G. A. Shepard.

Curling Brims.

No. 102,722. Patented May 3, 1870.

Fig: 2.

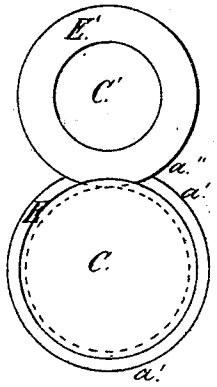


Fig: 3.

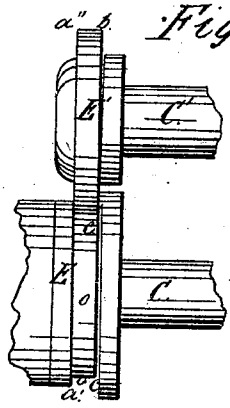


Fig: 4.

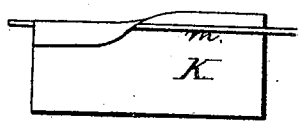
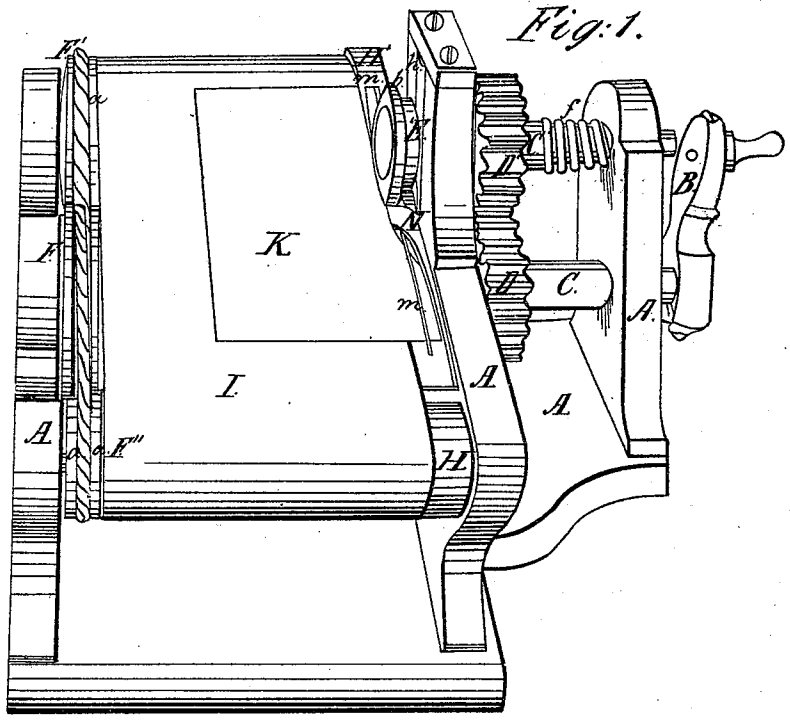


Fig: 5.

Fig: 6.

Fig: 1.



Witnesses.

David J Hubbell.

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GEORGE A. SHEPARD, OF BETHEL, CONNECTICUT.

Letters Patent No. 102,722, *dated May* 3, 1870.

IMPROVEMENT IN MACHINES FOR COVERING REEDS FOR HAT-TRIMMINGS.

The Schedule referred to in these Letters Patent and making part of the same.

I, GEORGE A. SHEPARD, of Bethel, in the county of Fairfield and State of Connecticut, have invented a Machine for Covering Reeds for Hat-Trimmings, of which the following is a specification.

The object of this invention is to cover the reeds that are used in trimming hats with prepared cloth, leather, or other material, by machinery, and finish the same with a single operation; and

It consists in the arrangement in the machine of an endless feed-apron, folding or curling-gauge, revolving cutters, and pressers that act upon the cemented material; and

It further consists in the giving the proper pressure upon the cemented material that covers the reed without crushing or in any way injuring the reed in passing through the machine.

Figure 1 is a perspective view of a machine embodying my invention;

Figure 2 is a front view of the cutters, with the other parts removed;

Figure 3 is a side view of the cutters, showing the groove in the lower cutter for the reed;

Figure 4 shows a reed, placed near the edge of a cemented piece of cloth, with a portion of the cloth turned over the reed, as it is done by passing through the curling-gauge in front of the cutters;

Figure 5 is a cross-section of the covered reed; and

Figure 6 is a side view of the same.

A is the frame of the machine.

B is the crank by which the shaft C is made to turn.

C′ is a shaft over the shaft C, and is made to turn by the motion of the shaft C through the gears D D′.

E and E′ are revolving cutters centrally placed around revolving shafts C and C′.

The cutter E is turned down to form the recess *o*, and receive therein the outer edge of cutter E′, as seen in figs. 2 and 3.

Each of the cutters has cutting-edges, *a′ a″*, upon the angles of contact.

The cutter E′ revolves in and upon the upper surface of recess *o* in cutter E.

The sides of the cutters are purposely turned a little under, in order that their cutting-edges *a′ a″* may always be in contact and sure to cut the material.

The edge of E′, at *b*, which comes over groove *c* in the recess *o* of cutter E, is turned off slightly, so as to give room for the reed being covered to pass through without being pressed any more than to closely fold the cemented material around it.

The lower cutter E (not seen in fig. 1) is fastened to and turned by the shaft C, and the cutter E′ is fastened correspondingly to the shaft C′.

F is a pulley on the outer end of the shaft C, and when in motion gives a corresponding motion to the pulleys F′ F″, and to the rollers H H′, to which the pulleys F′ F″ are fastened by and with the belt *a*.

I is an endless apron, strained over the rollers H H″, and moving in connection with them.

K is a piece of material, (cloth or leather, as may be,) cemented on the upper side, so that when the edge is folded over and pressed together it will firmly adhere.

m is a reed, such as used in hat-trimming, laid at the proper distance from the edge of the cloth K to be folded in as it passes through the folding-gauge N, and by which the cloth K is turned over it, as seen in fig. 4.

c is a groove turned in the cutter-head G to receive the reed *m*, so as to allow the cloth K to be pressed firmly together between the cutter-rollers E E′ as it passes through.

f is a spring on the shaft C′, by which the cutting-face and edge of the revolving cutter E′ are kept firmly against the corresponding face and edge of the cutter E, thus forming rotary or revolving shears to cut off the covered reed from the material as it passes through.

At *h* is a spring, by which the cutter E′ is made to press firmly, though not rigidly, against the cutter E, causing the cemented surfaces to adhere to each other as they pass between the pressing-surfaces of the cutters E E′.

N is a folding or curling-gauge, made from sheet-metal, of such shape and form as that, when the material K and the reed *m* are forced through it, the material will be folded over the reed and back upon itself to or nearly to the line cut by the revolving cutters E and E′.

It will be seen that, when the cemented cloth K is put on the revolving apron I, the reed *m* being properly placed, by the motion given to the apron I by the rollers H H′, the pulleys F F′ F″ and the belt *a* from the crank B, through the shaft C, the cloth K will be carried forward through the curling-gauge N, folding the edge of the cloth K over the reed *m*, as shown in fig. 4, and through between the cutting and pressing-rollers E E′, thus turning out the covered reed ready for use.

The cloth K is now drawn back, readjusted, another reed put on, and the process repeated as often as desired.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the revolving endless apron I, folding-gauge N, and revolving and pressing-cutters E and E′, when the several parts are constructed and arranged to operate in the manner and for the purpose above described.

2. The spring *h* over shaft C′, in combination with the revolving and pressing-cutter E′ and cutter E, having recess *o* and groove *c*, all arranged to operate in the manner substantially as and for the purposes set forth.

GEORGE A. SHEPARD.

Witnesses:

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MORGAN CHITTENDEN.