

E. A. LA DUE.  
PAPER CUTTING MACHINE.  
APPLICATION FILED JUNE 28, 1909.

943,258.

Patented Dec. 14, 1909.  
2 SHEETS—SHEET 1.

Fig. 1.

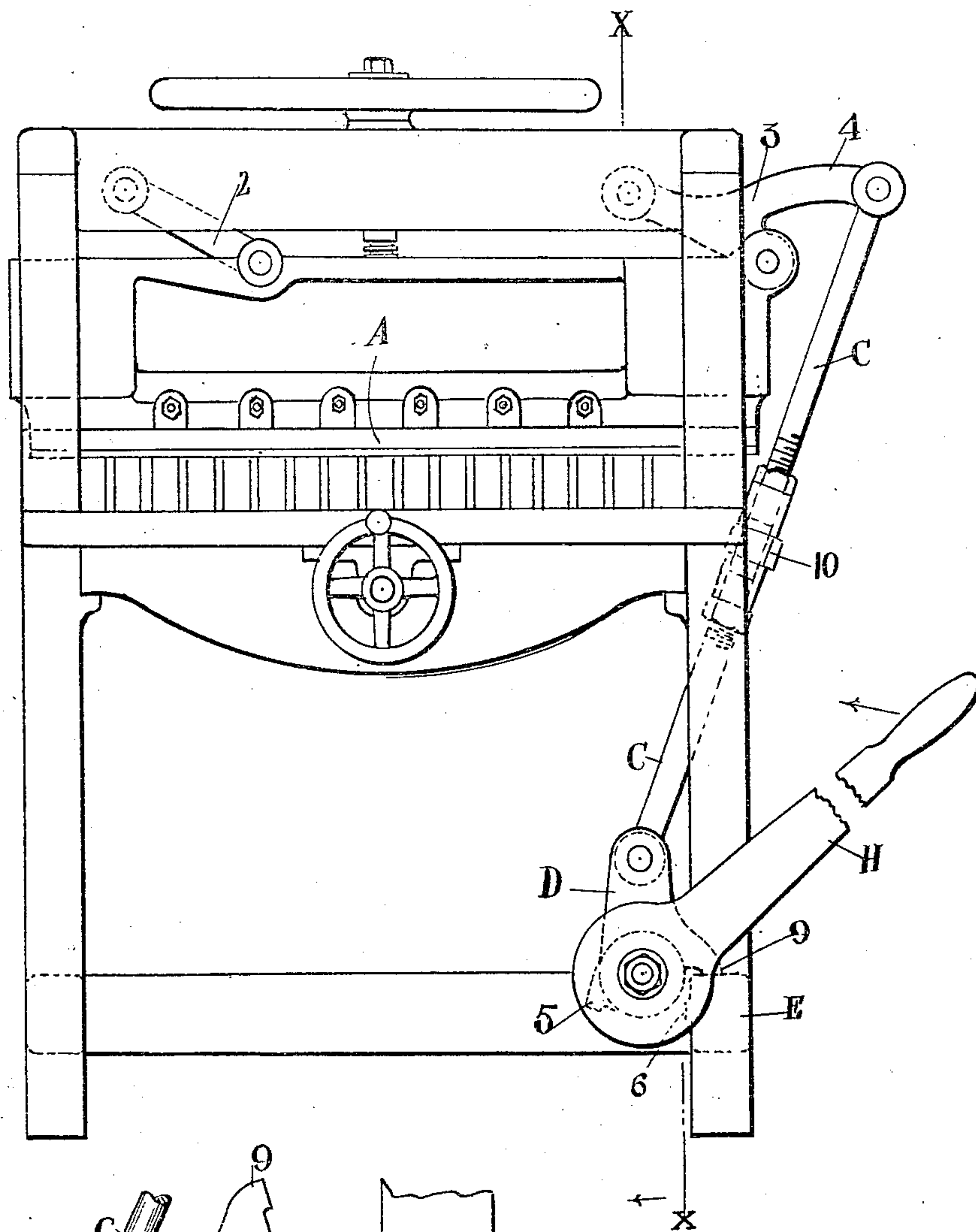
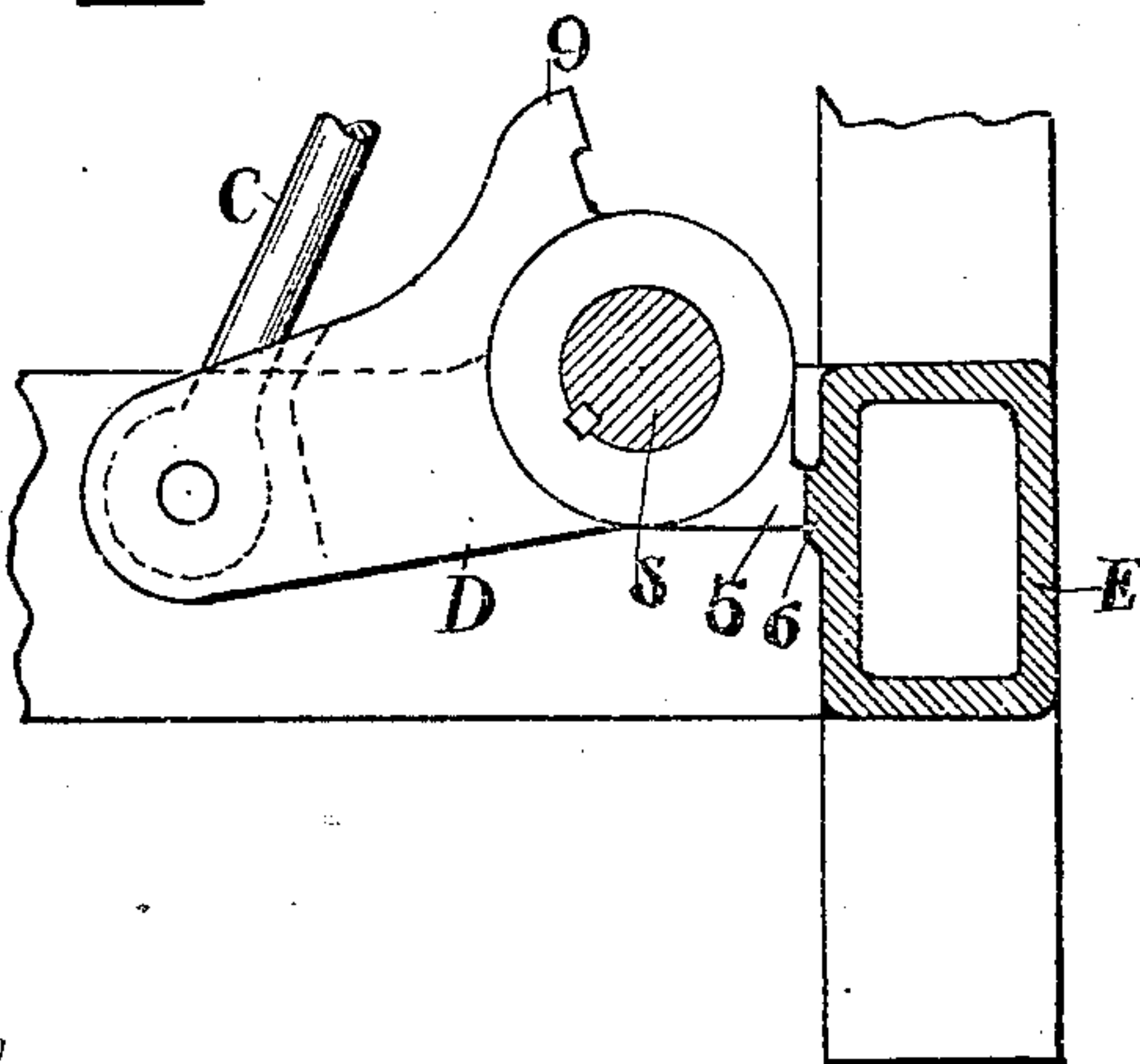


Fig. 2.



ATTEST  
E. M. Fisher  
F. C. Mussum.

INVENTOR  
EUGENE A. LA DUE

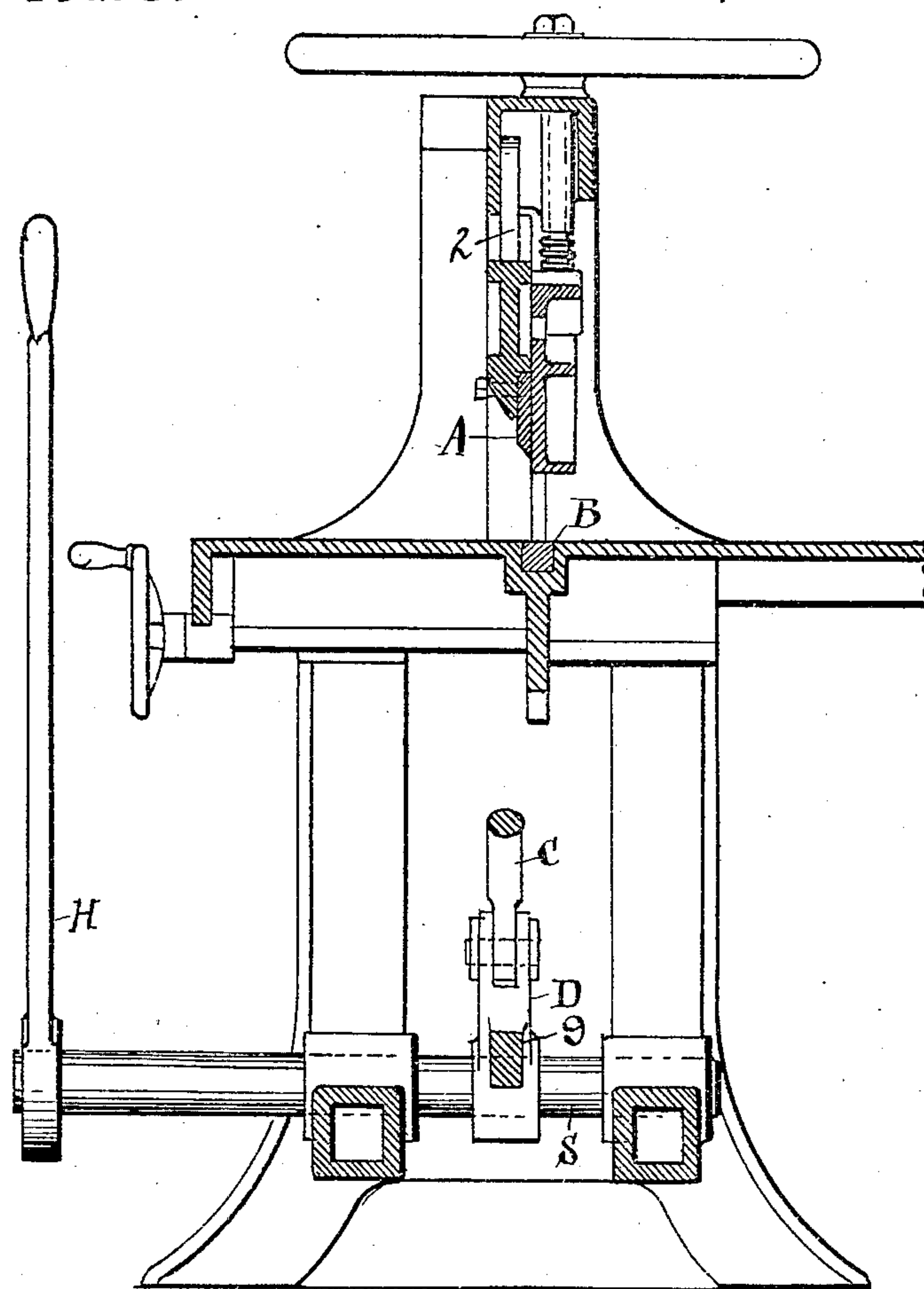
BY Fisher & Moser  
ATTYS.

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FIG. 3.



ATTEST  
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# UNITED STATES PATENT OFFICE.

EUGENE A. LA DUE, OF CLEVELAND, OHIO, ASSIGNOR TO THE CHANDLER & PRICE COMPANY, OF CLEVELAND, OHIO, A CORPORATION.

PAPER-CUTTING MACHINE.

943,258.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed June 28, 1909. Serial No. 504,891.

*To all whom it may concern:*

Be it known that I, EUGENE A. LA DUE, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Paper-Cutting Machines, of which the following is a specification.

This invention appertains to paper cutting machines, and the invention consists in means to limit the descent of the blade in respect to the cutting block or base so as not to sink the blade into the block as the strokes occur, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the machine, and Fig. 2 is a sectional detail as hereinafter more fully described. Fig. 3 is a sectional elevation of the machine on line  $x-x$ , Fig. 1.

The invention is shown in connection with a hand operated machine and the object and nature thereof will be readily seen from the foregoing views and description.

In machines of this general character the knife or blade A which cuts the paper is mounted over a wooden cutting block or strip B, set into the bed or table of the machine beneath said blade and for the blade to cut upon without injury thereto, and said strip or block B is adapted to be removed and replaced by another strip when it becomes unserviceable. As to this it may be observed that length of service depends almost entirely upon the care that is taken by the operator in handling the blade when it approaches the end of its stroke upon said strip B, and the life of the strip can be prolonged by taking care not to force the blade down into the wood, and it can also be shortened by carelessness in this particular. However, since the blade must in any event be pressed into cutting contact with the strip to sever the lower sheets of paper, it is by no means easy to stop at that point and not drive the blade down into the strip more or less even if ordinary or reasonable precaution be exercised. Of course if this is done repeatedly the strip soon becomes impaired or unserviceable and a new one is required. Then it also occurs that as the blade sinks into the strip or block it is liable to become more or less wedged therein and the strength

of the operator is taxed to withdraw it. Upon the whole, therefore, the old construction and arrangement of the machine as to these particulars was defective and unsatisfactory and I have therefore developed an improvement thereon which overcomes the objection as to cutting out of the block or strip B and protects and prolongs the life thereof as will now appear. Thus, the blade is suspended on or by two links 2 and 3, and link 3 has an arm 4 engaged at its extremity by connecting rod C from the operating arm D on cross shaft S at the bottom of the machine. A hand lever H is mounted on the end of shaft S to rotate the same, and this also rotates arm D keyed thereon, and through said arm and the link connections shown operates blade A. Said blade has a parallel movement up and down by reason of the inclined position of its supporting links 2 and 3 while at the same time it moves correspondingly lengthwise as it is depressed, thus giving the blade something of a shearing cut.

Now, having in mind the primary object hereinbefore mentioned of limiting the descent of the cutting blade on the cutting strip by means definitely provided for this purpose and thus projecting the cutting block or strip, I provide the arm D with a lug, shoulder or projection 5 at its rear and base and behind shaft S in location and adapted to strike or stop against a projection or lug 6 on the cross bar or tube E of the main frame of the machine and which limits the depression of said arm and consequently of blade A also. Of course if the lug or projection 5 were made somewhat longer no raised portion or projection 6 on the machine frame would be required, and thus a fixed limit to the depression of the blade is interposed in the operating mechanism therefor and presumably with such accuracy as to the stop 5 that it strikes exactly at the time when the blade has severed the lowest sheet on strip B and not before nor after. Of course this implies very great nicety of adjustment or setting of the parts, and to the end that this may be easily accomplished I provide a two-part connecting rod or link C having the adjacent ends thereof threaded and united by a turnbuckle 10, or its equivalent. By this means the relation of the cutting edge of the blade to the strip or block



C is brought under easy and exact control and the blade can be set at any time to greater or less cutting depth as may be required to bring it into exact working relations with stop 5. Then having set the blade aright in this way the cutting takes care of itself by or through stop 5.

It will be noticed that arm D is located on shaft S midway between the sides of the machine frame on which the shaft is mounted, and this not only affords a direct vertical connection with the blade carrying link 3 but avails the said arm of any spring there may be in said shaft to relieve the said mechanism of strain or harshness in operation. I also show a stop lug or projection 9 on the opposite side of the base of arm D from stop 5 adapted to contact with the top of cross bar E, as in dotted lines, Fig. 1, when the blade has been raised to its maximum height. When the blade reaches its lowest depression the stop 5 engages as seen in Fig. 2, and thus said arm with its stops 5 and 9 has approximately a quarter turn from one position to the other. If a stop corresponding to projection 5 were fixed on shaft S independently of arm D it would be the equivalent of the construction shown.

What I claim is:

1. A paper cutting machine having a main frame, a cutter blade and rotatable shaft mounted therein, links suspending said blade and an arm fixed on said shaft, one of said links having an arm, an adjustable connection between said arms and a stop adapted to engage said main frame and limit the depression of said arms and thereby also limit the depression of said blade.

2. In paper cutting machines, a supporting frame, a cutter blade and mechanism to operate the blade comprising a projection adapted to be rotated on a fixed axis, links suspending said blade from said frame and one of said links having a projection, a connection C uniting said projections and adjustable as to length thereof and a stop to limit the downward movement of said projection D, whereby the descent of the blade upon the cutting block is fixed at will.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE A. LA DUE.

Witnesses:

H. S. FISHER,  
E. M. FISHER.