W. Adamson.

Paper Cutting Mach.

No. 13,153. Patented Jul. 3, 1855.

Fig. 1.

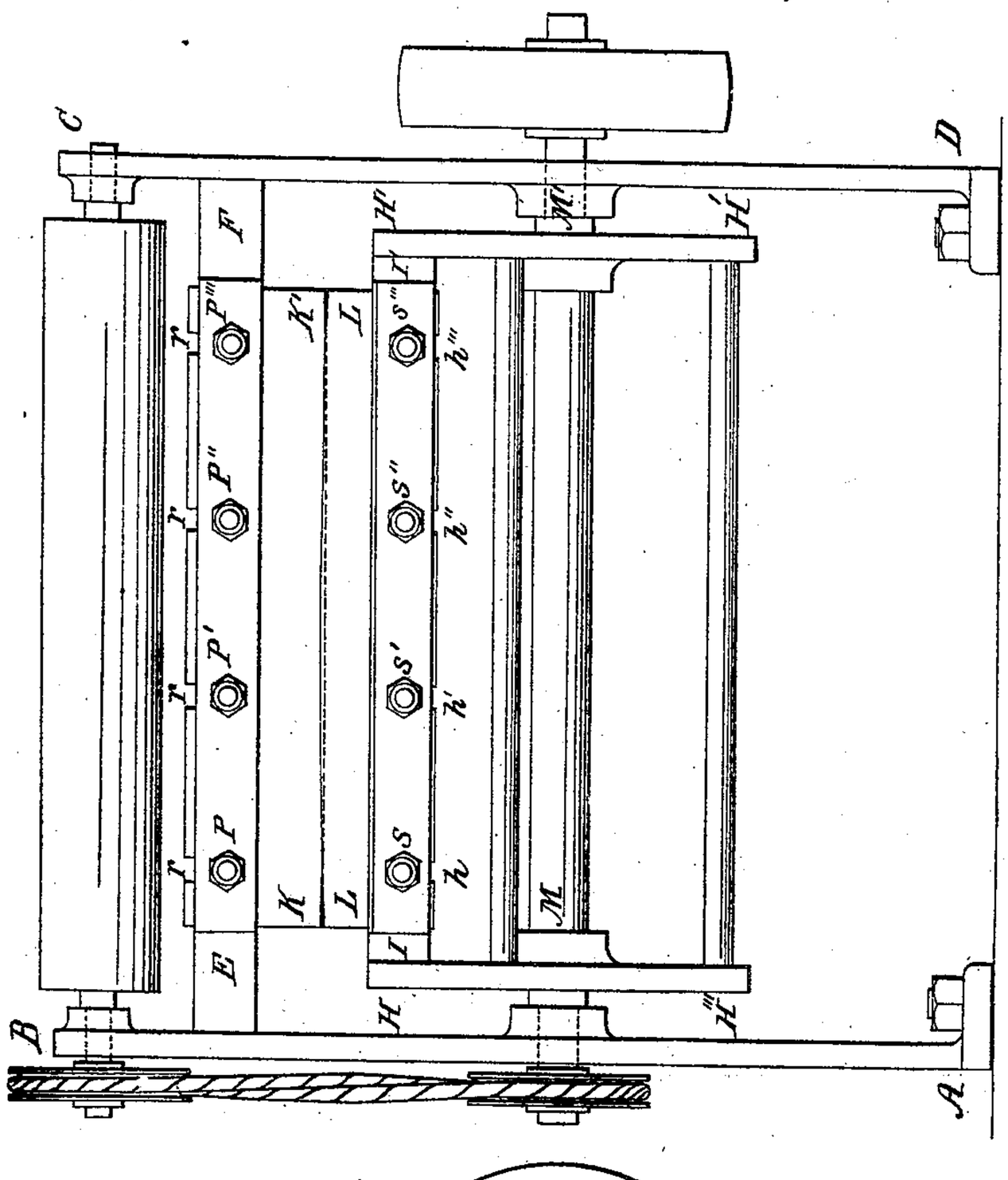
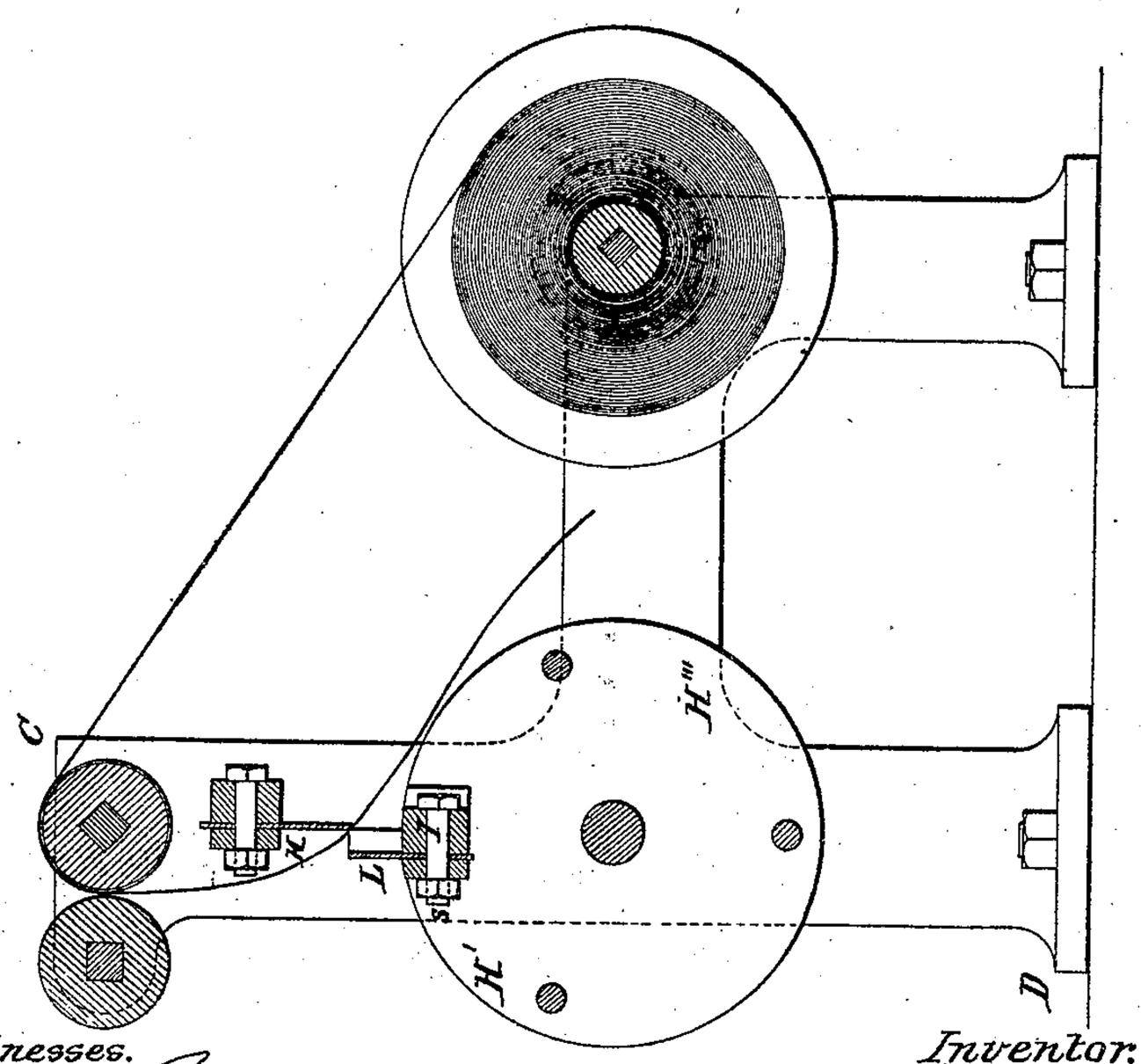


Fig. 2.



Witnesses.
Alfred H Greer
George Harding.

Inventor.
Wm Adamson

UNITED STATES PATENT OFFICE.

WILLIAM ADAMSON, OF PHILADELPHIA, PENNSYLVANIA.

SANDPAPER-CUTTING MACHINE.

Specification of Letters Patent No. 13,153, dated July 3, 1855.

To all whom it may concern:

Be it known that I, WILLIAM ADAMSON, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Construction of Cutters for Sandpaper-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a front view of my improved revolving cutters. Fig. 2 represents a side view of my revolving cutter.

Heretofore in the manufacture of sand paper it has been customary to make the sand paper in long sheets and to cut it into the required lengths by means of large shears or sliding knives. It had been found that revolving cutters when used for slitting or cutting sand paper became rounded or beveled at the edges in consequence of the gritty material in the paper, and soon ceased to cut at all.

My present improvement consists in a combination of a revolving blade of thin metal and a similar stationary blade so arranged that the revolving blade shall slightly overlap the stationary blade and shall cut by springing against and under it. Thereby, the sand paper is cut into the required lengths.

A, B, C, D in the accompanying drawing is the stand or frame for supporting the rollers and revolving cutters.

H H′ and H′ H″ are two circular disks or nuts attached to and revolving on a central axis M M′.

I I′ is the cross bar attached to the hubs H H′. In this box the blade L L′ is attached by means of set screws S, S′, S″, S‴ and slots *h h′* &c., cut into the heel of the blade. This blade is made of thin steel saw blade so as to spring and is square on the edge. This blade L L′ projects beyond the bar I I′ sufficiently to allow of a spring whenever L L′ strikes K K′.

K K′ is a stationary blade of the same material and dimensions as L L′. This blade K K′ is secured to the upper cross bar E F by slots and set screws J J′ J″ J‴. The operation of cutting is effected by the rotation of the blade L L′ against the blade K K′. The paper advances and passes between the knives to the desired length during the time occupied by the blade L L′ in revolving as in ordinary paper cutters. The blades L L′ and K K′ are adjusted by the slots and set screws so that L L′ shall overlap K K′ very slightly. The extremity of L L′ is also made slightly rounding. The effect of this overlapping is that as the blade L L′ revolves the blade L L′ springs back and is forced under K K′ and the cutting of the paper is effected immediately by the spring or elasticity of the blades L L′ and K K′

I have found this mode of cutting with thin elastic blades of uniform thickness arranged so as to overlap and cut by means of the spring or elasticity of the blades to be peculiarly advantageous in cutting sand paper, wet paper, enameled cards, cloth, etc. The blades not being beveled on the edges are not ground and do not require to be ground. In said paper cutting the gritty matter cuts the edge down smooth and the blades are set forward by the set screws and slots as fast as this occurs.

Having thus described my improvement what I claim and desire to secure by Letters Patent is—

The employment of thin elastic metallic blades L L′ and K K′ of uniform thickness so arranged that the revolving blade shall overlap slightly the stationary blade in the manner and for the purpose substantially as herein set forth.

WM. ADAMSON.

Witnesses at signing:
GEO. HARDING,
ALFRED C. GOWER.