

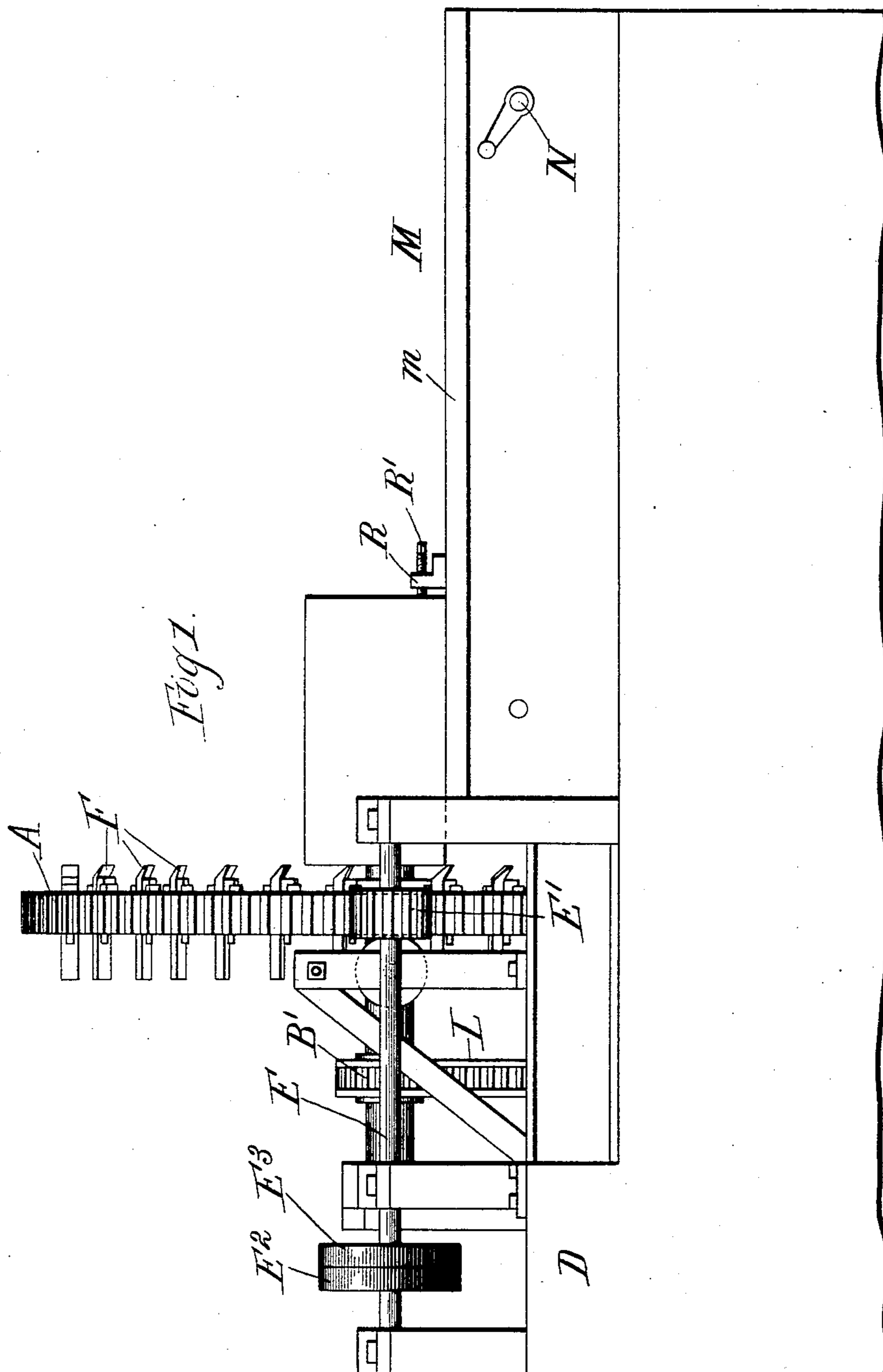
(No Model.)

5 Sheets—Sheet 1.

A. LARSON.
STONE JOINER.

No. 587,588.

Patented Aug. 3, 1897.



Witnesses:
A. F. Durand,
A. M. Belfield

Inventor:
August Larsson
by Page & Befield,
Attys

(No Model.)

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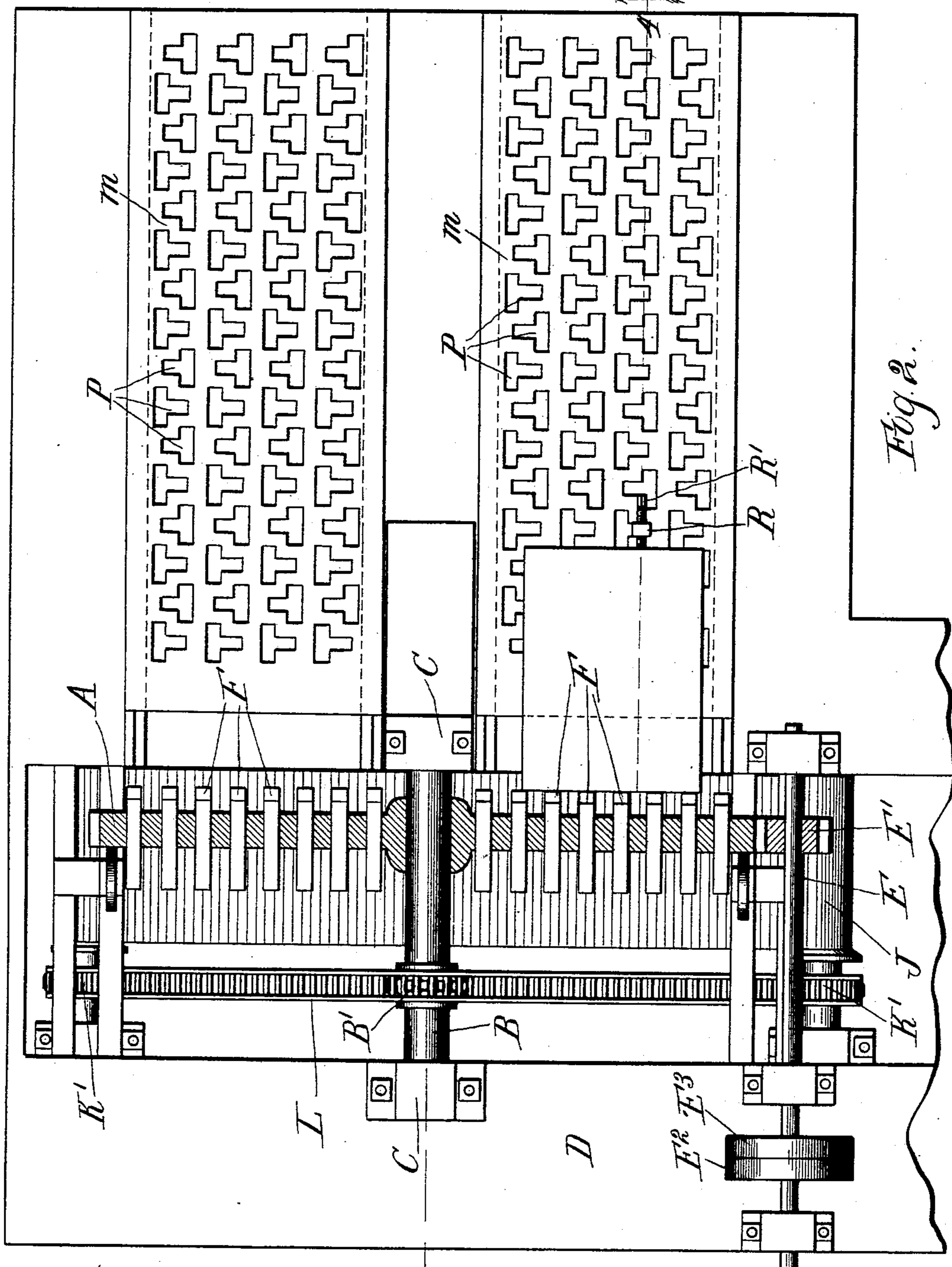


Fig. 2.

Witnesses:
A. F. Durand.
A. M. Belfield

Inventor:
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by Page & Belfield
Attys.

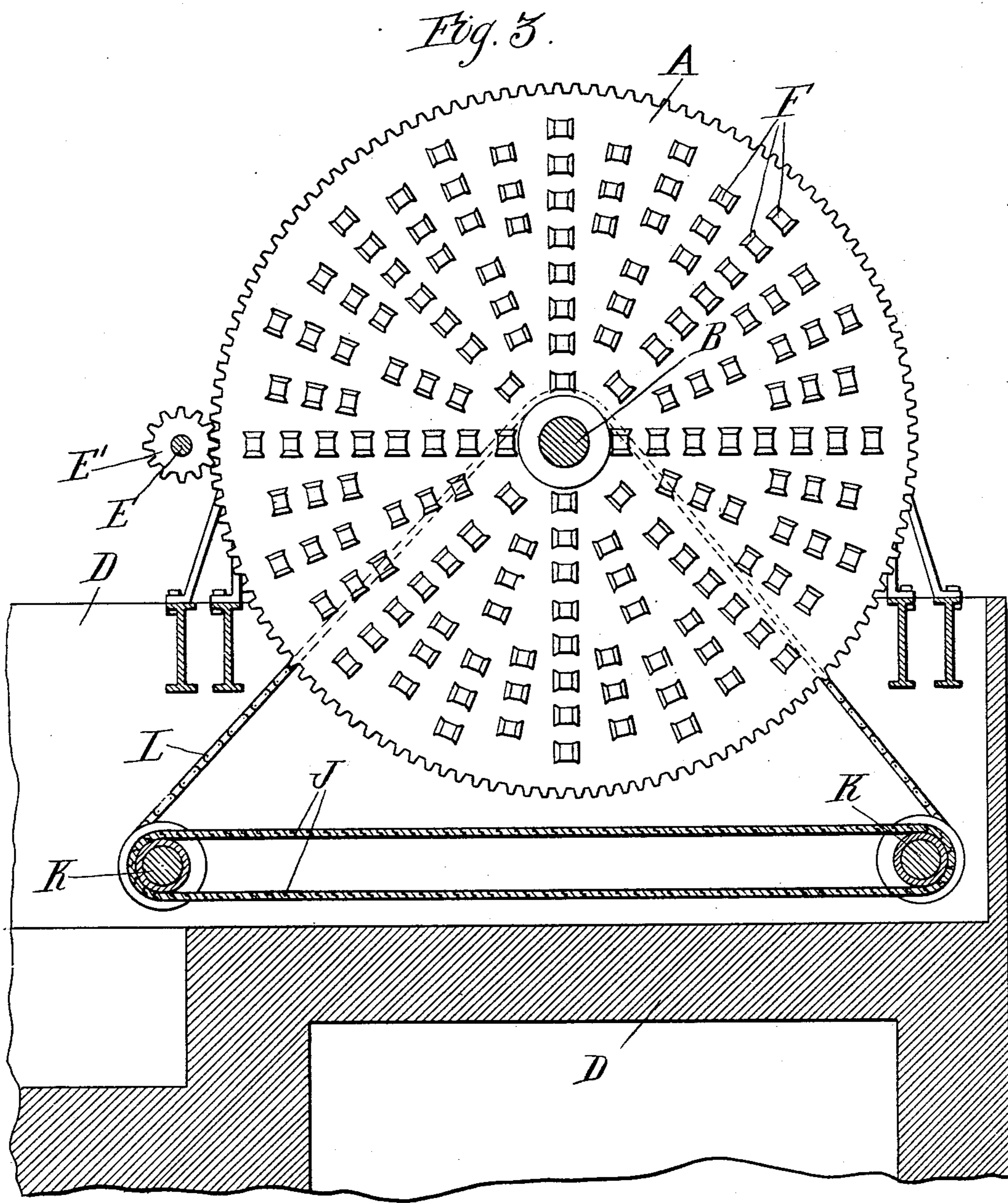
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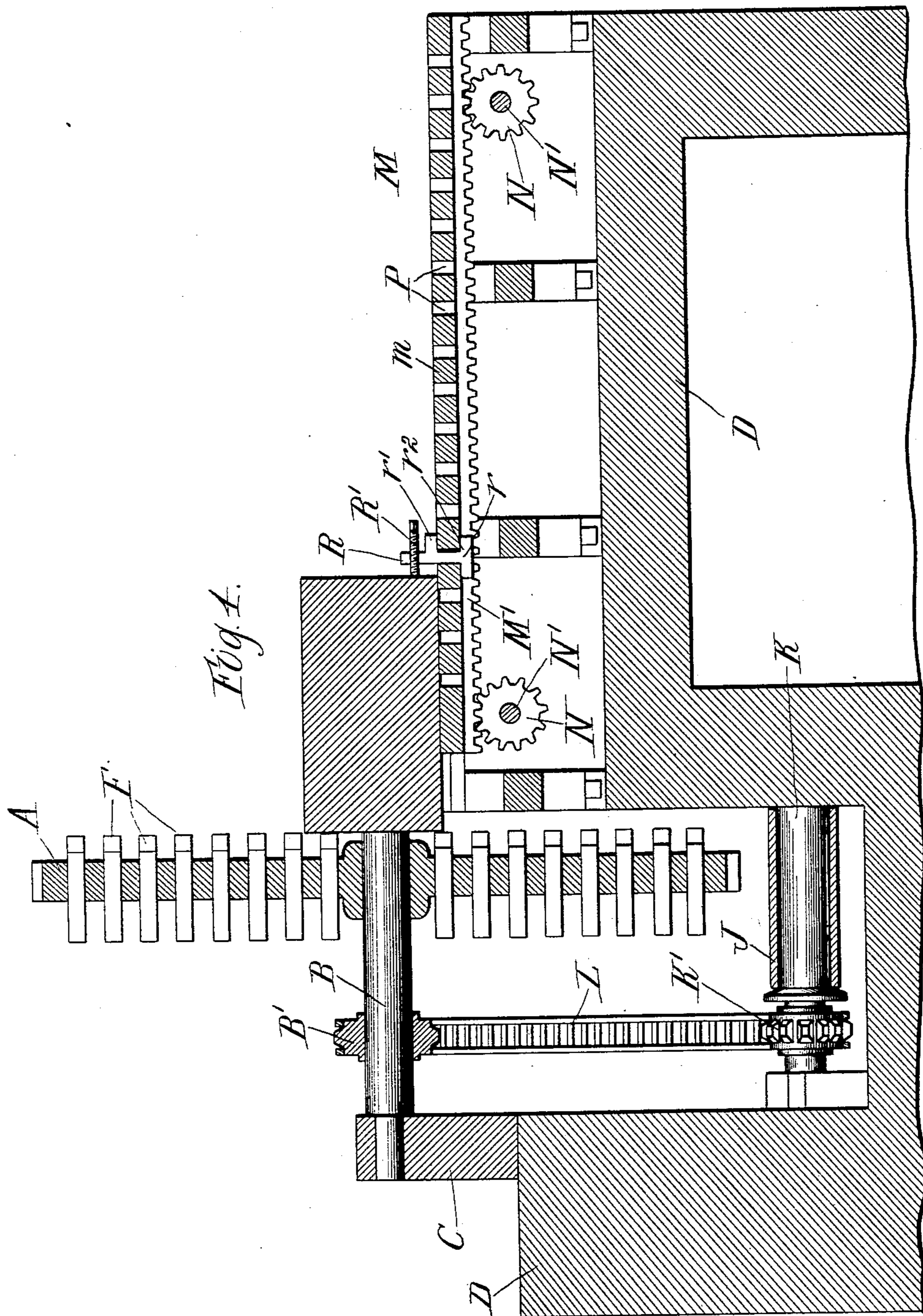
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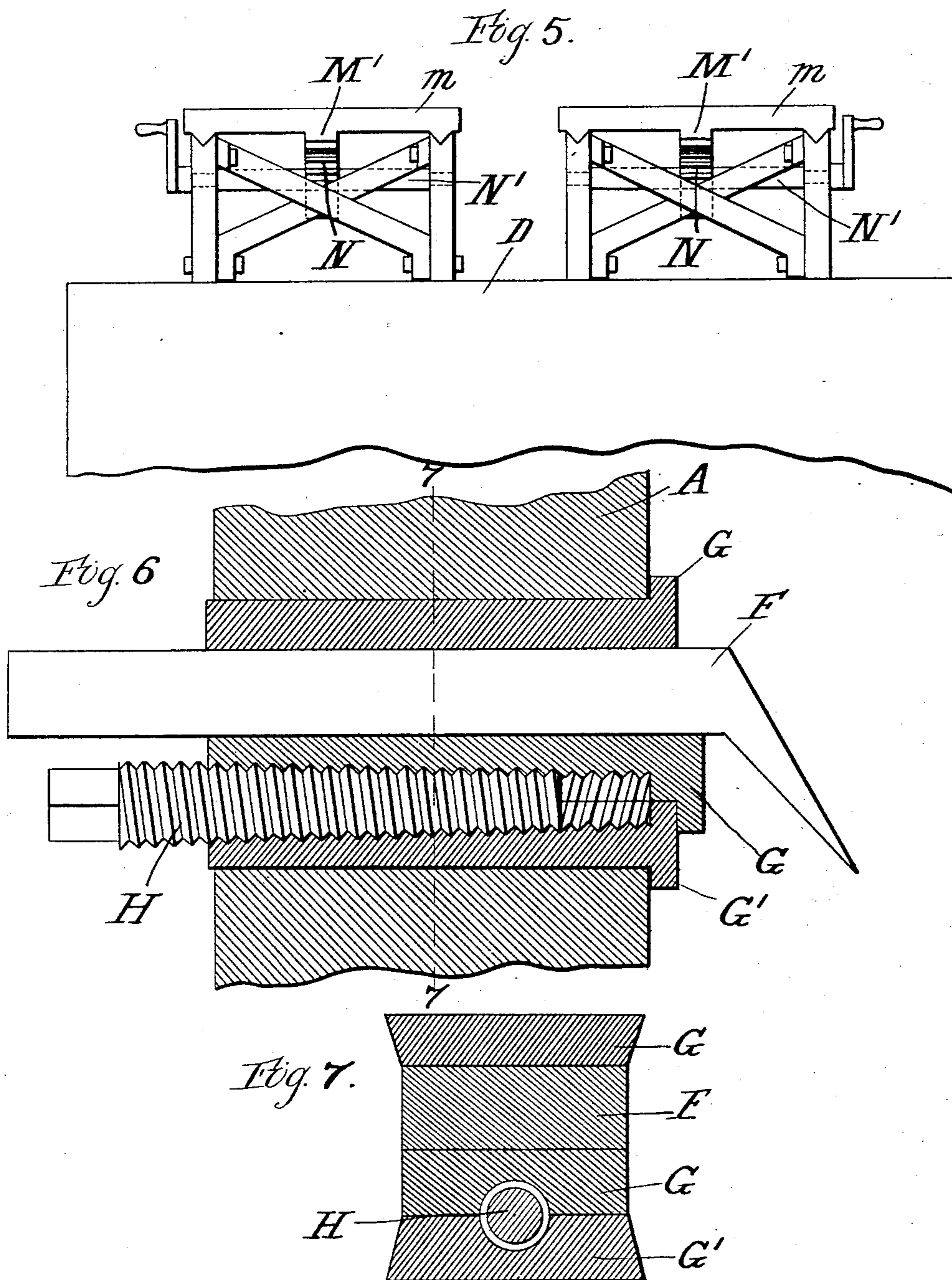
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A. F. Durand.
A. M. Belfield

Inventor:
August Larson
by Page & Belfield
attys.

UNITED STATES PATENT OFFICE.

AUGUST LARSON, OF CHICAGO, ILLINOIS.

STONE-JOINTER.

SPECIFICATION forming part of Letters Patent No. 587,588, dated August 3, 1897.

Application filed August 24, 1896. Serial No. 603,814. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LARSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Stone-Cutting Machines, of which the following is a specification.

The objects of the invention are the production of a machine capable of easily cutting or planing the edges or sides of blocks of stone, the allowance of such cutting at right angles to another of the sides of the block, the provision of means by which the stock may be securely held in place during the cutting process, and of means by which the stock may be fed forward, the ready disposition of the refuse resulting from the cutting, and the attainment of such results with economy and efficiency.

In a machine characterized by my invention a number of cutting-tools are supported by a movable carrier, and the carrier is arranged to be moved so as to bring the tools successively before the stock to be cut or planed. A bed or table is provided, upon which the stock may be arranged and is supported so as to be capable of longitudinal movement, whereby the stock may be fed forward as portions of it are removed. A traveling conveyer is also arranged below the tools, whereby the chips or cuttings may be removed.

In the accompanying drawings, Figure 1 is a side elevation of a stone-cutting machine embodying my invention. Fig. 2 is a top plan of the same. Fig. 3 is a transverse vertical section of the machine, showing the tool-carrier in front elevation. Fig. 4 is a vertical section taken on line 4 4 in Fig. 2. Fig. 5 is an end elevation of the bed or table. Fig. 6 is a section showing in detail the arrangement by which the tools are held in the carrier. Fig. 7 is a section taken on line 7 7 in Fig. 6.

The rotary tool-carrier A is shown mounted on the shaft B, which latter is supported in suitable bearings C. The bearings C are mounted on the base D, which serves as a frame or support for the various parts of the machine.

The carrier A may be turned by any suitable mechanism.

In the arrangement shown the carrier is provided with teeth on its periphery, and a driving-shaft E is arranged alongside the carrier and provided with a spur-wheel E', which engages the teeth on the carrier. The driving-shaft E is also provided with the belt-pulleys E² and E³.

The carrier A is provided with a number of cutting-tools F, which are arranged to cut the surface of the stock during the revolution of the carrier.

Any form of tool may be employed, and the tools may be mounted in the carrier in any suitable manner. As a preferred arrangement, however, the tools are arranged in radial lines in the carrier, as shown in Fig. 3, and are constructed with an inclined edge, Fig. 6. These tools are preferably held in place by blocks or slides G, arranged on either side of the tools. A tapering screw H is arranged to fit into the threads with which one of these blocks G and the adjacent bearing-piece G' are provided and thereby affords means for retaining the tool in place.

Below the carrier is situated the traveling conveyer J, which receives the cuttings and removes the same to one side of the machine. This conveyer may be of any suitable construction and may be connected to be operated in any desired manner. As a convenient arrangement the conveyer is supported by a couple of shafts K, and the latter are connected to be operated by the carrier-shaft B by means of the endless chain or belt L, which passes over the sprocket-wheels B', K', and K', with which the shafts B, K, and K are respectively provided, Fig. 3.

The bed or table M is composed of two portions *m* and *m*, each of which is supported upon the base D, so as to be capable of longitudinal movement, whereby the stock may be fed toward the cutting-tools. As a means for effecting such movement the portions *m* are provided with racks M' M' on their under surfaces, and the spur-wheels N are mounted upon the shafts N' below the portions of the table *m m* and arranged to gear with the racks M' M' upon the latter, Fig. 4. The bed or table M is also arranged to receive posts or braces at various points in its surface, whereby blocks of various sizes and shapes may be securely held in position. To

such end the portions *m m* are provided with apertures *P*, said apertures being enlarged at one end and contracted at the other and being arranged in rows with the enlarged and contracted ends alternating, as shown in Fig. 2. The posts or braces *R*, which are to be inserted into these apertures, are provided with enlarged ends *r* and the shoulders *r'* *r*², whereby the end *r* may be inserted through the enlarged portion of an aperture in the table, at which time the post may be moved sidewise, causing the shoulders *r'* and *r*² to embrace the thickness of the bed or table and retain the post securely in position. The posts or braces *R* are also provided with the screws *R'*, whereby a more delicate adjustment of the work is procured.

It is obvious that my machine may be readily operated and will cut the stone efficiently and with a slight expenditure of power. The refuse is collected and removed by the traveling conveyer, and the block may be easily fed forward until the desired amount of cutting has been done.

What I claim is—

1. In a stone-cutting machine, the combi-

nation of the bed or table provided with apertures which are constructed with an enlarged portion, and a portion of less width extending to one side thereof; and the posts or braces *R* which are provided with shoulders *r* and *r*² forming an enlarged end portion adapted for insertion through the enlarged portions of the apertures, and with the shoulder *r'* which serves to maintain the post or brace in position after it has been moved from the enlarged portion, into the narrow portion of the aperture, substantially as described.

2. In a stone-cutting machine, the combination with a cutting-tool in the tool-carrier, of the bearing-piece *G'* arranged to one side thereof, the block or slide *G* arranged between the bearing-piece *G'* and the tool, and the tapering screw *H* which is adapted to screw into a threaded bore formed in part in the bearing-piece *G'* and in part in the block or slide *G*, as set forth.

AUGUST LARSON.

Witnesses:

ANDREW SODERGREN,
CHARLES H. SCHOBBER.