

No. 736,313.

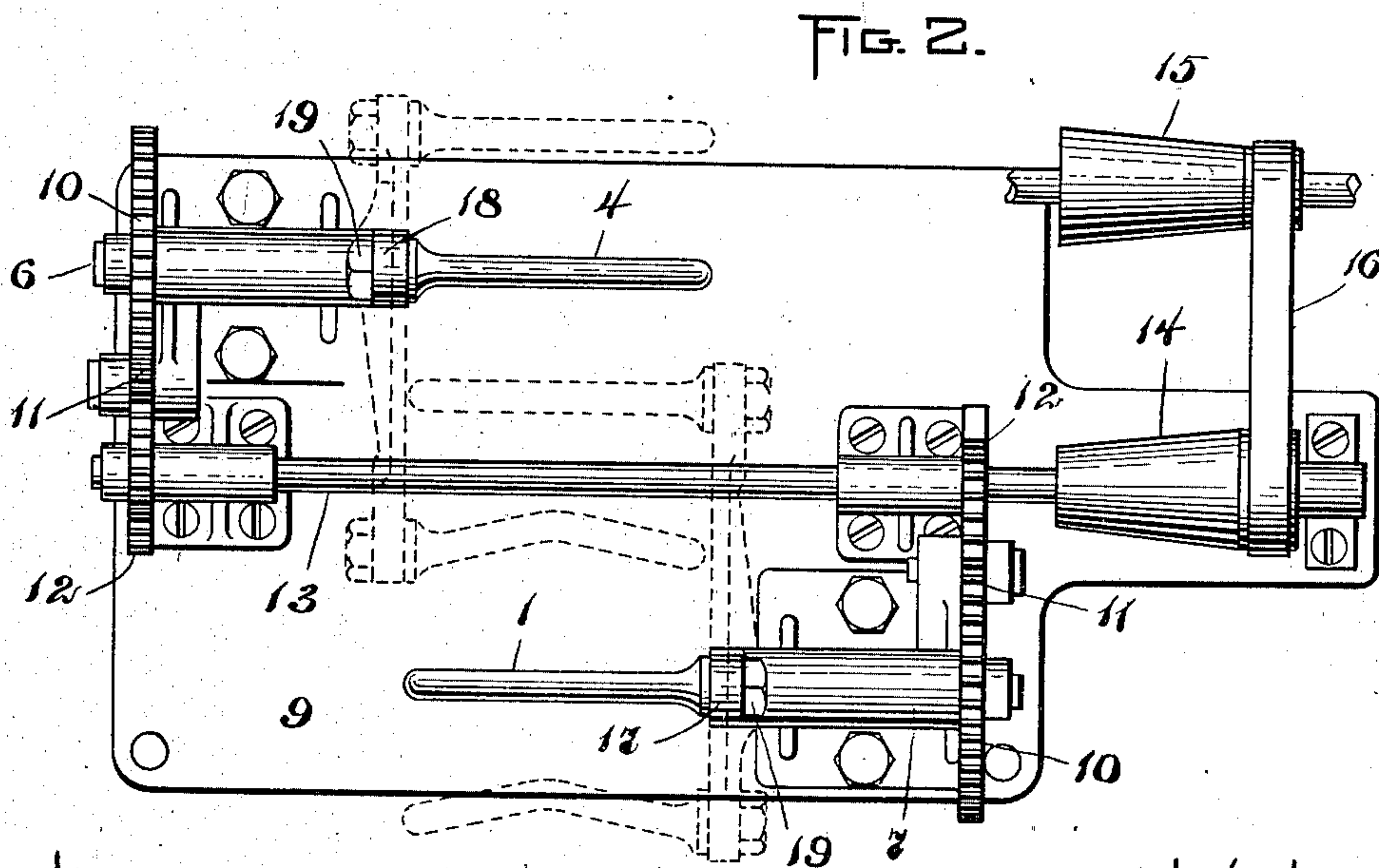
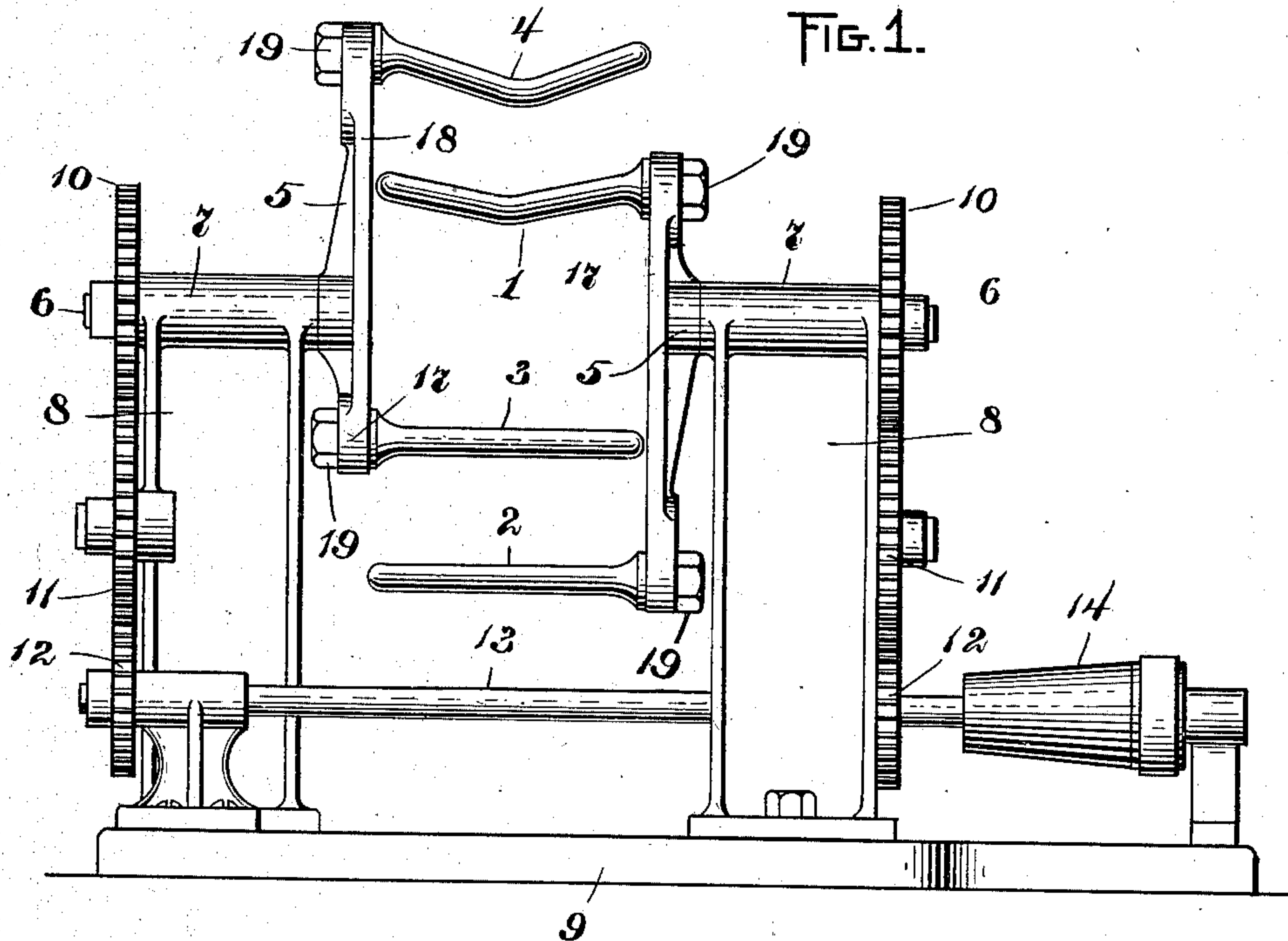
PATENTED AUG. 11, 1903.

C. THIBODEAU.
METHOD OF PULLING CANDY.

APPLICATION FILED JULY 10, 1901.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

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INVENTOR:

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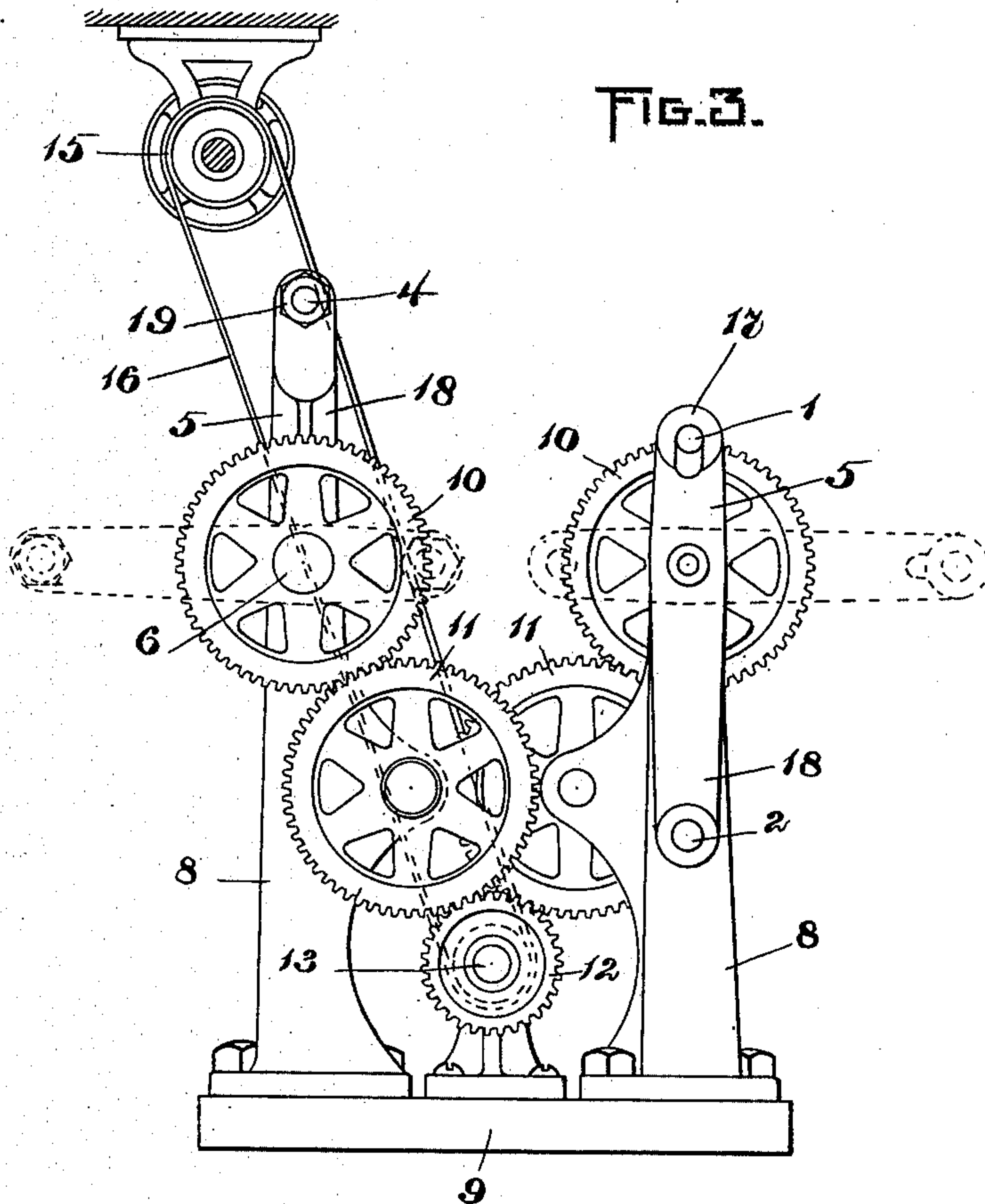
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

FIG. 4.

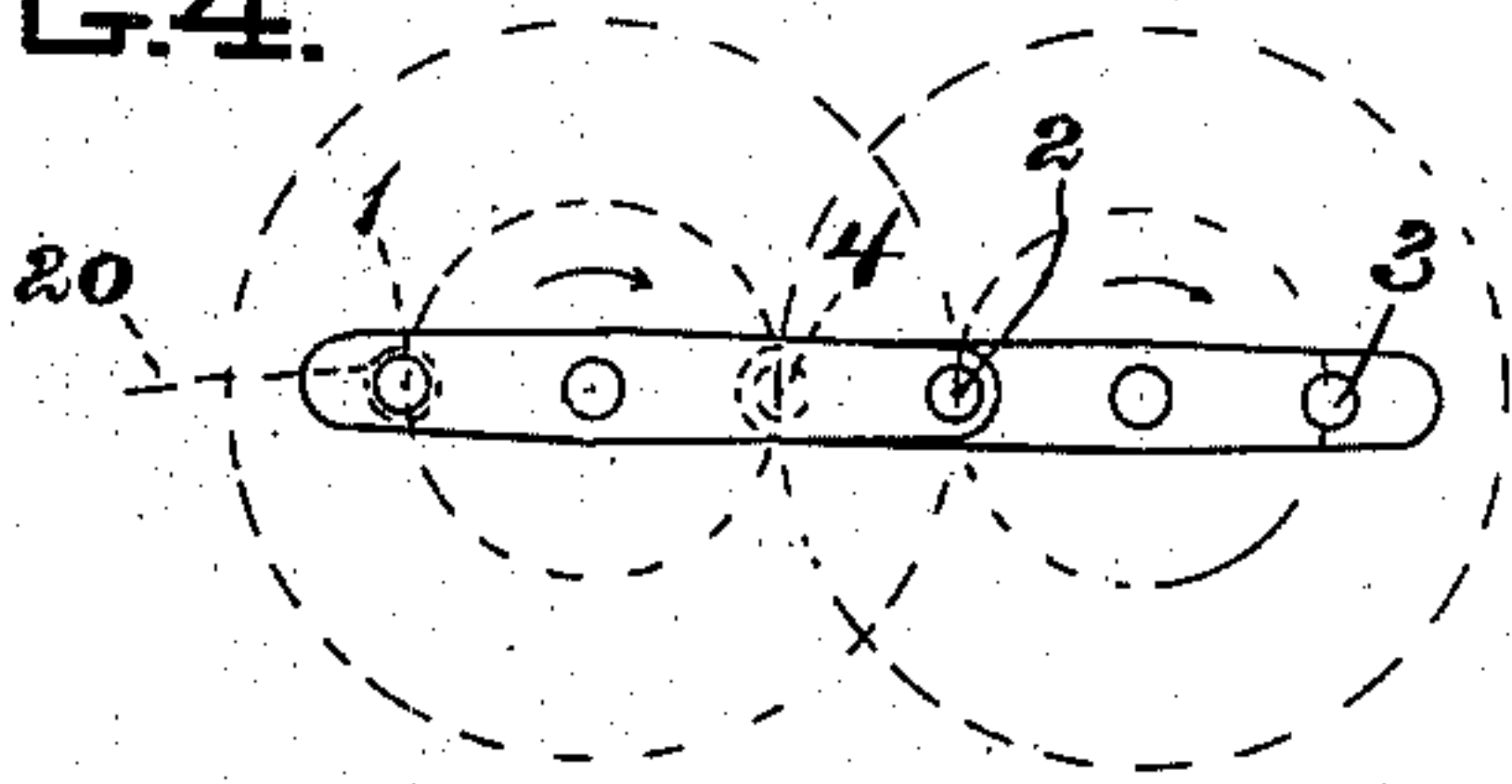


FIG. 6.

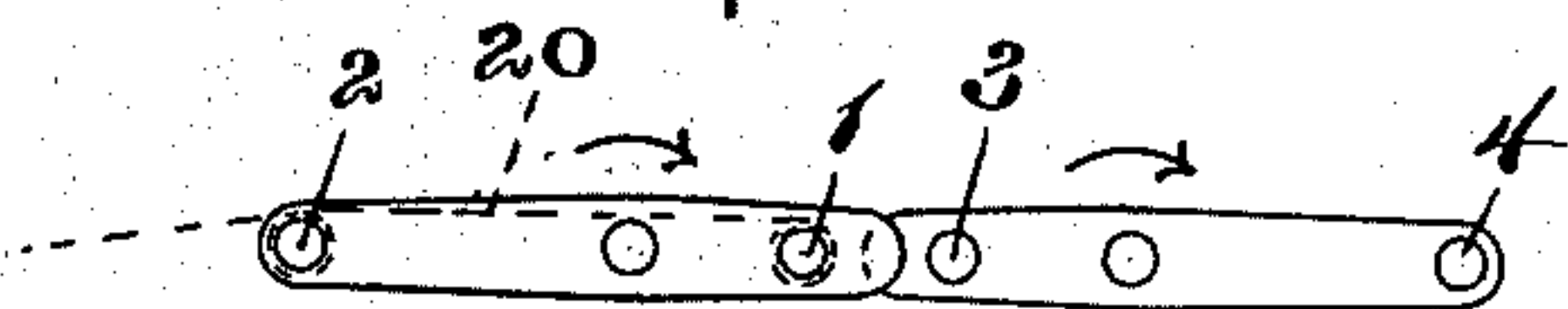


FIG. 8.

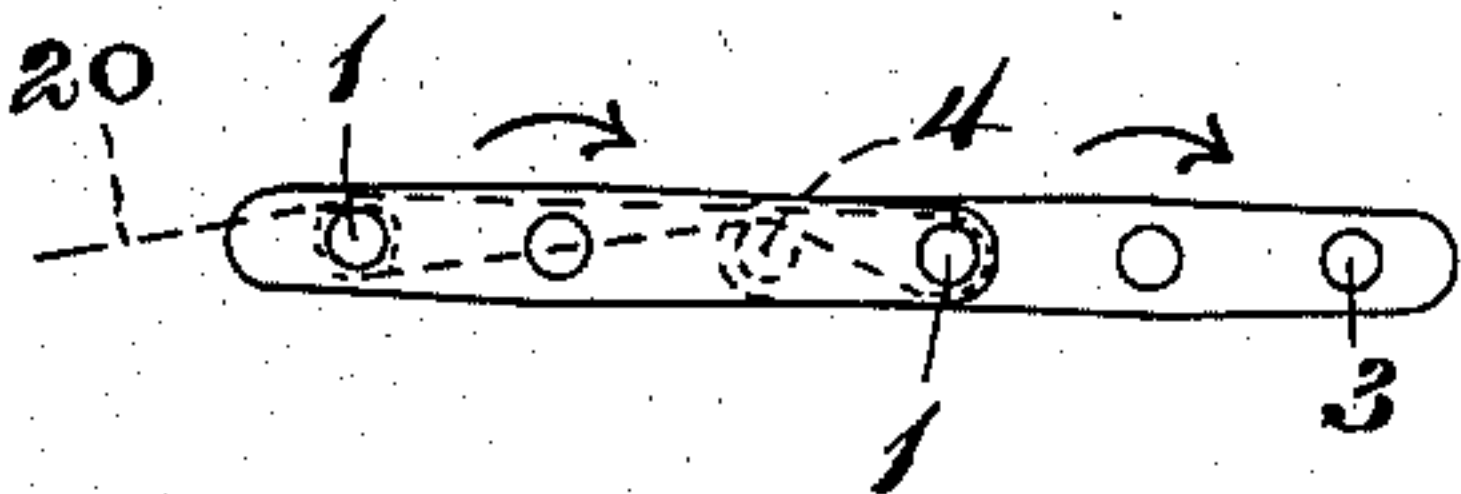


FIG. 10.

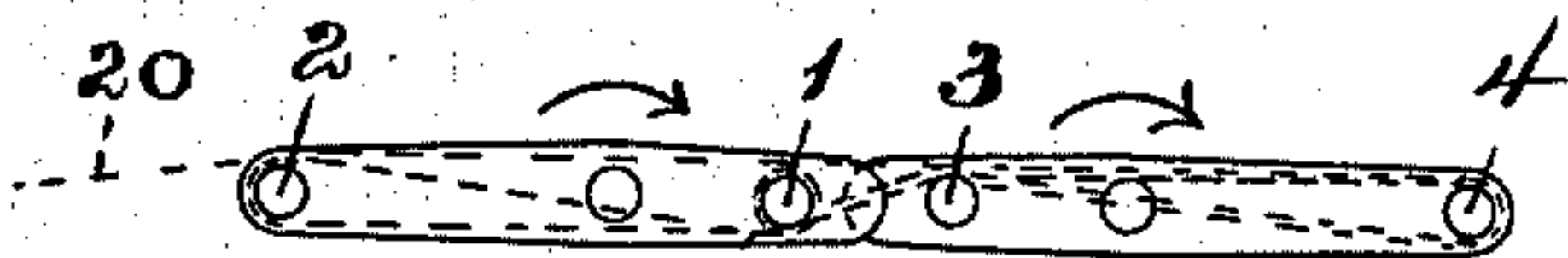


FIG. 12.

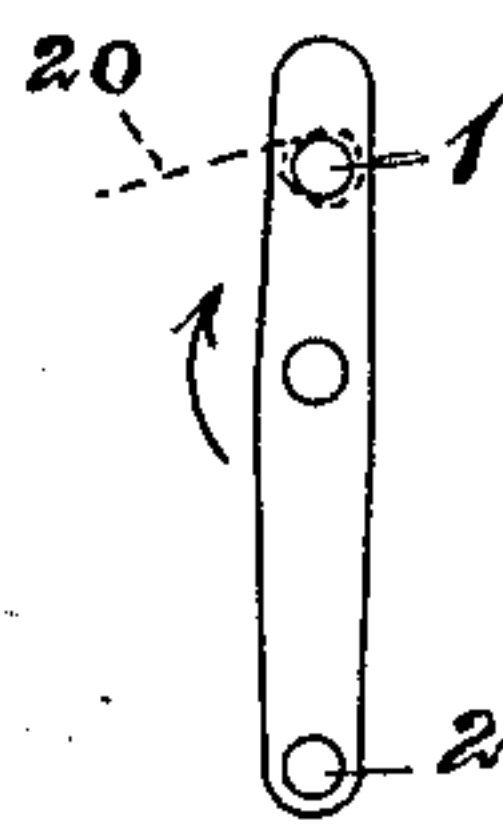
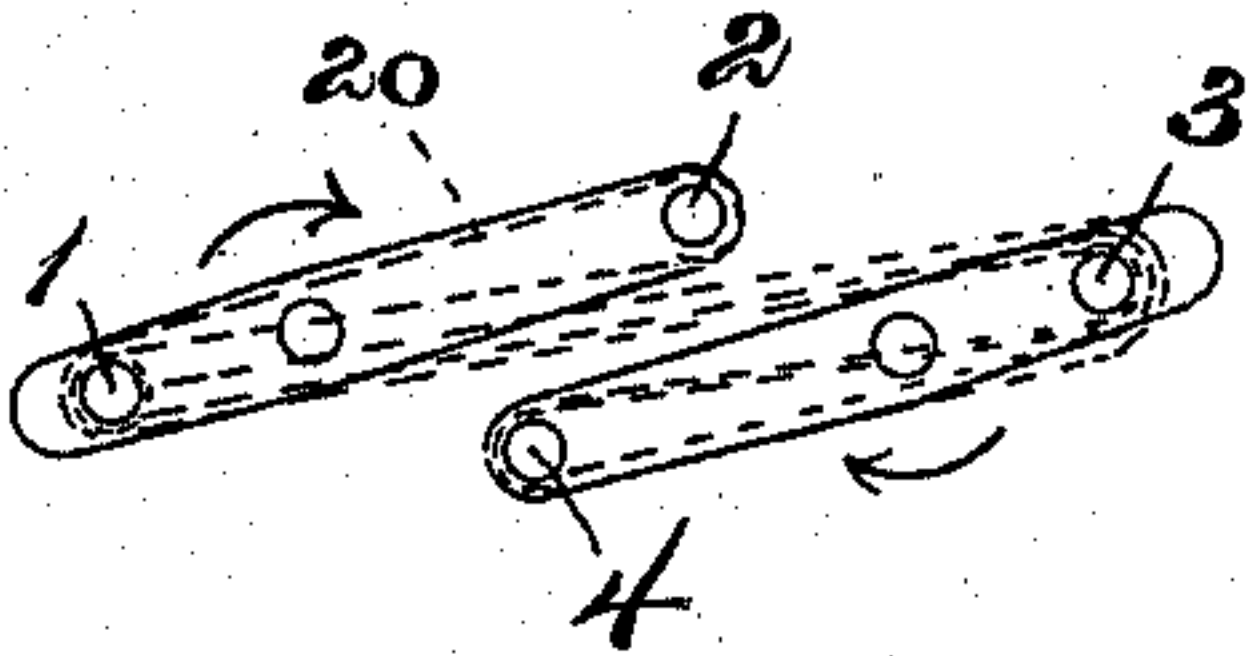


FIG. 5.

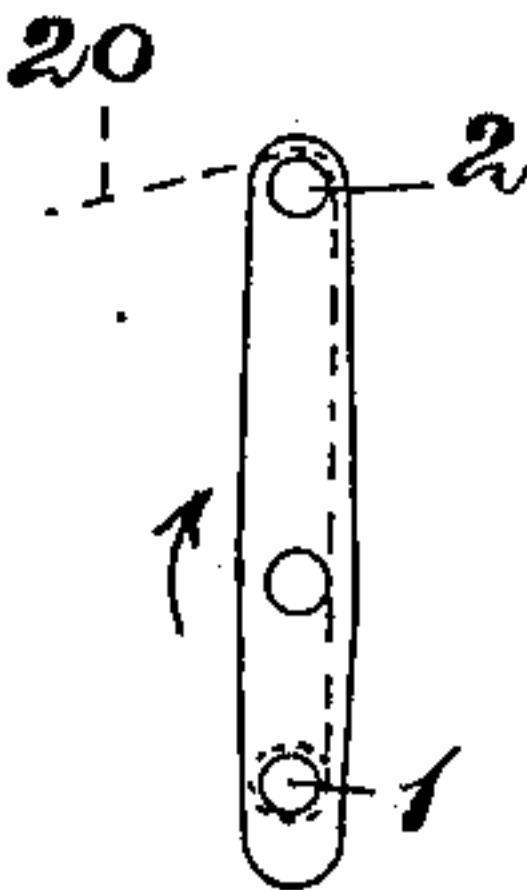


FIG. 7.

FIG. 9.

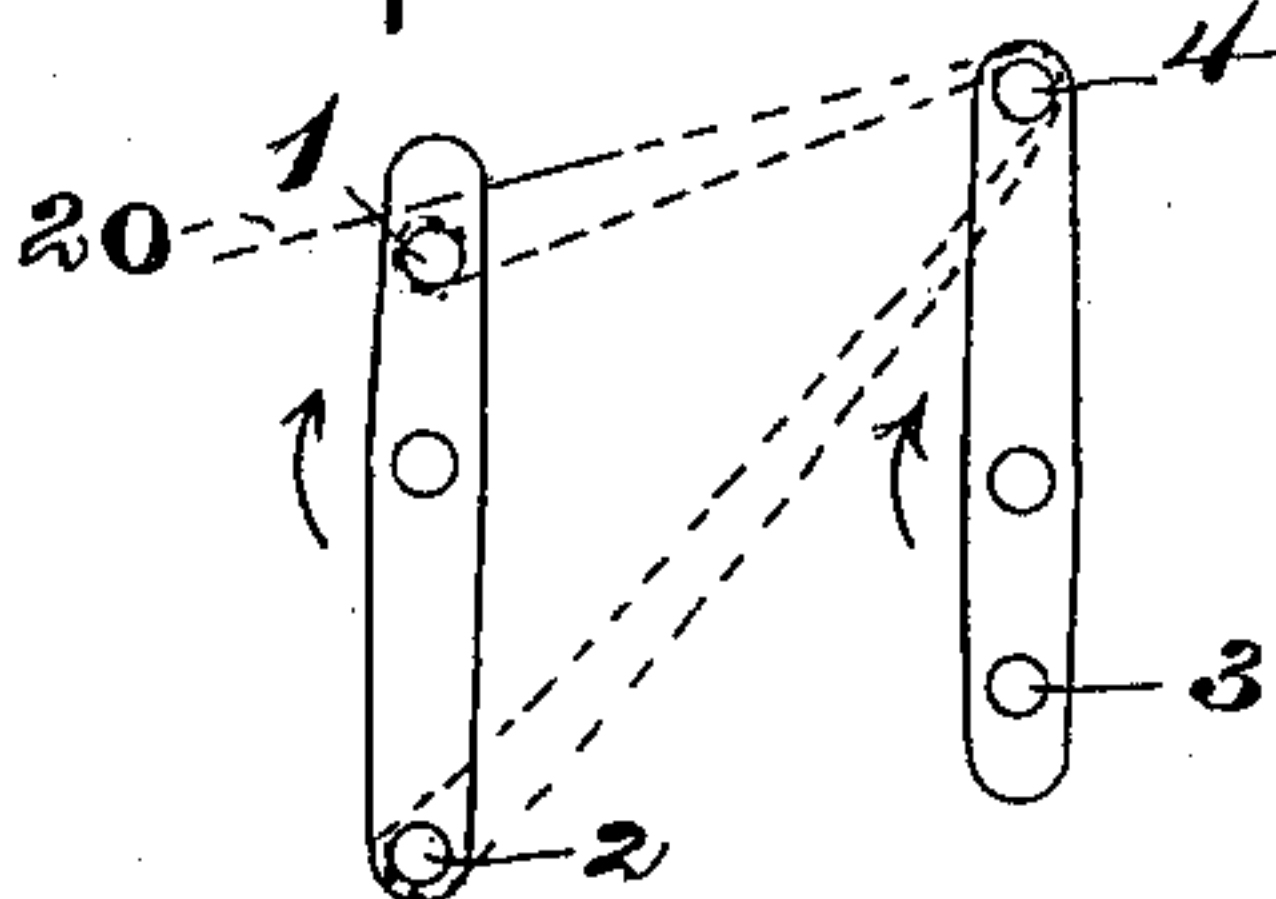


FIG. 11.

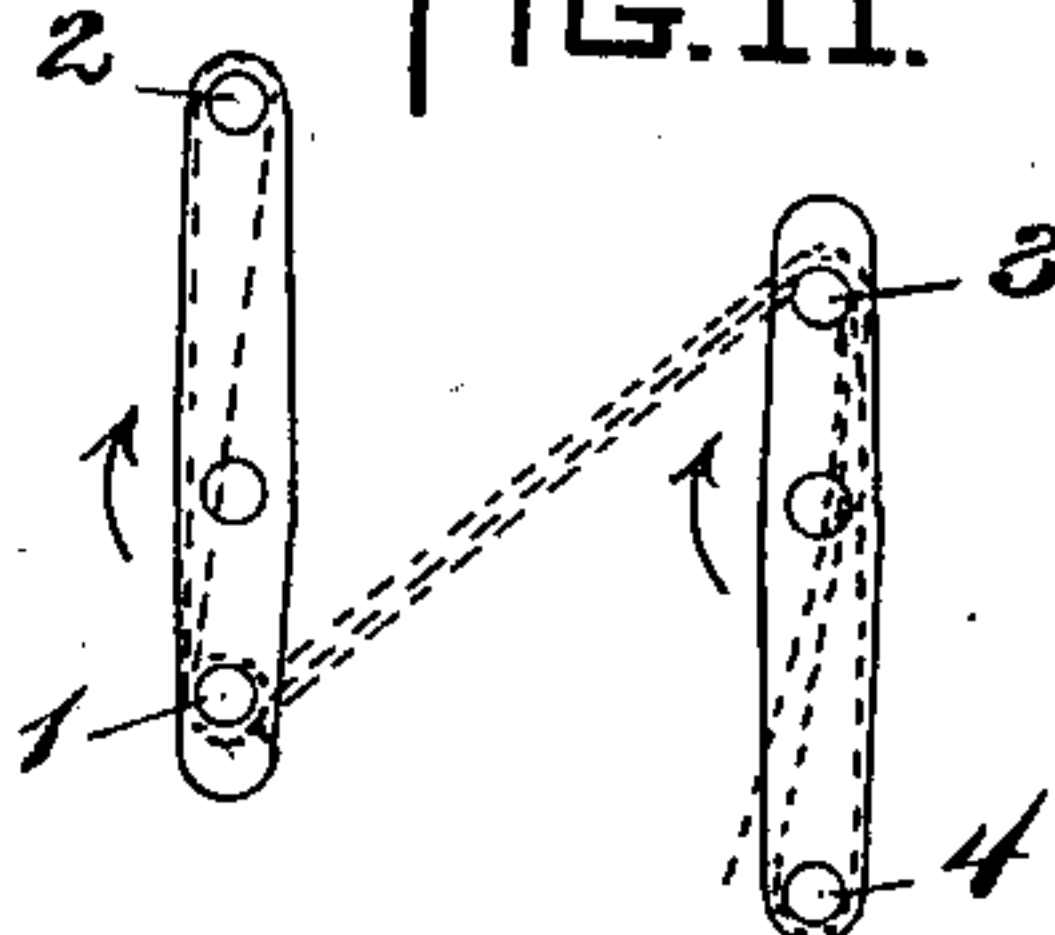
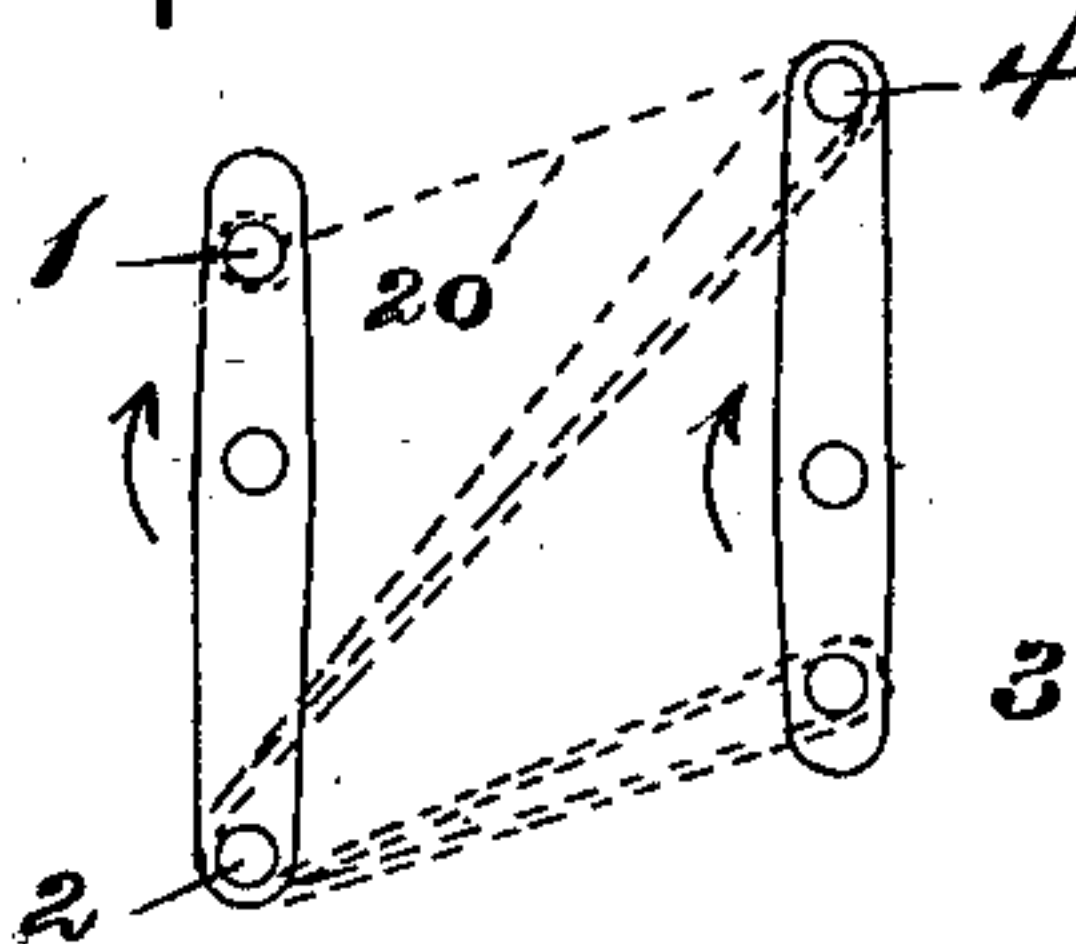


FIG. 13.



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UNITED STATES PATENT OFFICE.

CHARLES THIBODEAU, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO CATHERINE M. THIBODEAU, OF SOMERVILLE,
MASSACHUSETTS.

METHOD OF PULLING CANDY.

SPECIFICATION forming part of Letters Patent No. 736,313, dated August 11, 1903.

Application filed July 10, 1901. Serial No. 67,695. (No model.)

To all whom it may concern:

Be it known that I, CHARLES THIBODEAU, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Methods of Pulling Candy, of which the following is a specification.

This invention relates to a new and improved method of pulling candy; and it consists in certain novel features of construction
10 and arrangement of parts, fully described in the specification, clearly illustrated in the drawings, and particularly pointed out in the claims.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an end elevation of a candy-pulling machine constructed in accordance with my invention.
15 Fig. 2 represents a plan view thereof. Fig. 3 represents a side elevation. Figs. 4 to 13, inclusive, represent diagrammatic views showing different positions of the working parts of the machine.

The same reference characters indicate the
25 same parts in all of the figures.

Referring to the drawings, wherein is shown the mechanism for carrying out my invention, 1, 2, 3, and 4 represent four substantially parallel pins secured to levers 5 5. The levers
30 5 are secured to the inner ends of two shafts 6 6, which are journaled in bearings 7 7 at the upper ends of standards 8 8, said standards 8 8 being shown as mounted upon a base 9. Each shaft is provided with a gear 10, which
35 meshes with an intermediate gear or idler 11, the latter in turn meshing with a gear 12. The two gears 12 are secured to a common drive-shaft 13, rotated in any suitable manner, as by means of cone-pulleys 14 15 and a
40 shifting-belt 16, whereby different speeds of the said shaft may be obtained. By the described arrangement of shafts and gearing the levers 5 5 are rotated in the same direction at an equal speed. Each lever has a short arm
45 17 and a long arm 18, at the ends of which arms the pins 1, 2, 3, and 4 are affixed. The said pins are thus located at unequal distances from their axes of revolution, the pins

1 2 on the short arms 17 being located nearer to the shafts 6 6 than the pins 2 4 on the longer
50 arms 18.

The pins 1, 2, 3, and 4 and their supporting-shafts 6 are so related that the circles described by the pins 1 and 3, which are nearest the shafts 6 6, do not intersect, while the circles described by the pins 2 4, which are
55 farthest away from the shafts 6 6, intersect each other. The result of this construction is a novel action, the successive stages of which are represented in Figs. 4 to 13. Figs. 60 4 to 11 show the positions of the parts at quarter-turns of the shafts 6 6. Fig. 12 shows their positions at slightly less than a quarter-turn from the positions shown in Fig. 11. Fig. 13 shows the positions at slightly more than
65 a quarter-turn from the positions shown in Fig. 12.

Let it be assumed that an elongated rope or batch 20 of candy has been attached to the pin 1. When the pins are all in one plane and
70 the pins 2 4 on the long arms of the levers have crossed each other's paths, a quarter-turn of the shafts will bring the parts to the position represented in Fig. 5. Another quarter-turn causes the rope of candy to overlies
75 the pin 2 of the same set as pin 1, as shown in Fig. 6. Another quarter-turn bends the rope 20 over pin 2, as shown in Fig. 7. Another quarter-turn causes the rope to be doubled on the pins 1 2 and brings the pin 4 of the set on
80 the other bracket underneath the doubled strands, as illustrated in Fig. 8. The next quarter-turn brings the parts to the position represented in Fig. 9, in which the doubled rope supported by the pins 1 2 has been pulled
85 out or stretched into a loop by the pin 4. The next quarter-turn brings the pins 1 3 on the short arms adjacent to each other with the pin 3 about to come into action, as shown in Fig. 10. It may be assumed that the feed-
90 ing of the rope of candy is then discontinued and the machine has received its full quota. In the next quarter-turn the pins 1 3 draw away from each other and pull or stretch out the candy between them. In Fig. 12, which
95 shows the parts just before the completion

of the next quarter-turn, the pins 2 4 on the long arms are crossing each other's paths and the candy, which is already in quadruple strands, is about to be doubled again on each set of pins. After the pins have come into the same plane the next quarter-turn brings them into the positions shown in Fig. 13, in which both the pins 2 and 4 are exerting the action which the pin 4 is exerting in Fig. 9.

10 The next quarter-turn brings the parts again to positions shown in Fig. 10, and the subsequent pulling is a repetition of the action shown in Figs. 10, 11, 12, and 13. It will be understood that after each stretch caused by

15 the moving away from each other of two pins carrying the candy the mass that is intermediate of said pins is then laterally deflected by the next pin to engage it. The operation of my improved machine therefore causes the

20 candy to be quickly and uniformly stretched out by the pins, which act as pullers. One pin in each set, as the pins 1 and 4 in the drawings, may be bent or bowed toward their axes of revolution in order to keep the candy

25 centered on the rods.

In the operation of the machine the candy is not necessarily wound on the pins successively, as shown in Figs. 4 to 10, this method being selected merely to clearly illustrate the

30 action of the machine. The candy may be applied to the machine in any suitable manner. For instance, when the parts have the positions represented in Fig. 6, the pins 1 and 3 being adjacent, a batch of candy may be

35 wrapped around or molded on said pins 1 and 3 and the machine then started, whereupon the action illustrated in Figs. 10 to 13 will soon ensue and be continuously repeated. In starting to work a batch of candy the machine

40 is preferably run slowly at first and its speed gradually increased until the normal working speed has been attained. In the operation of the machine the candy is alternately automatically fed and refeed to the pins (see

45 Figs. 9 and 12) and then pulled and repulled, (see Figs. 8 and 13,) this operation continuing

until the candy has been pulled to the desired extent.

I do not confine myself to the exact construction shown, as various modifications may be made within the scope of the invention, which includes power-driven candy-pulling pins arranged to move in intersecting and non-intersecting paths and to automatically feed and refeed the candy to each other and then pull or repull the fed or refeed candy.

In the place of the pins I may employ other forms of pulling members and the arms and pins may be differently arranged and positioned, so long as they operate the described way. The path of motion of the pins may, if desired, be made that of polygons besides circles.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all the modes of its use, what I claim, and desire to secure by Letters Patent, is—

1. The method of pulling candy which consists in moving one portion of a batch in a continuous path, simultaneously moving another portion in a different continuous path to stretch the intermediate mass, and then laterally deflecting the said intermediate mass.

2. The method of pulling candy which consists in moving one portion of a batch in a continuous path, simultaneously moving another portion in a different continuous path to stretch the intermediate mass, then laterally deflecting the said intermediate mass and moving it in a continuous path differing from the two first-mentioned paths, and continuing these operations to alternately pull the candy and carry it from one path to another.

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

CHARLES THIBODEAU.

Witnesses:

E. BATCHELDER,
H. L. ROBBINS.