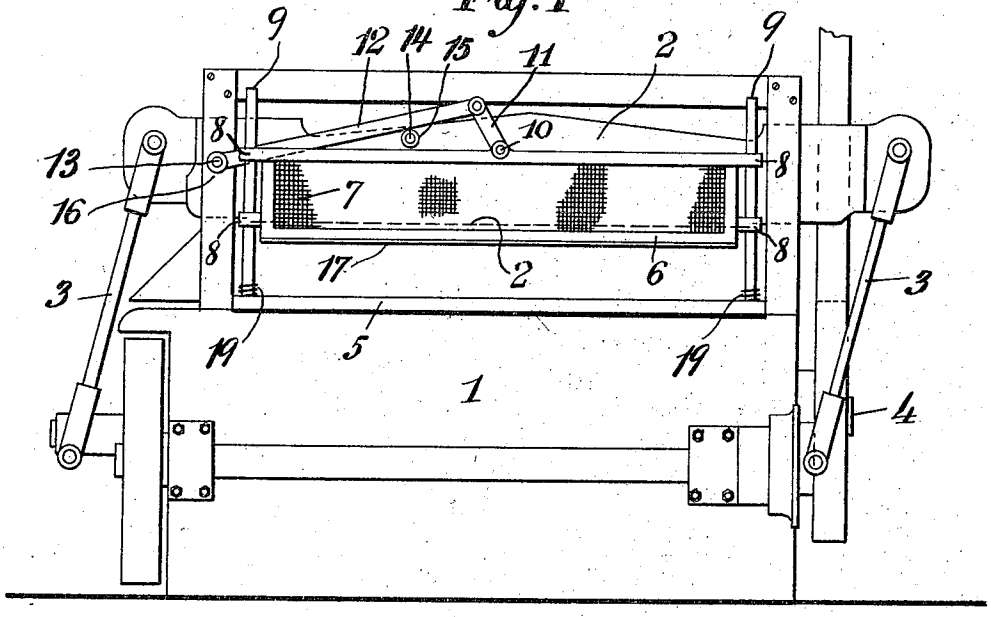
J. A. MOORE.

SAFETY GUARD FOR CUTTING MACHINES.

APPLICATION FILED APR. 14, 1916.

1,204,473. Patented Nov. 14, 1916.

Fig. 1



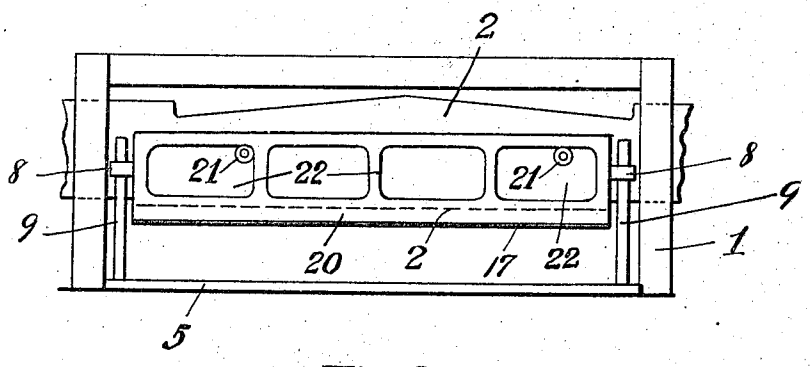


Fig. 2

James Arthur Moore. Inventor

By his Attorney

Raymond C. Spaulding.

UNITED STATES PATENT OFFICE.

JAMES ARTHUR MOORE, OF NEW YORK, N. Y.

SAFETY-GUARD FOR CUTTING-MACHINES.

1,204,475. Specification of Letters Patent. Patented Nov. 14, 1916.

Application filed April 14, 1916. Serial No. 91,011.

To all whom it may concern:

Be it known that I, JAMES ARTHUR MOORE, subject of Great Britain, (have taken out first papers,) and resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Safety-Guards for Cutting-Machines, of which the following is a specification.

This invention relates to improvements in safety guards for cutting machines with particular reference to machines for cutting paper or cardboard in which the cutting member is operated in a vertical plane.

The object of the invention is to provide a safety device comprising a guard and suitable operating means therefor adapted to be attached to the cutting machine to prevent injury to the hands of the operator as the cutting member descends to cut the paper or cardboard.

One object of the invention is to provide a safety device or guard for the purpose set forth of simple, practical construction and adapted to be manufactured at a low cost.

Another object is to provide a safety guard adapted to be attached to the cutting machine without requiring any material alteration thereof.

Other objects will appear as this specification proceeds while reference is had to the accompanying drawing illustrating the preferred form of my invention and in which—

Figure 1 is a front view of a cutting machine equipped with a safety guard embodying my invention, and Fig. 2 shows a modification.

In the drawing the reference numeral 1 denotes the frame of the machine.

2 is the knife operated by means of the connecting rods 3, 3 which are actuated in any usual and suitable manner from the driving shaft 4.

5 is the bed plate upon which the cutting is done.

The safety guard may be made of any suitable form and material. In the present instance it comprises a frame 6 fitted with a wire mesh 7 and provided with guiding lugs 8, 8 which slide upon the guiding rods 9, 9 suitably mounted upon the bed plate. The guard is pivoted at 10 to a link 11 which in turn is pivoted to an arm 12. The latter is pivoted at 13 to the frame.

14 indicates a pin secured to the cutting member and which carries a roller 15 upon which the arm 12 and the guard rest. The various parts are so proportioned and assembled that the lower edge of the guard projects below the knife, so that the guard precedes the knife in the descent as is obvious.

In Fig. 1 the parts are shown in their upper position when it will be seen that the guard is elevated sufficiently above the bed plate to permit the operator to handle the paper and adjust it under the knife. When the machine is operated to cut, the knife descends and consequently the pin 14 is lowered, permitting the guard to fall. If now the operator should have his hands under or close to the knife, the guard will, as it descends, fall upon his hands which he will instinctively withdraw, thus saving himself from injury. Upon the upward movement of the knife, the pin 14 lifts the guard and returns it to the position shown in the drawing. The position of the guard with respect to the knife may be adjusted for the particular machine by mounting the pivot 13 and the pin 14 at the proper places for hanging the guard so that its lower edge projects a predetermined distance below the knife. The guard may be lifted easily by the operator in working the machine as it has no direct connection with the knife. The lateral distance between the latter and the guard may be adjusted by a washer 16 on the pivot 13. If desired, the guard may have a lower edging 17 of rubber or like soft material and springs 19, 19 may be provided to break the fall of the guard.

Fig. 2 shows a modification in which the guard 20 is hung directly on pins 21, 21 secured to the knife. The guard is guided by lugs 8 sliding on the guiding rods 9 the same as in Fig. 1. The range of adjustment and the freedom with which the guard is lifted and operated is more limited by the construction in Fig. 2, yet this manner of supporting and operating the guard may prove sufficient for many types of machines. The guard 20 must of necessity be provided with cut out portions 22 or similar means to permit the pins 21 to follow the knife in its inclined movements. However, it will be seen that the invention as disclosed in the foregoing and as illustrated in the drawing, provides a guard mounted to move with the knife in advance thereof on the cutting stroke and be lifted by the knife on the re-

turn stroke, yet adapted to be freely lifted and adjusted by the operator independently of the movements of the knife.

The construction shown and described allows for considerable change both as to the form, material and operation of the guard without departing from the spirit of the invention. I do not, therefore, wish to be limited to the exact disclosure, but claim all such changes and modifications as come properly within the scope of the appended claim.

I claim:—

The combination with a cutting machine, the vertically movable knife thereof and its operating means, of a guard, vertical guide rods for said guard mounted upon the machine, guiding lugs on the guard adapted to slide upon said guide rods, supporting means for said guard arranged to permit the same to descend in advance of the said knife and comprising a lever pivoted at its one end to the said machine, a link pivotally connected to the other free end of said lever and to the said guard, and a roller on said knife adapted to engage the said lever to lift the guard, springs on said guide rods for breaking the fall of the guard and a soft rubber edge member secured to the lower edge of the said guard.

Signed at 4219 3rd ave., in the county of Bronx, New York, and State of New York, this 8th day of April A. D. 1916.

JAMES ARTHUR MOORE.