

Feb. 20, 1923.

1,446,404

R. D. TACKABERRY

CUTTER

Filed Nov. 29, 1921

2 sheets-sheet 1

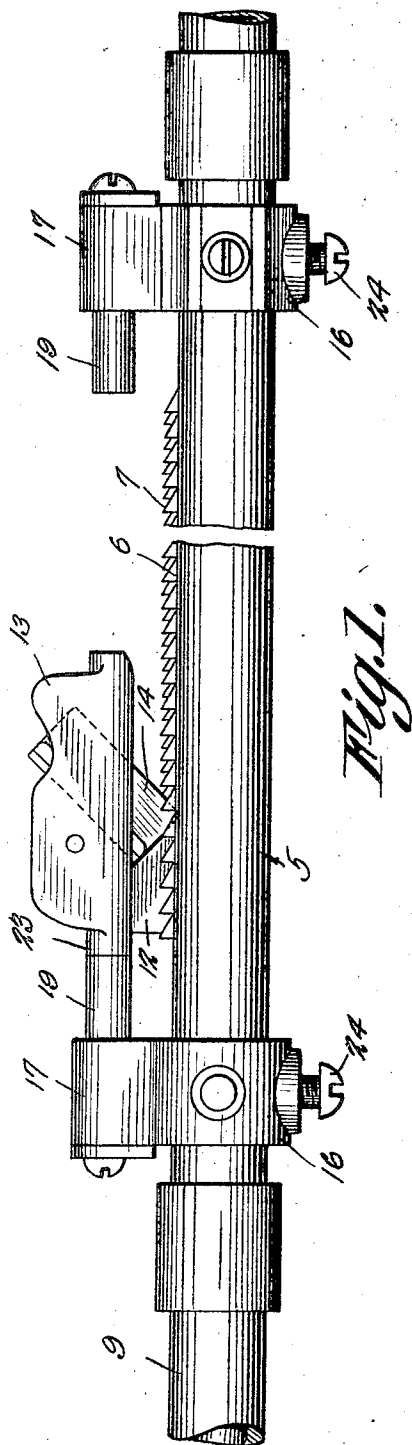


Fig. 1.

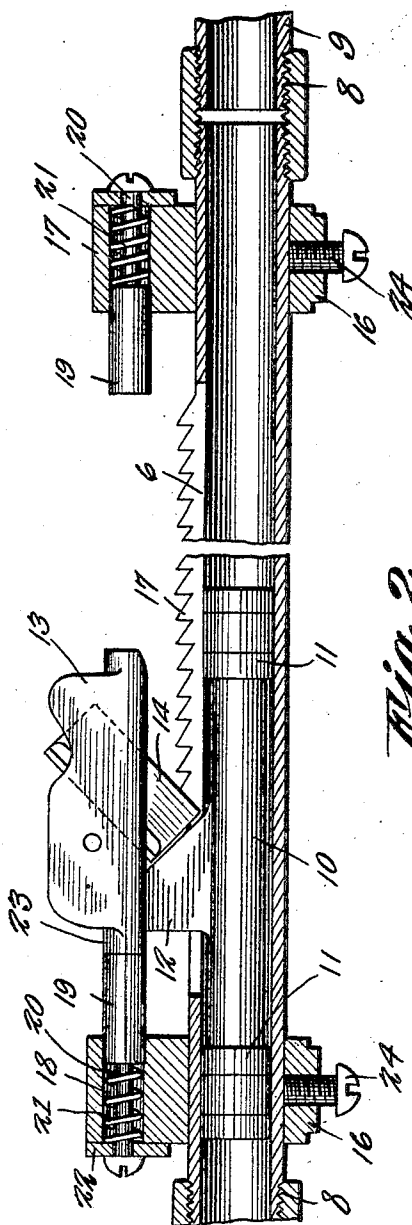


Fig. 2.

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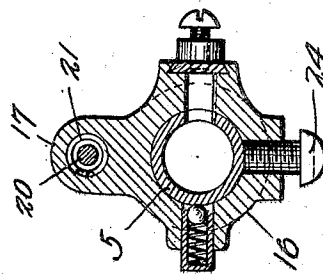
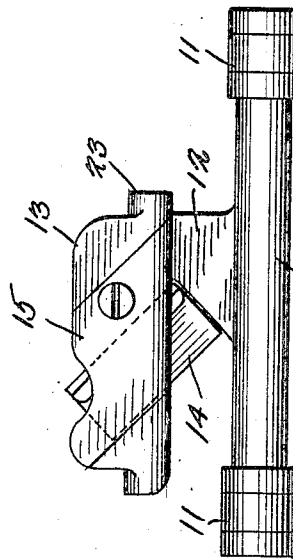
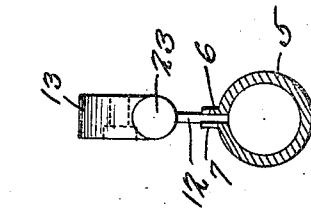
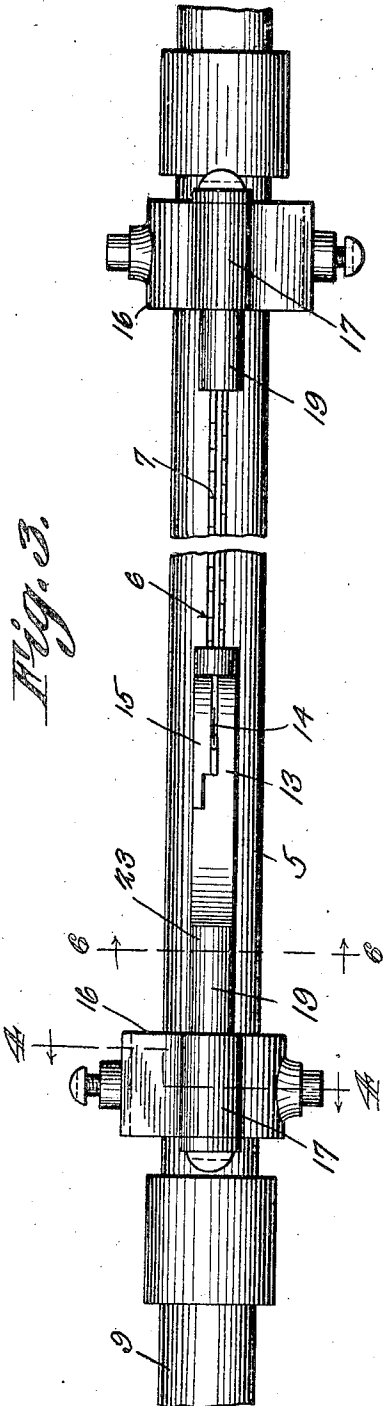
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2 sheets-sheet 2



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UNITED STATES PATENT OFFICE.

ROBERT D. TACKABERRY, OF LEWISTON, MAINE.

CUTTER.

Application filed November 29, 1921. Serial No. 518,650.

To all whom it may concern:

Be it known that I, ROBERT D. TACKABERRY, citizen of the United States, residing at Lewiston, in the county of Androscoggin, State of Maine, have invented a new and useful Cutter, of which the following is a specification.

This invention relates to cutting machines, and more particularly to machines for cutting sheet material, such as cloth, leather, paper or the like, it being the primary object of the invention to provide a machine of this character which will cut the material under operation on a true line.

A further object of the invention is to provide means forming a part of the machine for holding the material under operation, against lateral movement, to insure the true cutting of the material.

A still further object of the invention is to provide a reciprocating cutting element operated by fluid pressure and designed to move rapidly throughout the length of the supporting tube, thereby reducing the time required for cutting material, to a minimum.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:—

Figure 1 illustrates a side elevational view of the cutting machine constructed in accordance with the present invention.

Figure 2 illustrates a longitudinal sectional view through the supporting tube.

Figure 3 illustrates a plan view of the same.

Figure 4 illustrates a sectional view taken on line 4—4 of Figure 3.

Figure 5 illustrates an enlarged detail view of the reciprocating cutter carriage.

Figure 6 illustrates a sectional view taken on line 6—6 of Figure 3.

Referring to the drawings in detail, the reference character 5 designates the body portion of the machine, which includes a relatively long tubular member having a slotted portion formed in the side wall

thereof, the slotted portion extending to points in spaced relation with the ends of the body portion 5, the walls thereof extending at angles with respect to the body portion as indicated at 6, where the same are formed into teeth 7 designed to pierce the material under operation and hold the same against movement.

The respective ends of the body portion 5 are threaded as at 8 where the same have connection with suitable supply pipes 9 for supplying the body portion 5 with fluid under pressure to cause the operation of the cutting member.

This cutting member comprises a base 10 which is relatively long and provided with the heads 11 at opposite ends thereof, which heads are of diameters to fit closely within the body portion 5 to prevent the fluid from passing between the heads and the inner wall of the body portion with the result that the cutting member is moved through the body portion.

Formed integral with the base 10 is a supporting arm 12 to which is secured the head 13 that carries the cutting blade 14, the head 13 however being provided with a removable section 15 whereby the cutting blade or knife 14 may be readily removed and replaced, in the event that the same is to be repaired or sharpened.

Disposed at the respective ends of the body portion 5 are the stops indicated at 16, each of which stops includes a sleeve having an offset portion 17 which is bored as at 18 to accommodate the plunger 19. This plunger 19 is provided with a reduced portion 20 which supports a coiled spring 21 that contacts with the removable head 22, so that the action of the coiled spring 21 normally urges the plunger 19 outwardly to contact with the ends 23 of the head 13. Thus it will be seen that as the cutting member, or knife carriage moves within the body portion 5, the shock of the head 13 contacting with the ends of the body portion 5 is absorbed by the spring pressed plungers 19.

In the operation of the device, the material to be cut, is placed over the teeth 7, whereupon fluid under pressure is admitted into the body portion 5 in any suitable manner, and at one end thereof, whereupon the base 10 is moved the entire length of the body portion 5, to the end that the material under operation is cut.

It follows that fluid under pressure is

now admitted to the opposite end of the body portion, and the base is forced in the opposite direction, where the blade is in a position to again cut an article placed on the body portion 5.

It might be further stated that the stops 16 are adjustable along the body portion 5, so that the device may be adjusted for cutting material of various widths, and in order that the stops may be held in their positions of adjustment, set screws 24 are provided.

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

15 1. In a cutting machine, a tubular body portion having a slot formed in the wall thereof, the walls of said slot extending beyond the wall of the body portion and provided with teeth, a cutting member including a base having heads on opposite ends thereof, a supporting arm having a head, a cutting blade carried by the head, means for restricting movement of the cutting member, and means for directing fluid under pressure to the body portion.

25 2. In a cutting machine, a tubular body portion having a slot formed in the wall thereof, a cutting member operating in the body portion, means forming a part of the body portion for preventing lateral movement of the material under operation, a cutting blade carried by the cutting member, means for restricting movement of the cutting member, and means for directing fluid under pressure to the body portion.

35 3. In a cutting machine, a tubular body portion, a cutting member including a base,

a supporting arm forming a part of the base, said body portion having a slot, said supporting arm adapted to extend through the slot, a blade carried by the cutting member, means for directing fluid under pressure to the body portion to contact with the base to move the cutting member throughout the length of the body portion, and means for restricting movement of the cutting member.

4. In a cutting machine, a tubular body portion, said body portion having a slot, a cutting member including a base adapted to move in the tubular member, said base having a supporting arm extending through the slotted portion, a head on one end of the supporting arm, a cutting blade supported by the head, means for restricting movement of the cutting member, and means for directing fluid under pressure to the body portion.

5. In a cutting machine, a tubular body portion, a cutting member adapted to move within the body portion, said cutting member including a base having heads, said heads adapted to closely engage the walls of the body portion, a cutting blade carried by the cutting member, means for directing fluid under pressure to the body portion, and adjustable stops supported on the body portion.

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

ROBERT D. TACKABERRY.

Witnesses:

DANA S. WILLIAMS,
BELLE P. CARTWRIGHT.