

No. 739,159.

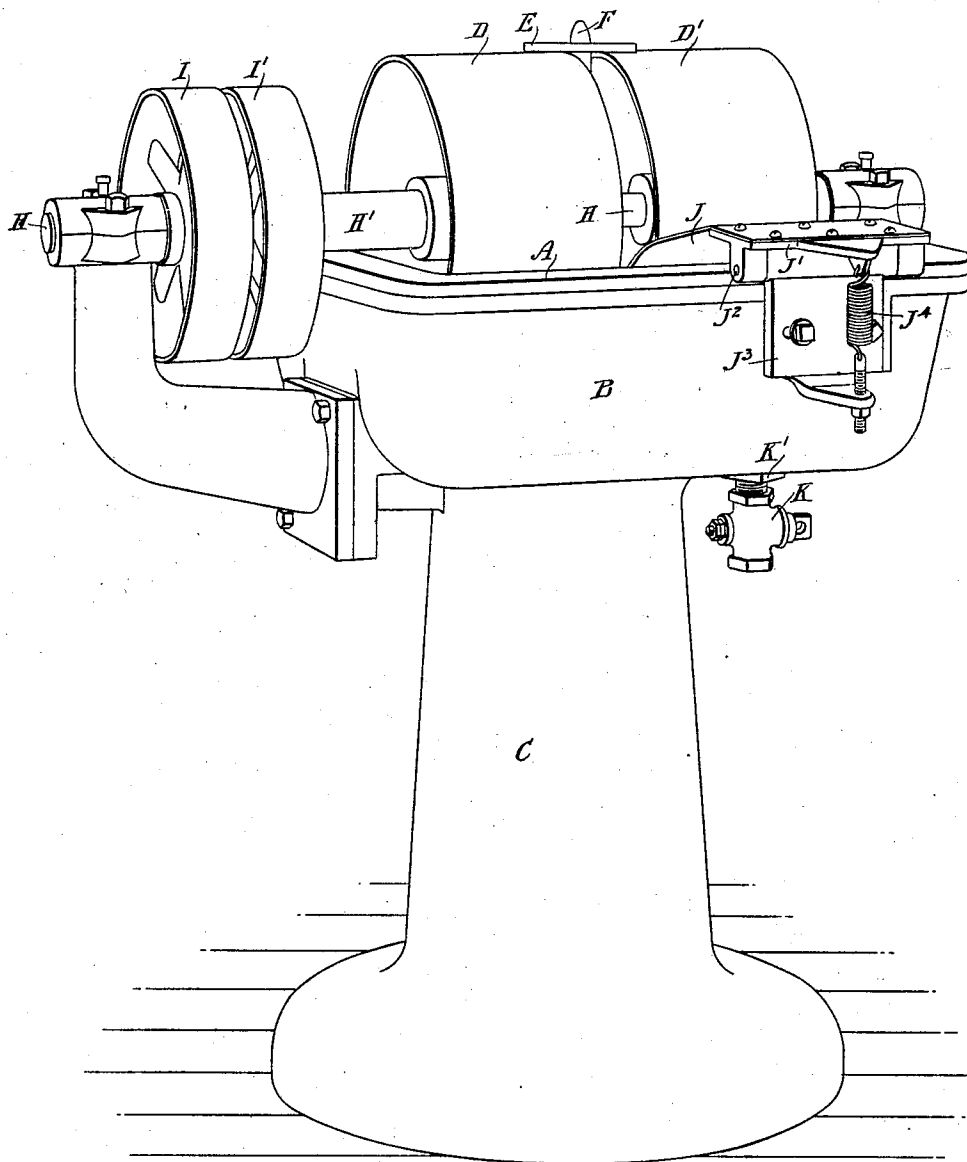
PATENTED SEPT. 15, 1903.

G. A. ENSIGN.
GLUE APPLYING MACHINE.
APPLICATION FILED OCT. 28, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1,



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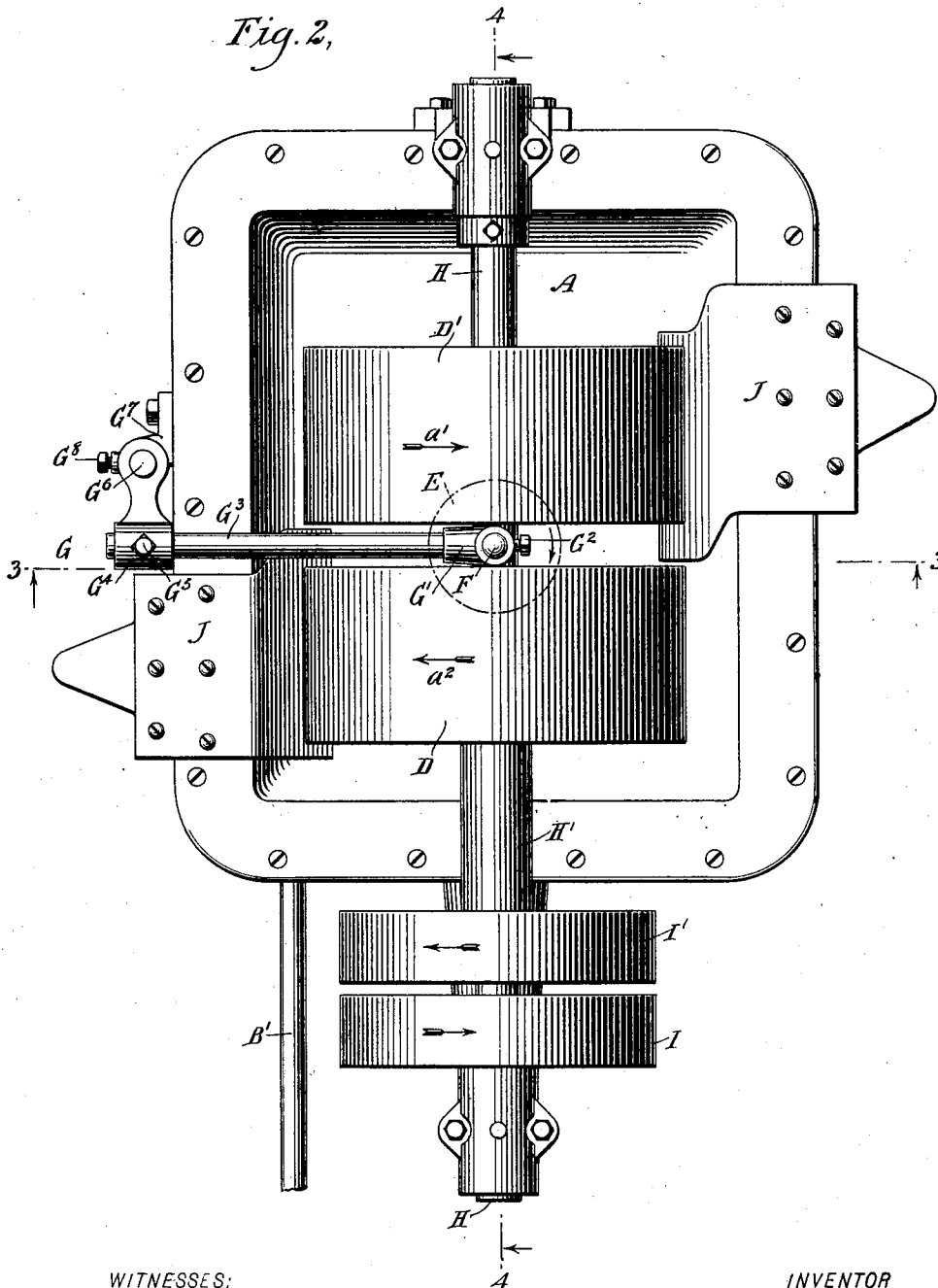
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NO MODEL.

3 SHEETS—SHEET 2.

Fig. 2,



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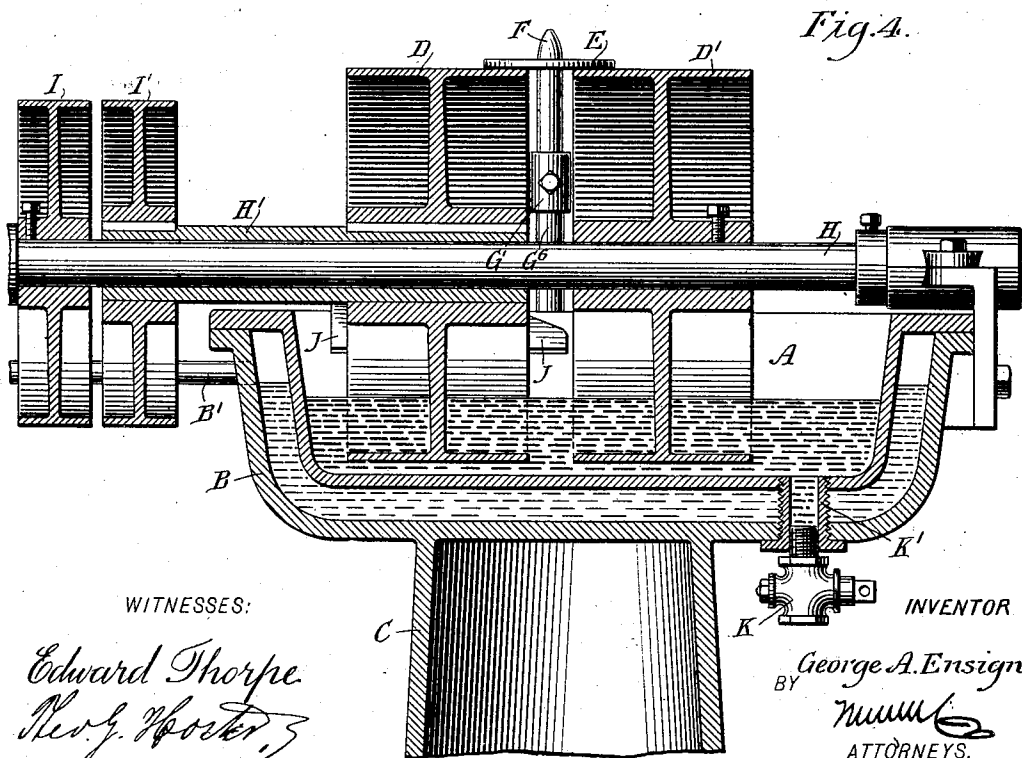
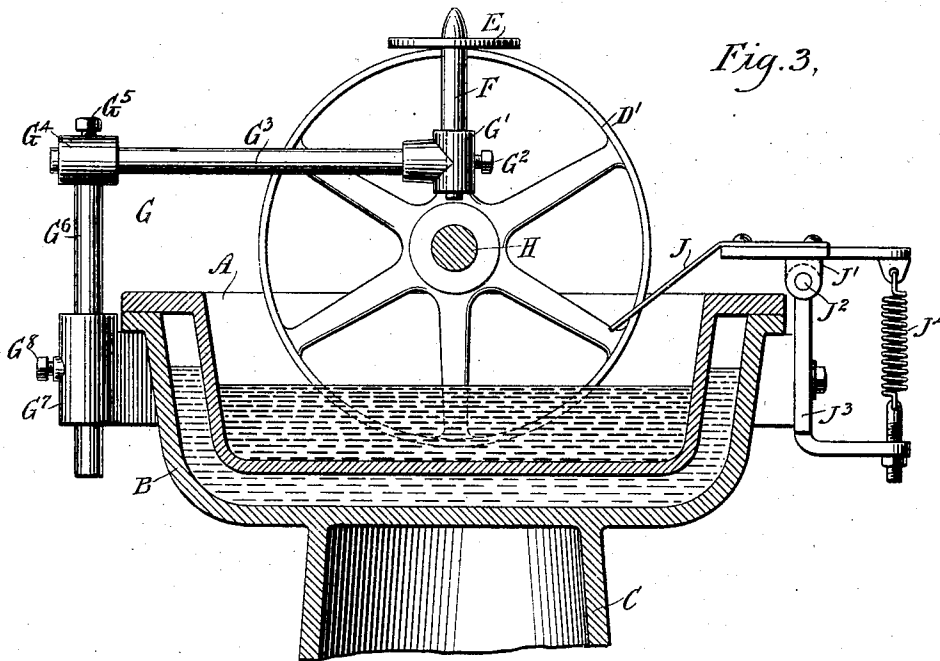
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NO MODEL.

3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

GEORGE A. ENSIGN, OF DEFIANCE, OHIO, ASSIGNOR TO DEFIANCE MACHINE WORKS, OF DEFIANCE, OHIO.

GLUE-APPLYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 739,159, dated September 15, 1903.

Application filed October 28, 1902. Serial No. 129,120. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. ENSIGN, a citizen of the United States, residing at Defiance, in the county of Defiance and State of Ohio, have invented a new and Improved Glue-Ap-
5plying Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved glue-applying machine
10 which is simple and durable in construction, very effective in operation, and more especially designed for uniformly applying glue to the faces of disks or other similar articles preparatory to gluing the disks or other arti-
15 cles together.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

20 The practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

25 Figure 1 is a perspective view of the improvement. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section of the same, and Fig. 4 is a longitudinal sectional elevation of the same.

30 The improved glue-applying machine is provided with a pot A, adapted to contain the liquid glue, and the said glue-pot is held on a heating-receptacle B, containing hot water, steam, or the like for keeping the glue in the
35 proper condition. The receptacle B is mounted on a suitable stand C, as plainly illustrated in the drawings.

Into the glue contained in the glue-pot A extend the lower ends of wheels or pulleys D
40 and D', engaging with their peripheral faces the under side of the disk E or similar article to receive the glue, the said disk being mounted to turn on a spindle F, extending vertically between the adjacent sides of the wheels
45 D and D', the said spindle being held in a suitable support G, carried by the receptacle B. (See Figs. 2 and 3.) The pulleys D and D' are rotated in opposite directions, and for this purpose the pulley D' is secured on the
50 shaft H, journaled in suitable bearings carried by the receptacle B, and on this said shaft

II is secured a pulley I, connected by a belt with other machinery to impart a rotary motion to the shaft H and wheel D' in the direction of the arrow a' . The other wheel D is
55 secured on a sleeve H', mounted to turn on the shaft H and carrying a pulley I', connected by a cross-belt with a pulley on a counter-shaft to rotate the sleeve H' and its wheel D in the direction of the arrow a'' —that is, in an
60 inverse direction to the one in which the pulley D' is running.

It will be seen that when the disk E is placed on the upper end of the spindle F then the under side of the said disk is in contact with
65 the peripheral surfaces of the wheels D and D', and as the latter rotate in opposite directions it is evident that they impart a rotary motion to the said disk, and consequently apply the glue on the peripheral surfaces of the
70 wheels to the under side of the disk. As the wheels D and D' dip continually in the glue contained in the glue-pot A, it is evident that the peripheral faces of the said wheels carry fresh glue continually to the under side of
75 the disk, so that the glue is uniformly distributed on the said disk and in a comparatively short time. When the disk has received the desired amount of glue, it is removed and a new one is placed in position on
80 the spindle F. In order to prevent the glue from hardening on the rims of the wheels D and D', each of the wheels is provided with a scraper J for scraping the peripheral faces as well as the side edges of the rim of the corresponding wheel, and the glue scraped off
85 by the scrapers passes back into the pot A to be remelted and used over again. Each of the scrapers J is secured on a plate J', fulcrumed at J² on a bracket J³, adjustably se-
90 cured on one side of the receptacle B, and the said plate J' is pressed on at its outer end by a spring J⁴, carried on the bracket J³ and serving to hold the scraper J in firm contact with the rim of the corresponding wheel D or D'.
95

The support G, previously mentioned, consists, essentially, of a socket G', receiving the lower end of the spindle F, secured in the said socket by a set-screw G². The socket G' is carried on one end of a rod G³, held adjust-
100 ably in a socket G⁴ and adapted to be secured therein by a set-screw G⁵, and the said socket

G⁴ is held vertically adjustable on a rod G⁶, mounted to slide in a bracket G⁷, secured to one side of the receptacle B, the said rod G⁶ being secured in the bracket G⁷, after the desired adjustment is made, by a set-screw G⁸.

By the arrangement described the holder can be readily adjusted to bring the spindle F into the desired position relative to the wheels D and D' to properly hold the disk E or other article for the latter to rotate in the manner above described while in position on the spindle.

The receptacle B is provided with a supply-pipe B' for conducting steam or hot water to the receptacle, so as to heat the glue-pot A to the desired degree for keeping the glue in proper condition.

A drain-valve K screws in a threaded sleeve K', screwing in the bottom of the receptacle B and in the bottom of the glue-pot A, (see Fig. 4,) so that when the valve K is opened the glue-pot may be drained of its contents.

From the foregoing it will be seen that the machine is very simple and durable in construction, is not liable to easily get out of order, and is arranged to uniformly apply glue to one face of the disk while the latter is rotating.

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

1. A glue-applier, comprising a glue-pot, and a pair of wheels extending into the glue in the pot, and rotating in opposite directions, and a spindle between the wheels for the article to turn on while rotating by contact with the peripheral faces of the said wheels, as set forth.

2. A glue-applier, comprising a glue-pot, and a pair of wheels extending into the glue in the pot, means for rotating the wheels in opposite directions, a spindle extending vertically between the wheels for the article to turn on, and an adjustable support for the said spindle, as set forth.

3. A glue-applier, comprising a glue-pot, and a pair of wheels extending into the glue in the pot, and rotating in opposite directions, a spindle between the pulleys for the article to turn on, and spring-bearing pivotal scrapers for engaging the wheel-rims at the sides and periphery, as set forth.

4. A glue-applier, comprising a glue-pot, a wheel mounted to rotate with the lower portion of its rim extending into the glue contained in the pot, and a vertical spindle, said spindle being constructed to receive adjacent to one end of the spindle and revolvably supporting the article to receive the glue in a horizontal position with its under surface in contact with the periphery of the wheel, whereby the article will be rotated by said wheel, as set forth.

5. In a glue-applier, the combination with a glue-pot, and a wheel mounted to rotate with the lower portion of its rim extending into the glue contained in the pot, of an adjustable support carried by the pot and extending inwardly to and above the axis of the wheel, and an adjustable vertical spindle on the inner end of the support, and upon the upper end of which the article to receive the glue is adapted to be revolvably mounted, as and for the purpose set forth.

6. In a glue-applier, the combination with a glue-pot, and a wheel mounted to rotate therein, of a vertical rod adjustably secured to the pot, a horizontal rod having one end adjustably secured to the vertical rod and provided at its other end with a socket, and a vertical spindle adjustably secured in said socket, as set forth.

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

GEORGE A. ENSIGN.

Witnesses:

GEO. W. DEATRICK,
JOS. BONER.