A. DEWES.

KNIVES FOR CUTTING PAPER-COLLAR BLANKS.

No. 171,270. Patented Dec. 21, 1875.

Fig. 1.

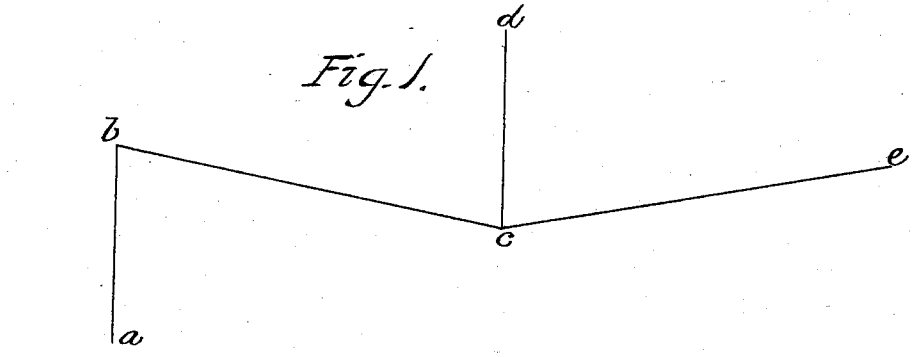


Fig. 2.

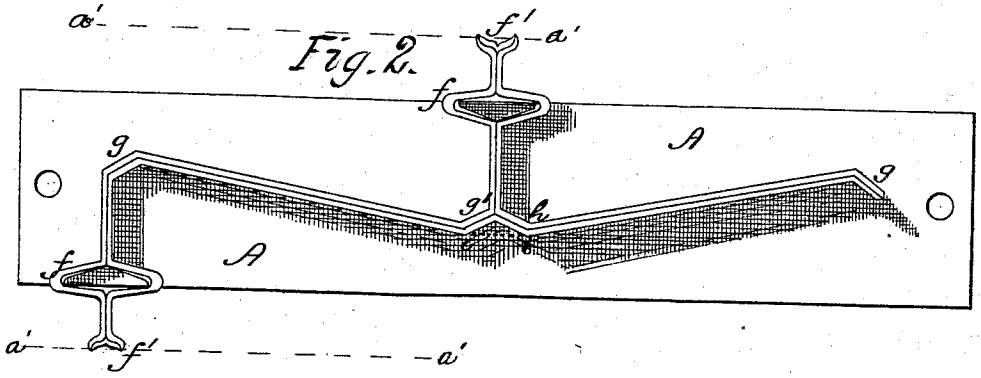


Fig. 3.

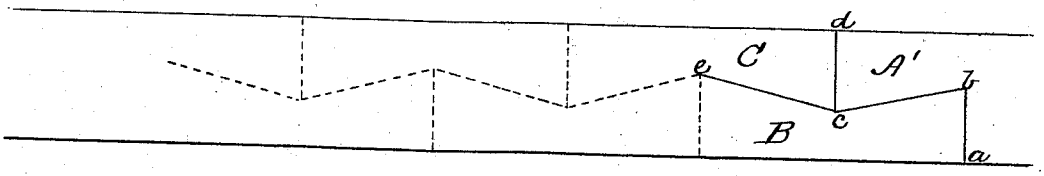
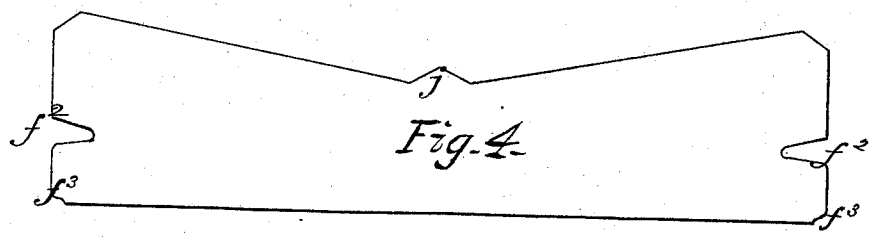


Fig. 4.



Witnesses.
E. A. Johnson.
J. S. Crawford

Inventor.
Abednego Dewes
per L. A. Burgin
Atty.

UNITED STATES PATENT OFFICE.

ABEDNEGO DEWES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN KNIVES FOR CUTTING PAPER-COLLAR BLANKS.

Specification forming part of Letters Patent No. **171,270**, dated December 21, 1875; application filed November 3, 1875.

To all whom it may concern:

Be it known that I, ABEDNEGO DEWES, of the city of Brooklyn, county of Kings, State of New York, have invented certain Improvements in Knives for Cutting Paper-Collar Blanks, of which the following is a specification:

My invention relates to knives for cutting out paper-collar blanks from a strip or sheet of paper, &c.; and it consists in a certain novel geometrical configuration of the knife, whereby great facility for cutting is obtained; and it has for its objects to obviate waste of material of which the collars are made, and to increase the capacity of the cutter, as will be fully hereafter set forth.

Figure 1 is a diagram illustrating the geometrical configuration of the knife. Fig. 2 represents the complete cutter. Fig. 3 is a diagram illustrating the manner of operation of the cutter, and Fig. 4 represents a paper-collar blank cut by the cutter.

For the purposes of rendering the principle on which the knife cuts clear and lessening the difficulty of a literal description of my invention I have embodied in the drawing a diagram showing at a glance the configuration of the knife, the niching-cutters and other slight irregularities being disregarded therein. The edge of the knife forms substantially three equal, similar, acute angles—viz., the two alternate angles *a b c*, *b c d*, the side *b c* being common, and the angle *d c e*, the side *d c* being common to it and the angle *b c d*. The angles *a b c* and *b c d* being similar, the sides *a b c d* are parallel. In Fig. 2 is shown the complete knife, its edge corresponding substantially to the lines of the diagram, Fig. 1. f f^1 are cutters for niching the extremities of the collar-blank, as shown at f^2 f^3, Fig. 4. The apexes of the angles are cut off by pieces *g g' g*, and where these pieces meet at *g'* they form the angle *i g h*. The knife is, in section, of the usual form, and may be either soldered to a flat plate, A, as shown, or wrapped around a cylinder.

The object of the peculiar construction of my improved knife will be obvious from the following description of its operation, and a contemplation of diagram, Fig. 3: The plate A is secured to a reciprocating head, and the strip of paper, which is the width between the lines *a' a'*, Fig. 2, being fed under it, the knife is brought down on it, producing portions of two collar-blanks. It will be seen that of these two blanks B is the more perfect, for not only has the angle *a b c* been cut, thus forming one-half of the collar complete, but the portion of the knife *c e* constituting a side of the angle *d c e*, which cuts one-half of the next collar, has cut a portion of the remaining half of the first collar. The knife then rises, and the paper being fed under it the length of a collar, it again descends, completing both collars, and cutting portions of the two that are to succeed, the portion of the knife *a b* cutting the end of the blank B, while the angle *d c b* cuts the remaining half of blank C, and thus the operation proceeds, every collar breaking joint, as it were, with the two blanks on the opposite side of the strip of paper. It will be observed that the angle *i g h* produces in the middle of the back of the collar-blank a little peak, *j*. This is serviceable for covering the button by which the collar is secured to the shirt; but should it be desirable to have it off, the angle *i g h* may be bridged over with a piece, as shown by dotted lines at *i i*, Fig. 2, and thus converted into a triangle which would cut away the peak.

It is obvious that this arrangement of knives may be multiplied either on a plate or cylinder; but no particular advantage would arise therefrom, and it would be embraced by my invention.

I claim—

A knife or die for cutting out paper-collar blanks from a strip or sheet of paper, the edges of which form three similar, equal, acute angles, *a b c*, *b c d*, and *d c e*, whereby two complete collar-blanks are cut from the strip or sheet of paper at each successive action of the knife thereon, substantially in the manner described and specified.

ABEDNEGO DEWES.

Witnesses:

E. H. JOHNSON,

WM. LINDSAY.