

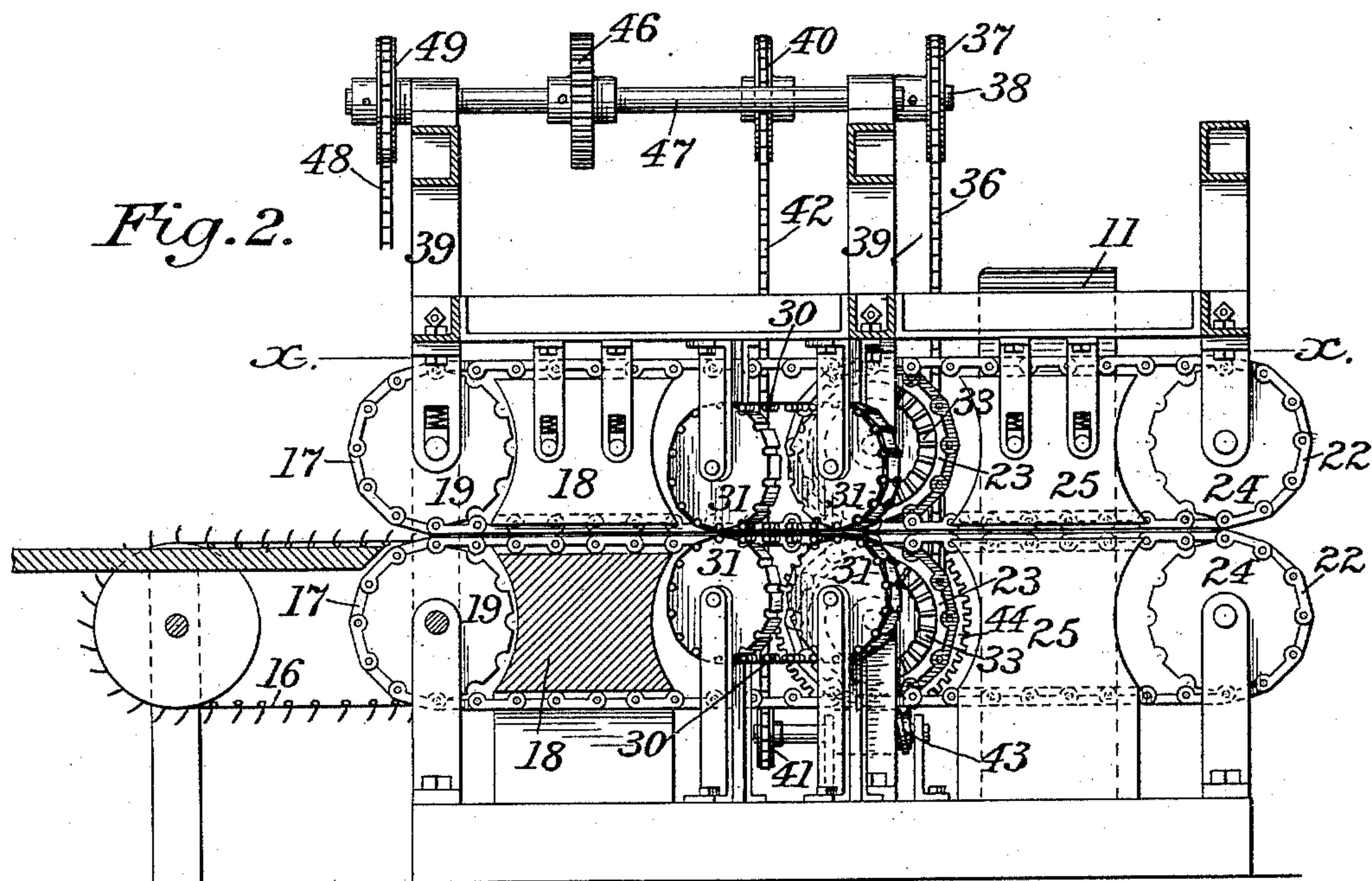
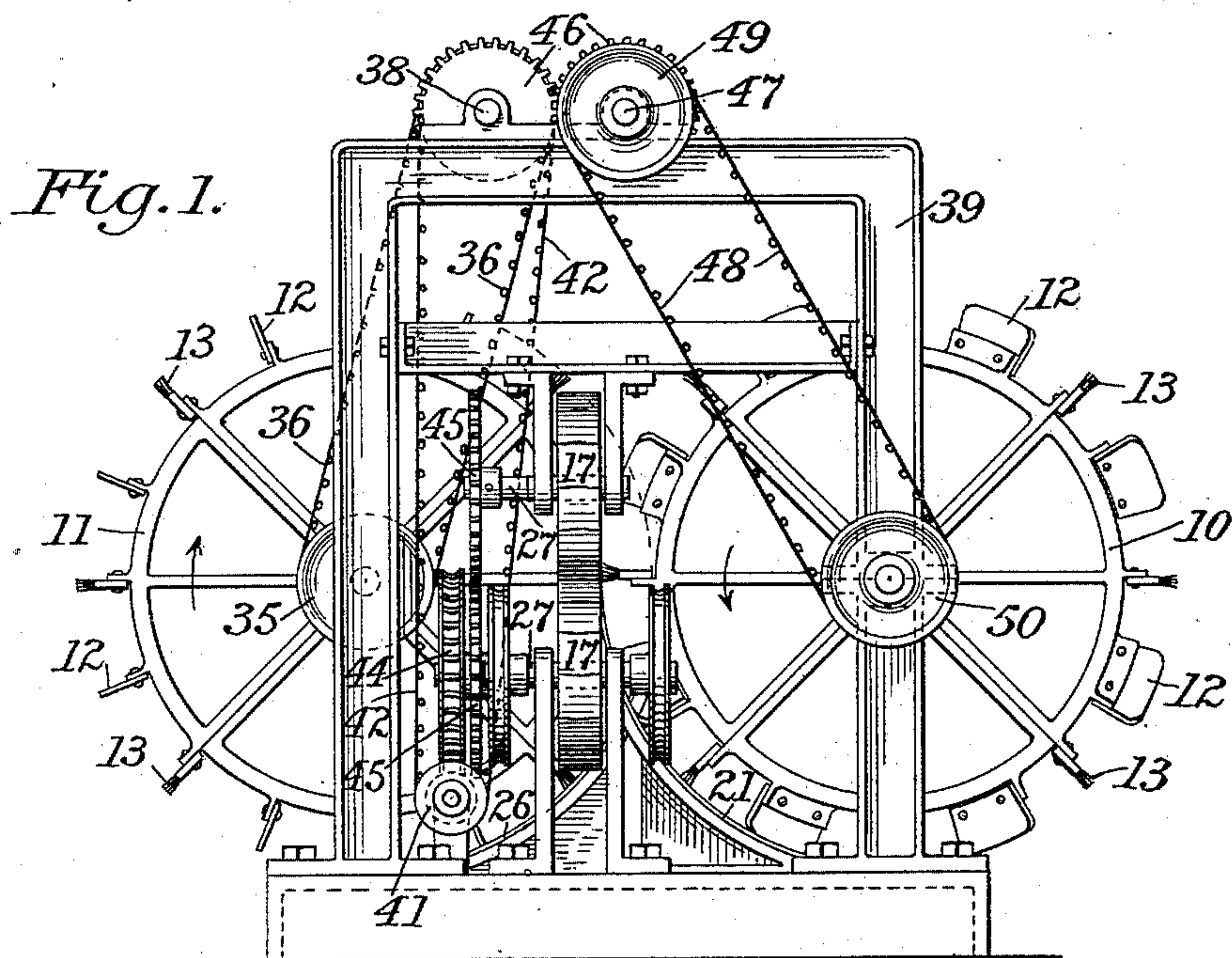
(No Model.)

2 Sheets—Sheet 1.

J. L. ACOSTA.
FIBER PREPARING MACHINE.

No. 485,903.

Patented Nov. 8, 1892.



Attest:
A. K. Jesperson.
A. H. Hilder

Inventor:
John Luis Acosta.
William B. Greeley
Atty.

(No Model.)

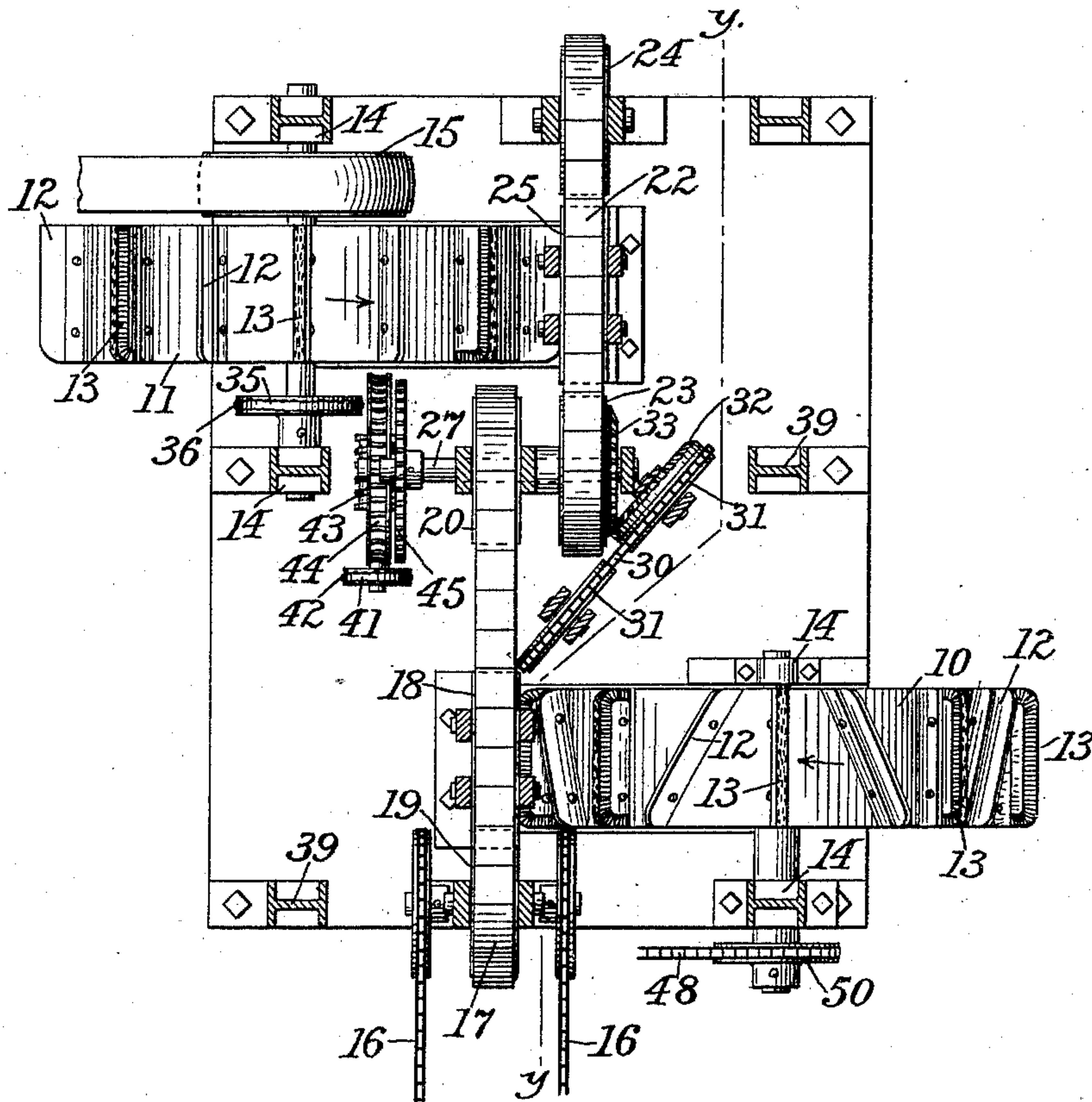
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Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN LUIS ACOSTA, OF VERA CRUZ, MEXICO.

FIBER-PREPARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 485,903, dated November 8, 1892.

Application filed June 22, 1892. Serial No. 437,622. (No model.)

To all whom it may concern:

Be it known that I, JOHN LUIS ACOSTA, a citizen of the United States of Colombia, residing in Vera Cruz, Mexico, have invented certain new and useful Improvements in Fiber-Preparing Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the figures of reference marked thereon, making a part of this specification.

My invention relates to machines of the general character of that shown in Letters Patent of the United States granted to me May 3, 1892, and numbered 474,052.

My object is to improve the general arrangement and construction of the machine described in said Letters Patent, and particularly to increase its productiveness while preserving its compactness.

In the drawings, Figure 1 is an elevation of the feeding end of the machine. Fig. 2 is a horizontal section thereof on the irregular line *y y* of Fig. 3, and Fig. 3 is a horizontal section on the line *x x* of Fig. 2.

In my former machine the fiber was carried by one member of an endless chain in front of a cleaning-wheel, and then being shifted in the jaws of the carrying-chain by an attendant was carried by the lower member of the same chain in front of another feeding-wheel placed opposite the first. In this manner provision was made for the cleaning of the ends of the fibers projecting on one side of the chain by the first wheel and then for the cleaning of the other ends of the fibers and of the part previously grasped by the jaws of the chain by the other wheel. The shifting of the fibers between the upper and lower members of the carrying-chain by an attendant necessarily rendered the process somewhat slow, and it is therefore the object of my present improvement to enable the fiber to be cleaned thoroughly in its passage from one end of the machine to the other without any handling by an attendant.

The two cleaning-wheels 10 and 11, peripherally armed with suitable blades 12 and brushes 13, are journaled in suitable stand-

ards 14, with their axes in parallel planes, but offset so that the peripheries of the two wheels shall overlap slightly, as shown clearly in Figs. 1 and 3. The supporting-shaft of the wheel 11 may have fixed thereon a driving-pulley 15, through which power may be transmitted to the entire mechanism. The fiber to be cleaned may be fed to the machine by suitable feeding-chains 16, (see Figs. 2 and 3,) from which it passes to carrying-chains 17, which may be of any suitable construction adapted to carry the fiber along and to hold it firmly against the action of the cleaning-wheel 10. I have shown a pair of carrying-chains 17, mounted one over the other and adapted to grasp the fibers between their proximate members, suitable blocks 18 being interposed between the upper and lower members of each chain to give the necessary rigidity to the chains between the chain-wheels 19 and 20. As the fibers are carried in front of the wheel 10, they are supported for the action of the wheel by a plate 21, Fig. 1, as described in my said patent. In order that the fibers may be completely cleaned, it is necessary that that portion thereof which was grasped by the first pair of chains should be released and subjected to the action of the second cleaning-wheel 11. To this end, therefore, I provide a second pair of chains 22, which are caused to travel in a plane parallel with but offset from the plane of the first pair of chains, the said chains 22 being carried by the wheels 23 and 24, and being provided with supporting-blocks 25, as before. A plate 26, Fig. 1, is likewise provided to support the fibers under the action of the wheel 11. The wheels 20 and 23 of each upper and lower set may be mounted, respectively, upon an upper and lower common shaft 27, as shown in Fig. 3, and may be driven by any convenient means. As the fibers are carried through the machine, they are first held by the chains 17, and by them are delivered in such position that the part formerly held by the chains 17, as well as the uncleaned ends, will be exposed to the action of the wheel 11. It is necessary that the ends of the fibers should be presented properly to the chains

22, in order that they may not become tangled or engaged with the chain-wheels, and I have therefore provided a pair of chains 30, obliquely disposed, as shown, and supported
5 by suitable chain-wheels 31. The proximate members of the two chains are caused to travel in the same direction through suitable gearing, one wheel 31 of each set carrying with it a skew bevel-gear 32, Fig. 3, which
10 meshes with a bevel-gear 33 on the shaft 27, the gears 32 being somewhat smaller than the gears 33, in order to give the chains 30 the proper relative rate of travel. The function of the chains 30 is to pick up the fibers as
15 they are carried by the chains 17 beyond the wheel 10, and to straighten them out in position to be grasped properly by the chains 22. A convenient arrangement of driving mechanism I have found to be that shown in the
20 drawings. Upon the shaft of the cleaning-wheel 11 is mounted a chain-wheel 35, from which motion is transmitted through a chain 36 to a chain-wheel 37 on a shaft 38, supported in bearings on the top of the framework 39.
25 Chain-wheels 40 and 41 and a chain 42 serve to drive a worm 43, which actuates a worm-wheel 44 on the lower shaft 27, the upper shaft 27 being driven from the lower by gears 45. Through gears 46 a second shaft 47 is driven
30 from the shaft 38 and transmits motion to the

cleaning-wheel 10 through a chain 48 and chain-wheels 49 and 50.

I claim as my invention—

1. In a fiber-preparing machine, the combination of two sets of fiber-carrying chains 35 arranged one after the other but offset in different planes, fiber-cleaning devices disposed on opposite sides of said chains, and obliquely-disposed chains between the two sets of carrying-chains to guide the fibers from the
40 first set of chains to the second set, substantially as shown and described.

2. In a fiber-preparing machine, the combination of two fiber-cleaning wheels having their axes parallel but offset in different
45 planes and having their peripheries overlapping, two sets of fiber-carrying chains offset in different planes and obliquely-disposed chains between the two sets of carrying-chains to guide the fibers from the first set of
50 chains to the second set, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN LUIS ACOSTA.

Witnesses:

A. N. JESBERA,

A. WIDDER.