March 25, 1930. L. A. SLITER 1,752,115

MACHINE FOR MANUFACTURING METALLIC PACKING

Filed Jan. 14, 1927

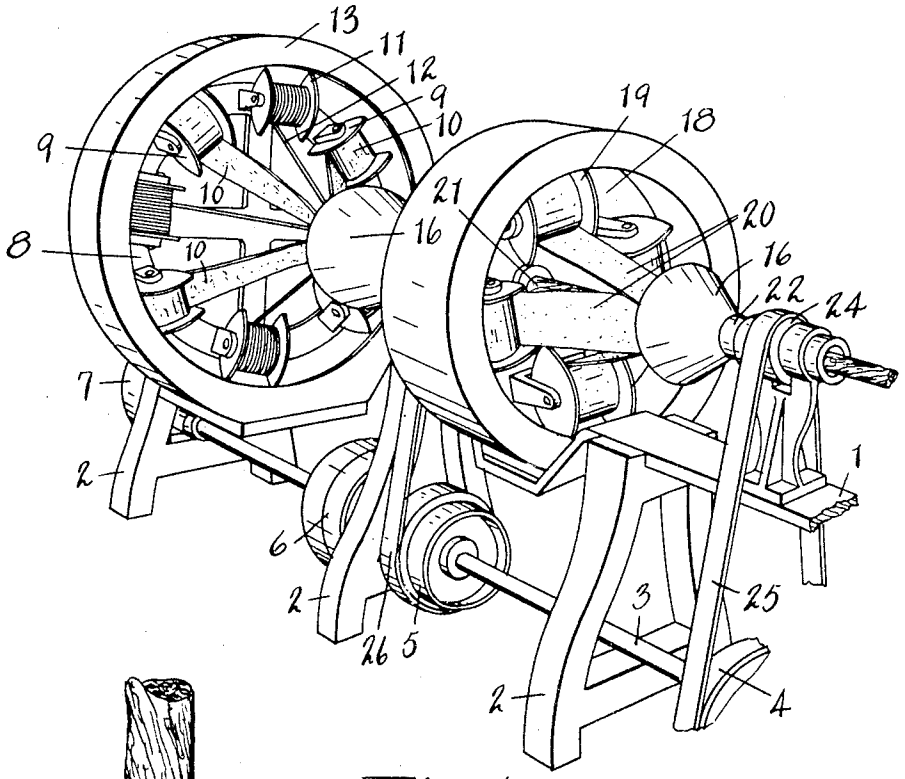


Fig. 1

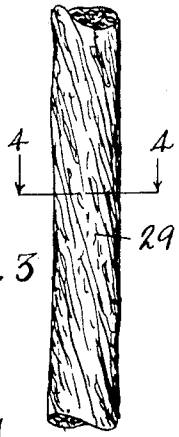


Fig. 3

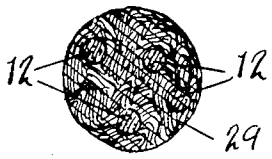


Fig. 4

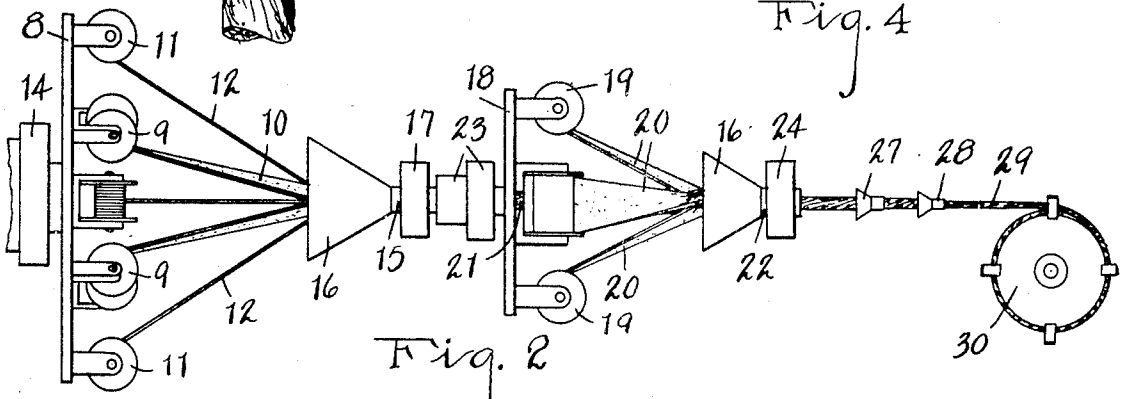


Fig. 2

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UNITED STATES PATENT OFFICE

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MACHINE FOR MANUFACTURING METALLIC PACKING

Application filed January 14, 1927. Serial No. 161,102.

My improved machine is especially designed for the making of packings of the type shown in my application for Letters Patent filed concurrently herewith, Serial No. 161,101.

The main object of this invention is to provide a machine of the class described by means of which packings may be rapidly formed from thin sheet metal or "metal foil" in the form of strands with reinforcing strands incorporated and interspersed therein the whole having a covering of metal foil.

A further object is to provide an improved machine of the class described by means of which packings of this type may be produced which have very substantial tensile strength and enables the incorporation of various materials with considerable uniformity.

Objects pertaining to details and economies of my impoved machine will definitely appear from the detailed description to follow. The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing forming a part of this application, in which:

Fig. 1 is a fragmentary perspective view of a machine embodying the features of my invention, the compacting formers and the reel being omitted.

Fig. 2 is a side elevation, various parts being shown conventionally.

Fig. 3 is a side view of a fragment or section of packing formed by my improved machine.

Fig. 4 is a cross section on line 4—4 of Fig. 3.

Referring to the drawing, the main supporting frame 1 is provided with a plurality of pedestals 2 in proper spaced relation to support the parts. I have only shown such parts as are deemed necessary to illustrate my improvements and certain of these parts are shown conventionally.

The driving shaft 3 is arranged longitudinally of the machine and is provided with pulleys, 4, 5, 6 and 7, preferably stepped pulleys as illustrated. At the front end of the machine is a turret 8 carrying a plurality of spools 9 adapted to receive strips of metal foil or thin sheet metal 10, and a plurality of spools 11 adapted to receive strands 12 of reinforcing material or the like.

This turret rotates within a housing 13 and is provided with stepped pulleys 14 adapted to be connected to the pulleys 7 by means of a belt not illustrated. At the rear of this turret is a rotary former 15 having a forwardly flaring guide 16, this former being rotatably mounted and provided with pulleys 17 which are connected to the pulleys 6 by a suitable belt not illustrated. The turret and former are mounted for independent rotation and adapted to be driven at different speeds.

The strips of metal 10 and the strands 12 are twisted together into a strand which is delivered axially through a second turret 18, this second turret being provided with a plurality of spools 19 adapted to receive strips of thin sheet metal or metal foil 20, the strand 21 formed by the first turret and former being delivered to a second former 22 so that the strips 20 are spirally twisted around the strand 20, thus providing an outer twisted covering for this strand 21.

The turret 18 is provided with pulleys 23 which are driven by the pulley by means of the belt 26 while the second former is provided with pulleys 24 which are driven from the pulley 4 by means of the belt 25.

At the rear of the former 22 are reducing members 27 and 28, these reducing members being of different diameters decreasing toward the rear so that the twisted strand is compacted into the strand 29 which is wound upon a reel 30 shown conventionally in Fig. 2. The material is drawn through the machine by the pull of this reel.

The second twister 22 is also provided with a forwardly flaring guide 16 which guides the strips into the twister gradually crumpling and compacting the metal as it is drawn into the twister.

My improved machine enables the making of packings such as described in my copending application very rapidly and of uniform size. The packing has considerable tensile strength and the various strips entering into

the same are bound together uniformly throughout.

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

1. In a machine of the class described, the combination of a rotatably mounted spool turret provided with a plurality of spools adapted to receive strips of relatively thin metal mounted thereon and other spools adapted to receive reinforcing strands, a tubular rotatably mounted former disposed at the rear of and in axial alinement with said spool turret, a second rotatably mounted turret disposed at the rear of said former and provided with a plurality of spools adapted to receive strips of relatively thin metal, a second rotatably mounted former disposed at the rear of said second turret, and means for driving said formers and turrets at varying speeds.

2. In a machine of the class described, the combination of a plurality of spool turrets disposed in spaced relation, each turret having spools adapted to receive strips of relatively thin sheet metal, the first turret being also provided with spools adapted to receive reinforcing strands, a rotating former disposed after each turret, each former being provided with a flaring guide projecting forwardly therefrom and rotating therewith, and a plurality of forming members of varying diameters decreasing toward the rear arranged at the rear of the rearmost former.

3. In a machine of the class described, the combination of a plurality of spool turrets disposed in spaced relation, each turret having spools adapted to receive strips of relatively thin sheet metal, the first turret being also provided with spools adapted to receive reinforcing strands, and a rotating former disposed after each turret, each former being provided with a flaring guide projecting forwardly therefrom and rotating therewith.

4. In a machine of the class described, the combination of a plurality of spool turrets disposed one at the rear of the other and each having a plurality of spools, a former disposed at the rear of each turret and rotatable independently thereof, means for rotating said turrets and formers at different speeds, and a plurality of forming members of varying dimensions decreasing toward the rear arranged at the rear of the rearmost former.

5. In a machine of the class described, the combination of a plurality of spool turrets disposed one at the rear of the other and each having a plurality of spools, a former disposed at the rear of each turret and rotatable independently thereof, and means for rotating said turrets and formers at different speeds.

6. In a machine of the class described, the combination of a rotatably mounted spool turret provided with a plurality of spools adapted to receive strips of relatively thin metal and other spools adapted to receive reinforcing strands, the several spools being arranged in a circle, a tubular rotatably mounted former disposed at the rear of and in axial alinement with the spool turret and provided with a flaring guide projecting forwardly therefrom and rotating therewith, and a plurality of forming members of varying diameters decreasing toward the rear arranged at the rear of said rotating former.

In witness whereof I have hereunto set my hand.

LEON A. SLITER.