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Patented Feb. 5, 1901.

R. G. NALL.

SCORING ATTACHMENT FOR ROTARY STRAW BOARD CUTTING MACHINES.

(Application filed Nov. 23, 1900.)

(No Model.)

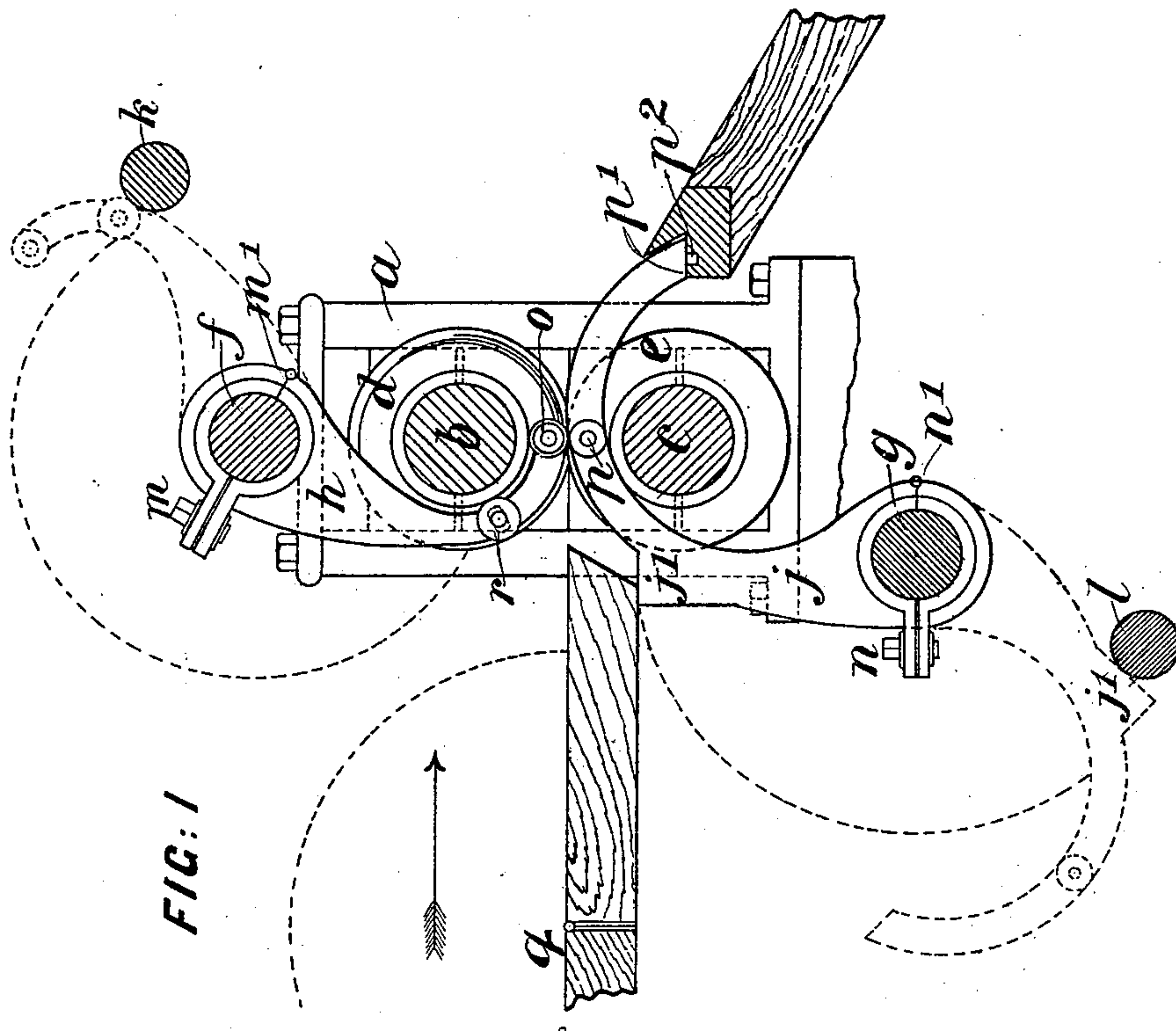


FIG. 1

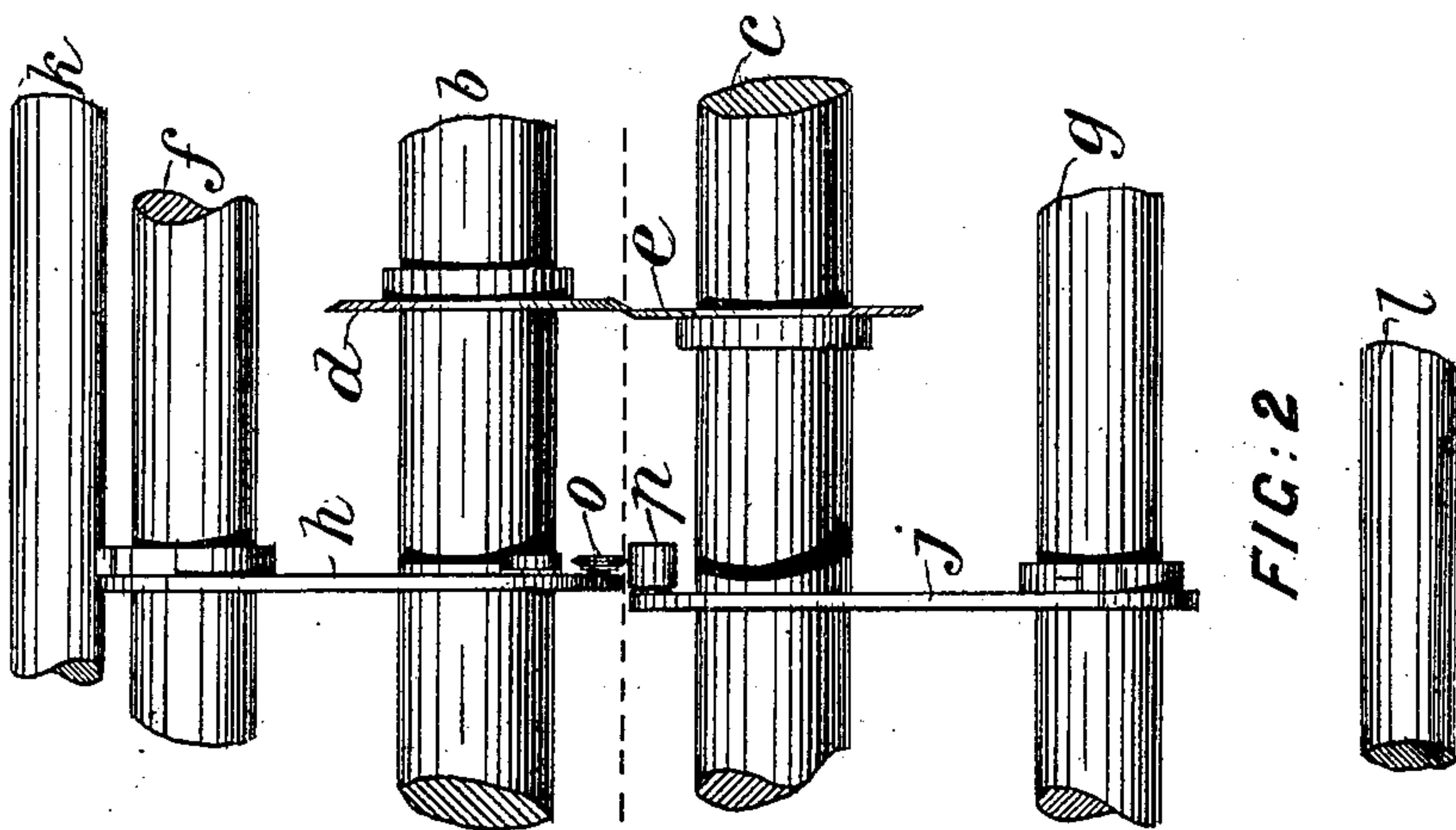


FIG. 2

WITNESSES:

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SCORING ATTACHMENT FOR ROTARY STRAWBOARD-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 667,245, dated February 5, 1901.

Application filed November 23, 1900. Serial No. 37,519. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GREAVES NALL, a subject of the Queen of Great Britain and Ireland, and a resident of George street, Sydney, in the county of Cumberland and Colony of New South Wales, have invented a certain new and useful Scoring Attachment for Rotary Strawboard-Cutting Machines, of which the following is a specification.

10 This invention consists of appliances to be used in connection with rotary strawboard-cutting machines that are used in the manufacture of cardboard boxes, and is applicable to almost any type of these machines, but is
15 described in this specification where there is an upper and lower rotary cutting-disk. The invention consists in an upper and a lower curved arm, which revolve on an upper and a lower longitudinal shaft. The upper curved
20 arm carries a cutting-disk of V-section and the lower arm carries a roller, against which the upper cutting-disk will very nearly impinge. When not in use, the two curved arms may be swung back clear of the cutting ap-
25 pliances and lie upon rest-bars, where they may remain until they are required for scoring or other purposes. Most of the parts may be adjusted as required.

30 In the accompanying drawings, Figure 1 is a transverse vertical section of a common type of a rotary strawboard-cutting machine and showing the new attachment in two positions. Fig. 2 is a front elevation of the essential parts of the machine, showing the relative positions of the shafts of the cutting-
35 disks and the new scoring appliances.

a is the head-stock, in which the several rotating shafts have their bearings. *b* is the upper cutting-disk shaft. *c* is the lower cutting-disk shaft. *d* is the upper cutting-disk, and *e* is the lower cutting-disk, which work together to cut the board, as shown in Fig. 2. Up to this point the machine presents no features of novelty.

45 Above and below are two shafts *f g*, and upon these shafts are secured in any suitable manner two curved arms *h j*. These curved arms may be swung back, as shown by the indicator-circles and by dotted lines, so as to
50 repose upon the rest-bars *k l*. When the curved arms *h j* are required to be used, they will occupy the positions shown by the full

lines in the drawings. The curved arms may be removed from their respective shafts by unscrewing the set-screws *m n* and swinging
55 them back on their hinges *m' n'*. The set-screws will also tighten the curved arms on their respective shafts when the arms have been adjusted for scoring a board at any required distance from the disk knives *d e*.
60 The lower extremity of the upper curved arm *h* is provided with a scoring-disk *o* and the lower curved arm *j* is provided with a roller *p*, against which the disk knife *o* will very
65 nearly impinge. The lower curved arm *j* is made longer and has a larger curve than the upper curved arm *h*, so that its forward end shall rest upon a ledge *p'* on a longitudinal
70 bar, and in order to prevent lateral movement of the arm *j* this forward end is provided with a dowel *p²*, which will fall into a corresponding recess in the ledge *p'*. The
75 ledge *p'* will be positioned so that the dowel shall be sure to fall into a recess. Other means equally good, or perhaps better, may be adopted for preventing the lateral move-
80 ment of this arm *j*; but it is important that its point should repose upon a ledge, so as to afford the necessary support and give the requisite rigidity to the arm in order to resist
85 the thrust of the scoring-disk *o* above the roller *p*. On the feed side the feed-table *q* will be hinged so that it may be raised, as shown by the indicator-circle, so as to allow
90 the arm *j* to be swung in and out of position. The arm *j* may be provided with a square shoulder *j'*, upon which the forward end of the hinged portion of the table *q* may rest.
95 The upper curved arm *h* is further provided with a stop-roller *r*, by which it will be prevented from swinging too far forward, and thus cause the axis of the scoring-disk *o* to be out of a vertical line with the roller *p* beneath it. The stop-roller *r* is susceptible of
adjustment, so that it may rest against either the collar of the disk knife *d* or against the
100 shaft *b*. In Fig. 1 it is shown bearing against the collar.

When both scoring and cutting are to be performed on a board, the several parts will
105 be adjusted to the required distances and the board will be fed in the direction of the arrow. The disk knives *d e* will cut the board to the required size, while the scoring-

disk *o* and roller *p* will cause an indentation on the surface of the board or will cut it partly through, so as to facilitate one portion of the board being bent to an angle, as is
5 usual in this class of machinery.

By adapting other and suitable appliances to the two curved arms instead of the scoring-disk *o* and roller *p* channeling, grooving, creasing, and printing may be performed
10 with the same apparatus.

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

As an attachment to rotary strawboard-cut-
15 ting machines, a ledge, an upper curved arm provided at its lower extremity with a suit-

able tool, in combination with a lower curved arm the point of which will firmly rest upon the ledge while vertically below the tool carried by the upper curved arm the lower
20 curved arm shall be provided with a roller to receive the thrust of the tool on the upper arm, both the curved arms being susceptible of lateral adjustment on their respective shafts as herein set forth.

In witness whereof I have hereunto set my
25 hand in presence of two witnesses.

ROBERT G. NALL.

Witnesses:

MANFIELD NEWTON,
A. R. W. MASSEY.