

A. H. Patch's Corn Sheller.

PATENTED JUL 4 1871

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Fig. 1.

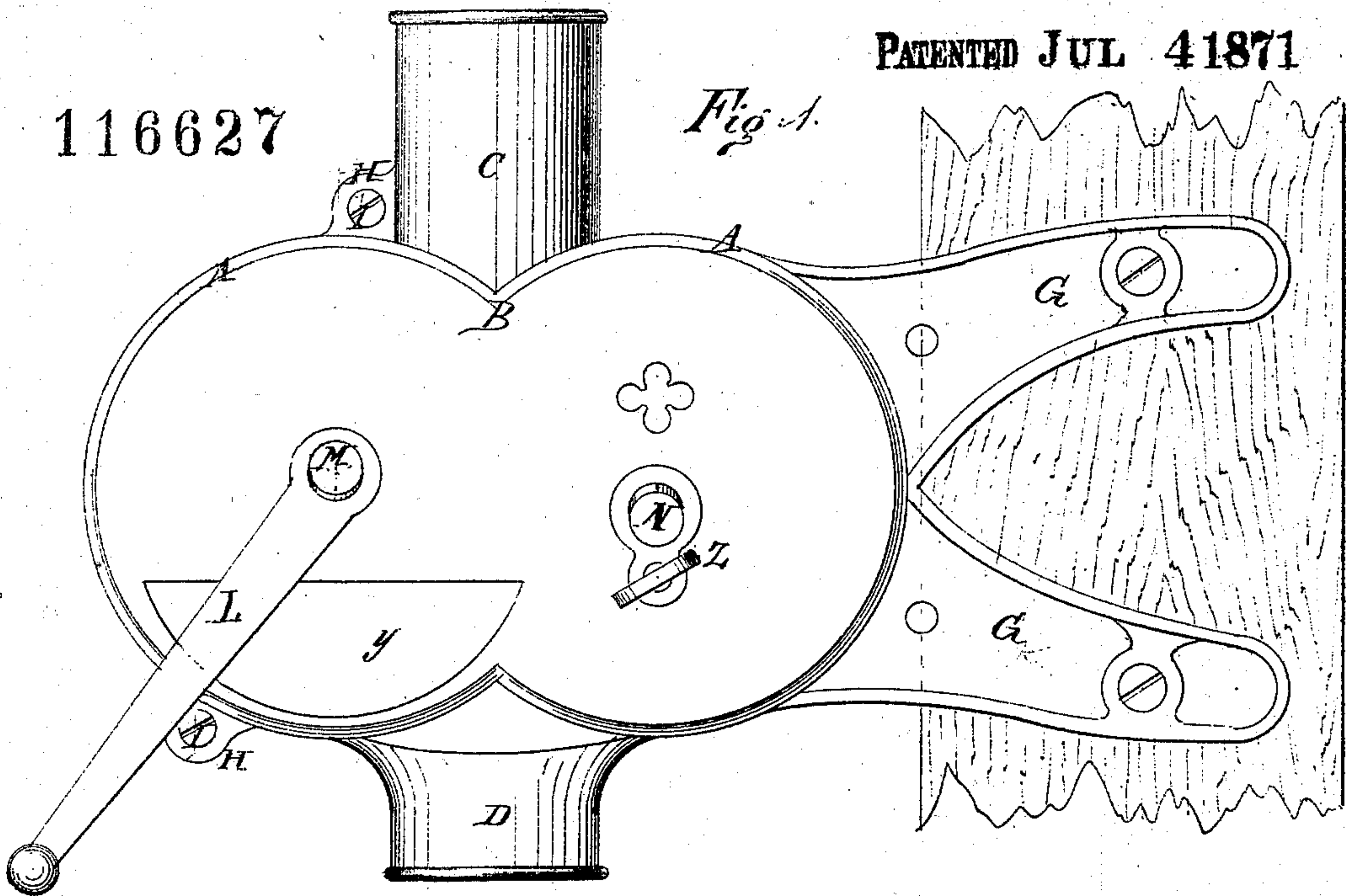


Fig. 2.

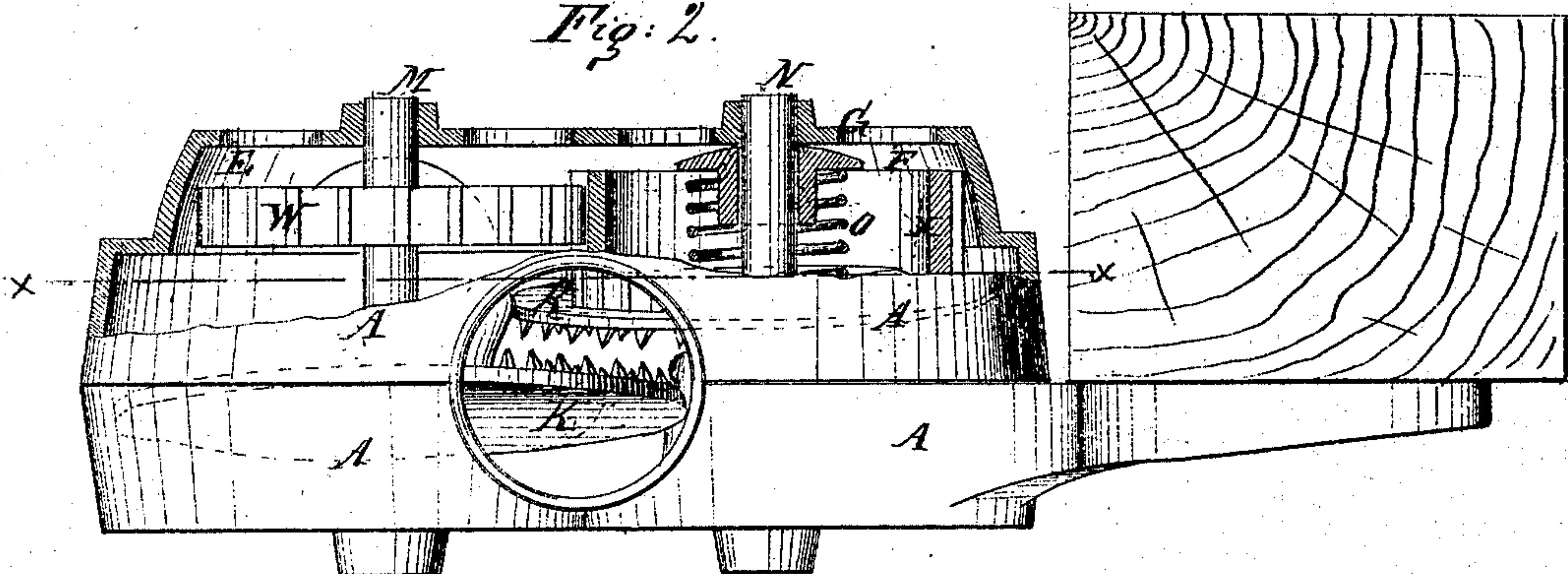
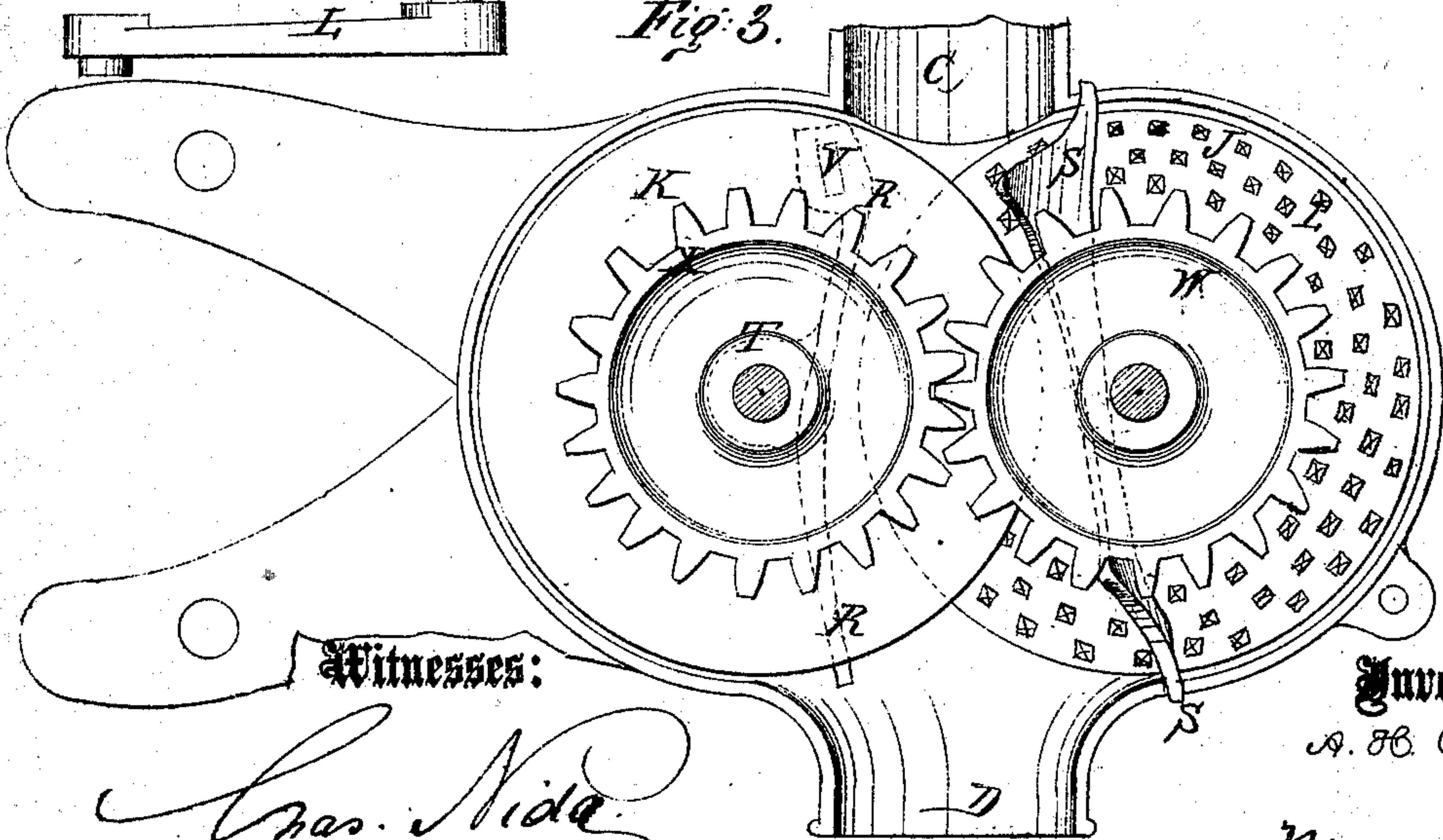


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

ASAHEL H. PATCH, OF HAMILTON, MASSACHUSETTS.

IMPROVEMENT IN CORN-SHELLERS.

Specification forming part of Letters Patent No. 116,627, dated July 4, 1871.

To all whom it may concern:

Be it known that I, ASAHEL H. PATCH, of Hamilton, in the county of Essex and State of Massachusetts, have invented a new and Improved Corn-Sheller; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention consists in improving corn-shell-ers, as hereinafter fully described and subsequently pointed out in the claim.

Figure 1 is a side elevation of my improved machine. Fig. 2 is partly a top view and partly a horizontal section, and Fig. 3 is a vertical sectional elevation on the line *x x* of Fig. 2.

Similar letters of reference indicate corresponding parts.

The case is composed of two parts, each consisting of the two circular cup-shaped parts, A, joined at B, and the semicircular tubes C D, one of said parts having the prongs G for connecting the machine to a support, and the other having the cavities E F in the bottom to make room for the driving-wheels, the said two parts being connected together by ears H and screw-bolts I for inclosing the operative parts. J and K represent the shelling-disks, of cast metal, with numerous prominently-projecting teeth-points, L, on one side. The disk J is mounted on the axle M, and K on axle N, which pass through the case, one in each of the circular parts A, in the axis or thereabout, in parallel vertical planes, but crossing each other horizontally. The said shafts are placed and the disks arranged thereon so that the toothed sides lap each other a considerable proportion of the distance from the periphery to the center of each, the disks being about as far from each other as the diameter of the smallest ear of corn, and being nearer together above the axis and at the upper sides than below. The disk J is arranged on its shaft to slide toward and from the other, and has a strong spiral spring, O, placed behind it, to constantly force it toward the other or hold it up to its work. The outer end of this spring is arranged on a tube, P, having a collar, Q, for holding it off from the case and turning with it to prevent friction and wear. This shaft N also carries a vertical or nearly vertical guide, R, which, together with another guide, S, are to

limit the movement of the ear laterally between the axles and prevent them from escaping at the edge of either disk. This guide R has a boss, T, shown dotted in Fig. 3, with a hole through it, in which the shaft works, and the upper end has a hole, also, through which a stud-pin, U, on the case projects, to hold it from turning around with the disk. The guide moves back and forth with the disk and on the stud V. The guide S, which is in front of the disk J, which does not slide, is supported at each end in notches in the case, so that it does not move. Both these guides are curved or concaved at the upper ends, and to some extent below, for guiding the ears and furnishing bearings better adapted for the rotary motion of the ears than flat ones would be.

The shaft M is provided with a driving-crank, V, and a driving-wheel, W, and the shaft N has a wheel, X, in which W works to turn it and disk K. This latter wheel has long teeth to admit it to move forward and back along the wheel W. The disks may be arranged to turn in parallel vertical planes, and will give very good results; but I prefer to incline them toward each other at the upper sides, as they clear better and are not as liable to clog; moreover, the teeth act more effectually upon the ear as it enters between them.

In practice I make the disks about five inches in diameter for an ordinary hand-machine for northern corn, and about six for southern and western, which size I find to be very efficient in shelling, doing the work with very little power.

I make openings at Y through the case at the back of each disk, and near the bottom, for the escape of any grain or pieces of cob which may work in between them and the case in any way.

A set-screw, Z, is employed in connection with the sliding disk, to adjust it for different-sized ears.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The disks K K, when combined and arranged to incline toward each other at the top, as shown, in the manner and for the purpose substantially as specified.

2. The guide R on shaft N, stud V, and disks K K, when arranged to operate together, substantially as and for the purpose specified.

Witnesses: ASAHEL H. PATCH.

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