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H. W. ORNDOFF

DELIVERY APPARATUS

Filed Sept. 30, 1926

Fig. 1

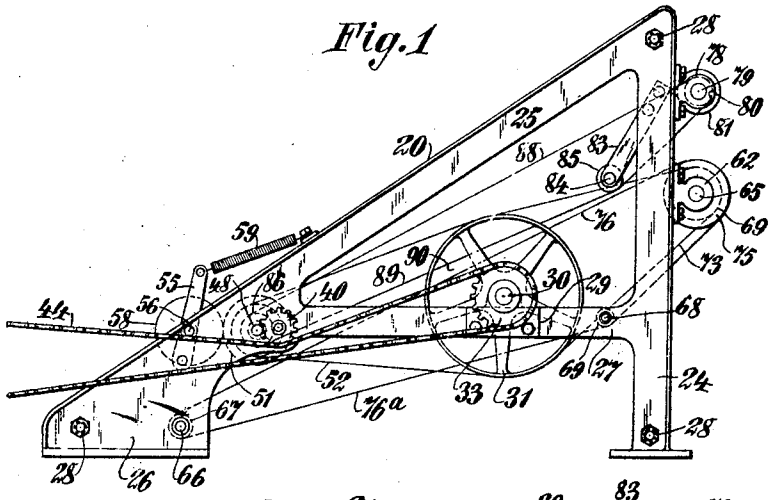
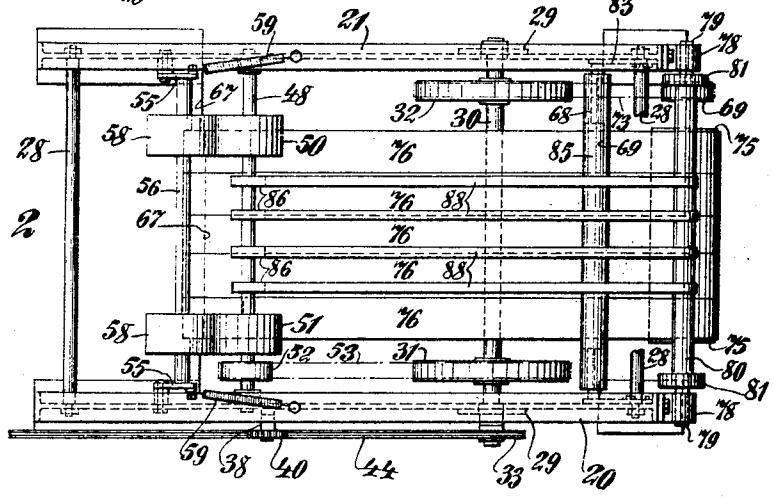


Fig. 2



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UNITED STATES PATENT OFFICE.

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DELIVERY APPARATUS.

Application filed September 30, 1926. Serial No. 138,699.

This invention relates to a delivery apparatus.

The object of the invention is the production of an apparatus wherewith bags or other objects can be easily clamped and delivered to a predetermined place. The second object of the invention is the production of an apparatus wherewith bags that are delivered from a bag making machine are clamped one after the other and automatically delivered to a predetermined place. The third object is to produce a delivery apparatus wherewith bags and other objects of different thickness are automatically clamped and conveyed to a predetermined place.

In the accompanying drawings Fig. 1 represents a side elevation of the delivery apparatus; and Fig. 2 shows a top plan view of Fig. 1.

The apparatus in this instance comprises the pair of triangle shaped frames designated in their entireties by the numerals 20 and 21. Each frame comprises the vertical T shaped member 24, the inclined T shaped member 25, the nose end 26 and the intermediate horizontal member 27. The frames are connected by the spacer bolts 28.

To the outer faces of the intermediate horizontal members 27 are fastened the journal brackets 29, which have journaled therein the driving shaft 30. Pulleys 31, 32 and the sprocket chain wheel 33 are fastened to the shaft 30. A journal bracket 38 is fastened to one side of the frame 20. An idler sprocket chain wheel 40 is journaled to the journal bracket 38. A sprocket chain 44 extends over the sprocket chain wheel 33, is guided by the idler sprocket chain wheel 40, and leads to a source of power not shown.

A shaft 48 has its ends journaled in the frames 20 and 21, and has fastened thereto the pair of clamping pulleys 50 and 51 and the pulley 52. A belt 53 connects the pulleys 31 and the pulley 52. A pair of arms 55 have their lower ends pivoted to the inner faces of the frames 20 and 21, and have fastened thereto the shaft 56, on which latter are journaled the pair of adjustable clamping pulleys 58. Springs 59 extend from the upper end of each arm 55, and have their other ends fastened to the frame of the apparatus.

A journal bracket 62 is fastened to each of the vertical members 25 of the frames, and a shaft 65 is journaled in said brackets 62.

A shaft 66 has its ends journaled in the nose ends 26 of the frames of the apparatus. A roller 67 is fastened to the shaft 66. A shaft 68 has its ends journaled in the members 27 of the frames 20 and 21, and has fastened thereto the roller 69. A belt 73 connects the pulleys 32 and 69. In this instance five pulleys 75 are fastened to the shaft 65. A plurality of delivery belts each indicated with the upper members 76 and the lower members 76ª extend over the pulleys 75, the guide roller 67 and said belts bear against the guide roller 69.

A pair of journal brackets 78 are fastened to the upper portions of the vertical members 24 of the frames 20 and 21, and have journaled therein the shaft 79. A roller 80 and a pair of guide pulleys 81 are fastened to the shaft 79. A pair of journal arms 83 extend from the vertical members 24 and have journaled therein the shaft 84, to which latter is fastened the guide roller 85. A plurality of pulleys 86 are fastened to the shaft 48. Clamping bands indicated with the upper members 88 and the lower members 89 extend around the roller 80, the pulleys 86 and bear up against the guide roller 85.

To use the delivery apparatus the driving shaft 30 is turned by means of the sprocket chain 44 and its appurtenances. This causes the delivery belts having the members 76 and 76ª, and also the clamping bands having the members 88 and 89 to move. The bags or other objects to be delivered are guided, by means not shown, and drop between the circumferential surfaces of the pairs of clamping pulleys 50 and 58, whereby they are clamped and directed to the upper members 76 of the delivery belts. The bags or other objects then enter the nozzle shaped spaces 90 between the members 76 of the delivery belts and the members 98 of the clamping bands where they are somewhat compressed, and are then discharged from the apparatus beyond the members 24 of the frames. The pulleys 50, 51 and 58 are preferably rubber covered and the flexibility of the springs 58 enable the bags and other objects of different thickness to be clamped between the said pulleys.

Various modifications may be made in the invention and the present exemplification is to be taken as illustrative and not limitative thereof.

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

1. In a delivery apparatus the combination of a delivery belt, a moving clamping band making an angle with the delivery belt to form a nozzle shaped space, a pair of clamping pulleys one bearing on the other adjacent to said belt and band, means to rotate one of said pulleys and pliable means to hold the second pulley against the rotating pulley.

2. In a delivery apparatus the combination of a pair of frames, a rotative driving shaft journaled in the frames, a second shaft journaled in the frames on one side of the driving shaft, a pulley fastened to the second shaft, a roller journaled in the frames, means to rotate the pulley during the rotations of the driving shaft, a delivery belt supported by said pulley and roller, a third shaft journaled in the frames, means to rotate the third shaft with the rotations of the driving shaft, a pulley fastened to the third shaft, a second roller journaled in the frames, a clamping band carried by the latter pulley and roller, the said clamping band forming a nozzle shaped space with the delivery belt, a clamping pulley fastened to the third shaft, a second clamping pulley and resilient means for holding the second clamping pulley in contact with the first clamping pulley.

3. In a delivery apparatus the combination of a pair of frames, a driving shaft journaled in the frames, a second shaft journaled in the frames on one side of the driving shaft, a plurality of pulleys fastened to the second shaft, a roller journaled in the frame on the side opposite to the second shaft, a plurality of delivery belts carried by said pulleys and roller, means to rotate said pulleys with the rotations of the driving shaft and thereby move the delivery belts, a third shaft journaled in the frame, means to rotate the third shaft with the rotations of the driving shaft, a plurality of pulleys fastened to the third shaft, a second roller journaled in the frames, a plurality of bands carried by the latter pulleys and roller, said bands positioned so that one member of each band makes a nozzle shaped space with one member of each delivery belt, a pair of clamping pulleys fastened to the third shaft, a pair of arms pivoted to the frames, a shaft fastened to said arms, a pair of clamping pulleys journaled to the latter shaft adapted to bear against the first pair of clamping pulleys and a spring with one end of each fastened to one of said arms and their other ends fastened to said frames.

In testimony whereof I affix my signature.

HERBERT W. ORNDOFF.