The invention further aims to produce strips of ammunitions quickly, typically a strip of 15 cartridges in less than 5 minutes, with no mechanical cranking force greater than 130 N, by manual actuation of the machine.

Summary

The present disclosure relates, in an aspect, to a machine for attaching ammunitions intended to form a chain or strip with links of ammunitions or cartridges, including an ogive, a cartridge casing and a cup that are essentially cylindrical, attached from one to the next by links articulated to one another, each link being made up of a first part attached to a second part, both parts being offset relative to one another, the second part including a central loop or handle relative to the height of the link, defining an approximately semi-cylindrical opening, sized to be adjusted on the cartridge casing of a cartridge of given caliber, the first part including two loops also of this type but located, heightwise, respectively on either side of the central loop, said machine including:

- a first guideway, intended for the successive introduction of the links detached from one another and their guiding under the effect of gravity and a second guideway, intended for the successive introduction of the cartridges and their guiding under the effect of gravity;

- a moving mechanism provided with a first shaft, a second shaft and a third shaft, said shafts being mounted parallel to one another and coupled by gears, the moving mechanism being set in motion by a rotation of the third shaft, which drives, in a continuous movement, a rotation of the first shaft in a counterclockwise direction and a rotation of the second shaft in a clockwise direction, or vice versa, the first shaft including at least two gripping wheels each having slots regularly spaced apart and with a circular shape making it possible to drive the casings of the cartridges, the second shaft including at least two gripping wheels having slots regularly spaced apart making it possible to drive the cup or a rear part of the links, such that, when the moving mechanism is set in motion, each cartridge is presented by the rotation of the first shaft synchronously with the link presented by the rotation of the second shaft and is clipped transversely in said link;

CLAIMS

1. A machine for attaching ammunitions intended to form a chain or strip with links of ammunitions or cartridges, including an ogive, a cartridge casing and a cup that are essentially cylindrical, attached from one to the next by links articulated to one another, each link being made up of a first part attached to a second part, both parts being offset relative to one another, the second part including a central loop or handle relative to the height of the link, defining an approximately semi-cylindrical opening, sized to be adjusted on the cartridge casing of a cartridge of given caliber, the first part including two loops also of this type but located, heightwise, respectively on either side of the central loop, said machine including:

- a first guideway, intended for the successive introduction of the links detached from one another and their guiding under the effect of gravity and a second guideway, intended for the successive introduction of the cartridges and their guiding under the effect of gravity;
- a moving mechanism provided with a first shaft, a second shaft and a third shaft, said shafts being mounted parallel to one another and coupled by gears, the moving mechanism being set in motion by a rotation of the third shaft, which drives, in a continuous movement, a rotation of the first shaft in a counterclockwise direction and a rotation of the second shaft in a clockwise direction, or vice versa, the first shaft including at least two gripping wheels each having slots regularly spaced apart and with a circular shape making it possible to drive the casings of the cartridges, the second shaft including at least two gripping wheels having slots regularly spaced apart making it possible to drive the cup or a rear part of the links, such that, when the moving mechanism is set in motion, each cartridge is presented by the rotation of the first shaft synchronously with the link presented by the rotation of the second shaft and is clipped transversely in said link;
- an electric motor or a manual crank for setting the third shaft in rotation.

2. The machine for attaching ammunitions according to claim 1, characterized in that the gripping wheels of the respective cartridges and links are removable and adapted in terms of the shape of the slots to the caliber or the size of the cartridges and the respective links, the assembly being easily adaptable to other calibers or sizes by replacement of the gripping wheels.

3. The machine for attaching ammunitions according to claim 2, characterized in that, to allow transition from a 40 mm caliber to a 30 mm caliber, the first shaft includes a gripping wheel distal from a position by using the ogive of the cartridges and two twinned gripping wheels proximal from the position by using the ogive of the cartridges, the two twinned wheels having slots respectively adapted to the 30 mm caliber and the 40 mm caliber, a return to the 40 mm caliber being ensured by a removal of the wheel provided for the 30 mm caliber.

4. The machine for attaching ammunitions according to claim 3, characterized in that the two aforementioned twinned wheels are secured by at least one jack using a ball-lock.

5. The machine for attaching ammunitions according to claim 1, characterized in that it includes a to-and-fro mechanism with a finger that serves as a stop blocking a first link of a column located in a bottom of the first guideway, the finger unlocking and retracting sequentially during the rotation of the moving mechanism, so as to ensure a passage and gripping of the links one after the other.

6. The machine for attaching ammunitions according to claim 1, characterized in that the first guideway is profiled such that the links present themselves with the openings of the central loops or handles toward a front of the machine.