

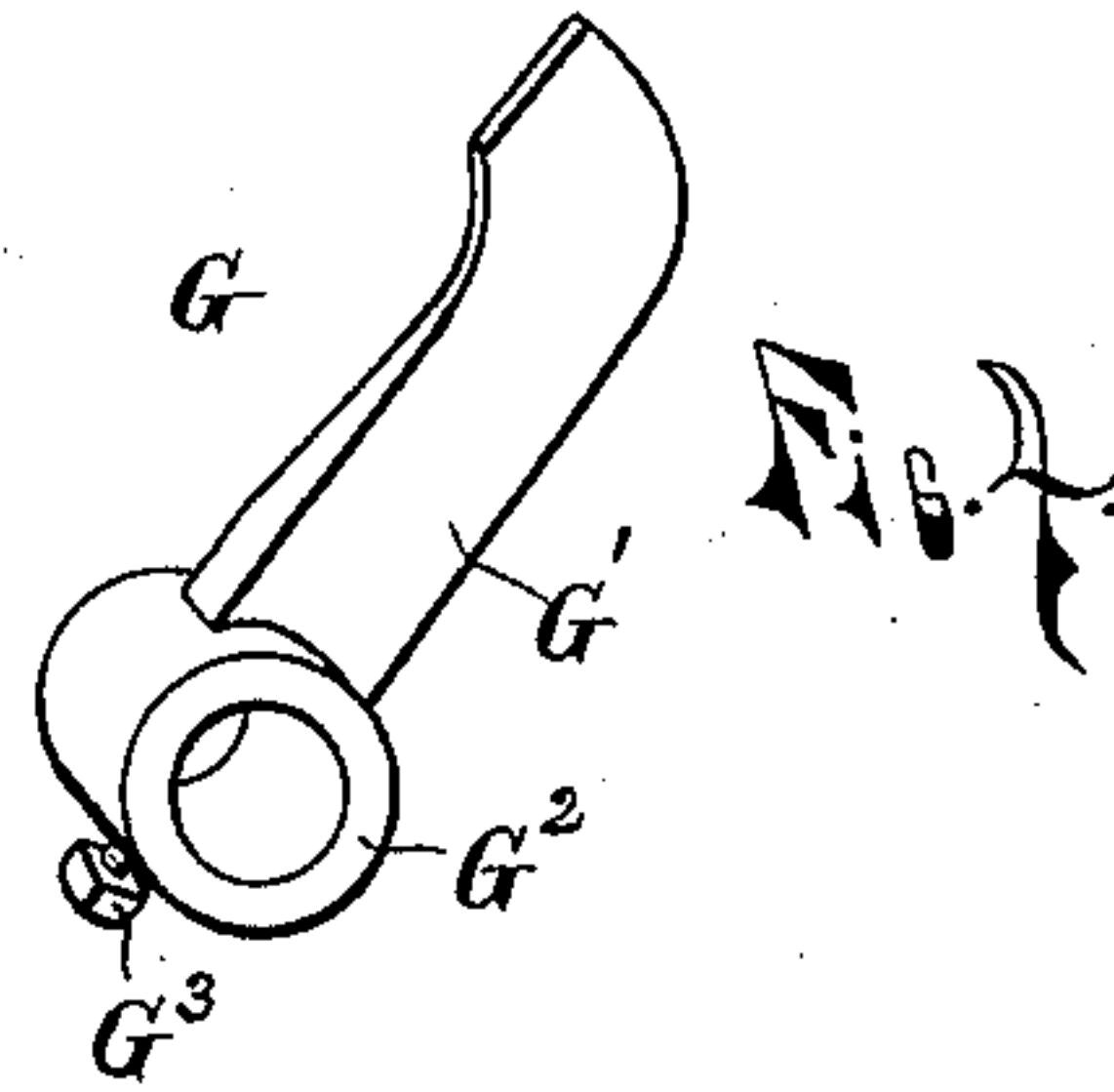
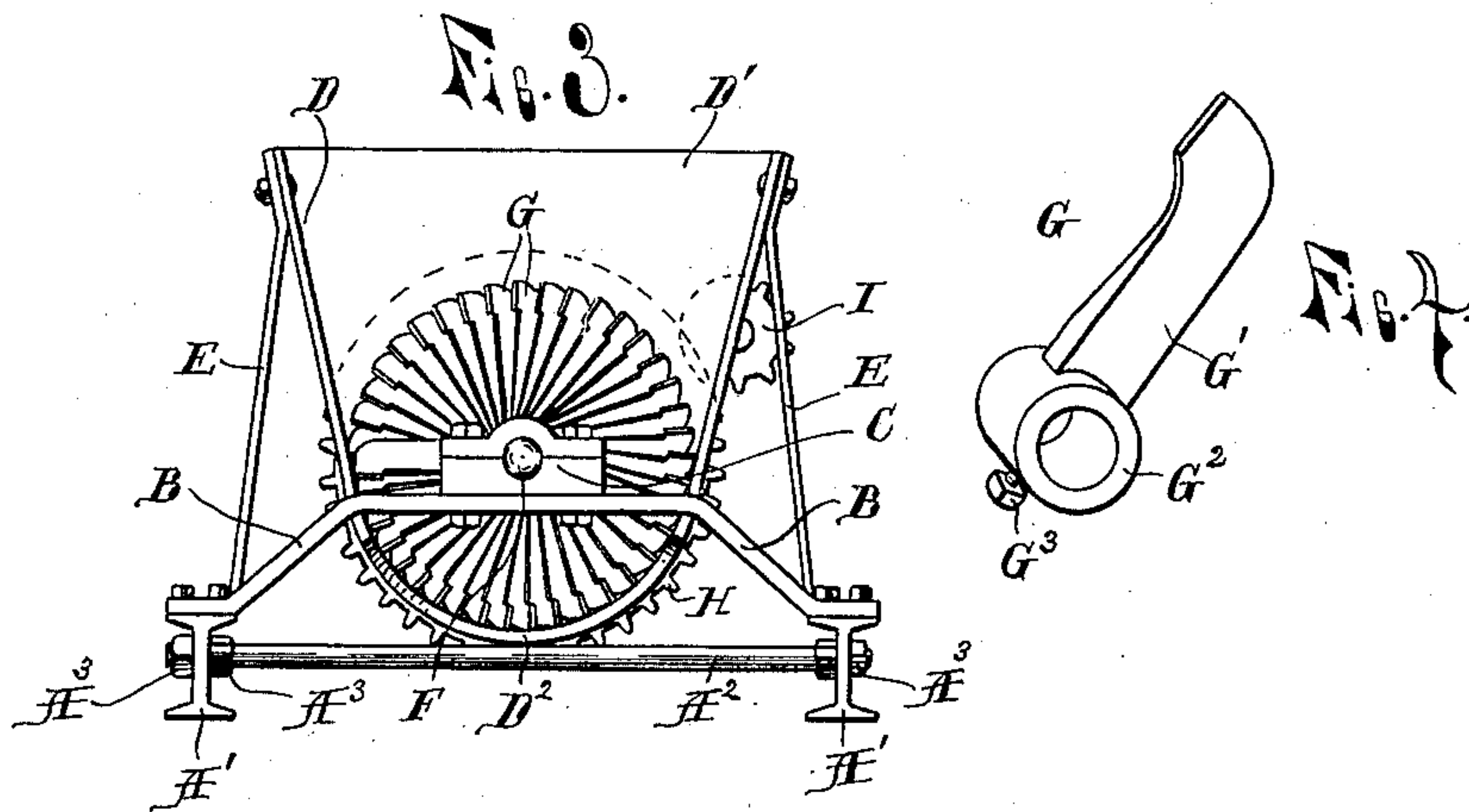
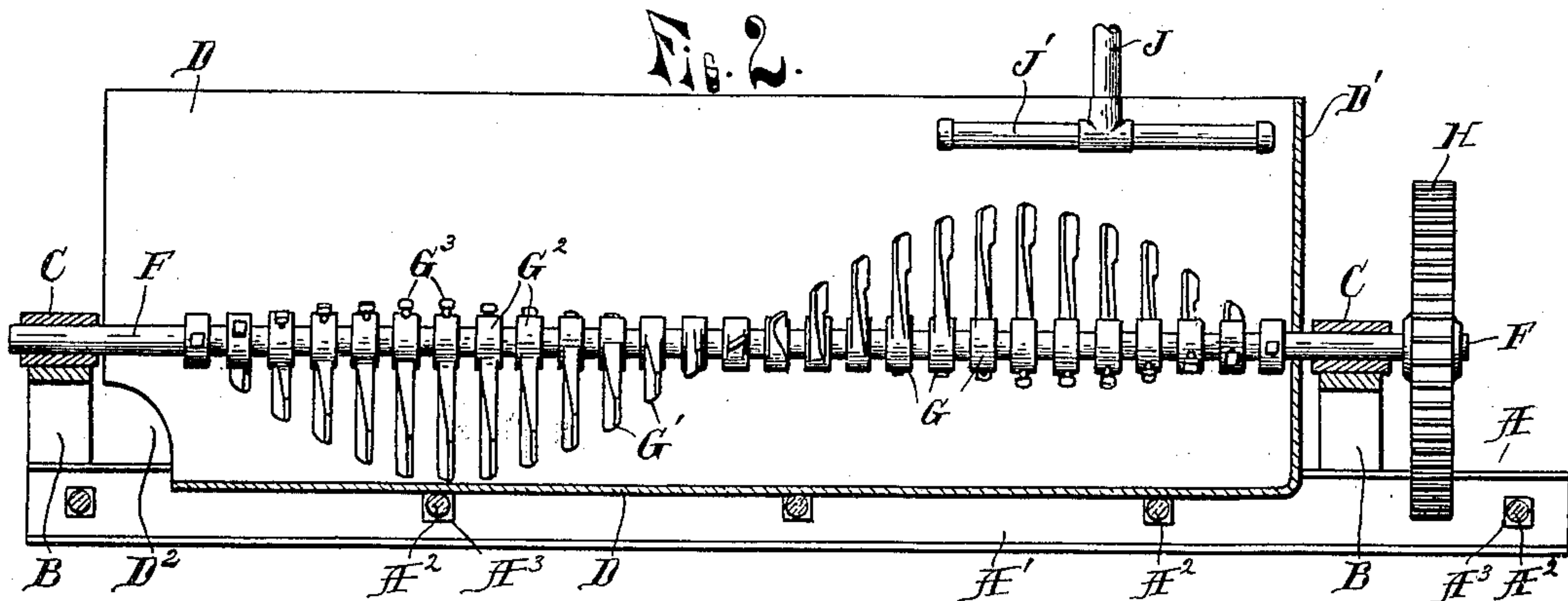
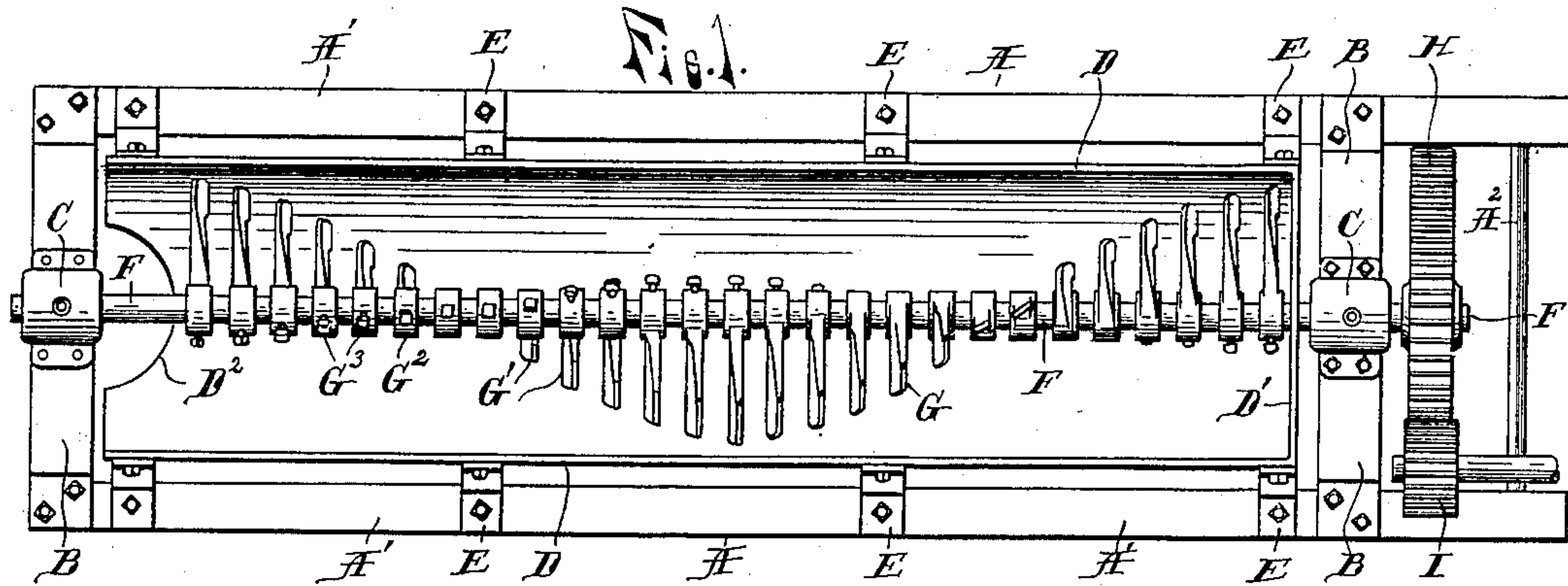
No. 754,927.

PATENTED MAR. 15, 1904.

J. E. KENISELL.
MACHINE FOR MIXING CONCRETE, &c.

APPLICATION FILED DEC. 26, 1903.

NO MODEL.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN E. KENISELL, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
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MACHINE FOR MIXING CONCRETE, &c.

SPECIFICATION forming part of Letters Patent No. 754,927, dated March 15, 1904.

Application filed December 26, 1903. Serial No. 186,565. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. KENISELL, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Machines for Mixing Concrete, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to improvements in concrete-mixers and machines for similar purposes; and its object is to provide a very simple, cheap, and efficient device which is strong, durable, and so constructed as to be continuous in its operation, the right proportion of material being continuously put in at one end of the machine and the mixed concrete ejected by the machine in a continuous stream at its opposite end.

20 It is also an object of the invention to so construct and arrange the agitating-arms that they may be adjusted on their shaft as desired and same removed or others put on, as desired, to properly stir the material and convey it along the trough, and a further object is to provide the particular arrangement and combination of parts, all as hereinafter more fully described, reference being had to the accompanying drawings, in which—

30 Figure 1 is a plan view of a device embodying the invention; Fig. 2, a central longitudinal vertical section of the same; Fig. 3, an end elevation, and Fig. 4 a perspective view of one of the agitating and conveying arms.

35 As shown in the drawings, A represents a suitable rectangular supporting-frame consisting of two parallel I-beams A^1 , connected and spaced apart by tie-rods A^2 , provided with nuts A^3 , engaging the inner and outer sides of the webs of the beams. Near each end of the frame are secured transverse supporting-brackets formed of flat bars B, bolted at their ends to the top of the beams and provided upon their raised middle portion with bearings C. Supported upon the frame with its bottom resting upon the tie-rods is a trough D, semicircular or U-shaped in cross-section and secured in place thereon by braces

E, formed of flat bars or strips bolted at one end to the top of the beams and at their opposite ends to the sides of the trough near its upper edge. At one end this trough is provided with an end wall D^1 , the opposite or discharge end being open and a portion of the bottom cut away at D^2 to form a discharge-opening for the material. A shaft F, supported near its ends in the bearings C, extends in the longitudinal axis of the trough, and on this shaft are strung the arms G for agitating and conveying the material along the trough. 50 These arms each consist of the blade portion G^1 , which is so formed as to give it a lead—that is, the blade extends at a slight angle to the path of its rotation—so that as it turns about the axis of the shaft it will slowly feed the material toward the discharge end of the trough, said incline of the blade acting to push the material along during both its downward and upward movement in the material, and a sleeve portion G^2 is formed integral with the blade to fit the shaft. Set-screws G are provided to secure the arms in any desired position on the shaft and permit of their being removed when there are too many to secure the best results, according to the work being done, or others may be put on. The arms are preferably set, however, to form one continuous spiral row, which extends once around the shaft, and thus but a few of the agitators are in the bottom of the trough at any one time and the shaft will turn much easier than it would provided the same number of arms were used, but so set that the row extended more than once around the shaft, as more of the arms would be in the material at one time. 85

The shaft F may be driven in any suitable manner, a gear H on the end of said shaft, driven by a pinion I on a separate driving-shaft, being shown as the most convenient way where a gasolene-engine is used as the motive power. 90

As shown in Fig. 2, for the purpose of supplying water to the trough to mix with the other material a water-supply pipe J is provided having a pipe or head J, extending at right angles thereto and longitudinally of the

trough above the same, said head being perforated along its lower side to allow the water to escape in small streams.

Having thus fully described my invention,
5 what I claim is—

1. In a mixing-machine, the combination
of a supporting-frame consisting of parallel
I-beams secured together by tie-bolts provided
with nuts engaging the inner and outer sides
10 of the webs of said beams, brackets secured to
the upper side of said beams at each end of
the frame, bearings on said brackets, a U-
shaped trough having a closed and an open
end and supported by the tie-rods, braces se-
15 cured at one end to said beams and at their
opposite ends to the sides of the trough near
its upper edge, a shaft in said bearings ex-
tending in the axis of the trough, agitators
on said shaft consisting of blades extending
20 at an angle to the path of their travel around
the shaft to feed the material toward the open
end of the trough, and means for actuating
said shaft.

2. In a concrete-mixer, the combination of
25 a supporting-frame consisting of two parallel
I-beams secured together by tie-rods extend-

ing through openings in the webs of the beams
and provided with nuts engaging the inner
and outer sides of said webs, a U-shaped
trough having an open and a closed end and 30
having its bottom cut away at its open end to
form a discharge-opening, flat iron bars bent
to form brackets and secured at their ends to
the beams near each end of the trough, bear-
ings secured to said brackets, a shaft in said 35
bearings, agitators consisting of sleeves to
engage the shaft and provided with blades
formed to extend at an angle to the path of
travel of the blades around the shaft and se-
cured to the shaft in a spiral row extending 40
once around the shaft, set-screws to secure
the agitators to the shaft, a water-supply pipe
having a perforated head extending longitudi-
nally of the trough above the same near its
closed end, and means for turning the shaft. 45

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

JOHN E. KENISELL.

Witnesses:

CLARENCE C. LOWRY,
OTTO F. BARTHEL.