No. 765,425. PATENTED JULY 19, 1904.

G. I. HERRICK.

BREAD CUTTER.

APPLICATION FILED SEPT. 4, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

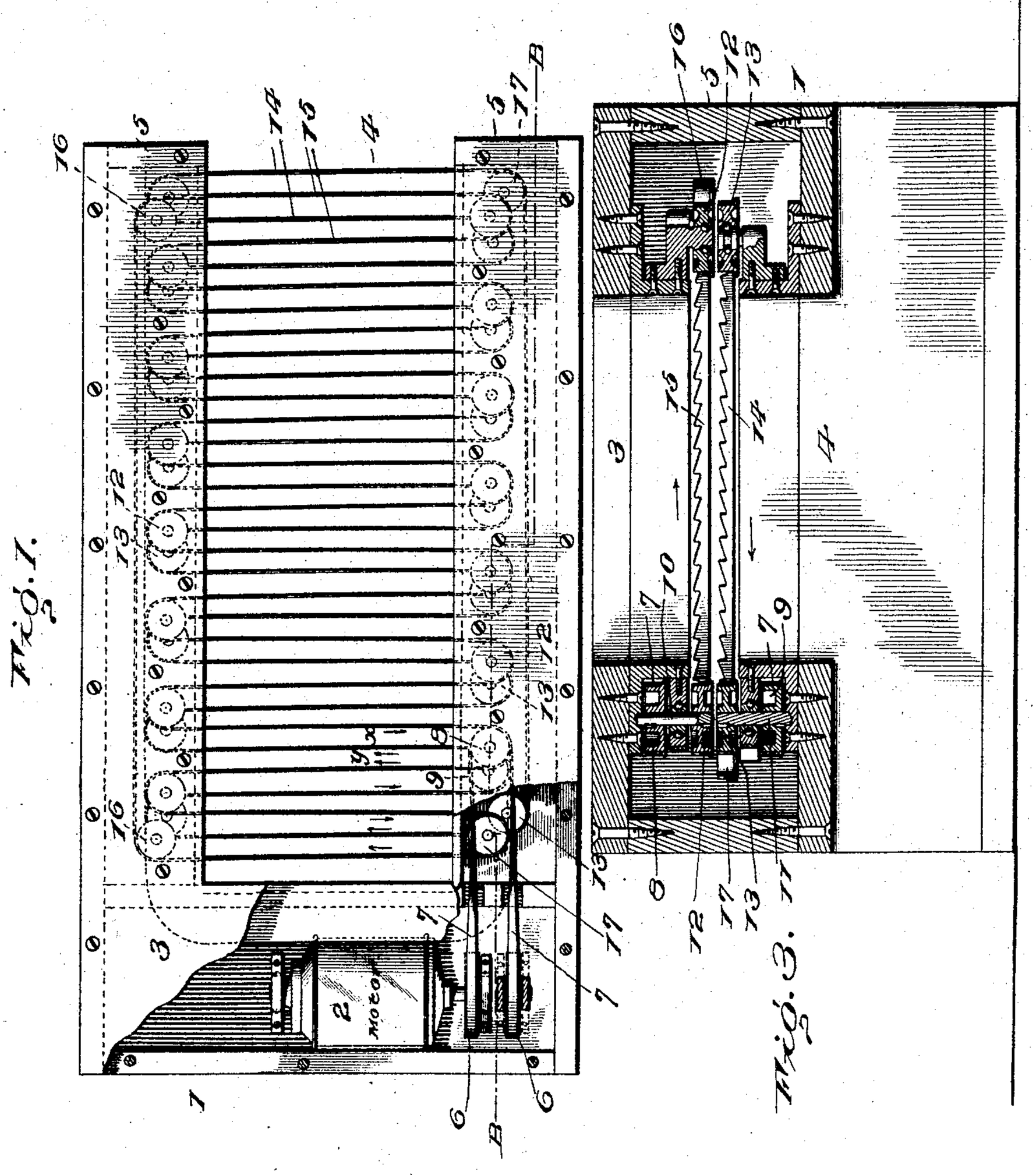

Fig. 2.

Fig. 3.

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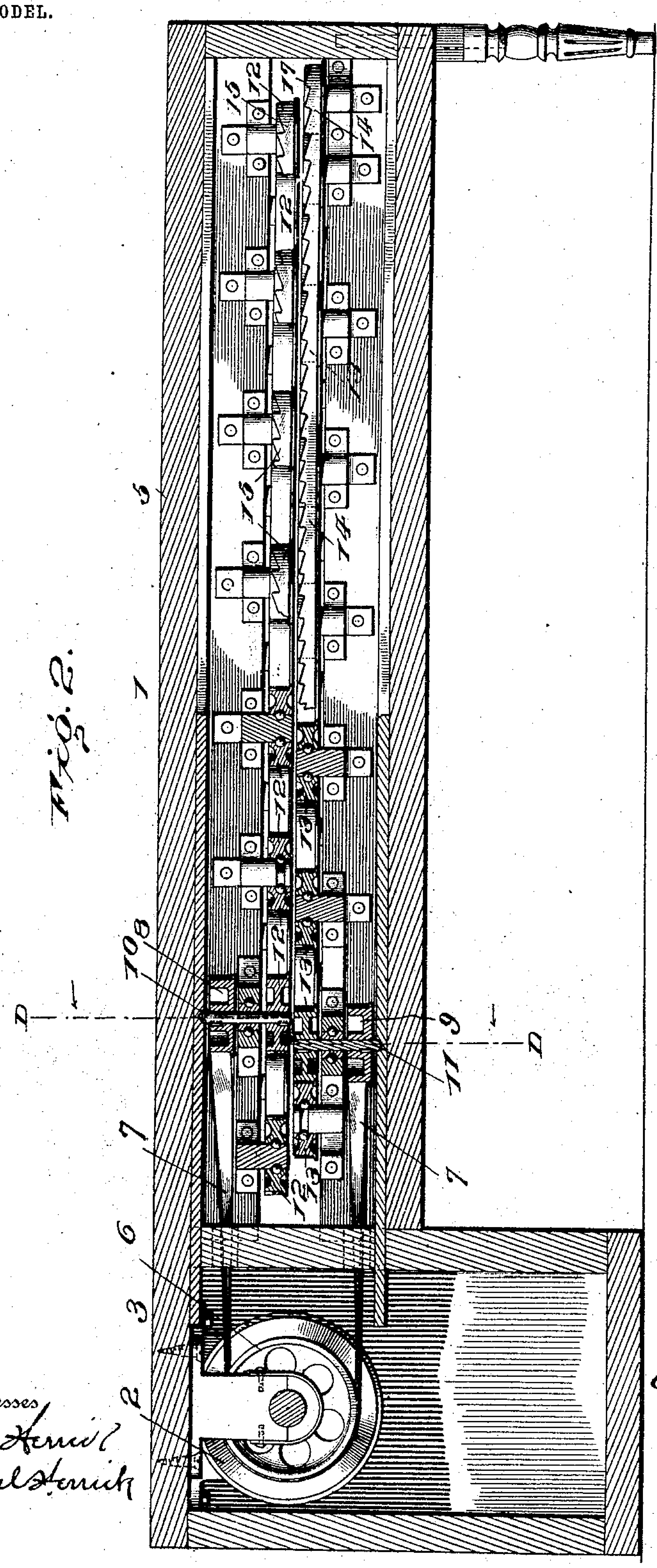

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No. 765,425. Patented July 19, 1904.

UNITED STATES PATENT OFFICE.

GEORGE IRA HERRICK, OF WHEATON, ILLINOIS.

BREAD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 765,425, dated July 19, 1904.

Application filed September 4, 1903. Serial No. 171,967. (No model.)

To all whom it may concern:

Be it known that I, GEORGE IRA HERRICK, a citizen of the United States, residing at Wheaton, in the county of Dupage and State of Illinois, have invented new and useful Improvements in Bread-Cutters, of which the following is a specification.

My invention relates to bread-cutting machines which are adapted for cutting bread into slices.

The present invention is portable and capable of being used in any convenient place or rested upon any suitable object.

The purpose of the invention is to provide a device of this type which is simple in its structure and at the same time very effective. Further, this machine is designed especially for the cutting of loaf-bread into even slices and may be operated electrically, the electric supply being obtained from any suitable source.

Other bread-cutting devices have been heretofore employed; but it is thought that this present machine presents many advantages over the prior ones, especially in rapidity of operation, neatness of the work done by it, and the specific structure of the working parts.

The specific construction of this invention will appear more particularly in the description following and will be clearly understood on reference to the accompanying drawings.

In the drawings, Figure 1 is a top plan view of the device with parts broken away. Fig. 2 is a section taken on line B B of Fig. 1. Fig. 3 is a detail in transverse section through line D D of Fig. 2.

Referring more particularly to the drawings, 1 is a suitable casing, which is substantially U-shaped, consisting of the rear portion 3 and the hollow arms or forward portions 5 5, having the bread-receiving space 4 therebetween. In the rear portion 3 of the casing is mounted the motor driving means 2, together with the driving-pulleys 6 6′, which are driven by the motor through the medium of shafting and which carry the belt 7. One of these pulleys is driven directly from the motor, while the other receives its actuating power through the belt 7, which runs thereon. Carried within the arms 5 5 of the casing are the driven wheels 8 and 9, mounted upon the vertical shafts 10 and 11. These wheels receive the belt 7 from the pulleys 6 6′, the belt running from the driving-pulley 6 over wheel 8 and from the latter wheel over pulley 6′, from which it runs over the wheel 9 to drive the same. These wheels give the movement to the bread-cutting means, as will hereinafter appear. Upon the lower end of shaft 10 is mounted a wheel 12, while in this casing-arm 5 is mounted a series of these wheels 12. In the opposite arm 5 is also mounted a series of these wheels in alinement with those first described in the other arm 5. Mounted upon these wheels 12 and receiving its motion therefrom is a continuous band-saw for cutting the bread, which saw 15 runs around each of the wheels, extending across the bread-receiving space 4 of the casing 1, as seen. These wheels 12 in each arm are spaced as far apart as desired; but in the present structure it has been found convenient to place them at a distance of one inch apart. Beneath this series of wheels 12 in the casing-arms 5 5 are mounted the wheels 13, one of them being mounted upon the same vertical shaft as wheel 9, corresponding to the structure just described. These wheels are mounted below the other wheels 12 and at such a distance to one side thereof that the peripheries thereof fall in a line midway between every two of the wheels 12. These wheels 13 are spaced apart a corresponding distance to the wheels 12, and a band-saw 14 is mounted thereon, which is supported by the arrangement just described in a line midway between the wheels 12 or at a distance of one-half an inch from the nearest portions of the saw 15. It is thus seen that the slice of bread cut by this arrangement will be one-half an inch thick. By the structure set out it will be noticed that these saws are run in opposite directions, and, as illustrated, the teeth are arranged in opposite directions, as seen in Fig. 3. Within the casing in the arms 5 5 are also carried the wheels 16 and 17. The first wheels, 16, are set out beyond the series of wheels 12 and 13, so as to carry the run of the band-saw 15 and prevent the same from contacting with these wheels. The wheels 17

are arranged in a similar manner for the same purpose and carry the band-saw 14 as it emerges from the wheels 13 in its run. These wheels, as seen, are mounted at opposite sides of the casing for convenience in handling the run of the band-saws, which are carried by their actuating-wheels in opposite directions.

The operation of the device should be clear from this description. By any ordinary means the motor is connected to a suitable supply, and the pulleys 6, being connected with the motor, are operated. The belt 7 being connected with these pulleys and with wheels 8 and 9 communicates motion from the motor to these parts. From the shafts of wheels 8 and 9 the wheels 12 and 13, carrying the band-saws, receive their motion, and these saws are then actuated in opposite directions, the saw 15 traveling in the direction of the arrow X and the saw 14 running in the direction of the arrow Y, as seen in Fig. 1. The bread to be cut is placed between the arms 5 5 and may extend beyond the opening 4 if too long to be contained between the arms. One end of the loaf rests against the rear portion of the casing, and by bearing down on the bread the saws are brought into contact with the same and cut it into even slices, as readily seen. As these saws are traveling in opposite directions, the bread is prevented from any bunching between the saws and a clean even slice thus insured. These slices drop down beneath the casing and may be caught in a suitable receptacle.

It is understood that the main features of my invention are herein set forth, consisting in the motor-driven bread-cutting device provided with the spaced cutting-saws mounted one above the other and actuated by the motor and run in opposite directions; but it is to be understood that many changes may be introduced in the details of the structure, especially in the number of wheels, the means of mounting the same, and the character of the saws and driving means therefor; but these changes do not depart from the spirit of my invention.

What I desire to protect by Letters Patent of the United States and what I claim is—

1. In a bread-cutting machine the combination with a casing provided with longitudinally-arranged arms having a space between them driving means mounted in said casing, rotatable means actuated by the said driving means, the rotatable means being arranged wholly within the arms, and continuous band-saws mounted on said rotatable means, and adapted to travel upon movement of the rotatable means, said saws being mounted one above the other and having parallel spaced portions whereby the bread may be cut in even slices, substantially as described.

2. In a bread-cutting machine, the combination with a casing provided with arms having a space between the same, a driving means mounted in said casing, a series of wheels carrying a bread-cutting saw, and a second series of wheels carrying a second saw, the wheels all lying wholly within the arms and the runs of the saws being arranged in planes intermediate one another and having their runs all disposed for cutting, substantially as described.

3. In a bread-cutting machine, a casing having arms thereon provided with a space between the same, an upper and lower series of rotatable means mounted in one of said arms, a corresponding series of rotatable means mounted in the opposite arm of the casing, a continuous bread-cutting means mounted on the upper series of rotatable means of one arm and extending across said space between the arms and connected with the corresponding series of means in the opposite arm, a second bread-cutting means correspondingly mounted on the lower series of rotatable means in each arm, and driving means to actuate the rotatable means, substantially as described.

4. In combination with a casing provided with longitudinally-arranged arms having a space between the same, a driving means, a series of upper and lower wheels, the lower ones being disposed to one side of the upper wheels mounted in one arm of the casing, a second series corresponding to the first mounted in the other arm of the casing, continuous bread-cutting saws mounted one on each series of wheels in one arm and extending across the space between the arms to engage corresponding wheels of the series in the opposite arm, and means for guiding the cutting means to prevent contact between the runs of the same, said means being mounted beyond the line of the series of wheels, substantially as described.

5. A bread-cutting machine comprising a casing having parallel arms spaced apart, driving means mounted in said casing, rotatable means driven thereby, two series of wheels mounted in one arm, one above the other driven by said rotatable means, two series of similarly-arranged wheels corresponding thereto mounted in the other arm, and band-saws carried by the upper and lower series of wheels in one arm, extending across the space between the arms and engaging the corresponding series of wheels in the opposite arm, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE IRA HERRICK.

Witnesses:

R. P. HERRICK,

SAMUEL HERRICK.