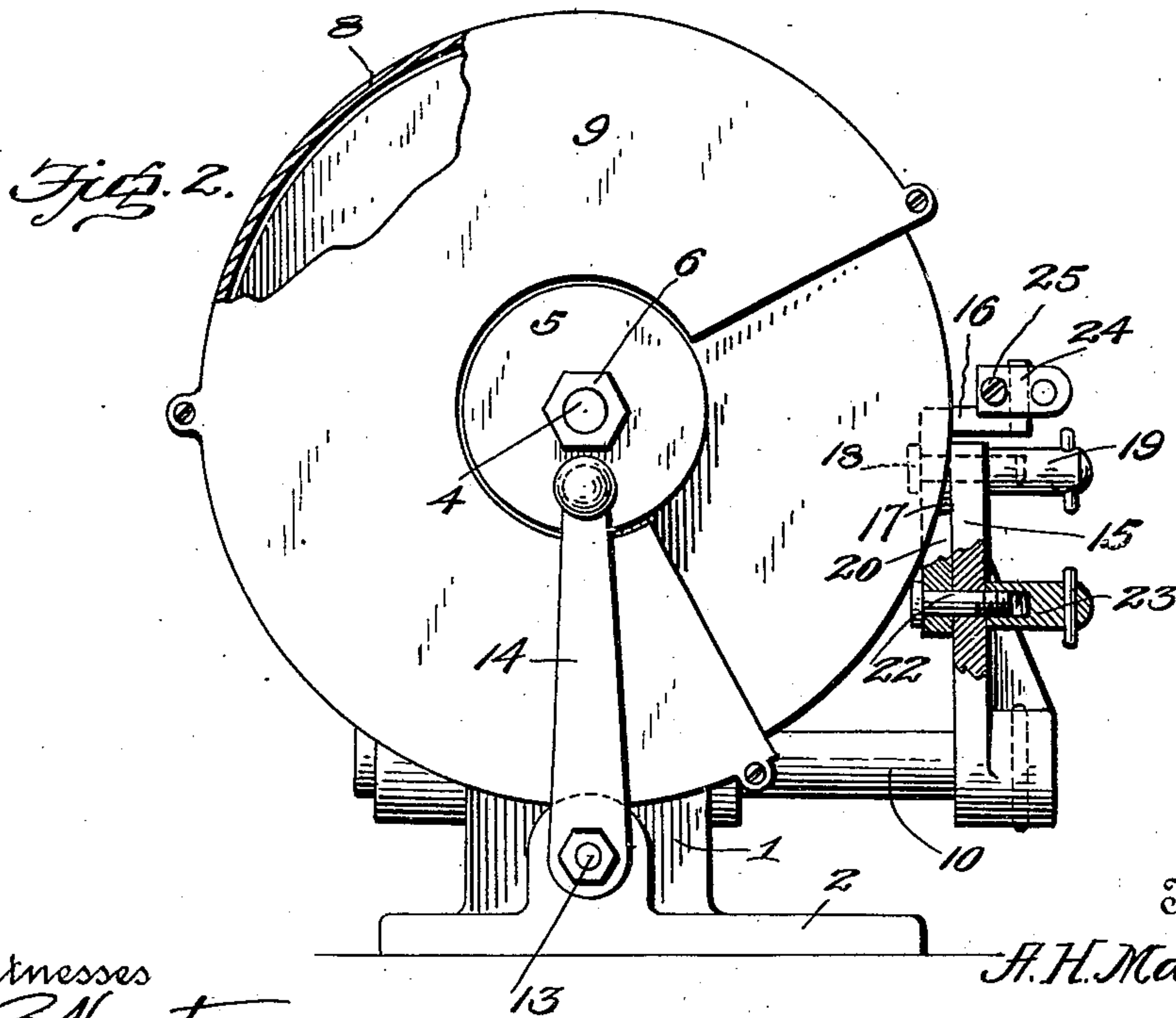
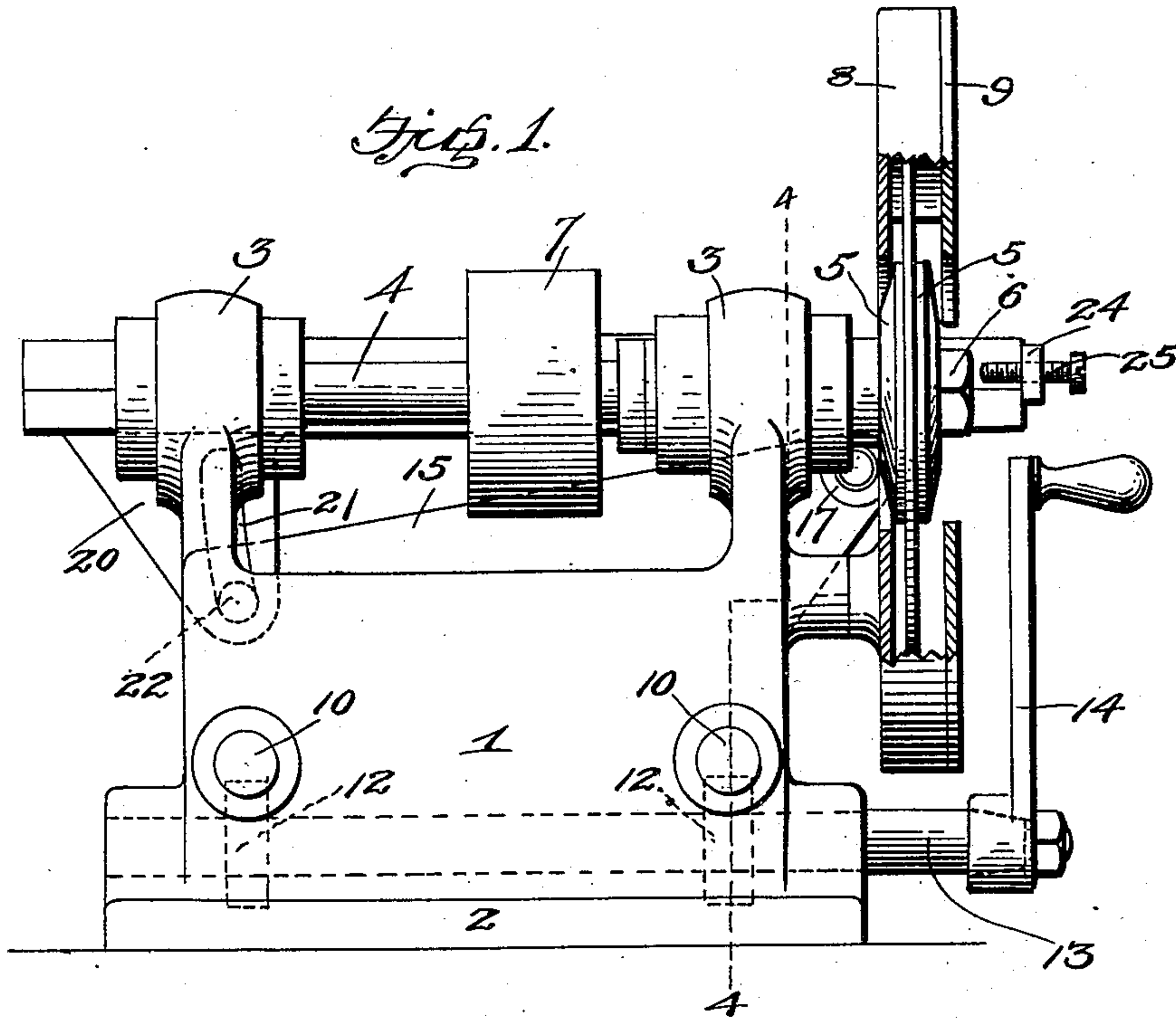


A. H. MATSON.
METAL CUTTING MACHINE.
APPLICATION FILED APR. 4, 1910.

991,627.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



Witnesses
C. E. Hunt.
C. H. Griesbauer.

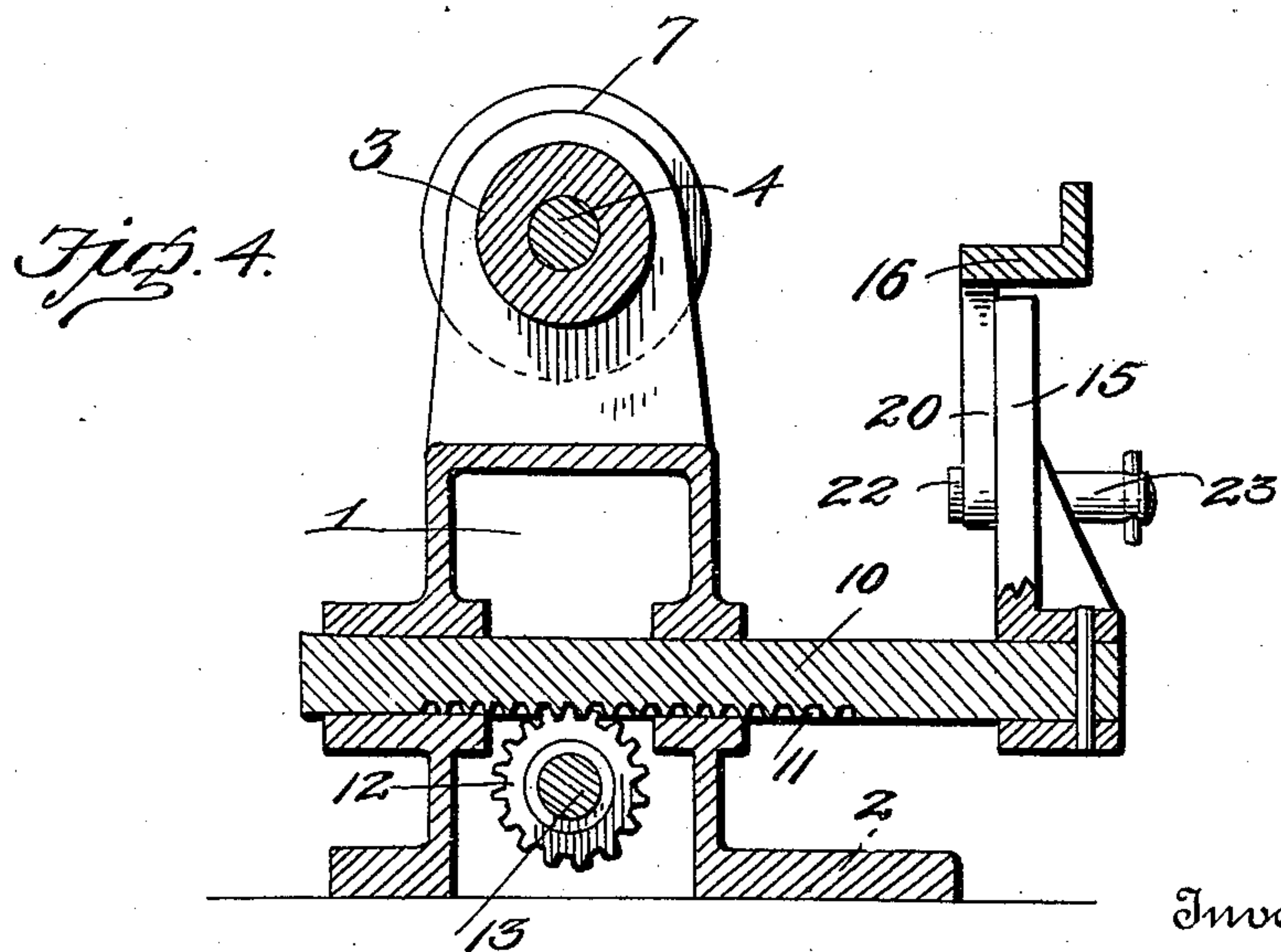
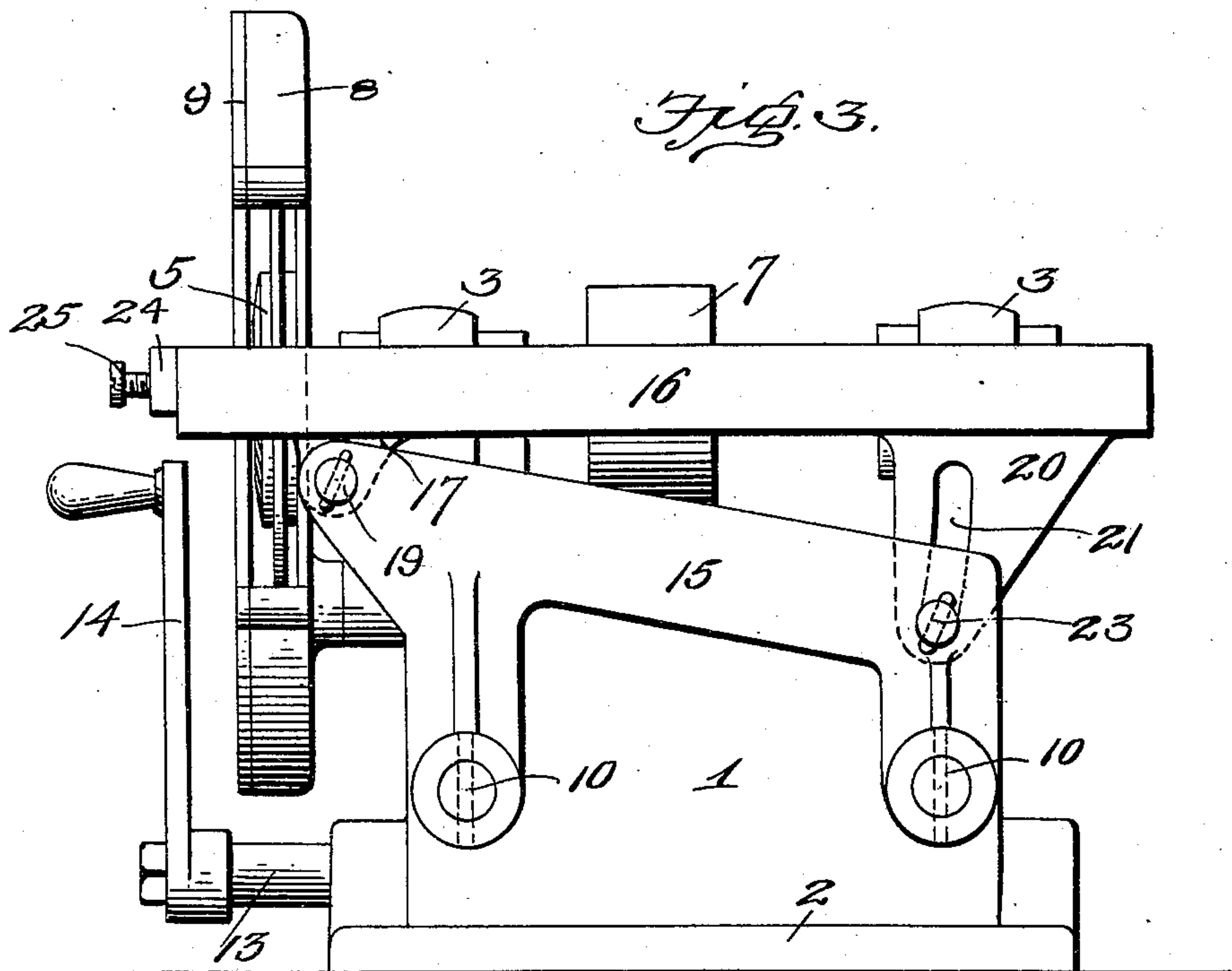
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UNITED STATES PATENT OFFICE.

ALEXANDER H. MATSON, OF BETHEL, VERMONT.

METAL-CUTTING MACHINE.

991,627.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed April 4, 1910. Serial No. 553,192.

To all whom it may concern:

Be it known that I, ALEXANDER H. MATSON, a citizen of the United States, residing at Bethel, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Metal-Cutting Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in metal cutting machines.

One object of the invention is to provide a machine of this character, the construction and arrangement of which is such that the operator stands on the opposite side of the machine from which the cutting is done.

Another object is to provide an improved construction of adjustable work supporting and feeding mechanism whereby the work is fed to the cutting mechanism at the desired pressure and supported at the desired angle with respect to the cutting wheel.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a front elevation of the machine, parts being broken away and in section; Fig. 2 is an end view of the same partly in section. Fig. 3 is a rear elevation. Fig. 4 is a vertical cross section on the line 4-4 of Fig. 1.

Referring more particularly to the drawings, 1 denotes a supporting stand on which is formed a flanged base 2, whereby the machine is attached to a bench or other suitable support. In the upper portion of the stand are formed shaft bearings 3, in which is revolubly mounted a cutter operating shaft 4, on one end of which is detachably secured a cutting wheel. The cutting wheel may be of any suitable construction and is here shown as being secured to the shaft by clamping plates 5 and a clamping nut 6. On the shaft 4 is fixedly mounted a drive pulley 7, by means of which power is applied to the shaft to revolve the cutting wheel.

The cutting wheel is covered, except for a short space, by a casing 8 which is secured to the stand 1 and is provided on its outer side with a removable cover plate 9, as shown. By providing the casing 8, the oper-

ator is protected from injury by the wheel, said casing also receiving a great deal of the dust occasioned by the operation of the machine.

In the lower portion of the frame 1, adjacent to its opposite ends, are slidably mounted work supporting bars 10, in the lower sides of which is formed a series of rack teeth 11, adapted to be engaged by spur gear pinions 12 fixedly mounted upon a work feeding shaft 13 which is revolubly mounted in suitable bearings in the lower portion of the frame, as shown. One end of the shaft 13 projects a slight distance beyond the working end of the machine and on said projecting end of the shaft is secured a crank handle 14 by means of which the shaft is revolved in one direction or the other to shift the bars 10 back and forth through the machine.

On the outer ends of the bars 10 is secured a work supporting plate 15, above which is arranged a work supporting table 16. The table 16 is provided on its inner side, adjacent to the working end of the machine, with an apertured bearing lug 17 which is pivotally connected to the adjacent end of the plate 15 by a pivot screw 18 having on its outer end a clamping nut 19. On the inner side of the table 16, adjacent to its opposite end, is formed a second lug 20 having formed therein a curved slot 21 through which and through the adjacent portion of the plate 15 is arranged a clamping bolt 22, on the outer end of which is arranged a clamping nut 23, whereby the table 16 may be adjustably supported at different angles of inclination. The upper edge of the plate 15 is formed at an angle to permit the pivotal adjustment of the work supporting table. By thus adjustably securing the table 16 to its supporting plate, the work may be held at an inclination so that the same may be cut square or at the desired angle. On the working end of the table 16 is secured a stop lug 24, in which is arranged a stop screw 25, which is adapted to be engaged by the end of the work, whereby the latter is held in the proper position for engaging with the cutting wheel.

In the operation of the machine, the work is placed on the table in the desired position for cutting, after which the crank 14 is operated to turn the shaft 1 and pinions 12 thereby drawing the supporting bars 10 and plate 15, together with the table and the

work arranged thereon, into engagement with the cutting wheel which is being rapidly revolved in the proper direction. As the wheel cuts into the work, the latter is
 5 fed into engagement therewith by a further operation of the feeding mechanism in the manner described. Particular attention is called to the arrangement of the work supporting and feeding mechanism whereby the
 10 operator stands on the opposite side of the machine from that on which the cutting is done, thus greatly facilitating the work.

From the foregoing description, taken in connection with the accompanying drawings,
 15 the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be
 20 resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what
 25 I claim is:

1. In a metal cutting machine, the combination of a supporting stand, an operating shaft mounted therein, a cutting wheel on said shaft, supporting bars mounted in the
 30 stand below said shaft, means for actuating said bars, a work supporting plate carried by said bars and having an inclined upper edge, and a work table pivoted to said plate at the higher end of its inclined edge and
 35 adjustably secured to the opposite end of said plate.

2. In a metal cutting machine, a supporting stand, an operating shaft revolubly mounted therein, a cutting wheel fixedly
 40 mounted on said shaft, a pair of plate supporting bars slidably mounted in said stand below said shaft, a work supporting plate carried by said bars and arranged in rear of the cutting wheel, a work supporting
 45 table adjustably mounted on said plate,

means to secure said table at the desired angle to the cutting wheel, a feed shaft revolubly mounted in said stand, an operating handle connected with said shaft, and means to operatively engage the latter with said
 50 plate supporting bars whereby the latter and the parts carried thereby are adjusted to feed the work to the cutting wheel.

3. In a metal cutting machine, a supporting stand, a cutting wheel operatively
 55 mounted thereon, plate supporting bars slidably mounted in said stand, a series of rack teeth formed on said bars, a work supporting plate secured to the outer ends of said bars, a work supporting table pivotally
 60 mounted on said plate, whereby said table is adjusted at the desired angle with respect to said cutting wheel, clamping bolts and nuts adapted to hold said table in its adjusted position, a feed shaft revolubly
 65 mounted in said stand, pinions fixed on said shaft and adapted to engage the rack teeth on said supporting bars, and a crank handle secured to said feed shaft whereby the latter is operated in the desired direction for shift-
 70 ing said work supporting and feeding mechanism.

4. In a metal cutting machine, a supporting stand, a cutting wheel operatively
 75 mounted thereon, an upright supporting member, means to adjustably support said member to feed the work to said wheel, a work supporting table adjustably secured to said member, a stop lug secured to said table, and a stop screw arranged in said lug and
 80 adapted to be engaged by the end of the work to hold the latter in the desired position on said table.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit-
 85 nesses.

ALEXANDER H. MATSON.

Witnesses:

GUY WILSON,
 L. M. HEATH.