April 5, 1932. L. H. ZEUN 1,852,341

TOBACCO CUTTING MACHINE

Filed April 21, 1927 2 Sheets-Sheet 1

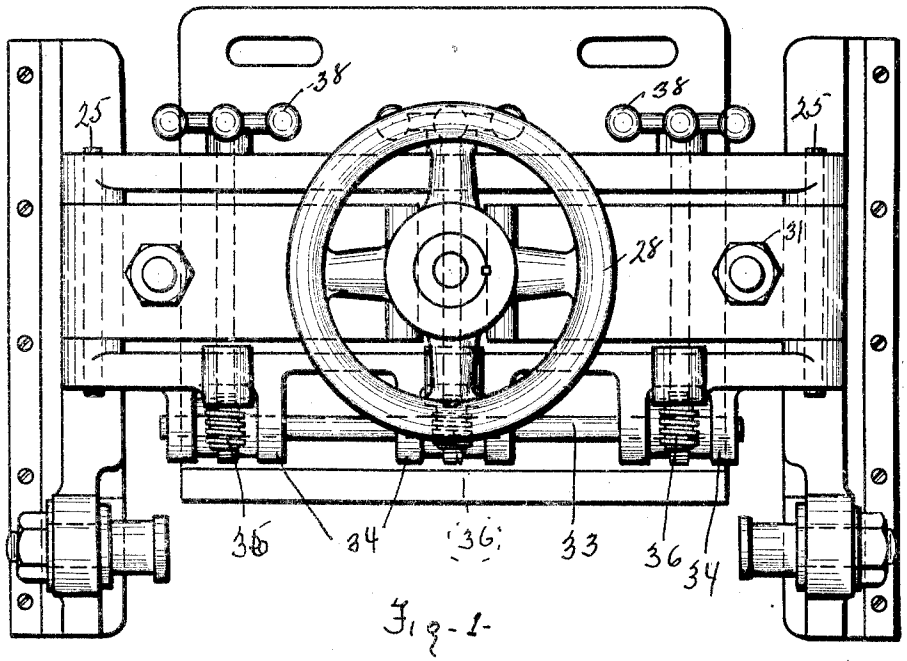

Fig-1-

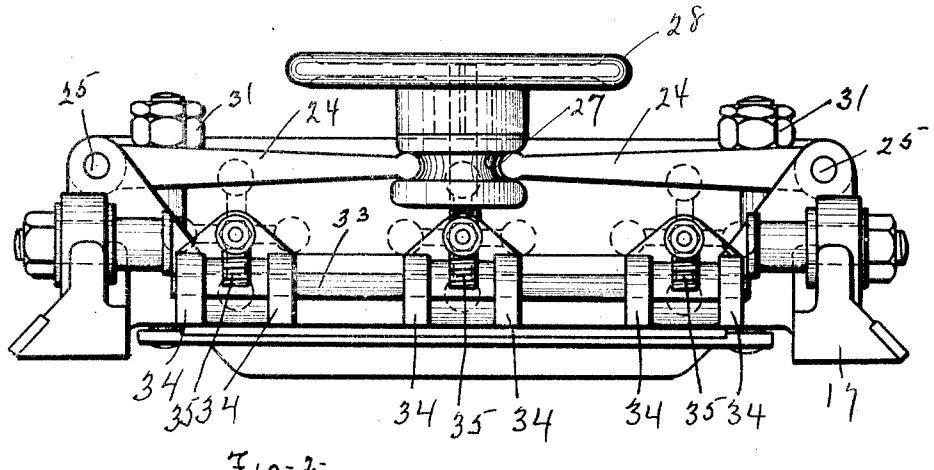

Fig-2-

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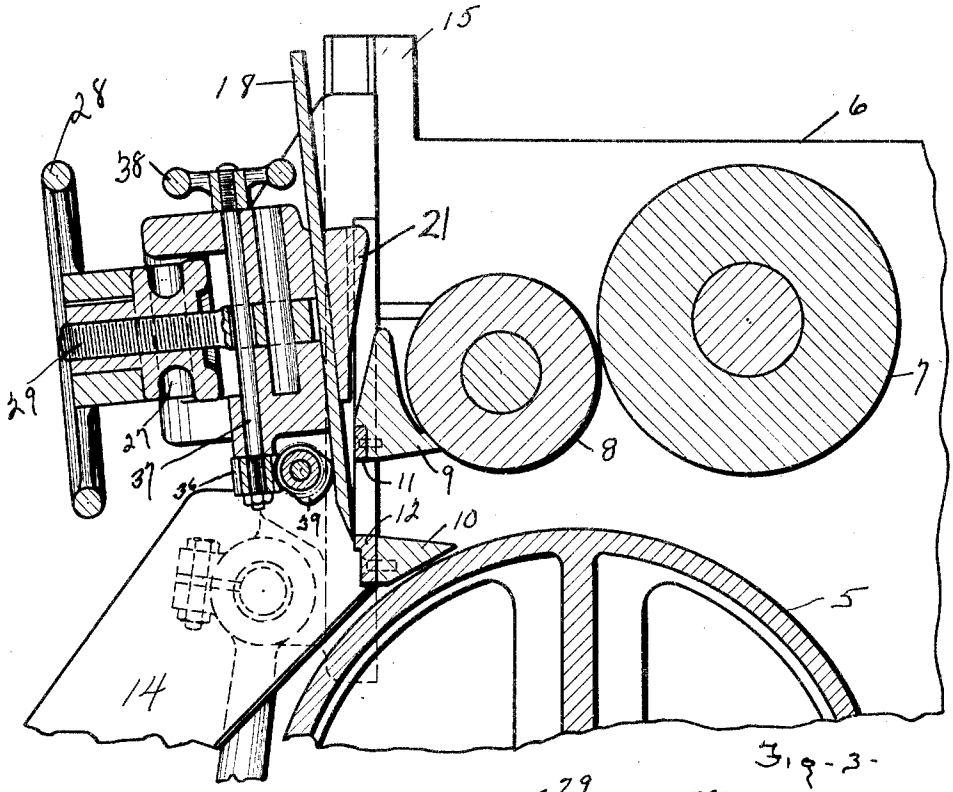

Fig-3-

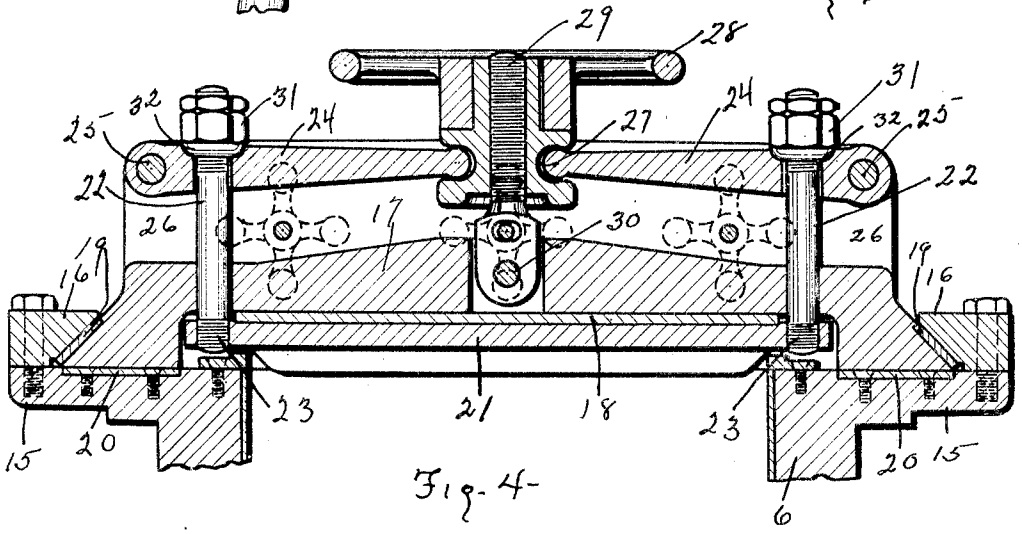

Fig-4-

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UNITED STATES PATENT OFFICE

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TOBACCO CUTTING MACHINE

Application filed April 21, 1927. Serial No. 185,515.

This invention relates to improvements in tobacco cutting machines and has for its particular object the provision of a novel knife clamping and adjusting means whereby said adjustments can be made by a single operator while the machine is in motion.

A further object of the invention is the provision of means whereby the knife of a tobacco cutting machine may be minutely adjusted by a single operator without necessitating the stopping of the machine.

A further object of this invention is the provision of means whereby a knife blade may be removed and replaced in a comparatively short space of time and by a single operator.

This invention particularly relates to an improvement in the tobacco cutting machine illustrated and described in Patent No. 1,419,094, patented June 6, 1922, and assigned to the John B. Adt Company, of Baltimore, Maryland.

With these and other objects in view, the invention consists in certain novel features, combination and arrangement of parts as will be hereinafter more fully described, pointed out in the accompanying drawings, and claimed.

In the drawings,

Figure 1 is a front elevational view of the knife blade adjusting means and support therefor;

Figure 2 is a side elevational view of said knife adjusting means;

Figure 3 is a vertical, longitudinal, sectional view of the knife adjusting means and a fragmentary portion of the tobacco cutting machine to which it is attached; and,

Figure 4 is a transverse sectional view of the knife adjusting means and the support therefor.

Referring to the drawings, the numeral 5 indicates a feed drum mounted at the discharge end of a supporting frame 6 of a tobacco cutting machine and located above said drum and properly journaled in said frame are the presser rollers 7 and 8, respectively. The drum 5 and rollers 7 and 8, respectively, are mounted and operated identically with the construction illustrated in Patent No. 1,419,094.

In the front of the roller 8 is located a cross member 9 and beneath the latter and extending parallel thereto, in spaced relation therewith, is a co-acting cross member 10. These two cross members are arranged at a relatively spaced distance apart and are located at the discharge end of the frame and define a contracted throat through which tobacco is fed to the cutter. The mouth piece 9 is parallel to the roller 8 and it is set close to said roller in front thereof and extends downwardly as far as the bottom thereof. Each of the cross members 9 and 10, respectively, is provided on its outer face with removable ledger plates 11 and 12, respectively, across which ledger plates operates the cutter, the same consisting of a vertically, reciprocating, elongated cutting blade 18. The blade 18 has its bottom edge sharpened and is of such length as to correspond with the length of the mouth or discharge opening formed by the members 9 and 10, respectively.

From the member 10 there extends a chute 14 onto which the cut fragments of tobacco drop for proper disposal.

The frame 6 of the machine is provided at its rear end with laterally spaced uprights 15, on which are mounted vertical bars 16 forming slide ways for a vertically reciprocatory cross-head 17 carrying the cutting blade 18. The inner edges of the bars 16 are under-cut to retain the cross-head 17, and that portion of the cross-head, which engages the undercut portion of the bars 16, is provided with wear plates 19. The uprights 15 are also provided with wear plates 20 to engage the opposing face of the cross-head to compensate for wear in the sliding action of the cross-head thereon.

To the back of the cross-head 17 is bolted, or otherwise secured, a blade clamping plate 21, and this plate engages one face of the blade 18 and is held in firm contact with said blade through the medium of stud bolts 22, which have one of their ends threaded as at 23, and fastened to the opposite ends of said plate. The free ends of said bolts extend upwardly through fulcrum bars 24, which are pivotally secured as at 25, to uprights 26 car-

ried by the cross-head 17. The free ends of these fulcrum members are freely mounted in a slot or groove 27 formed in an operating or adjusting wheel 28 mounted on a bolt 29, the free end of which bolt has a ball and socket connection with the cross-head 17, as at 30.

The upper ends of the bolts 22 have fitted thereon, nuts 31 having their inner faces spherical shaped, as at 32, so as to allow movement of said fulcrum members 24 upon operation of the wheel 28, in order to adjust said clamping plate toward and away from the blade 18. The adjusting of this plate naturally effects the adjustment of the blade 18 toward and away from the cross member 10 at the throat portion of the machine.

Mounted transversely of the front face of the cross-head 17 is an axle 33, which is mounted in brackets 34 carried by the said cross-head, and this axle 33 is provided between each of said brackets with adjusting bars 39 and each bar is provided with worms 35, which engage worms 36 mounted on standards 37 extending vertically through the cross-head 17 and have affixed on their upper ends adjusting wheels 38, and by rotation of the wheels 38 the bars 39 will in turn be rotated. The adjusting bars are supported in such manner that they may engage the blade to flex the latter toward the ledger plates 11 and 12, of the cross members 9 and 10, respectively, thereby locating said blade in proper operative relation therewith.

The principal features inculcated in this improvement are the provision of means whereby the blade may be held in fixed adjusted position and its cutting edge arranged in proper operative relation with the cross members by virtue of the wheels 28 and 38, respectively, without the necessity of stopping the operation or reciprocating action of the cross-head, which carries the blade.

It can be readily seen that by virtue of the wheel 28, levers 24 and bolts 22, that the blade 18 may be quickly and easily removed.

The operation of this improvement is identical with that embodied in Patent No. 1,419,094, and applicant lays no claim to the particular construction of this patent other than the improvements involved in the present application.

It is to be understood that certain minor changes may be resorted to without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim as new is:

1. In a tobacco cutting machine having a tobacco feeding means, the combination of a vertically reciprocatory cross-head, cross members located in said machine defining a tobacco outlet, a cutting blade associated with said cross-head, a clamping plate for said blade, bolts securing said clamping plate to the cross-head for retaining said blade therein, fulcrum bars pivoted to the cross-head and embracing said bolts, and hand operated means for operating the fulcrum bars for controlling the movement of said clamping plate away from and toward the cross-head.

2. In combination with a tobacco cutting machine, having a feeding means, vertically spaced transverse members located in advance of the feed means and defining a throat, a vertically reciprocatory cross-head, means for operating said cross-head across the throat, a cutting blade carried by said cross-head, a clamping plate for said blade, means for adjustably securing said clamping plate to the cross-head for retaining said blade therein, said means comprising bolts slidably received in the cross-head and fulcrum bars pivotally secured to the cross-head, said bolts having one end thereof secured to the clamping plate and the other end thereof secured intermediate the ends of the fulcrum bars, and manual means for operating the bars simultaneously.

In testimony whereof he hereunto affixes his signature.

LOUIS H. ZEUN.