

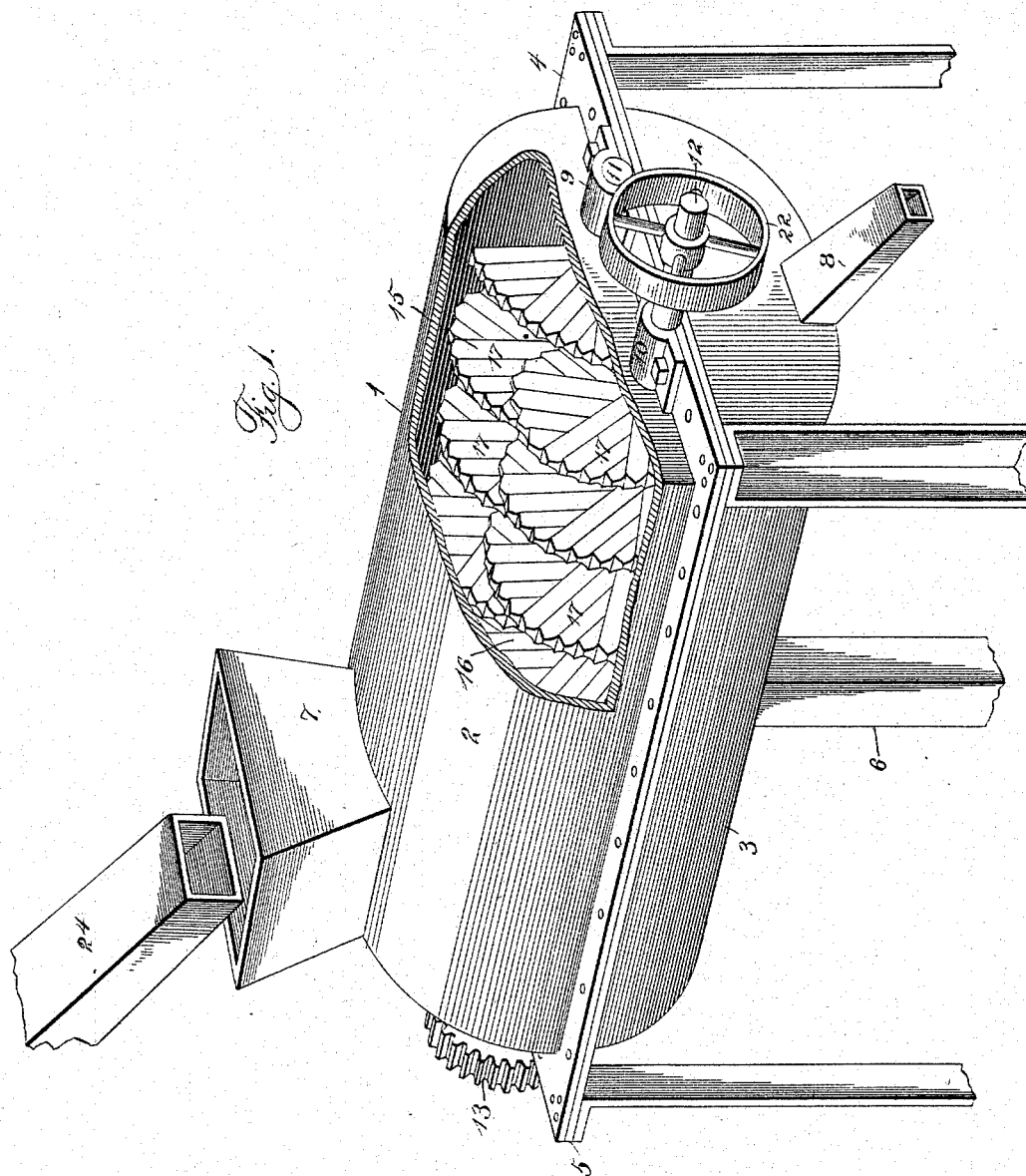
(No Model.)

2 Sheets—Sheet 1.

C. RIPPIN.  
MIXING MACHINE.

No. 526,541.

Patented Sept. 25, 1894.



Witnesses:

John Enders Jr.  
W. J. Sankey.

Indenter;

Charles Ripplin

by

Nigdon Nigdon Tongan  
Att'ys.

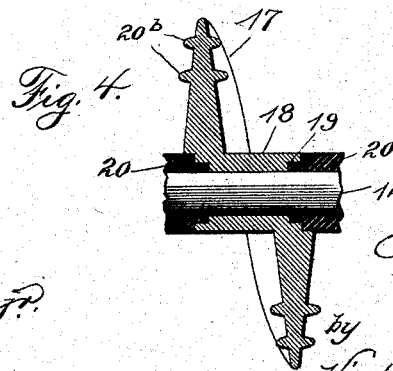
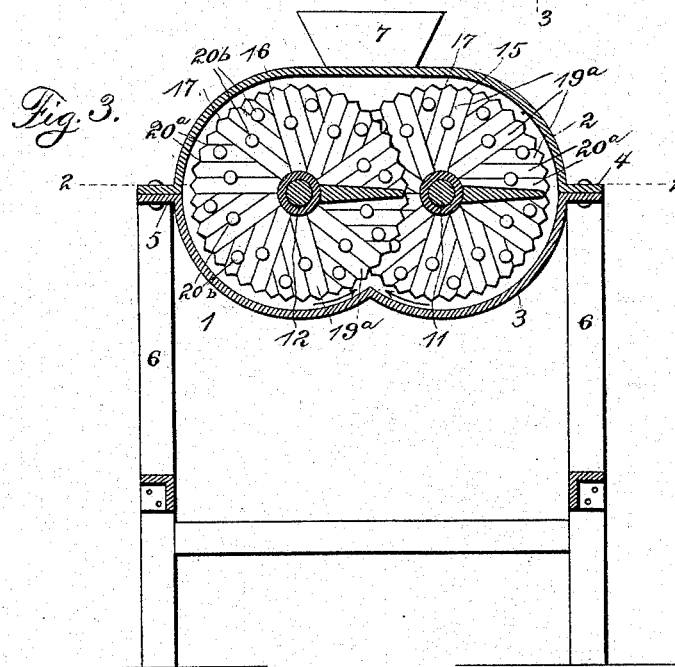
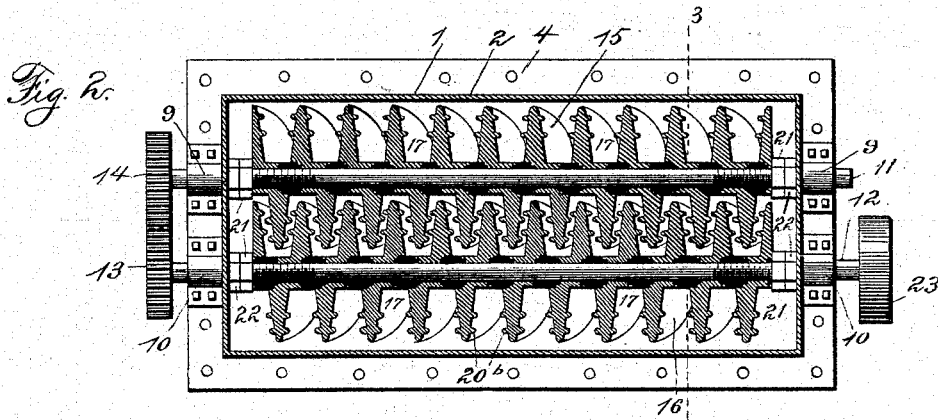
(No Model.)

2 Sheets—Sheet 2.

C. RIPPIN.  
MIXING MACHINE.

No. 526,541.

Patented Sept. 25, 1894.



Witnesses:  
John Anders Jr.  
W. J. Sanson

Inventor  
Charles Ripplin  
by  
Higdon Higdon Longan  
Attys

# UNITED STATES PATENT OFFICE.

CHARLES RIPPIN, OF ST. LOUIS, MISSOURI.

## MIXING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 526,541, dated September 25, 1894.

Application filed August 5, 1893. Serial No. 482,478. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES RIPPIN, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Mixing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improvement in "mixing machines" and consists in the novel arrangement, combination and construction of parts as will be more fully hereinafter described and designated in the claims.

In the drawings: Figure 1 is a perspective view showing my invention ready for operation, parts being broken away to more clearly show the same. Fig. 2 is a longitudinal section taken on the line 2—2 of Fig. 3. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2. Fig. 4 is an enlarged detail section of one of the sections which are used in carrying out my invention.

1 indicates an outer casing which is constructed in two portions 2 and 3, each portion being provided with marginal flanges 4 and 5 for the purpose of allowing said portions to be bolted or riveted together. This casing is mounted on a supporting frame 6, the upper end of which is connected to the marginal flanges in any desirable way.

Mounted on the upper portion 2 of the casing 1 and opening through said casing and located in the position shown in Fig. 1 is a hopper 7.

Connected to the lower portion 3 of the casing 1 and opening through said casing is a tail-chute 8. (See Fig. 1 for illustration.)

Mounted in the casing 1 and held in position by bearings 9 and 10 are two parallel shafts 11 and 12. Mounted upon one end of the shafts 11 and 12 are two gear wheels 13 and 14 which mesh together so that said shafts will rotate in opposite directions. Mounted on the shafts 11 and 12 intermediate of their bearings are two conveyers 15 and 16. These conveyers are constructed in sections 17 and each section is provided with a hub 18 and formed in each end of said hub, is an annular recess 19. Mounted on the shafts intermediate the adjacent hubs 18 and constructed to conform with the annular re-

cess thereof is a compressible washer 20 which is made of rubber or any other suitable material. The sides of the sections 17 are provided with a series of sections 19<sup>a</sup> each having parallel corrugations 20<sup>a</sup> as can be seen by inspecting Fig. 3. The sections 19<sup>a</sup> are arranged segmentally and each of said sections is provided with parallel corrugations as before stated, and the parallel corrugations of each section being formed at angles with relation to the parallel corrugations of the adjacent section. The object of these corrugations is to elevate the products which are desired to be mixed and spread the same over the entire surface of the section as the same revolves.

20<sup>a</sup> indicates lugs formed on or fixed to the sections 17. Said lugs are so arranged on the sections 17 that the lugs on one section of the conveyer 16 will not come in contact with the lugs formed on sections of the conveyer 15. The object of these lugs is to more fully facilitate the mixing of the contents, and also to increase the frictional surface that is brought to bear on the contents. Said lugs should be of such a size as not to interfere with the adjustment of the sections 17. These sections are so constructed and arranged on the shafts 11 and 12 that they will overlap each other as shown in Fig. 2 and by turning in opposite directions one will be a right and the other a left hand conveyer.

The outer edge or periphery of the sections 17 is corrugated for the purpose of more fully facilitating their operation.

The shafts 11 and 12 are screw threaded intermediate their bearings and provided with nuts 21 and lock nuts 22. These nuts are to engage the outer section and by screwing these nuts on the said shaft it will compress the washers 20 thus bringing the sections 17 closer together, which will be required for mixing fine material. Mounted on the shaft 12 at the opposite end of the gear-wheel 13 is a belt pulley 23 which is adapted to receive a driving-belt from any suitable power.

The lower portion 3 of the section 1 is constructed to conform with the outer periphery of the sections 17 and will give said sections a greater mixing surface than as though it was flat.

24 indicates a supply spout for the purpose of conveying the material which is required to be mixed in the machine.

The operation is as follows:

5 By making my machines of different sizes they will be applicable for mixing spices, mortar, cement or anything which is desired to be mixed. The material which is desired to be mixed is supplied from the spout 24 to the hop-  
10 per 7 which opens into the interior of the casing 1 and falls on to the revolving conveyers 15 and 16. These conveyers moving in the direction of the arrows in Fig. 3 will mix the material and convey it to the opposite end of  
15 the casing 1 and out through the tail chute 8. All the time it is passing from one end to the other the sections will stir and mix it thoroughly.

When it is desired to mix fine material the  
20 operator screws the nuts 21 on the shafts 11 and 12 up which will compress the washers 20 and bring the sections closer together. By so doing it will cause a greater friction on the material as it passes through the machine and  
25 more fully stir and mix the same.

When the sections comprising the conveyers are adjusted nearer together, the sections of both shafts should be adjusted or moved  
30 in same direction at same time, if possible, and through the same space, so that the sections of one shaft will not interfere with those of the adjacent shaft. These sections do not form a continuous conveyer, and the adjacent edges of contiguous sections on the same  
35 shaft do not register, but are usually separated a distance, so that the above-described adjustments may be accomplished.

Having fully described my invention, what I claim is—

40 1. The combination, in a mixing machine,

of a casing, two parallel shafts mounted therein said shafts being screw-threaded intermediate their ends and nuts engaging said screw-threads conveyers mounted on said shafts, said conveyers being constructed in  
45 sections, and a yielding washer mounted between said sections to allow the said sections to be adjustable relative to each other, substantially as set forth.

2. The combination, in a mixing machine, 50 of a casing, two parallel shafts mounted therein, conveyers mounted on said shafts, said conveyers formed in sections constructed with a yielding washer mounted between said sections, and means for compressing said  
55 washer, substantially as set forth.

3. The combination, in a mixing machine, of a casing formed in two pieces separable from each other, one of said sections being located above the other section and connected  
60 thereto, a feed hopper at one end of the upper section, a tail chute connected to the lower section, two parallel shafts mounted in said casing, two gear wheels 13 and 14 mounted one  
65 on each of said shafts to mesh with each other and rotate said shafts in opposite directions, sectional right and left hand conveyers mounted on said shafts within said casing,  
70 means for sliding said sections of both conveyers separately and independently in a longitudinal direction upon said shafts, and means for clamping each of said sections in position after adjustment, substantially as herein specified.

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

CHARLES RIPPIN.

Witnesses:

JOHN ENDERS, Jr.,

JNO. C. HIGDON.