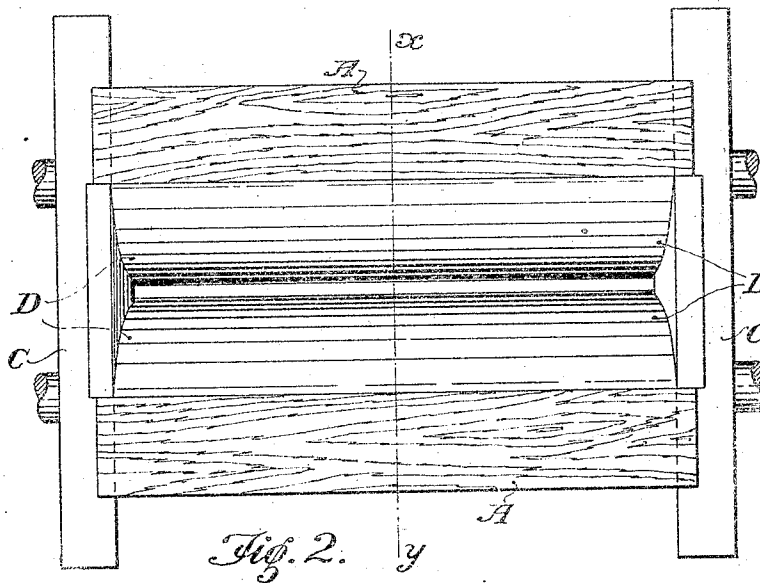
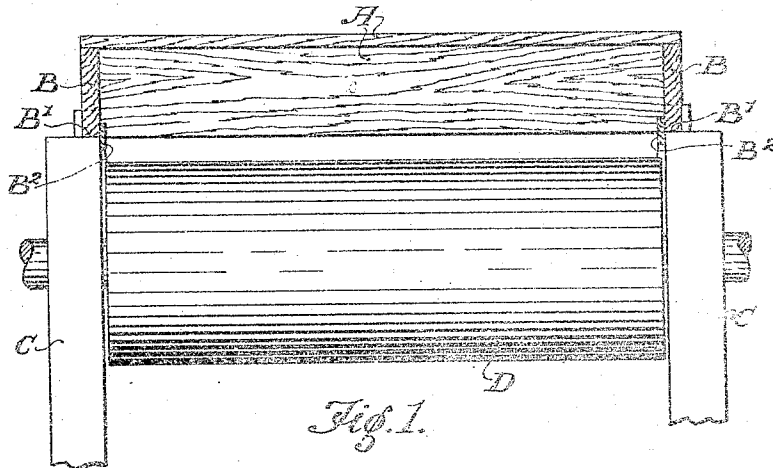


L. GAISMAN.
 GUARD FOR RUBBER MILLS AND LIKE MACHINES.
 APPLICATION FILED SEPT. 2, 1916.

1,341,422.

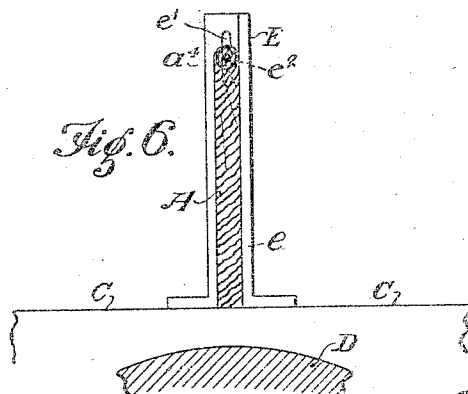
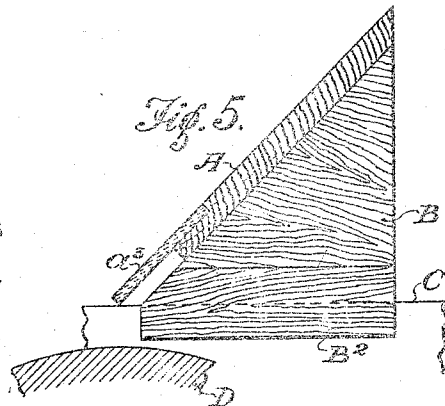
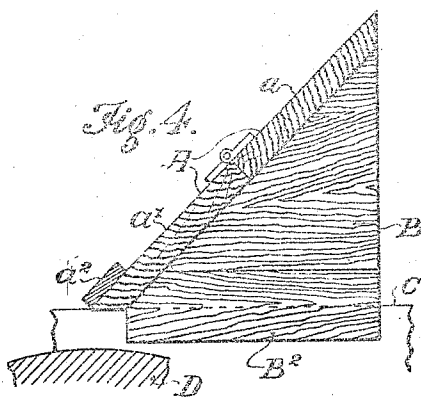
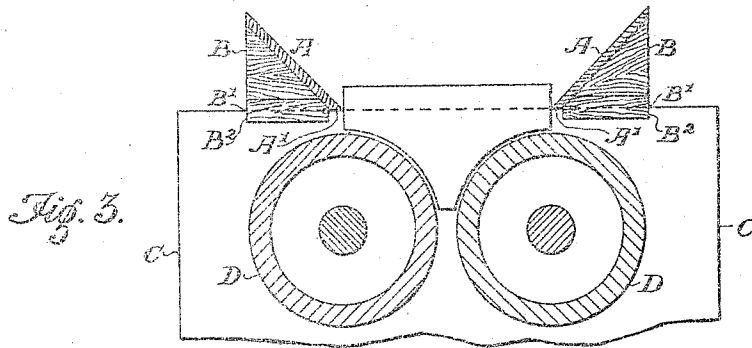
Patented May 25, 1920.
 2 SHEETS—SHEET 1.



Inventor,
 Lucien Gaisman.
 by
 Rosenberg, Starkbridge & Co.
 Attys.

1,341,422.

2 SHEETS—SHEET 2.



Inventor.
Lucien Gaisman
by
Raustrass, Stockbridge & Co.
Attys.

UNITED STATES PATENT OFFICE.

LUCIEN GAISMAN, OF MANCHESTER, ENGLAND, ASSIGNOR OF ONE-HALF TO SYLVAIN DREYFUS, OF MANCHESTER, ENGLAND.

GUARD FOR RUBBER MILLS AND LIKE MACHINES.

1,341,422.

Specification of Letters Patent.

Patented May 25, 1920.

Application filed September 2, 1916. Serial No. 118,170.

To all whom it may concern:

Be it known that I, LUCIEN GAISMAN, a citizen of the Republic of Switzerland, and a resident of Longsight, Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Guards for Rubber Mills and like Machines, of which the following is a specification.

This invention relates to guards for rubber and like mills and has for its object to provide an improved guard especially applicable to rubber mills such as grinders, mixers, washers and calenders and which while affording effectual means for preventing the hands of the operative being nipped or crushed between the rolls of the mill will not interfere with the feeding of the material under treatment to and between the rolls.

A guard in accordance with this invention comprises a piece, length, plate or the like of wood, metal or other appropriate substance arranged lengthwise of and vertically or at an inclination above the roll to be guarded with its lower or rear edge at a suitable distance above the periphery of the roll to permit the passage of a normal thickness or quantity of material and being so adapted, or having its lower part or edge so adapted, that while it may yield to permit the passage of an abnormal thickness or quantity of material it will nevertheless offer an obstruction to the operative's hands should the operative pass his hands too far over or around the roll.

In the accompanying drawings Figures 1, 2 and 3 are respectively an elevation, a plan and a transverse section on the line $x-y$ in Fig. 2 of a rubber mixing mill fitted at the front and rear with one form of guard in accordance with the invention, only sufficient of the mill necessary for elucidation being illustrated. Figs. 3^A, 4, 5 and 6 are transverse sections of modified arrangements of guard.

Referring first to Figs. 1, 2 and 3 of the drawings the form of guard illustrated therein comprises a member A, consisting of a length of wood, having attached to its ends triangular pieces B, B whereby it is supported at an inclination on the side frames C, C in which the rolls D, D are mounted. Conveniently the triangular pieces

B, B may be such that the member A lies at an inclination of about 45°.

The two guards are arranged on the side frames C, C so that the members A, A incline outwardly as shown and their lower edges A¹ are approximately central of the rolls D, D and an appropriate distance, say about two inches, above the peripheries thereof. The spaces between the lower edges of the guards and the rolls is sufficient to permit the passage of a normal thickness of material under treatment but if the operator who is feeding the material to the rolls should, while feeding, pass his hands too far over the top of either roll, they will come into contact with the corresponding guard and his attention will thereby be called to the fact.

In order to allow the lower edges of the members A, A of the guards to yield to permit the passage of an abnormal thickness or quantity of material the triangular end members B, B of the guards may simply rest on the side frames C, C so that the guards may tilt about the lower front corners B¹, B¹ of the end members B, B. If desired the guards may be weighted and stops B², B² clips or the like fitted to the inner sides of the end members B, B or the side frames C, C to prevent lateral displacement of the guard.

Instead of the guards being adapted to tilt about the corners B¹, B¹ of the end member B, B to permit the passage of an abnormal thickness of material, the end members B, B may, as shown in Fig. 3^A, be hinged at their corners B¹, B¹ to the side frames C, C by hinges B³ on which the guards can rock to allow the edges A¹ to yield. Or the members A, A may comprise a fixed part a , Fig. 4, and a yielding part a^1 hinged to the fixed part and, if desired, weighted by a metal bar a^2 or otherwise, or, as shown in Fig. 6, the members A, A may be made of lesser width and their lower edges provided with yielding flaps a^3 of rubber or other suitable material. In any event, however, the arrangement is such that the operator cannot pass his hands over a roll without their coming into contact with the guard.

The inclination of the members A, A prevents them from interfering with the feed-

ing of the material to the rolls and the operator's view of the other roll and between the rolls. Further the inclined members A, A serve as chutes for feeding the material to the rolls when it is fed over the top of the guards in the first stages of treatment.

According to the modification illustrated in Fig. 6 the guard member A is pivoted at or about its upper edge and arranged vertically though, if desired, it may be arranged at an inclination to the vertical. In such cases the member A may be pivoted on a rod a^4 adjustably clamped by nuts e^2 in slots e^1 in brackets E carried by the frames C, C, and the member A may normally bear against a stop e or other suitable abutment. Or the member A may be in two parts or be provided with a yielding flap as above described with reference to Figs. 4 and 5. In each case the member A is, as before, disposed with its lower edge approximately central of the roll to be guarded and at a distance above the periphery of same to permit the passage above of a normal thickness of material under treatment so that while the guard member A, or its lower part, is free to yield to allow the passage of an abnormal thickness of material, the operator cannot pass his hands over the roll without their coming into contact with the guard member.

If desired the member A of the improved guard may be of metal or other appropriate material.

As will be obvious various other modifications of the improved guard may be devised without departing from the nature or spirit of the invention.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a rubber mill, the combination with rollers and a supporting frame, of a guard for said rollers disposed adjacent one of the rollers and spaced therefrom an amount slightly greater than the thickness of material normally passing between the rollers and the guard, said guard being hingedly mounted on the supporting frame, whereby the passage of abnormal thicknesses of material between the guard and the rollers

will be permitted by the swinging of the guard.

2. In a rubber mill, the combination with rollers and a supporting frame, of a guard for said rollers comprising a member extending longitudinally of one of said rollers, and spaced therefrom an amount slightly greater than the thickness of material normally passing between the rollers and the guard, end members on said guard member, and means for mounting on said supporting frame said end members and thereby the guard member to permit the guard member to swing away from the roller when an abnormal thickness passes over the roller.

3. In a rubber mill, the combination with rollers and a supporting frame, of a guard for said rollers spaced from one of said rollers an amount slightly greater than the thickness of material normally passing over one of said rollers, and means for mounting the guard on said supporting frame to permit the guard to yield automatically for permitting the passage over the rollers of abnormal thickness of material.

4. The improved guard for the rolls of rubber mills and like machines, comprising a guard member, and triangular end members for supporting said guard member at an inclination longitudinally of the roll to be guarded with its lower edge at a distance above the periphery thereof to permit the passage of a normal thickness of material under treatment; the guard being adapted to tilt or rock on said triangular end members so that while said guard member offers an obstruction to the hands of the operator if passed too far over or around the roll, the lower edge thereof may yield to permit the passage of an abnormal thickness of material.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUCIEN GAISMAN.

Witnesses:

EDMUND WARD PATTISON,
HAROLD WALKER.