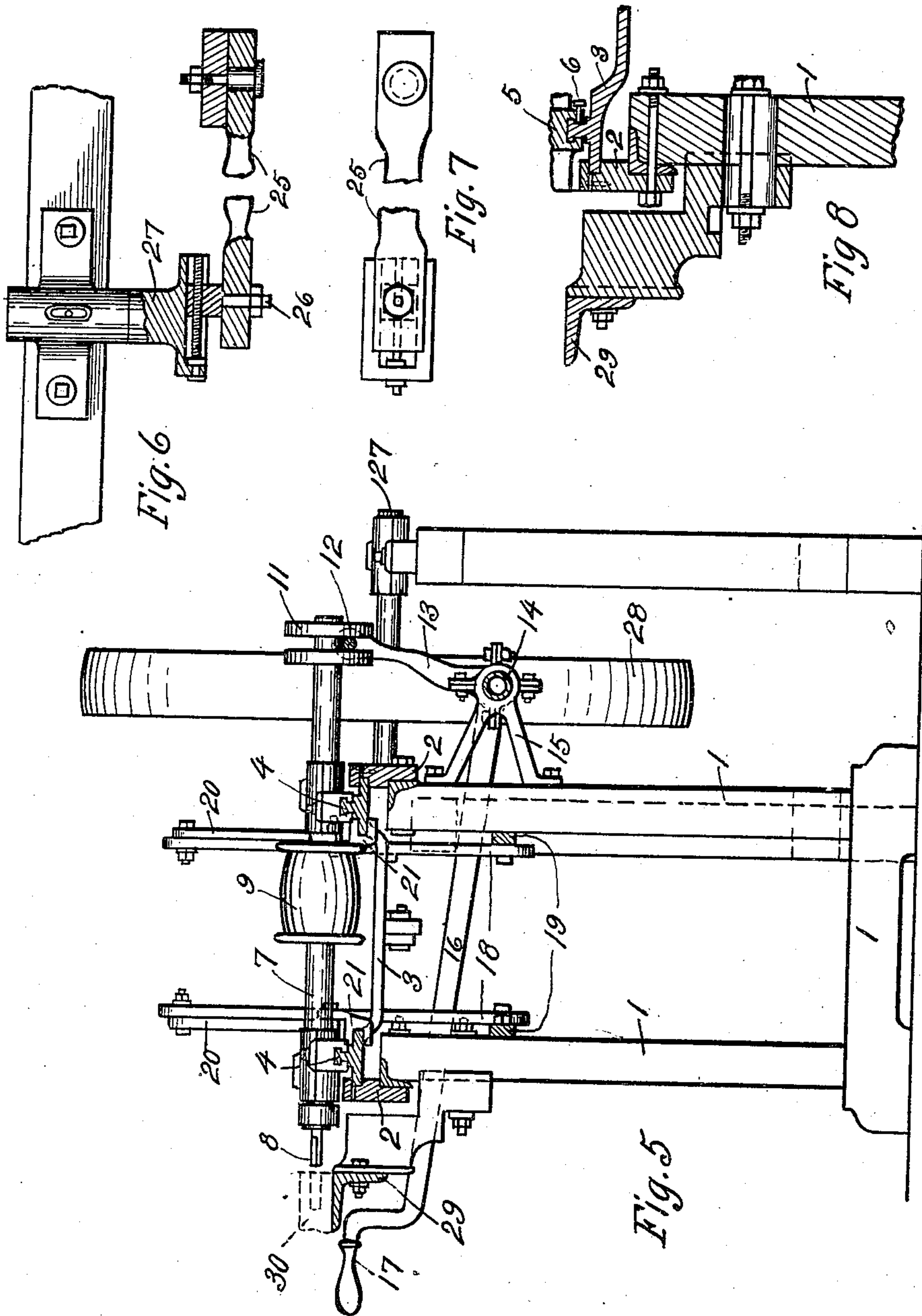


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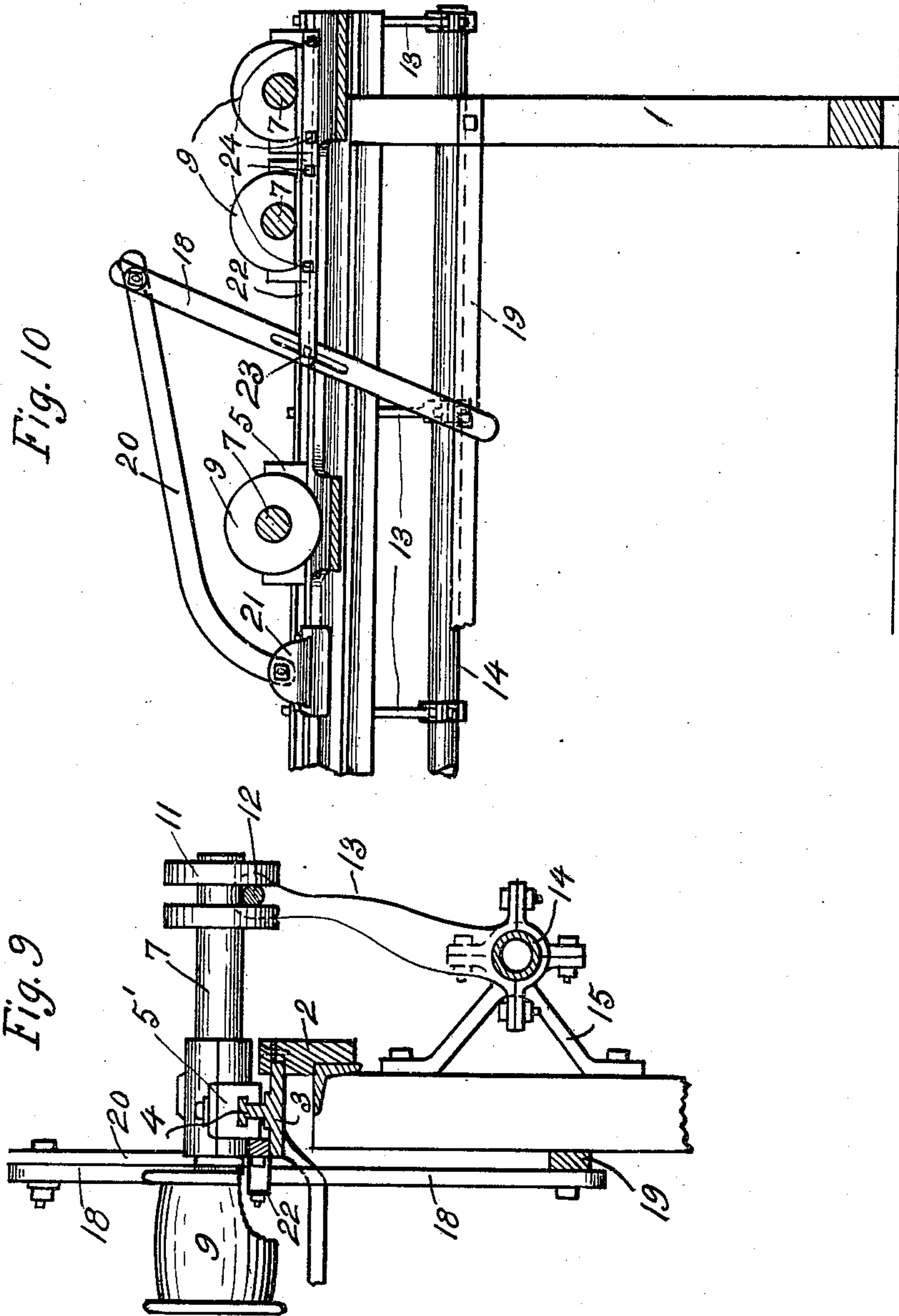
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

AUGUST O. VICK, OF CHICAGO, ILLINOIS.

MORTISING-MACHINE.

990,316.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed July 15, 1910. Serial No. 572,128.

To all whom it may concern:

Be it known that I, AUGUST O. VICK, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Mortising-Machines, of which the following is a specification.

My invention relates to improvements in mortising machines and has for its object the provision of a mortising machine which is capable of cutting mortises of different lengths at the same operation and which shall be of simple construction and efficient in operation.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a front elevation of a machine embodying my invention, Fig. 2 is a top plan view of the same, Fig. 3 is a sectional detail illustrating the connection between a spindle operating lever and the machine table, Fig. 4 is a detail illustrating the mechanism for reciprocating the cutting spindles longitudinally, Fig. 5 is a section on line $x-x$ of Fig. 2, Fig. 6 is a detail illustrating the means for reciprocating the machine table, Fig. 7 is an elevation of said means, Fig. 8 is a detail illustrating the mounting of the work table, Fig. 9 is a section taken at right angles to Fig. 4, and Fig. 10 is a partial longitudinal section of the machine.

The preferred form of construction as illustrated in the drawings comprises a suitable frame 1 having guides 2 at its top. A reciprocating table 3 is slidably mounted in guides 2 and carries two longitudinally substantially T-shaped guide rails 4, as shown. Mounted upon guide rails 4 are intermediate bearing blocks 5 adjustably secured to said guide rails by means of set-screws 6, as shown. At each end of the table two pairs of bearing blocks 5' are mounted upon guide rails 4 and left free to slide thereon. Mounted in alining guide blocks are longitudinally reciprocable spindles 7 carrying bits 8 at their forward ends. Each of the spindles 7 is provided with a driving pulley 9 adapted to be driven by belts 10 from overhead. At their rear ends each of the spindles 7 carries a grooved collar 11 engaging a rod

12 carried by rock arms 13 fixed to the rock shaft 14 which is rotatably mounted in brackets 15 secured to the rear of frame 1. A rocking lever 16 having a handle 17 at its forward end is secured to shaft 14 and serves as a means for rocking said shaft. By this construction it will be observed that the operator is enabled to move spindles 7 forwardly and back while said spindles are rotating and reciprocating laterally, and that bearing blocks 5 in the corresponding spindles will be caused to reciprocate with table 3 while bearing blocks 5' and their corresponding spindles are free to reciprocate independently of table 3.

Table 3 is reciprocated by means of levers 18 pivoted at their lower ends to bars 19 secured in frame 1 and having their upper ends projecting above table 3 through openings or spaces therein. The upper ends of levers 18 are connected to table 3 by means of curved links 20 pivoted at one end thereto and pivoted at the other end to clamps 21 secured to the inner edge of the sides of table 3, as shown. Each pair of end spindles is secured to the central portion of the corresponding levers 18 by means of bars 22 connected at one of their ends with said lever by means of a slot and pin connection 23 and bolted to each of the corresponding bearing blocks 5' by means of bolts 24. By this construction it will be observed that the reciprocations of table 3 will be communicated to the upper ends of levers 18 and in turn communicated to the end spindles on a reduced stroke, so that the reciprocations of the end spindles will take place synchronously with those of the intermediate spindles but will be shorter.

Table 3 is reciprocated by means of a link 25 connected to an adjustable crank pin 26 carried by a shaft 27 which is driven by means of a belt passing over a pulley 28 carried by said shaft.

A work table 29 is adjustably secured to frame 1 in position to support work in operative relation to bits 8, as indicated in Fig. 5.

In use the work to be done is clamped to table 29 in operative relation to bits 8. Then spindles 7 are moved forward by means of lever 16 until they enter the work. Bits 8 constantly reciprocating with spindles 7 serve to cut an elongated notch or mortise in the work. The end bits making a shorter stroke than the intermediate bits will cut

correspondingly shorter mortises. This machine will be found to be especially adapted for use in making doors or other work in which it is desired to use mortises of different lengths.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of variation or modification without departing from the spirit of the invention. I therefore do not wish to be limited to the exact details of construction set forth but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In a mortising machine, the combination with a suitable frame, of a table mounted to reciprocate therein; a series of longitudinally reciprocable spindles secured to said table to reciprocate transversely thereof; a series of longitudinally reciprocable spindles mounted to slide laterally on said table and to reciprocate longitudinally transversely of said table; bits carried by said spindles; means for holding work in operative relation to said bits; means for reciprocating said table; levers pivoted to a stationary support and connected with said table; and a connection between said last mentioned spindles and different points of said levers, substantially as described.

2. In a mortising machine, the combination with a suitable frame, of a table mounted to reciprocate therein; a series of longitudinally reciprocable intermediate

spindles secured to said table to reciprocate transversely thereof; pairs of longitudinally reciprocable spindles slidably mounted on each end of said table; bits carried by said spindles; means for holding work in operative relation to said bits; means for reciprocating said table; levers pivoted to a stationary support and extending above said table; links connecting the upper ends of said levers to said table; and a connection between each pair of said end spindles and a lower point of one of said levers, substantially as described.

3. In a mortising machine, the combination with a suitable frame, of a table mounted to reciprocate therein; a series of longitudinally reciprocable intermediate spindles adjustably secured to said table to reciprocate transversely thereof; a pair of longitudinally reciprocable spindles slidably mounted on each end of said table; bits carried by said spindles; means for holding work in operative relation to said bits; means for reciprocating said table; levers pivoted to a stationary support and extending above said table; links connecting the upper ends of said levers to said table; and a connection between each pair of said end spindles and a lower point of one of said levers, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST O. VICK.

Witnesses:

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