

J. J. GRIFFIN & G. M. PEACOCK.
SEAMING HEAD OF DOUBLE SEAMING MACHINES.
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1,065,800.

Patented June 24, 1913.

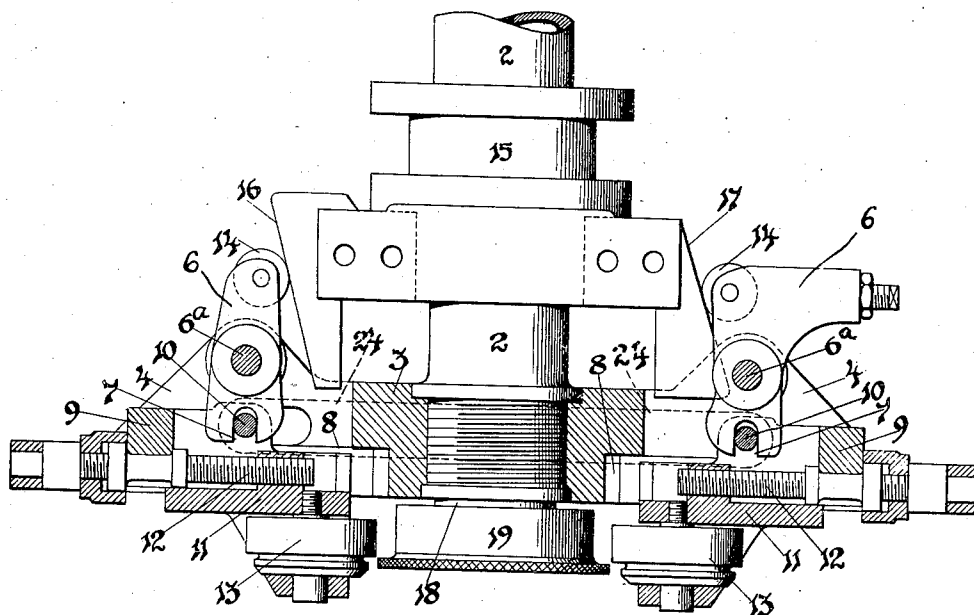


Fig. 1.

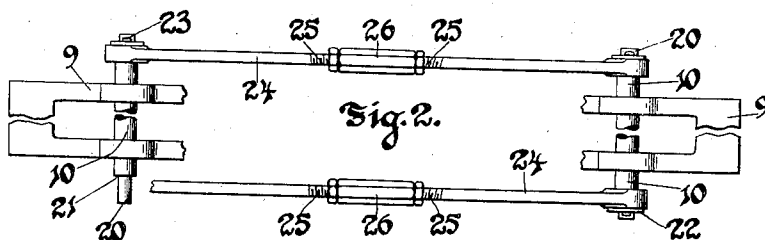


Fig. 2.

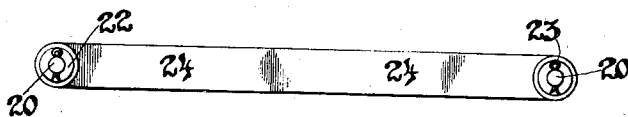


Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES JOSEPH GRIFFIN, OF SAN FRANCISCO, CALIFORNIA, AND GORDON MOFFITT PEACOCK, OF SOUTH YARRA, VICTORIA, AUSTRALIA.

SEAMING-HEAD OF DOUBLE-SEAMING MACHINES.

1,065,800.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed April 23, 1912. Serial No. 692,734.

To all whom it may concern:

Be it known that we, JAMES JOSEPH GRIFFIN, a citizen of the United States of America, and a resident of the city of San Francisco, in the State of California, United States of America, whose post-office address is at 1131 Shotwell street, in the said city of San Francisco, but who is temporarily residing at 1 Garden street, South Yarra, a suburb of the city of Melbourne, in the county of Bourke, State of Victoria, Commonwealth of Australia, and GORDON MOFFITT PEACOCK, a subject of the King of Great Britain and Ireland, and a resident of 1 Garden street, South Yarra, aforesaid, have invented certain new and useful Improvements in the Seaming-Heads of Double-Seaming Machines, of which the following is a specification.

This invention relates to what is commonly known as the head of a double seaming machine used in canning and particularly concerns that class of head having a disk carrying two seaming rollers. A machine employing such seaming heads is described and illustrated in our prior United States Patent application Serial No. 614,698, filed 15th March 1911.

In the type of head referred to two slides each carrying a seaming roller are mounted in the disk and alternately engaged with the can by intermediately pivoted levers operated by inclined surfaces of a vertically moving sleeve.

The object of this invention is to cause the slides to move positively and synchronously with one another, and to utilize centrifugal force in maintaining the operative roller in its seaming position. By the invention far less power is required, friction and wear upon the parts is very considerably reduced, a steadier motion of the disk obtained and a better seam is possible. In addition the arrangement of existing machines need scarcely be altered to apply the invention and the movement of the slides is always positive and at the speed required, and the action of centrifugal force is utilized to assist in maintaining the operating roller in position.

Referring to the drawings which form a part of this specification: Figure 1 is a sectional view showing a seaming head to which this invention is applied. Fig. 2 is

a plan showing slide cross pins and links extending therebetween by which the slides are caused to move synchronously. Portions have been broken away and omitted for convenience of illustration. The links here shown are adjustable in length by means of turn nuts. Fig. 3 is a side view showing the slide cross pins and a link therebetween. The link here shown is not adjustable in length.

The seaming head includes a hollow vertical spindle 2 attached to the bottom of which is a disk 3 having two pairs of upstanding opposite lugs 4 each carrying a pivot pin 6^a. Pivoted to each of the pivot pins 6^a is a lever 6 at the bottom of which is an incut or recess 7. In the said disk below each lever 6 are formed two opposite slide-ways 8 in each of which is a major slide 9. Each major slide carries a cross pin 10 accommodated by the incut 7 of the lever above it. In each major slide 9 is a minor slide 11 adjusted by an adjusting screw 12 and carrying a seaming roller 13. Mounted at the top of each intermediately pivoted lever is a roller 14.

Sliding upon the hollow spindle 2 is a sleeve 15. At one side of the said sleeve is an inwardly and downwardly inclined surface 16 opposite which, at the other side of the said sleeve, is an outwardly and downwardly inclined surface 17. Within the hollow spindle 2 is a hollow guide and chuck carrier 18 having attached to its bottom a chuck 19. The foregoing parts constitute a seaming head substantially as set forth in the aforesaid prior United States patent application.

The present invention consists in providing at each end of each cross pin 10 an extension 20. Each extension 20 as shown is of less diameter than the cross pin 10 and is provided with a shoulder 21 and a split pin hole. Accommodated by each extension is a washer 22 which may be retained by a split pin 23 or other suitable means. Extending between the extensions of the cross pins are two links 24. The ends of the said links are accommodated by the extensions of the cross pins and retained thereto by the split pins 23 as shown. Each of the said links 24 may be divided into two portions, each portion having a threaded inner end 25 to engage with an internally

threaded turn nut 26. This arrangement permits of adjustment so that any slack may be taken up.

With this invention upon the sleeve 15 rising or falling, the levers 6 alternately move the major slides 9 and seaming rollers 13 inwardly into engagement with the can being seamed. As either one of the slides 9 moves inwardly it is obvious that its cross pin 10 moves with it and through the agency of the links 24 the other slide is moved outwardly. Pressure is not exerted to any extent in this operation as the tendency of the slide and seaming roller thereof is to move outwardly once it has passed the center of equilibrium. It is obvious that the one roller is, during seaming, nearer the edge of the disk than its fellow and that centrifugal force will exercise a direct effect, through the links 24, upon the roller in engagement with the can being seamed. The centrifugal force acting upon one support opposes the effect of the centrifugal force acting upon the other. There is however but one point at which the forces are exactly counterbalanced,—that is when both of the slides are the same distance from the center of rotation,—at all other times there will be a greater force acting upon one of the slides than on the other; but at such times the centrifugal force acting upon one of the slides is opposed by the centrifugal force acting upon the other slide.

Having now described our invention what we claim as new and desire to secure by Letters Patent is:—

1. The combination with a seaming head comprising a seaming disk having slides carrying seaming rollers, or adjustable links extending between said slides.

2. In a seaming head, the combination with a seaming disk having slides thereon each carrying a seaming roller, of a cross pin carried by each slide and links extending between said pins.

3. In a seaming head, the combination of a rotating disk, independent supports mounted on said disk, seaming means on said supports, and means for moving said supports radially; with connections between said supports independent of the means for moving the supports whereby the effect of centrifugal force upon one support when its seaming means is operating on a can is opposed by the effect of centrifugal force upon the other support.

4. In combination, a seaming head comprising a seaming disk, independent sliding supports thereon, seaming means on said supports, and means for moving said sup-

ports radially; with devices connecting the said sliding supports independently of the means for moving them whereby when one of the said supports is moved inwardly the other is moved outwardly, and the effect of centrifugal force upon one of said supports is opposed by the effect of centrifugal force upon the other support.

5. In combination with a seaming head comprising a seaming disk, diametrically opposite radially movable sliding supports thereon, seaming means carried by said supports, and means for moving said supports radially; with link connections between said supports independent of the means for moving them whereby the effect of centrifugal force upon one seaming means is opposed by the effect of centrifugal force upon the other seaming means, substantially as described.

6. In a seaming head, the combination with a seaming disk having mounted thereon slides carrying seaming rollers adapted to be alternately operated by the inclined surfaces of a sleeve, of links extending between and connected with the said slides whereby when one slide is moved inwardly the other is moved outwardly.

7. The combination in a seaming head having opposite slides each carrying a seaming roller and a cross pin, said cross pin having an extension at each end; with links extending between and connected to the extensions of opposite pins.

8. The combination in a seaming head having a seaming disk provided with opposite slides each carrying a seaming roller and a cross pin having an extension at each end, and links extending between and connecting the extensions of opposite pins; and means for alternately moving the respective slides inwardly.

9. The combination in a seaming head having a seaming disk provided with opposite slides each carrying a seaming roller, a cross pin carried by each slide having a reduced extension with a split pin hole, links extending between and connecting the reduced extensions of opposite pins, washers accommodated by the extensions outside the links, and split pins bearing against the washers and accommodated by the split pin holes.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES JOSEPH GRIFFIN.
GORDON MOFFITT PEACOCK.

Witnesses:

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