No. 743,477. PATENTED NOV. 10, 1903.

F. FÖRSTE.

MEANS FOR TURNING THE SHEETS FED TO LINING OR OTHER MACHINES.

APPLICATION FILED NOV. 3, 1902.

NO MODEL.

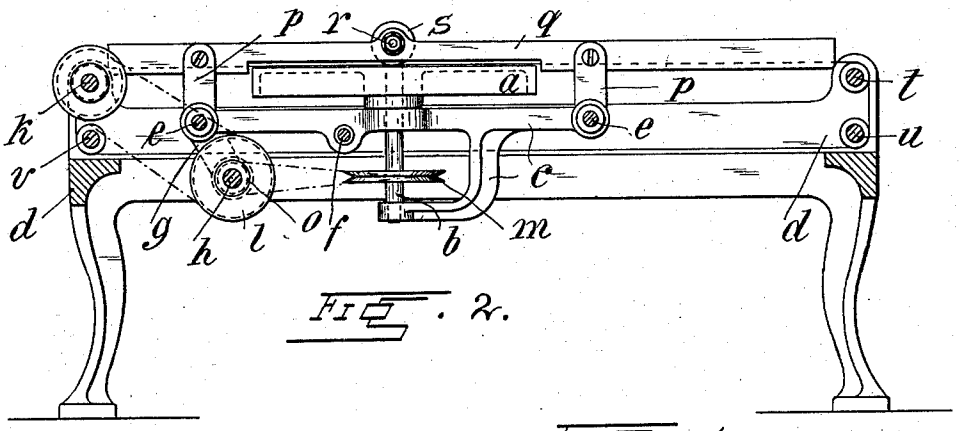


FIG. 2.

FIG. 1.

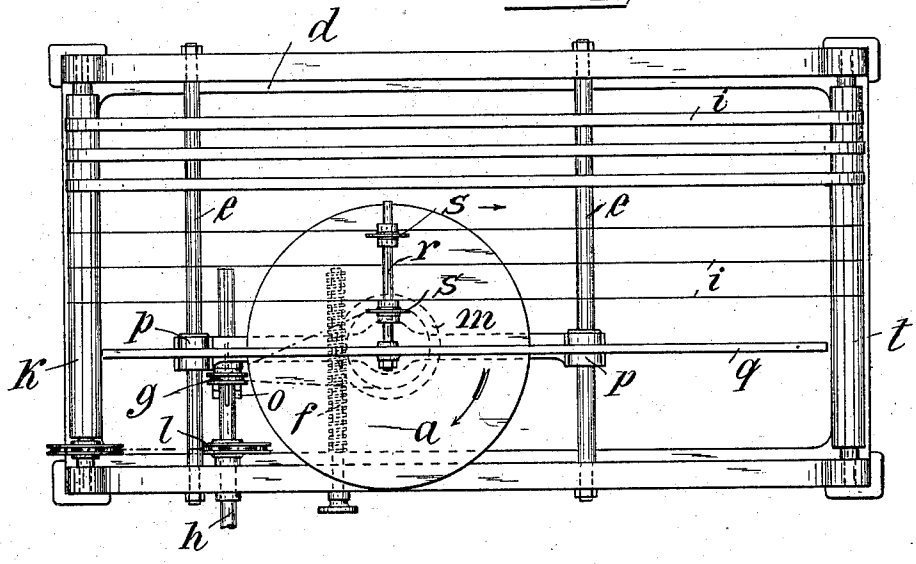
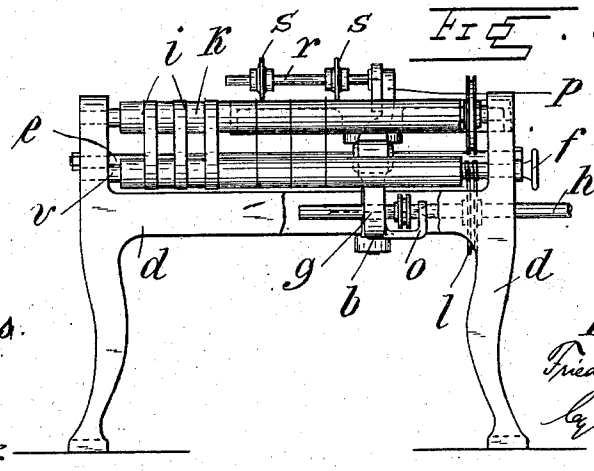


FIG. 3.



Witnesses.

V. Ulmer, Jr.

Sigmund Wischin

Inventor:

Friedrich Förste

by Church & Hopkins

Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 743,477. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

FRIEDRICH FÖRSTE, OF LEIPZIG-LINDENAU, GERMANY.

MEANS FOR TURNING THE SHEETS FED TO LINING OR OTHER MACHINES.

SPECIFICATION forming part of Letters Patent No. 743,477, dated November 10, 1903.

Application filed November 3, 1902. Serial No. 129,969. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH FÖRSTE, a subject of the King of Saxony, and a resident of Leipzig-Lindenau, Saxony, Germany, have invented certain new and useful Improved Means for Turning the Sheets Fed to Lining or other Machines, of which the following is a description.

The present invention relates to machines for lining paper or for making slots or incisions in cardboard; and its object is to provide means for easily and conveniently turning the sheet being treated a quarter of a turn or round at right angles. This movement of the sheet is necessary in cross-lining or in case slots or incisions have to be produced at right angles to those already made.

In order to render the present specification easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a plan of the device; Fig. 2, a side elevation with the table in section; and Fig. 3, a front elevation, showing the table slightly broken away.

In the frame *d* a rotary disk *a* is horizontally disposed, having its upper surface substantially flush with a series of transfer-bands *i*, adapted to pass over the said table. The disk *a* is mounted on a spindle *b*, supported in bearings *c*, adapted to slide on cross-bars *e* of the frame, on which they and with them the position of the disk *a* may be adjusted by means of a screw-spindle *f* in the known manner. The bearing-frame *c* is provided with upwardly-extending arms *p* at each end, to which is fixed a guide-bar *q*, suitably recessed so as to fit onto the surface of the disk *a* and to project beneath it at each side, so that the sheets carried along by the bands *i* will be prevented from passing under the said guide-bar. The bands *c* are guided over rolls *k v* and *t u*, mounted at each end of the frame *d*. The bar *e* nearest the roll *k* carries hanger-bearings *g*, in which is mounted the driving-shaft *h*, which may be rotated by any suitable means. A cord-roll *l* or other suitable gear serves to drive the roll *k* and with it the transfer-bands *i*, while a second cord-roll or other gear *o*, which is movable along the shaft *h* by a groove-and-feather attachment to follow any adjustment of the disk *a*, rotates the cord-roll or gear *m* of the spindle *b* and with it the disk *a*.

A laterally-extending spindle *r* is mounted in the guide-bar *q* and provided with loosely-running friction-rolls *s s*, adapted to run on a radius of the disk *a* at right angles to the guide-bar *q*.

The device operates in the following manner: Assuming the sheet to have been lined or slotted in one direction and to be passing along on the bands *i* in the direction of the arrow, Fig. 1, to be cross-lined or slotted and assuming the disk *a* to rotate in the direction of the arrow in Fig. 1, the sheet passes along the bands with, say, its longitudinal edge contacting with the guide-bar. On crossing over the disk *a* it will come under the friction-rolls *s s*. Now the speed of the outer of the two rolls is greater than of the inner one, owing to the greater peripheral speed of the disk *a*, and thus as the sheet passes under these rolls the greater speed of the outer roll will slew it round at right angles during its passage over the disk *a*, so that on leaving it the said sheet will lie with its cross edge against the guide-bar *q* and will be in position to be cross-lined or slotted, as will be readily understood.

I claim as my invention—

1. In a device for turning sheets of paper, card or the like being fed to a lining or other machine, at right angles to their direction of motion, the combination of a horizontally-disposed disk mounted to rotate immediately underneath the transfer-bands in the path of movement of the sheet, a guide-bar for the sheet extending over the surface of the said disk, a spindle extending laterally from the said guide-bar and having friction-rolls mounted thereon to run on the said disk at different distances from the disk center substantially as described.

2. In a device for turning sheets of paper, card or the like, being fed to a lining or other machine, at right angles to their direction of motion, the combination of a horizontally-dis-

posed disk mounted to rotate immediately underneath the transfer-bands in the path of movement of the sheet, a guide-bar for the sheet extending over the surfaces of the disk and recessed to receive the same, a spindle extending laterally from the said guide-bar along a radius of the said disk and having a series of friction-rolls loosely mounted thereon adapted to be rotated by contact with the said disk at different speeds substantially as described.

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

FRIEDRICH FÖRSTE.

Witnesses:
MORITZ SPREER,
RUDOLPH FRICKE.