

F. B. WILDMAN & E. W. BORTMAN.
GRINDING ATTACHMENT FOR CLOTH CUTTERS AND THE LIKE.

APPLICATION FILED AUG. 17, 1911.

1,050,891.

Patented Jan. 21, 1913.

Fig. 1.

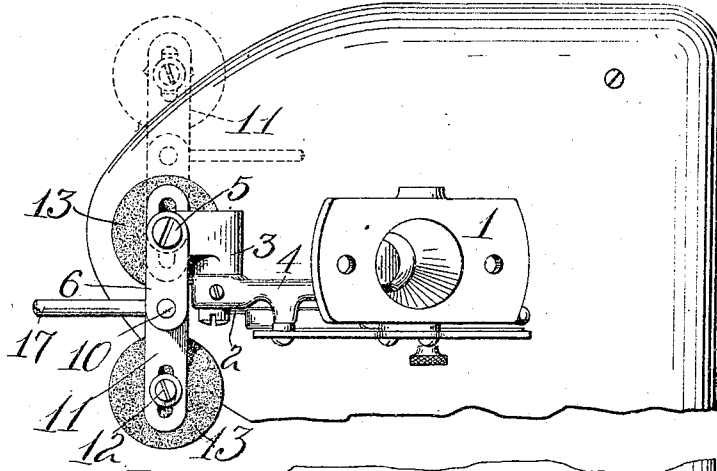


Fig. 2.

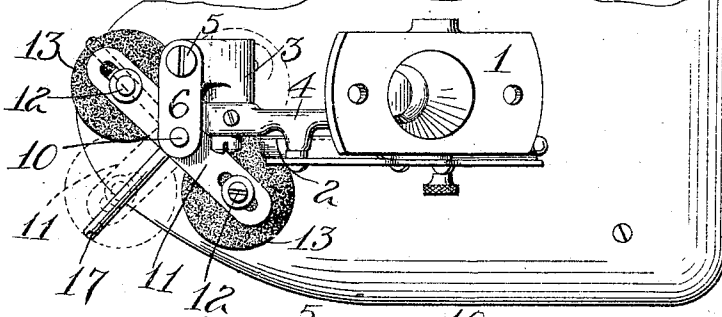
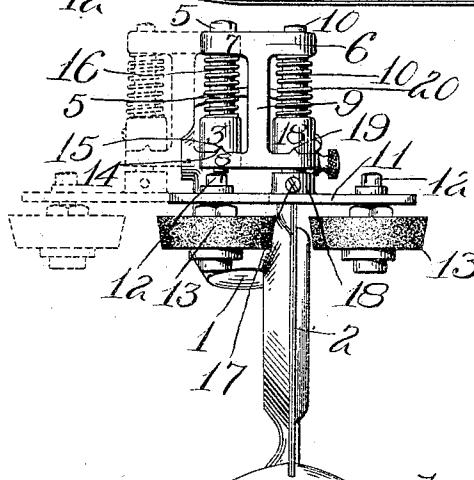


Fig. 3.



Attest
Cendon M. Stahl
R. L. Ourand

Inventors
Frank B. Wildman
Emanuel W. Bortman
by Spear Middleton Donalson & Spear Attys

UNITED STATES PATENT OFFICE.

FRANK B. WILDMAN AND EMANUEL W. BORTMAN, OF NORRISTOWN, PENNSYLVANIA,
ASSIGNORS TO WILDMAN MFG. COMPANY, OF NORRISTOWN, PENNSYLVANIA.

GRINDING ATTACHMENT FOR CLOTH-CUTTERS AND THE LIKE.

1,050,891.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed August 17, 1911. Serial No. 644,851.

To all whom it may concern:

Be it known that we, FRANK B. WILDMAN and EMANUEL W. BORTMAN, citizens of the United States, residing at Norristown, Pennsylvania, have invented certain new and useful Improvements in Grinding Attachments for Cloth-Cutters and the Like, of which the following is a specification.

Our invention relates to grinding appliances for the cutters of cloth cutting machines and belongs to that class in which the grinding device is attached to the frame of the machine and is adapted to be thrown into position to do its work, or to be adjusted to a position to one side of the cutter at the will of the operator.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In these drawings, Figure 1 is a plan view of so much of a cloth cutter as is necessary to illustrate our invention in relation thereto, said view illustrating the attachment adjusted into position ready to have either of its grinding members thrown into engagement with the knife, and illustrating in dotted lines the position of the attachment when adjusted entirely out of operative position to one side of the knife. Fig. 2 is a similar view to Fig. 1, with one of the grinding members in contact with the knife and showing in dotted lines the adjustment of the attachment for bringing the other grinding member against the other edge of the knife. Fig. 3 is a front view of the parts in the position of Fig. 1.

In these drawings, 1 indicates a part of the frame of a cloth cutting machine, 2 the cutting knife, which in this case is in the form of a disk mounted to rotate and driven in any suitable manner, known in the art, to perform its cutting operation. The grinding attachment comprises a bracket 3 rigidly mounted upon an arm 4 of the frame, the said bracket having mounted therein a vertical stud 5. On this stud is pivotally mounted a frame or bracket 6 composed of upper and lower portions 7 and 8, which are perforated to receive the stud to swing thereon. The upper and lower portions of this frame are formed integral with a vertical connecting portion 9 and these upper and lower portions of the frame also have bearings in which are mounted a shaft 10, which carries

at its lower end fixed thereto, a cross piece 11 through slots in which studs 12 pass, these studs forming the journals of the grinding wheels 13. The studs are adjustably mounted in the slots to vary the position of the grinding wheels in relation to each other.

The whole frame or bracket 6 may be swung on the stud 5 to carry the grinding wheels to and from position in relation to the cutter and for holding the frame in either one of its positions, the lower arm thereof is provided with V shaped projections 14, at diametrically opposite sides of its journal or bearing opening, these V shaped projections being adapted to enter a notch 15 in the fixed bracket 3, the frame 6 being pressed normally upward by a spring 16 encircling the journal post or stud 5. In order to swing the frame or bracket 6 from the position shown in dotted lines in Fig. 1 to that shown in full lines in said figure, or in Fig. 3, pressure of the hand is applied to the frame sufficient to overcome the tension of the spring and make the V shaped projection ride out of the retaining notch in the bracket 3, and then when the frame has been turned to the position shown in full lines in Figs. 1 and 3 the other V shaped projection will engage the notch in the bracket 3 and center and hold the said frame with the grinding wheels on opposite sides of the plane of the cutting knife ready to be thrown into engagement with the said knife upon the turning of the cross piece 11 in one direction or the other. For so turning this cross piece the handle 17 is provided, extending from the hub thereof and the operator by grasping this handle can throw either wheel into action and exert any desired pressure thereon. In order to hold the cross piece in neutral position with both of the grinding wheels out of action we provide a collar 18 fixed to the shaft 10, the said collar having a V shaped notch in its lower face to be engaged by a V shaped point or projection 19 on the lower arm of the frame 6. A spring 20 surrounding the shaft and bearing upon the collar at one end and the upper arm of the frame at the other presses the collar downwardly to lock the cross arm in neutral position until sufficient pressure is exerted on the handle to overcome the force of this spring.

From the above it will be seen that we have provided an attachment by which the

grinding wheels may be thrown entirely to one side of the knife, where they are held firmly in inoperative position or the frame may be turned to carry the grinding wheels into neutral position with one on each side of the plane of the knife from which position either may be thrown against the knife under any degree of pressure at the will of the operator by simply grasping the handle and turning the cross piece in relation to the swinging frame which is now held rigidly in position by the lock at 14, 15. It will be observed that the grinding wheels are slightly tapered downwardly. When thrown against the knife they engage the upper portion thereof or that portion which lies above the horizontal center. The position of these wheels and the angle at which they are driven by contact with the rotating knife provide a cutting edge peculiarly well adapted for the cutting of the cloth as the lines of grinding incline backwardly in relation to the direction of rotation and as a result of this the burred ragged or saw-like edge will not tend to pull the cloth into the throat plate together with fluff and waste which would result in clogging and interfering with the proper running of the knife.

We claim as our invention:—

1. In apparatus of the class described, a pair of grinding wheels, a swinging support therefor by which either wheel may be brought against the knife edge, said support being pivoted intermediate of its length and carrying the grinding wheels one on each side of said pivot and a pivotally mounted supporting frame to which the said swinging support is pivoted, said supporting frame being movable to throw the grinding wheels entirely to one side of the knife, substantially as described.

2. In combination in apparatus of the class described, a fixed frame, a knife, a pivotally mounted supporting frame movable toward and from the knife, locking means for holding the said frame in either of its positions to or from the knife, a swing-

ing support on the pivotally mounted frame and carrying grinding wheels to lie one on each side of the knife, and locking means to hold said swinging support to the pivotally mounted frame, substantially as described.

3. In combination in apparatus of the class described, a fixed frame, a knife, a pivotally mounted supporting frame, spring pressed locking means for holding said pivotally mounted supporting frame in either of its two positions toward or from the knife, grinding wheels, a swinging support therefor mounted in the pivotally mounted frame and spring pressed friction locking means for holding the swinging support in proper position in relation to the pivotally mounted supporting frame, substantially as described.

4. In combination, a fixed frame, a cutter, a supporting frame pivoted at one end and mounted on the fixed frame, a swinging member mounted at the free end of the pivotally mounted supporting frame, grinding wheels at opposite ends of the swinging member and the handle connected with the swinging member for throwing either grinding wheel into contact with the knife, substantially as described.

5. In combination a fixed frame, a cutting knife, a pivotally mounted supporting frame composed of upper and lower portions and a central connecting portion, a stud connecting the said frame at one end pivotally with the fixed frame, a swinging member, a stud connecting the same pivotally with the free end of the supporting frame, grinding wheels carried by the swinging member and locking means for the pivotally mounted supporting frame and the swinging member, substantially as described.

In testimony whereof, we affix our signatures in presence of two witnesses.

FRANK B. WILDMAN.
EMANUEL W. BORTMAN.

Witnesses:

OWEN BALLARD,
I. F. TEANY.