A. J. FRANKLAND.

MEANS FOR MAKING PAPER SPOONS.

APPLICATION FILED MAY 9, 1916.

Patented May 22, 1917.

1,227,534.

Fig. 1.

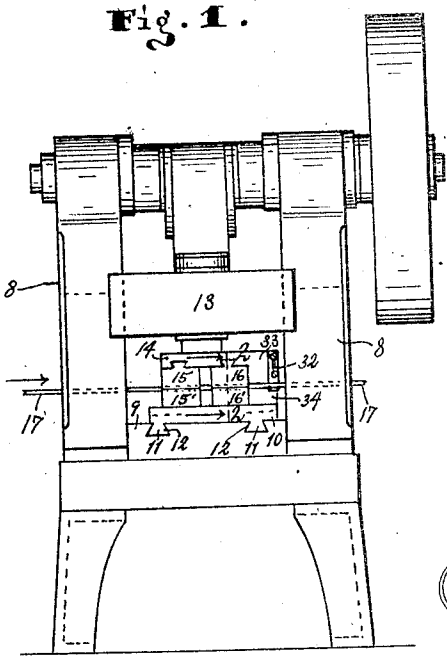


Fig. 5.

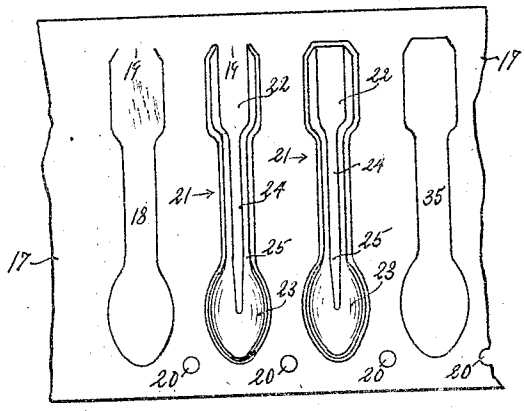


Fig. 6.

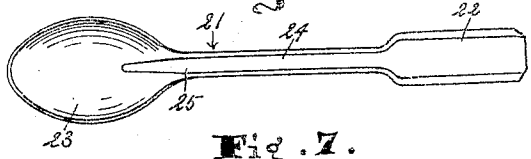


Fig. 7.

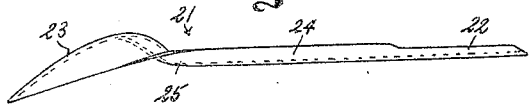


Fig. 3.

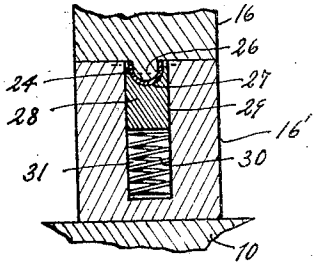


Fig. 4.

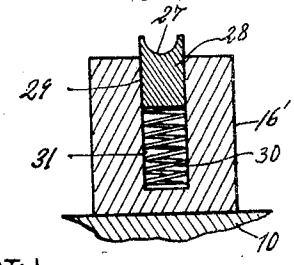
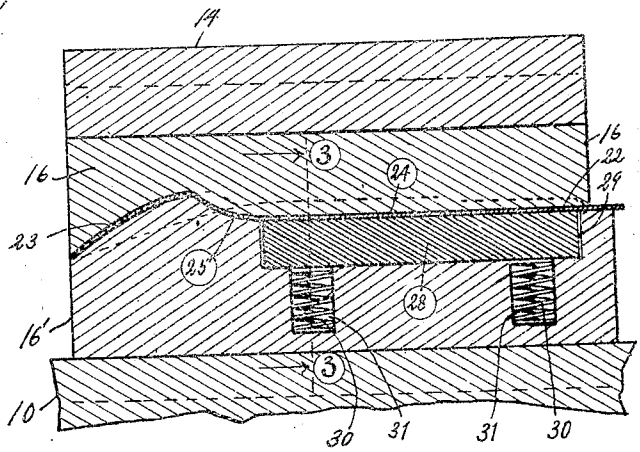


Fig. 2.



Witness:
W. M. Gentle.

Inventor.
Alexander J. Frankland
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UNITED STATES PATENT OFFICE.

ALEXANDER J. FRANKLAND, OF TROPICO, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO LEO D. JACOBY, OF LOS ANGELES, CALIFORNIA.

MEANS FOR MAKING PAPER SPOONS.

1,227,534. Specification of Letters Patent. Patented May 22, 1917.

Application filed May 9, 1916. Serial No. 96,447.

To all whom it may concern:

Be it known that I, ALEXANDER J. FRANKLAND, a citizen of the United States of America, residing at Tropico, county of Los Angeles, State of California, have invented a certain new and useful Means for Making Paper Spoons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to means for making paper spoons; and it may be said to consist in the provision of the novel and advantageous features and in the novel and improved construction, arrangement, and combination of parts as will be apparent from the description and the claim which follows hereinafter.

The main object of the invention is the provision of means for making spoons of paper or other suitable fibrous material, which means overcomes the difficulty of forming the spoons without any weakening or rupture at the junction of the shanks and the bowls of the spoons.

Other objects and the advantages of the invention will be apparent to those skilled in the art from a careful consideration of the following description of the preferred construction embodying the invention, taken in connection with the accompanying drawings in which—

Figure 1 is an elevational view of a power press having the invention applied thereto; Fig. 2 is an enlarged broken sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a broken cross sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a cross sectional view of the lower die shown in Fig. 3, with parts in changed position; Fig. 5 is a view to illustrate the formation by steps of the spoons from a sheet or strip of paper; Fig. 6 is a plan view of one of the paper spoons; and Fig. 7 is a side elevational view of the paper spoon.

The power press 8 may be of the usual or any approved construction. On the table 9 of the power press 8 is mounted a die holder 10 which is provided with dovetail tenons 11 fitted in the dovetail channels 12 which are provided in the table 9. To the slide 13 of the power press 8 is connected by the usual or any approved means the die holder 14.

On the holder 14 carried by the slide 13 are suitably mounted the dies 15 and 16 which respectively coact with the stationary dies 15′ and 16′ which are suitably mounted on the holder 10. The dies 15 and 15′ are suitably formed and adapted to coact to cut the sheet or strip 17 of paper or other suitable fibrous material to make the blank 18 of the spoon, see Fig. 5; the blank 18 being left uncut at one end 19 so that the blank 18 can be carried along by the strip of paper 17 to the coacting dies 16 and 16′. If desired the dies 15 and 15′ may be formed to cut the perforations 20 in the strip of paper 17 so that the latter can be moved along by suitable feeding mechanism fitting into the perforations 20.

The dies 16 and 16′ are formed and adapted to coact on the blank 18 to form the latter into the spoon 21; the upper end 19 preferably being left attached to the strip of paper 17. As shown the spoon 21 consists of the handle 22, the bowl 23, and the grooved shank 24 connecting the bowl 23 to the handle 22. On account of the strip of paper 17 being wet or dampened—preferably by having given it a bath in peroxid of hydrogen—when it is acted on by the forming dies great difficulty has heretofore been experienced because the forming of the spoons by the dies heretofore used resulted in a weakening or rupture of the spoon 21 at the junction 25 of the grooved shank 24 and the bowl 23. The difficulty of forming the spoon 21 without any weakening or rupture at the junction 25 is overcome by the construction of the dies 16 and 16′ as shown in Figs. 2, 3, and 4; the die 16 being provided on its lower end with the rounded or chamfered part 26 which is adapted to fit into the rounded groove 27 which is provided in the upper end of the block 28 which latter is yieldably mounted on the die 16′ and normally extends beyond the upper end of said die 16′. The block 28 is movably mounted in the slot 29 formed in the upper end of the die 16′ and is supported by the springs 30 which extend into the pockets 31 at the lower end of the slot 29. When the projection 26 strikes the portion of the blank 18 on the block 28 the latter yields and after it is pressed down into the slot 29 the formation of the groove in the shank 24 is fully completed. The holder 10 has thereon the block 34, and the holder 14 has thereon the block

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33 on which is mounted the blade 32, which is adapted to pass close to the upper end of the block 34 to cut the end 19 of the spoon 21 so that the latter can drop away from strip 17 and leave in the latter the cut out portion 35.

I claim:

In means for making paper spoons, dies adapted to coact to form from a blank of paper a spoon having a grooved shank connecting the handle to the bowl of the spoon, one of said dies being provided with a slot therein, springs arranged in the slot, and a block having a groove therein and fitted in the slot and supported by the springs so as to normally extend beyond the slot, and the other of said dies being provided with a rounded projection adapted to fit in said groove and form the grooved shank of the paper spoon, said block being adapted to yield when said projection strikes the portion of paper blank on the block, and the formation of the groove in said shank being fully completed when said block is pressed down into said slot, substantially as described.

In testimony whereof, I have signed my name to this specification at Los Angeles, county of Los Angeles, State of California, this 18th day of February A. D. 1916.

ALEXANDER J. FRANKLAND.