No. 625,696. Patented May 23, 1899.

H. D. PERKY.

MACHINE FOR REDUCING AND BAKING CEREALS IN FORM.

(Application filed Mar. 2, 1898.)

(No Model.)

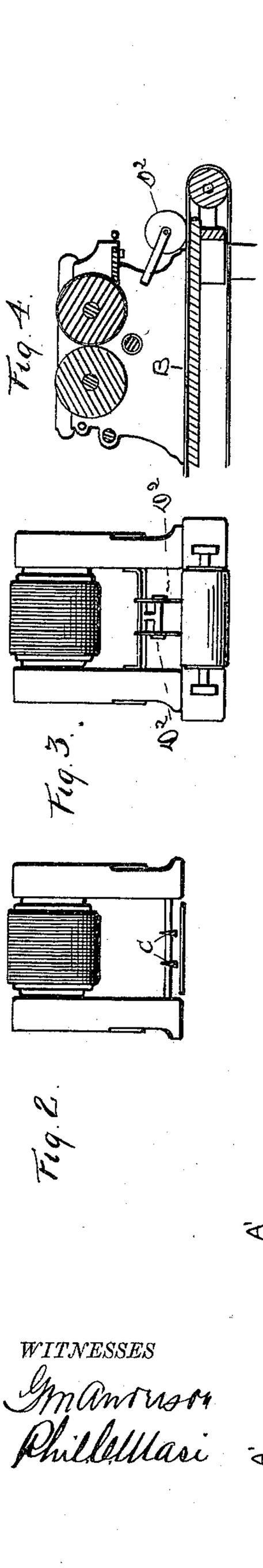

Fig. 4.

Fig. 3.

Fig. 2.

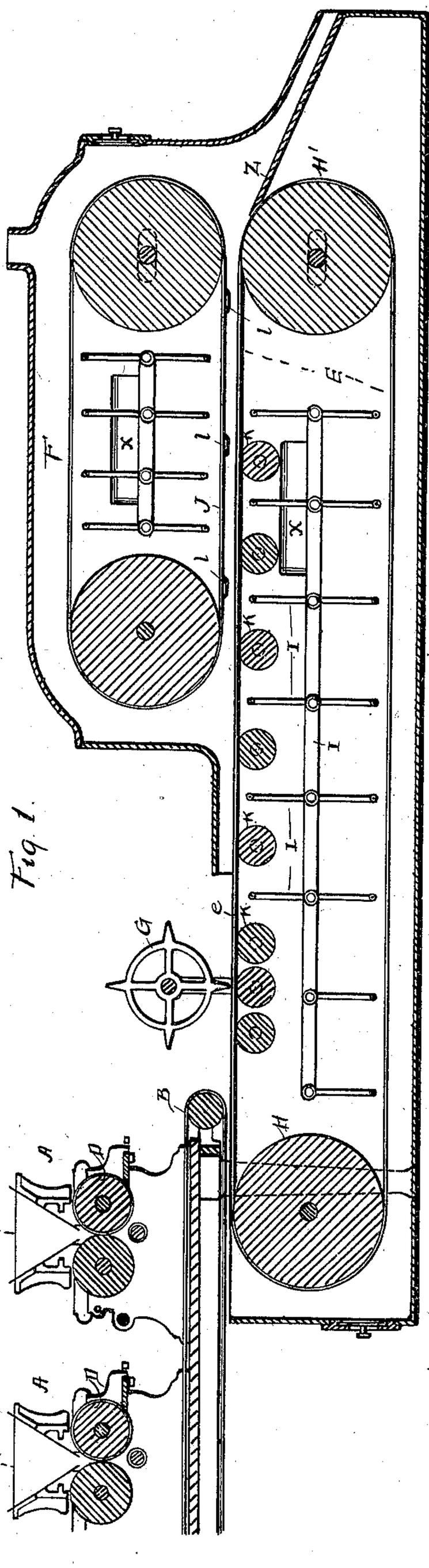

Fig. 1.

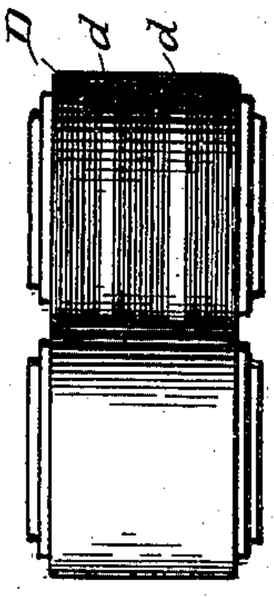

Fig. 5.

WITNESSES

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MACHINE FOR REDUCING AND BAKING CEREALS IN FORM.

SPECIFICATION forming part of Letters Patent No. 625,696, dated May 23, 1899.

Application filed March 2, 1898. Serial No. 672,293. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. PERKY, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Machines for Reducing and Baking Cereals in Form; and I do 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a sectional elevation showing the mechanism embodying the invention. Fig. 2 is an end view of one of the reducing-machines, showing one form of means for separating the layers. Fig. 3 is a similar view showing another form of such means. Fig. 4 is a detail sectional view of a portion of one of the reducing-machines, and Fig. 5 is a plan view of a part of the reducing-rolls.

The object of the present invention is to provide means for reducing cereals from the grain or berry form to continuous layers of shred or thread-like form and dividing and baking the same in large quantities for commercial use. Wafers of thin and lighter character can be made, which are designed to serve admirably for lunch purposes, teas, and especially for food for invalids.

In the accompanying drawings the letter A designates the reducing-machine, having a pair of reducing-rolls of the general character set forth in Letters Patent No. 502,378, dated August 1, 1893, into the hopper A′ of which the grain, having been properly boiled and salted and dried, is fed and from which it is discharged in the form of continuous threads or shreds, which fall into an irregular layer upon the traveling receiver B, which may also provide the baking-surface.

Usually I prefer to employ several reducing-machines in line with each other in order that the continuous discharge may consist of several layers, which, falling upon the traveling receiver B in succession, increase the thickness of the ribbon and give it more regularity of structure.

If the rolls employed in the reducing-machines are of sufficient length to produce a ribbon which is too broad, dividing-partitions C, extending longitudinally, may be employed to separate the layers into narrow parallel strips, (see Fig. 2,) or the division may be effected by means of partition-surfaces, as indicated at *d*, Fig. 5, on the grooved roll D, or it may be cut by dividers D^2, as indicated in Figs. 3 and 4. From the receiver-belt the layers fall upon the traveling baking-surface *e* of the oven F.

G indicates a rotary cutter or marker, whereby the layers or strips of the product are designed to be transversely indented or divided into lengths of suitable proportion.

E represents the carrying-baker, which receives the product from the receiver B and which may consist of an inside heated roller or drum of large diameter, but is preferably, as shown, a traveling band of sheet iron or steel having the driving and adjusting pulleys H H′ and the supporting-rollers *k*. Between the upper or feed branch of this band and its lower branch is arranged a gas-jet heater I, which is preferably adapted to heat both the upper and lower branches of the band, or the band may be arranged to pass over electrically-heated material.

J designates the top baker, which may be stationary and may consist of a plate heated by electricity, or gas-jets may be employed; but in order to insure the top cooking and to give more uniform appearance to the wafers I prefer to employ a traveling band of similar character to the carrying-baker E. This band may be run upon the edge guides *l* and is designed when it is to be in contact with the upper surfaces of the wafers to have the same speed as that of the carrying-band. The band J may also serve to level somewhat the upper surfaces of the wafers. The oven is incased and provided with the proper draft and with suitable openings X, with doors along the sides to permit inspection of and attention to the work. The wafers discharged over the inclined chute Z are designed to be light and crisp. They readily break apart in lengths at the indentations and can be easily and conveniently packed in cases of suitable character.

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

1. In an oven, the combination with an endless metallic carrying and baking band, of a second endless band above the first, and designed to travel at the same rate of speed, said second band having a portion of its length adjacent to a portion of the first-named band and designed to contact with the material carried by the latter, together with means for heating said bands, substantially as specified.

2. The combination with an oven-closure having a low rearward extension, open at its upper portion, and having a discharge-chute at its opposite end portion, of an endless horizontal metallic carrying and baking band in said closure, and means for forming the product to be baked and for automatically delivering the same onto the said band at the open portion of the said closure, substantially as specified.

3. The combination with an oven-closure having a low rearward extension, open at its upper portion, of an endless metallic carrying and baking band in the said closure, means for forming the product to be baked and for automatically delivering it onto the said band at the open portion of the said closure, and a device working through said open portion for severing the product after it has been delivered onto the said band, substantially as specified.

4. The combination with an oven-closure having an opening at each end, of a horizontal endless metallic baking-band in the said closure, a horizontal baking and leveling band within said closure, and having a portion of its length adjacent to the upper portion of the first-named band, and in position to contact with the material carried by the latter, and gas-jets directed against or adjacent to the non-baking surfaces of the said bands, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY D. PERKY.

Witnesses:
S. N. ROGERS,
J. M. STANLEY.