

(No Model.)

2 Sheets—Sheet 1.

H. WEINZ.
CORK CUTTING MACHINE.

No. 604,705.

Patented May 24, 1898.

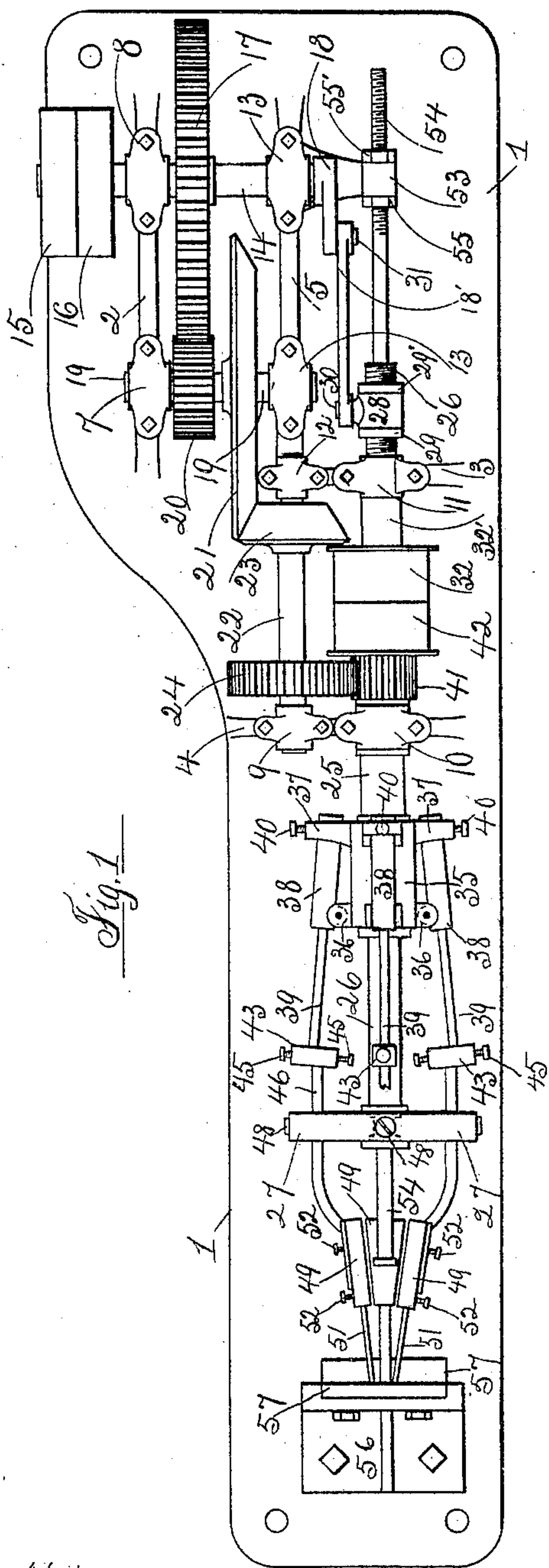
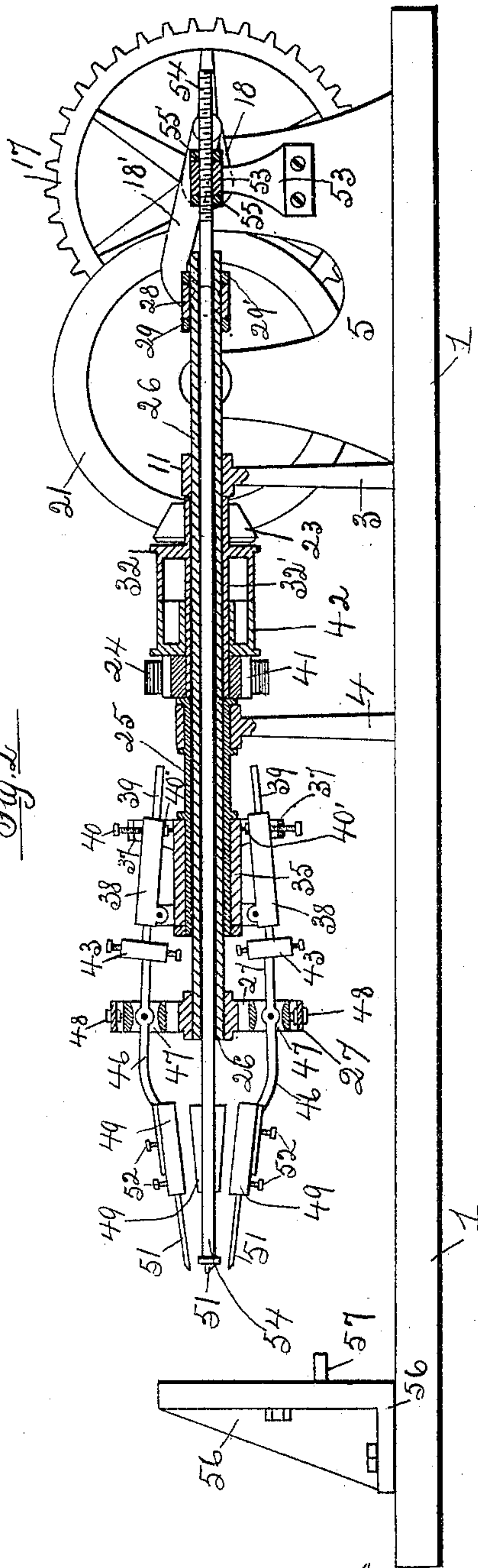


Fig. 2



Witnesses:
H. L. L. L.
M. Hunter

Inventor
Henry Weinz
Per
G. W. Lewis
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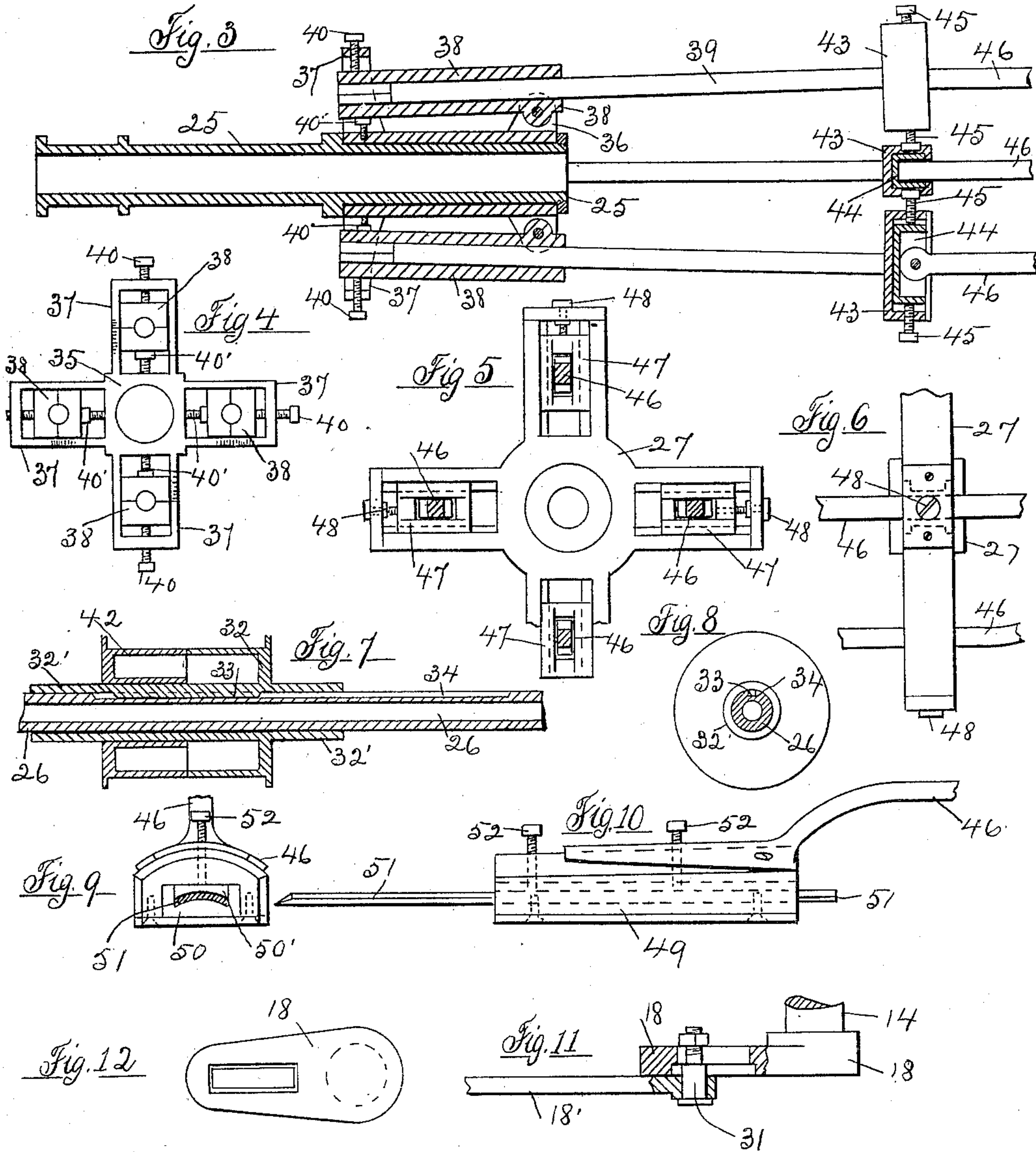
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H. Lewis
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Inventor:
Henry Weinz
Per O. S. Lewis
Atty.

UNITED STATES PATENT OFFICE.

HENRY WEINZ, OF PITTSBURG, PENNSYLVANIA.

CORK-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,705, dated May 24, 1898.

Application filed May 24, 1897. Serial No. 637,918. (No model.)

To all whom it may concern:

Be it known that I, HENRY WEINZ, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Cork-Cutting Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in cork-cutting machines; and the object thereof is to provide a machine that may be operated without employing skilled labor and also make a complete tapered cork at one operation, as well as effect a saving in the cork.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification and wherein like numerals designate similar parts throughout the several views, in which—

Figure 1 is a plan view of my improved cork-cutting machine as it would appear when on its forward stroke. Fig. 2 is a side view of the same, partly shown in section, as it would appear when on its backward stroke. Figs. 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 are enlarged views of various detail parts of the machine, some of which are partly shown in section.

Referring to the drawings for the details of the machine, the numeral 1 designates the bed-plate, which is provided with the upright standards 2, 3, 4, and 5, which have suitable bearings formed thereon and are provided with the caps 7, 8, 9, 10, 11, 12, and 13. The main shaft 14 is loosely fitted within the bearings of the said standards 2 and 5, and upon this shaft is secured the loose pulley 15, tight pulley 16, gear-wheel 17, and crank 18. The shaft 19, which is loosely fitted within similar bearings upon the said standards, has secured thereto the gear-pinion 20 and bevel gear-wheel 21, and said gear-pinion 20 is adapted to mesh or operate with the said gear-wheel 17.

The shaft 22, which is loosely fitted within the bearings of the standards 3 and 4, has se-

cured thereto the bevel pinion-wheel 23 and gear-wheel 24. The said bevel pinion-wheel is adapted to mesh or operate with the said bevel-wheel 21.

Secured to the standard 4 and cap 10 is the hollow sleeve 25, which has suitable collars formed or secured thereto at intervals, as shown. Loosely fitted within the said sleeve 25 and the bearing of standard 3 is the hollow shaft 26, which has a thread formed upon its rear end and has the spider 27 secured to its forward end. A hollow coupling 28 is loosely fitted over the threaded end of the said hollow shaft 26 and is held in place by the jam-nuts 29 and 29'. A link 18' is loosely connected to the said coupling 28 by a pin 30 at one of its ends and is connected at its opposite end by the pin 31 to the crank 18. The pulley-wheel 32 has the hollow tubular portion 32' formed thereon and is fitted over the said hollow shaft 26 and between the standards 3 and 4. A key 33 is secured or formed within the said tubular portion of the pulley-wheel 32 and projects down into a keyway 34, which is formed within and extends along the hollow shaft 26, so that the said shaft may have a horizontal movement during the revolving of the same by the wheels. 41 is a gear-pinion secured to the said tubular portion 32' of the pulley-wheel 32 and meshes with the gear-wheel 24. A loose pulley 42 is also fitted upon the said tubular portion.

The guide-box holder 35 is loosely mounted upon the stationary sleeve 25 and has the outwardly-projecting lugs 36 and brackets 37 formed thereon. Pivotaly connected between the said lugs 36 are the guide-boxes 38, which are each provided with an opening into which are loosely fitted the rods 39. The said guide-boxes are adapted to be inclined to any suitable angle and secured, when adjusted, by the screws 40 and 40'. Formed upon the ends of the said rods 39 are the hollow boxes 43, which have the slide-blocks 44 loosely fitted therein, and the screws 45 are arranged at each end of the said boxes, so that the slide-blocks may be adjusted and held in place. Pivoted within the said slide-blocks are the ends of the arms 46, which are also pivoted at about their middle within the slide-boxes 47 of the spider 27. The said slide-boxes 47

are capable of being adjusted by means of the screws 48. To the forward ends of the arms 46 are secured the knife-holders 49, which are provided with the bushings 50 and 50', into which are fitted the knives 51, which are held secure therein by the set-screws 52. A bracket 53 is secured to the standard 5 and has loosely fitted within its upper extremity the rod 54, which has a thread upon that end, whereby it may be adjustably held to the said bracket by the jam-nuts 55 and 55'. The said rod 54 is stationary and extends through the hollow shaft 26 and projects out even with the ends of the knives when the machine is on its back stroke, as shown in Fig. 2.

Secured to the bed-plate and in front of the knives is the upwardly-extended frame 56, having the adjustable frame 57 attached thereto, and upon which the cork is placed or held against when in the act of cutting out the corks.

In operating the machine power is applied to either of the tight pulleys 16 or 32, but preferably the former, and when in operation the crank 18' on its backward movement forces the knives to gradually open, as shown at Fig. 2, by drawing the shaft 26 backward the length of the crank-stroke, and the said shaft during all times is revolving, as well as the spider 27 and the other mechanism, including the guide-box holder, and when the knives are in their backward position the cork-board is then placed in position upon the frame 57 in front of the knives, and when the device is on its forward stroke the revolving knives gradually advance into the cork-board and close, thereby cutting a tapered cork, (large end first,) and when on the next backward stroke the stationary rod 54 forces the completed cork out from between the knives. A graduated scale is arranged, as shown, upon the ends of the guide-boxes and the brackets at the end of the guide-box holder, so that they may all be adjusted alike.

In order to cut corks of various sizes and tapers, the arms 46 are adjusted at their pivoted points within the spider 27, and boxes 43 upon the rods 39, as described in detail, as well as adjusting the guide-boxes 38 by the screws 40 and 40', and the throw of the crank may be adjusted by means of the screw-pin 31 of the crank and the coupling 28, and jam-nuts 29 and 29' upon that end of the hollow shaft 26.

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

1. In combination with the herein-described cork-cutting machine, of a revoluble guide-block, guide-boxes pivoted upon the forward end of the said block, rods carrying knives, the rods being loosely fitted within the said guide-boxes, brackets formed upon the rear

end of the said block and extending over the said guide-boxes, screws arranged upon the said brackets and bearing upon the outer sides of the said guide-blocks, and screws arranged upon the said block and beneath the said guide-boxes and at their rear ends which form bearings for the under sides of the said boxes, said screws arranged and adapted to adjustably incline the said boxes, substantially as shown and for the purpose described.

2. A cork-cutting machine consisting of the hollow shaft having mounted thereon adjustable guide-boxes, rods loosely fitting within said guide-boxes provided with adjustable slide-boxes, knives secured to the outer ends of said rods, and means for revolving the said knives, substantially as described.

3. In a machine as described, the combination with the rods 39 and arms 46 of the adjustable slide-boxes 44 and 47 into which the said arms are pivoted and by which they may be adjustably inclined.

4. A cork-cutting machine consisting of the shaft having adjustably mounted thereon guide-boxes, each of said guide-boxes being provided with openings into which are loosely fitted suitable rods, the ends of said rods having formed thereon boxes provided with slide-blocks, arms connected to said slide-blocks, and a series of knives suitably attached to said arms, substantially as shown and described.

5. A cork-cutting machine consisting of the hollow shaft having adjustably mounted thereon guide-boxes, each of said guide-boxes being provided with openings into which are loosely fitted suitable rods, the outer ends of said rods having formed thereon hollow boxes provided with slide-blocks, means for adjusting said slide-blocks, arms connected to said slide-blocks, their forward ends being provided with bushings into which are fitted a series of knives, and means for revolving the said knives, substantially as shown and described.

6. A cork-cutting machine consisting of the hollow shaft having adjustably mounted thereon guide-boxes, rods loosely fitted in said guide-boxes, boxes provided with adjustable slide-blocks formed upon the ends of said rods, arms pivoted to said slide-blocks, their middle portions being pivoted to adjustable slide-boxes located within a spider, the forward ends of said arms having attached thereto knife-holders which are provided with bushings into which the knives are fitted, substantially as shown and described.

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

HENRY WEINZ.

Witnesses:

JAS. J. MCAFEE,
H. J. LEVIS.