

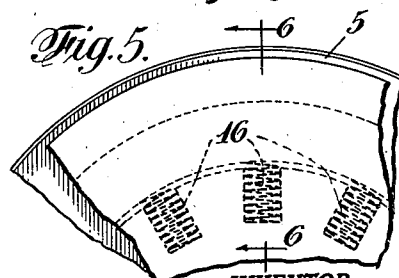
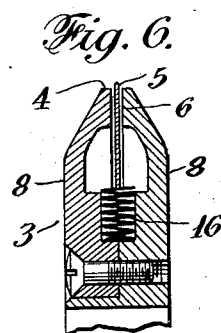
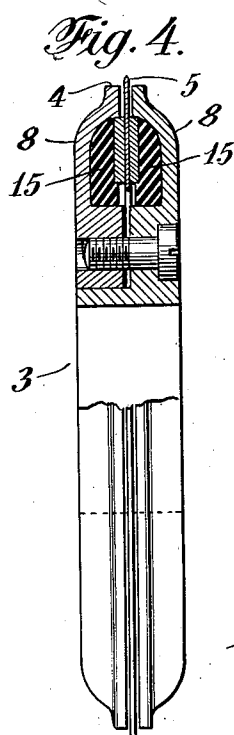
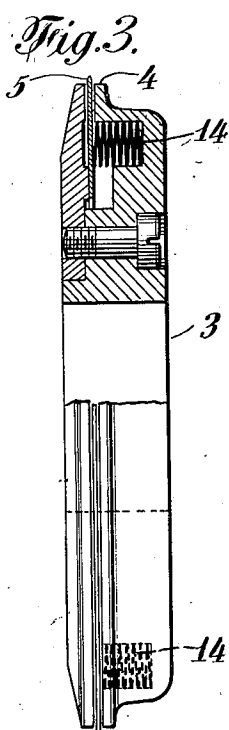
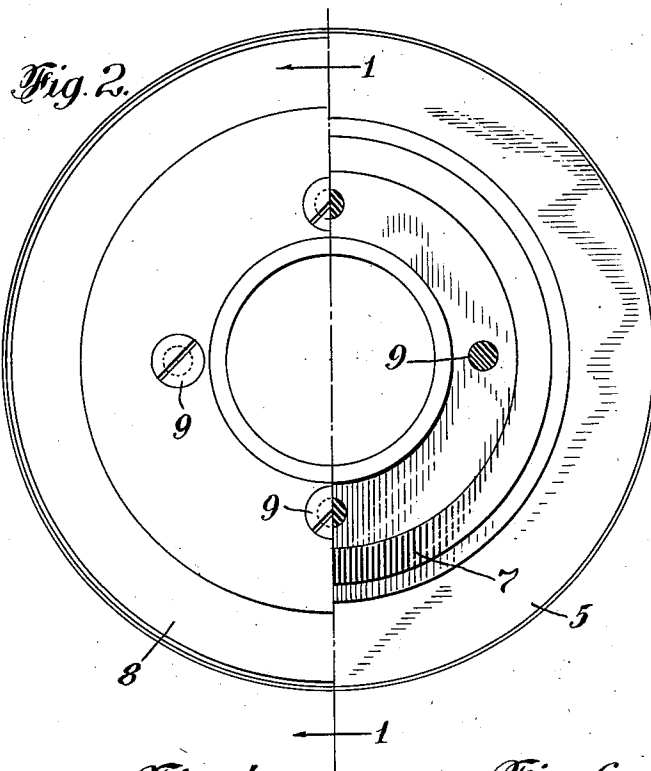
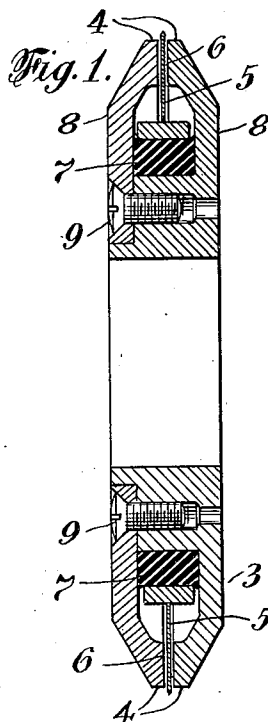
July 31, 1934.

G. B. BIRCH

1,968,242

SLITTING MEANS

Original Filed June 9, 1927 2 Sheets-Sheet 1



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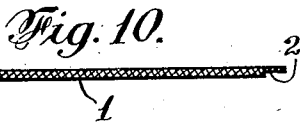
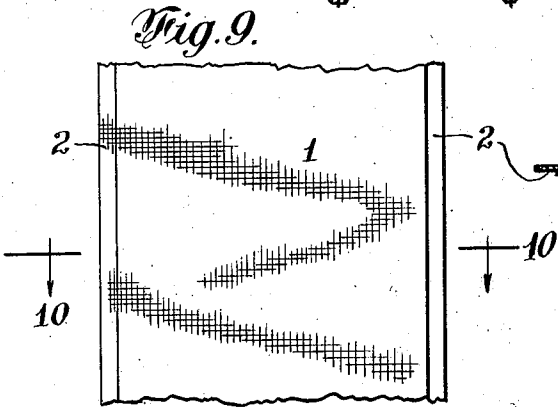
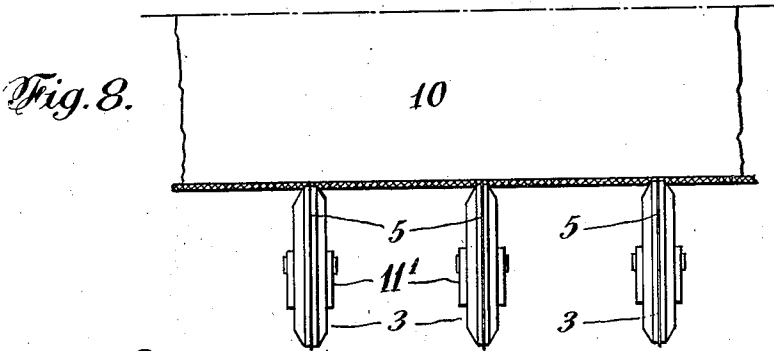
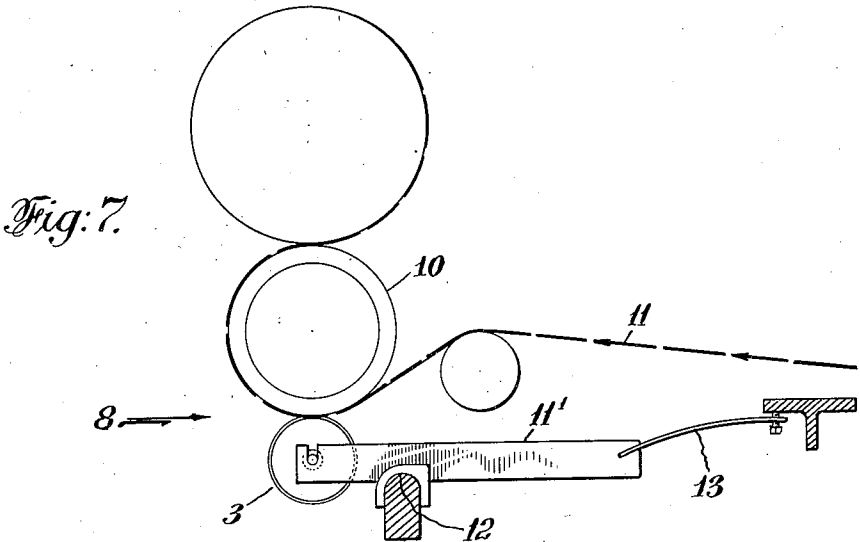
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G. B. BIRCH

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SLITTING MEANS

Original Filed June 9, 1927 2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

1,968,242

SLITTING MEANS

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Application June 9, 1927, Serial No. 197,554
Renewed February 10, 1931

3 Claims. (Cl. 164—70)

This invention relates generally to means for slitting flexible material.

Certain fabric articles, such as bandages, are produced from wide webs of material by a slitting process with the result that the raw slitted edges tend to unravel when the bandage is put into use, and this is especially true if the bandage is washed and used more than once. The main object and feature of this invention is to provide means for slitting such webs, whereby the slitted edges of flexible material will not unravel so readily as heretofore.

In the accompanying drawings the invention is disclosed in several concrete and preferred forms in which:

Fig. 1 is a sectional view, substantially on the plane of line 1—1 of Fig. 2, of a cutting member that may be used in connection with my invention.

Fig. 2 is a view in side elevation with parts broken away and in section, of the member shown in Fig. 1.

Fig. 3 is a view similar to Fig. 1 but showing a modified form of the invention.

Fig. 4 is also a view similar to Fig. 1 showing a still further modified form of the invention.

Fig. 5 is a fragmentary view of a member similar to that of Fig. 2 but showing a third modification.

Fig. 6 is a sectional view substantially on the plane of line 6—6 of Fig. 5.

Fig. 7 is a somewhat diagrammatic view of the cutting element associated with a backing member.

Fig. 8 is a view looking in the direction of arrow 8 of Fig. 7.

Fig. 9 is a fragmentary view of a slitted section produced by the method and means of this invention.

Fig. 10 is a sectional view substantially on the plane of line 10—10 of Fig. 9.

I have found that, by clamping or pressing flexible material during the process of slitting and at the point of slitting, the slitted edges of the slitted sections become more highly compressed than the remainder of the material and that this prevents or diminishes the tendency of the edges to unravel. This feature is illustrated in Figs. 9 and 10 where 1 indicates a slitted section and 2 the slitted edges shown more highly compressed than the remainder of the material. This action is produced by a rotatable cutting member 3 such as is shown in Fig. 1 which discloses a disc-like member having circumferential bearing surfaces 4, and an annular and yieldingly mounted slit-

ting member 5. This slitting member is here in the form of a ring or annulus that projects out through slot 6 between the bearing surfaces and is centered by a cushion or spring here shown as a body of rubber 7 held between cheeks 8 which latter are secured together by screws 9. It will be seen that when this cutting member is brought against a backing member such as 10 in Figs. 7 or 8, the annulus is depressed within the cutting member at the point where it engages the backing member and consequently the flexible material 11 is clamped with a rolling action by bearing surfaces 4 and the slitting takes place in the zone of the compressed material. The disc-like member is rotatably mounted in cutter lever 11' which is pivotally supported at 12 and which, when brought into engagement with the backing member, is held under tension by spring 13.

It will be understood that the annular slitting member may be held yieldingly in different ways. In Fig. 3, for instance, springs 14 that press against the face of the slitting member are utilized. These springs tend to resist movement of the annulus but do not prevent it. Similarly in Fig. 4 friction member 15 performs the same function as springs 14. In Figs. 5 and 6 spiral springs 16 form a resting surface similar to rubber cushion 7 of Figs. 1 and 2.

I claim:

1. Slitting means including: a rotary backing member, and a cooperating rotary cutting member, whereby a web of flexible material may be led between said members and clamped by a rolling action, said cutting member including an annular slitting member substantially concentric with and yieldingly projecting from said cutting member and engaging the surface of the backing member.

2. Slitting means including: a rotary backing member, and a cutter element consisting of a rotatable member having two circumferential bearing surfaces to engage the backing member and a yieldingly mounted annular slitting member intermediate the bearing surfaces.

3. A slitting element comprising a rotatable member having two circumferential bearing surfaces and a yieldingly mounted annular slitting member intermediate the bearing surfaces.

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