

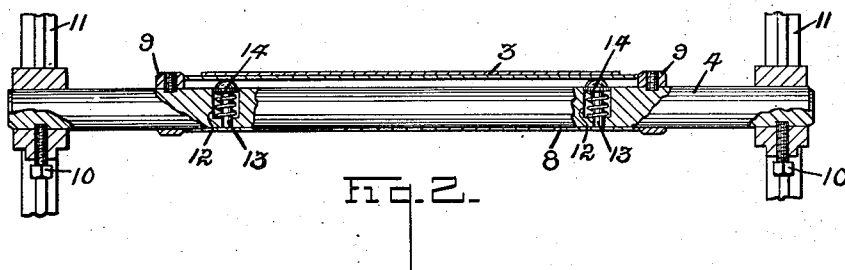
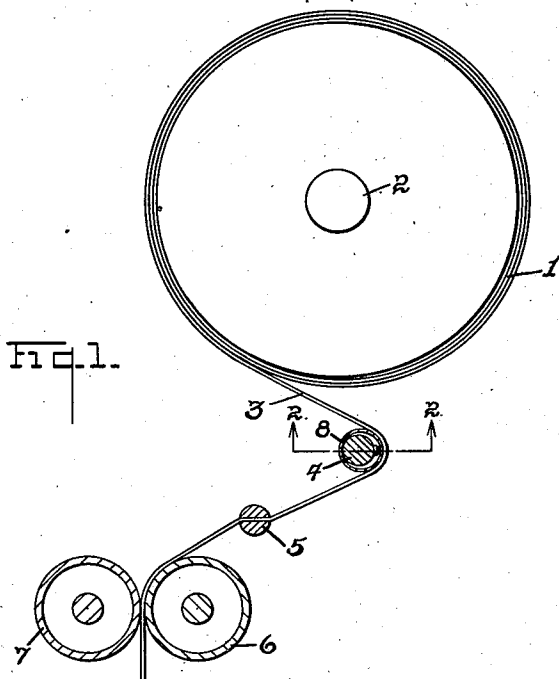
Feb. 15, 1927.

1,617,560

J. P. ALDRICH ET AL

SHEET FEEDING MECHANISM

Original Filed July 18, 1924



Inventors

John P. Aldrich
Howard A. Morris

By

Owen & Owen
Attorneys

UNITED STATES PATENT OFFICE.

JOHN P. ALDRICH AND HOWARD A. MORRIS, OF TOLEDO, OHIO, ASSIGNORS TO THE
AUTOMAT MOLDING & FOLDING COMPANY, OF TOLEDO, OHIO, A CORPORATION OF
OHIO.

SHEET-FEEDING MECHANISM.

Original application filed July 18, 1924, Serial No. 726,678. Divided and this application filed September 5, 1925. Serial No. 54,673.

This invention relates to sheet feeding mechanism but is more particularly concerned with devices for securing uniform feeding and for preventing tearing of the sheet material during the feeding operation. This application constitutes a division of our copending application, Serial No. 726,678, filed July 18th, 1924.

Objects of this invention are to provide a simple and inexpensive device for maintaining an even pressure on the sheet material during the feeding operation; and to provide a member for yieldingly compensating for the unequal pulling tension in sheet feeding mechanism.

Further objects and advantages of the invention will be apparent from the following detailed description.

While the invention in its broader aspect is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a diagrammatic sectional elevation of a sheet feeding mechanism showing the relative arrangement of the parts, and Figure 2 is a detail of the strip guiding means with parts broken away and in section.

It is found in the use of the feed roll 1 of sheet material, such as parchment, that the roll is frequently of unequal diameter throughout its length or larger at one end than the other due to unequal winding so that the sheet 3 has an unequal bearing throughout its width against the guide 4 when being pulled by the feed rolls 6 and 7 to unwind it from the roll 1 and that a tearing of the sheet frequently occurs due to such unequal strain.

To overcome this objectionable feature and cause the guide 4 to accommodate itself to the pull of the sheets 3, I mount a sheet engaging sleeve 8 on the guide rod 4 between end stops 9 on the rod. The shaft 4 is preferably held stationary by set screws 10 in suitable supports 11. Formed in the guide rod 4, adjacent the end portions of the sheet engaging sleeve 8, are recesses 12 in which yielding tension members 13 in the form of spring-pressed stems are disposed. The tension members 13 in the rod are located within the sleeve 8 in position to bear

outward against the side of the sleeve 8 engaged by the sheet 13 so that such side of the sleeve is normally spaced from the adjacent rod side, the sleeve opening being larger than the rod for such purpose. With this arrangement the sleeve will accommodate itself to any unequal strain on the opposite edge portions of the sheet and thereby prevent tearing at the edge where the greatest strain would otherwise be present.

The sleeve 8 is free to turn on the rod without effecting the action of the cushioning member 13. The member 13 constitutes pins which are mounted transversely in the rod 4 for longitudinal movements therein, and coiled compression springs encircle the pins within the rod sockets provided therefor and act on the pins to normally force them outward.

It is to be understood that the invention is not limited to any specific construction, arrangement, or form of the parts, as it is capable of numerous modifications and changes without departing from the spirit of the claims.

Having thus described the invention, what we claim as new and desire to secure by Letters Patent, is:—

1. The combination with a stationary shaft of a guide sleeve loosely encircling said shaft, means at opposite ends of said shaft for preventing endwise movement thereof, and spring controlled pins carried by said shaft and engaging opposed portions of said sleeve for yieldingly resisting unequal strains thereon.

2. In a device for guiding the movement of sheet material, a stationary shaft, a guide sleeve on said shaft and of a larger diameter than the diameter of said shaft, means for preventing endwise movement of said shaft, and spring controlled members socketed in said shaft and engaging opposed portions of the inside of said sleeve for accommodating the same to unequal strains imparted by a sheet passing thereover.

3. In a device for guiding the movement of sheet material, a shaft, a sleeve on said shaft and of a diameter larger than that of said shaft, means for preventing endwise movement of said sleeve, and spring pressed pins carried by said shaft and engaging the inside of said sleeve for permitting the sleeve

to accommodate itself to unequal strains of a sheet passing thereover.

4. In a sheet feeding mechanism, a stationary guide rod, a sheet engaging sleeve encircling said guide rod and having a diameter greater than the diameter of said rod, means for preventing endwise movement of said sheet engaging sleeve, said guide rod being formed with transversely arranged sockets, 5
10 pins in said sockets engaging opposed portions of the inside of said sheet engaging

sleeve, and coil compression springs in said sockets normally holding said pins outwardly to space said sleeve from the adjacent side of said guide rod whereby said sheet engaging sleeve accommodates itself to any unequal strain on the opposite edge portions of a sheet. 15

In testimony whereof we have hereunto signed our names to this specification.

JOHN P. ALDRICH.
HOWARD A. MORRIS.