E. J. BRACH.

CONFECTIONERY MACHINE.

APPLICATION FILED JULY 25, 1912.

1,093,380.

Patented Apr. 14, 1914.

3 SHEETS—SHEET 1.

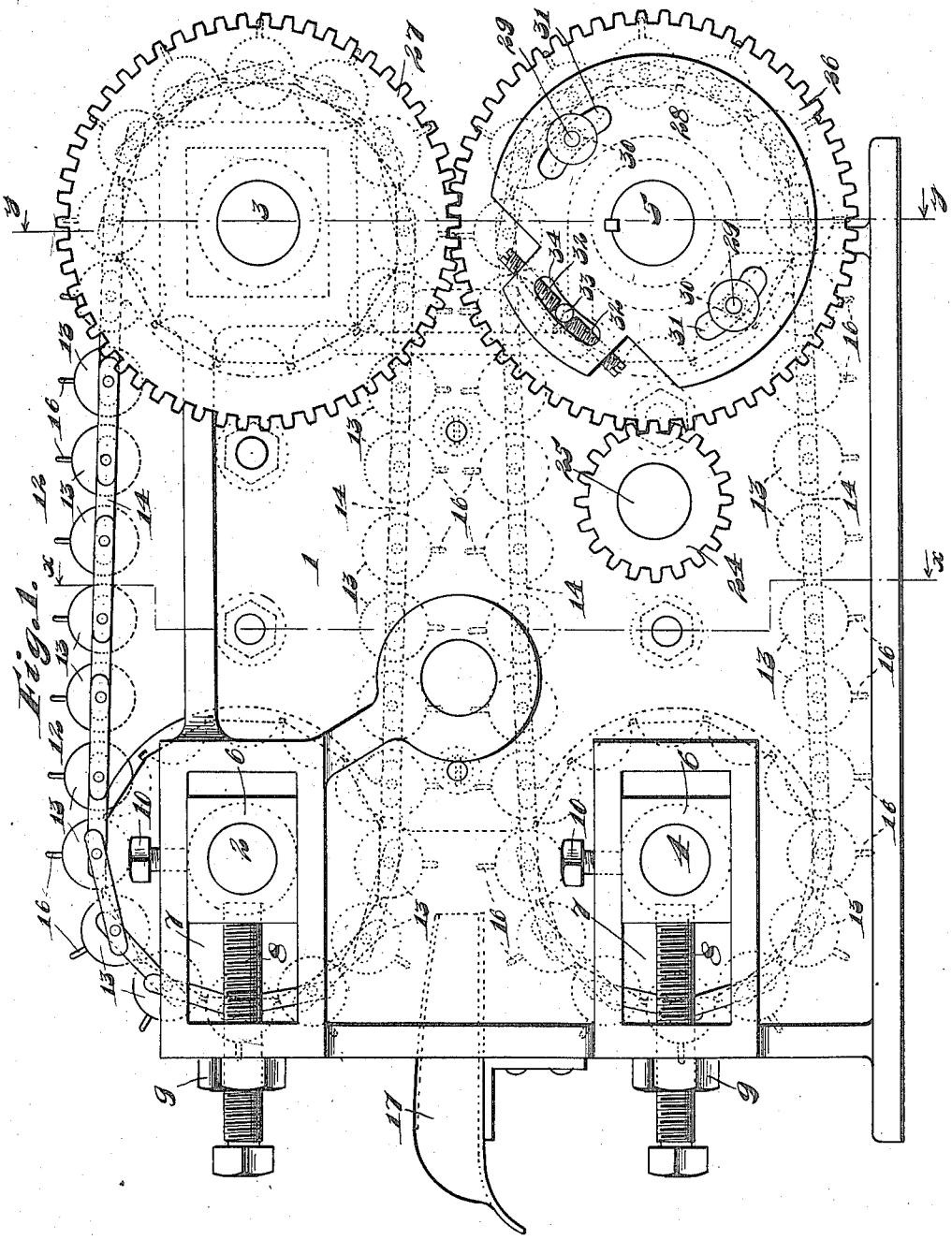


Fig. 1.

Witnesses:

C. E. Wessels.

A. A. Olson.

Inventor:

Emil J. Brach,

By Joshua R. H. Potts

his Attorney

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3 SHEETS—SHEET 2.

Fig. 5.

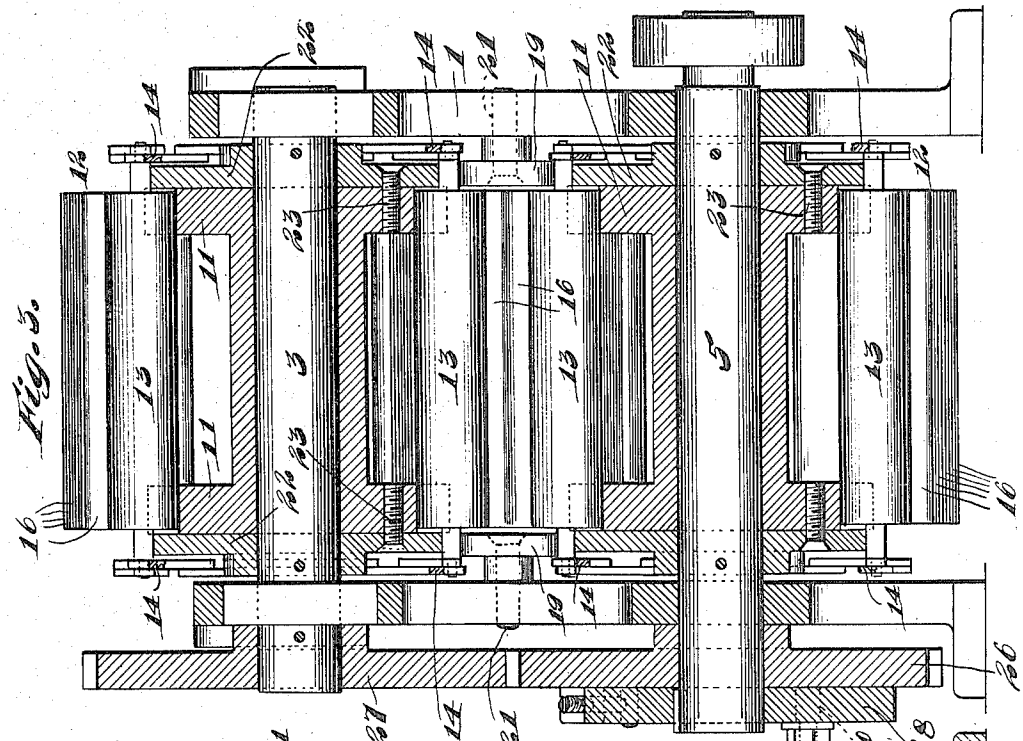
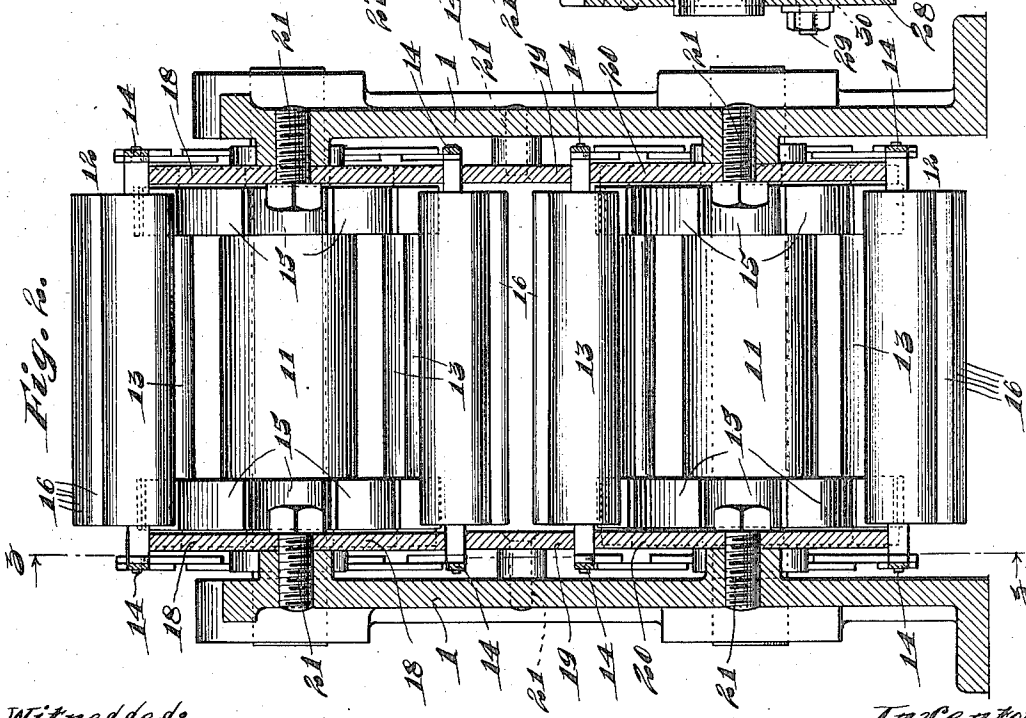


Fig. 5a.



Witnesses:
C. E. Wessels
A. A. Olson.

Inventor:
Emil J. Brach,
By Joshua R. H. Potts
his Attorney.

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3 SHEETS—SHEET 3.

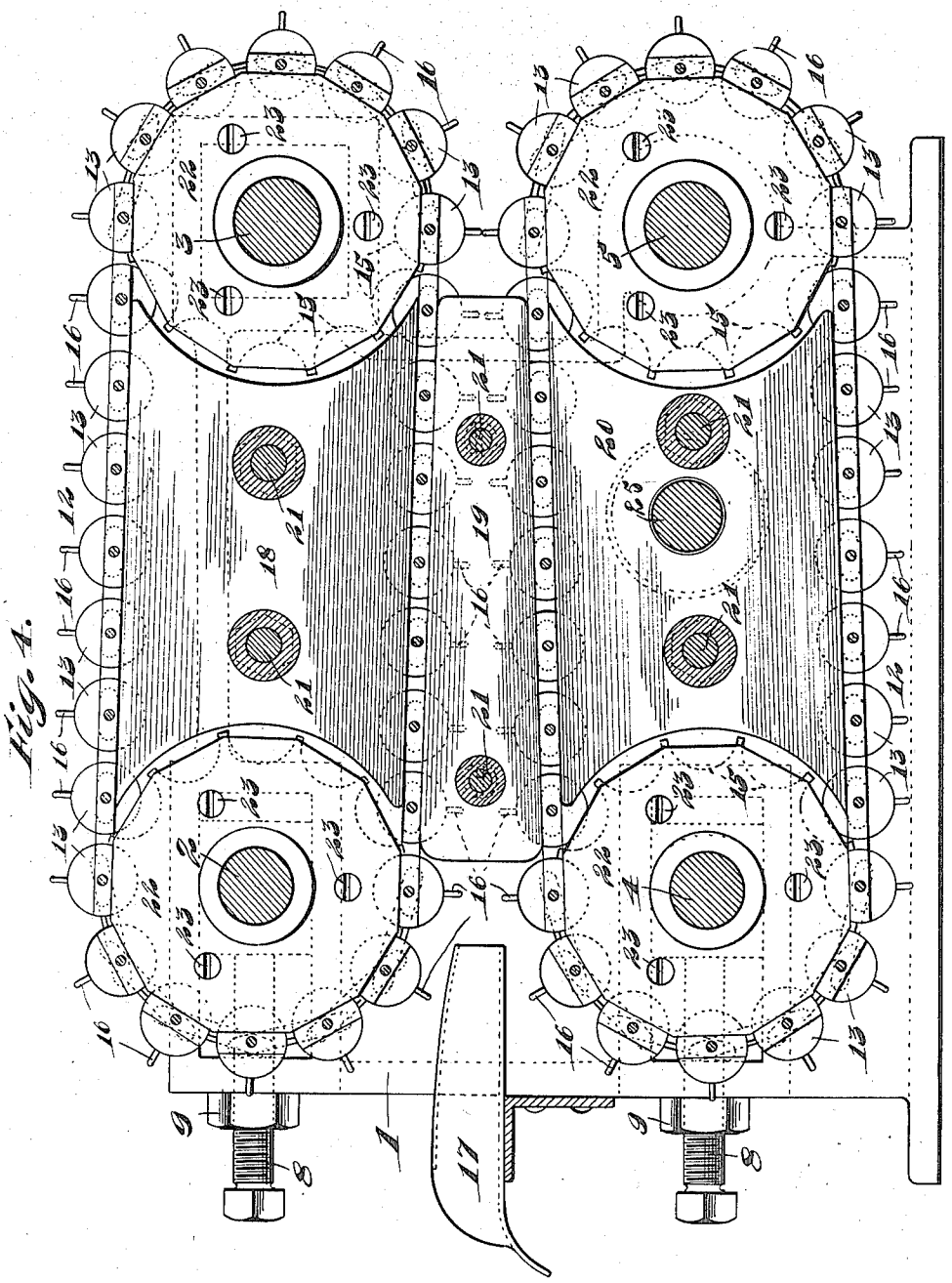


Fig. 4.

Witnesses:
C. E. Weasels
A. A. Olson

Inventor:
Emil J. Brach,
By Joshua R. H. Potts
his Attorney.

UNITED STATES PATENT OFFICE.

EMIL J. BRACH, OF CHICAGO, ILLINOIS.

CONFECTIONERY-MACHINE.

1,093,380. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed July 25, 1912. Serial No. 711,559.

To all whom it may concern:

Be it known that I, EMIL J. BRACH, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Confectionery-Machines, of which the following is a specification.

My invention relates to confectionery machines and more specifically to that class thereof designed for use in cutting a strip of candy or other similar plastic material into small pieces of uniform size, the present construction being designed specifically for effecting the formation of what are known as "pillows." Candies of the character last mentioned are formed of an inner portion of comparatively soft or plastic material such as minced cocoanut, and an outer wall of a more rigid and less plastic nature, so that in the cutting of the strip into small pieces or "pillows," if the cutting is sudden, the casing or outer wall will not yield readily enough, thereby causing the inner softer portion to be forced or to escape through the severed end of the "pillow" between the supposedly united or closed edges of the outer wall.

It is the object of this invention to provide a construction whereby this cutting of the "pillow" will be gradually effected so that the outer wall of the candy strip will be permitted to yield or stretch sufficiently to prevent the inner softer portion from escaping as above mentioned.

A further object is the production of a confectionery machine of the character mentioned which will be of durable and economical construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by referring to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a side elevation of a confectionery machine embodying my invention, Figs. 2 and 3 are vertical transverse sections taken on substantial lines *x*—*x* and *y*—*y* respectively of Fig. 1, and Fig. 4 is a vertical longitudinal section taken on substantial line *z*—*z* of Fig. 2.

The preferred form of construction as illustrated in the drawings comprises a supporting frame consisting of two spaced vertical members 1. Extending between the frame members 1 and having their extremities journaled in bearings provided therein, are shafts 2, 3, 4 and 5. The shafts 2 and 4 are, for more reasons to be hereinafter set forth, mounted for longitudinal adjustment in the supporting frame, movable bearing blocks 6 of said shafts being slidably mounted in elongated slots 7 provided in frame members 1 as clearly shown in Fig. 1. The bearing blocks 6 are connected with the inner ends of screws 8 which pass loosely through the end walls of slots 7, nuts 9 threaded upon said screws and abutting said walls of said slots being adapted to lock the screws 8 against inward movement and hence to lock the bearing blocks 6 against corresponding movement. With this arrangement it will be seen that adjustment of the shafts 2 and 4 outwardly or toward the left, may be effected by positively rotating nuts 9 upon the screws 8. Set screws 10 are provided for coöperation with bearing blocks 6 for locking the latter in positions of longitudinal adjustment in the slots 7.

Fixed upon each of the shafts 2, 3, 4 and 5 is a roller 11, the central portion of the periphery of said roller being cut away as shown in order to conduce to lightness in the construction and to reduce friction, as will be readily understood. Mounted upon the rollers 11 for rotation about shafts 2 and 3, and 4 and 5 respectively, are endless flexible elements 12. Each of the elements 12 consists of a series of transversely extending parallel cylindrical members 13, which are spaced slightly apart and which are connected at their extremities by endless chains 14, the peripheries of rollers 11 being semicircularly recessed as at 15 in order to accommodate the members 13. Carried by each of the members 13 is an outwardly projecting longitudinally extending blade or cutting element 16, the cutting elements of one of the flexible elements 12 being adapted to register with those of the other of said flexible elements as clearly shown in the several views. The adjacent sides of the flexible elements 12 are inclined to each other at an acute angle, as clearly illustrated in Fig. 4, so that, when said elements are synchronously moved, the cutting elements 16 thereof will gradually approach each other, the same being farthest apart at the left hand

end of the machine, and approaching each other gradually, in their movement toward the opposite end of the machine, where said elements are finally brought into contact with each other to effect complete severing of the material positioned between the same. The candy strip or other material which is severed in the manner above first described is fed to the machine through tapering tubular guide 17 which directs the material to a position between the cutting elements 16 which gradually move into engagement therewith ultimately effecting the cutting thereof into pieces of a desired size. By reason of the arrangement of the cutting members 16 whereby the same gradually approach each other, the objectionable results which are incident to quick or rapid cutting, as first mentioned, are eliminated.

The members 13 of the flexible elements 12 are held against relative rotary movement through the medium of straight edged blades 18, 19 and 20 secured to the frame members 1 through the medium of screws 21, the longitudinal edges of said members being adapted to contact with the flattened ends of said members 13 as clearly shown in Figs. 2, 3 and 4. At the extremities of the rollers 11 are provided polygonal circular plates 22 rigidly secured thereto by means of screws 23. Said plates 22 are so arranged, and the same are of such diameter, that the flattened peripheral portions thereof contact with the flattened extremities of the members 13 to hold the same against relative rotary movement as said members move about the rollers. With the construction as set forth then, it will be seen that blades 18, 19 and 20 will serve to prevent relative rotary movement of the members 13 of the flexible elements 12 in the span between the rollers, and the plates 22 will serve the same function in the passage of said members 13 around the rollers 11. Also the members 18, 19 and 20 serve in the capacity of guides, preventing sagging of the members 12.

The members 12 are driven through the medium of a pinion 24, which is mounted upon the driving shaft 25 the latter when the device is in use, being adapted to be driven from any source of power supply. The pinion 24 meshes with a gear 26 loosely mounted upon the shaft 5, said gear 26 meshing with a gear 27 fixed to the shaft 3. An operative connection between the shaft 5 and said gear 26 is effected by a disk 28 which is keyed or otherwise suitably fixed to said shaft. The connection of the gear 26 with the disk 28 is effected through the medium of threaded studs 29 and nuts 30 threaded upon said studs, said studs projecting through the elongated slots 31 provided in the member 29. Said slots 31 are elongated in form, as mentioned, in order to permit of relative rotary adjustment of the disk 28, and hence the shaft 5 relative to the gear 26, in order to effect registration of the cutting element 16 of one of the flexible elements 12 with those of the cutting elements of the other. This rotary adjustment may be readily effected through the medium of screws 32 threaded in the member 28, which engage at their inner ends against the stud 33 projecting from the gear 26, which engages an arcuate slot 34 provided in the member 28. With this arrangement, it will be seen that rotary adjustment of the disk 28 and hence shaft 5, relative to the gear 26, may be secured by manipulating screws 32, the parts being positively locked in positions of adjustment through the medium of threaded studs 29 and nuts 30.

A confectionery machine of the construction set forth is durable and economical in construction, through the medium thereof, confectionery of the character before mentioned may be manufactured with ease and expedition and the device is of efficiency in use.

It will be observed that in the passage of the flexible elements 12 about the rollers, the cutting elements 16 will be moved apart slightly, such movement of said cutting elements effecting release of the candy pieces cut thereby from said cutting elements without necessitating the employment of other additional means for effecting this purpose.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as fall within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A machine of the class described comprising a supporting frame; guides on said frame; rollers journaled in said frame; two endless flexible elements mounted on said rollers, each comprising two spaced endless chains and a plurality of parallel members extending laterally between said endless chains, each parallel member being provided with a flat surface at each end thereof engaging one of said guides, the ends of said parallel members being extended across said guides and secured to said endless chains; and a cutter blade extending outwardly from each of said parallel members, substantially as described.

2. A machine of the class described comprising a supporting frame; rollers journaled in said frame; a plurality of spaced parallel members, each having a flattened

end portion at each end and a pin extending longitudinally from each flattened end portion, endless chains on said rollers, each chain comprising a plurality of perforated plates pivotally mounted on said pins, each plate connecting two adjacent pins at adjacent ends of said parallel members; outwardly extending cutter blades on said parallel members; guides on said frame; and other guides on said rollers, all of said guides engaging said flattened ends holding said parallel members against rotation, substantially as described.

3. A machine of the character described comprising a supporting frame; rollers mounted in said frame; plates rigidly secured to said rollers and having flattened peripheral portions thereon; two superposed endless flexible elements mounted for rotation about said rollers each comprising two spaced endless members and a series of transversely extending parallel members provided with flattened end portions between said endless members and having the remote ends of their flattened end portions secured thereto; an outwardly extending cutter blade on each transversely extending member and superposed straight edged members arranged in spaced relation in said frame, the flattened edge portions of said parallel members being adapted for passage between said superposed straight edged members and for contact with the flattened peripheral portions of said plates whereby said parallel members are guided and held from relative rotary movement, substantially as described.

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

EMIL J. BRACH.

Witnesses:
JOSHUA R. H. POTTS,
JANET E. FARRELL.