

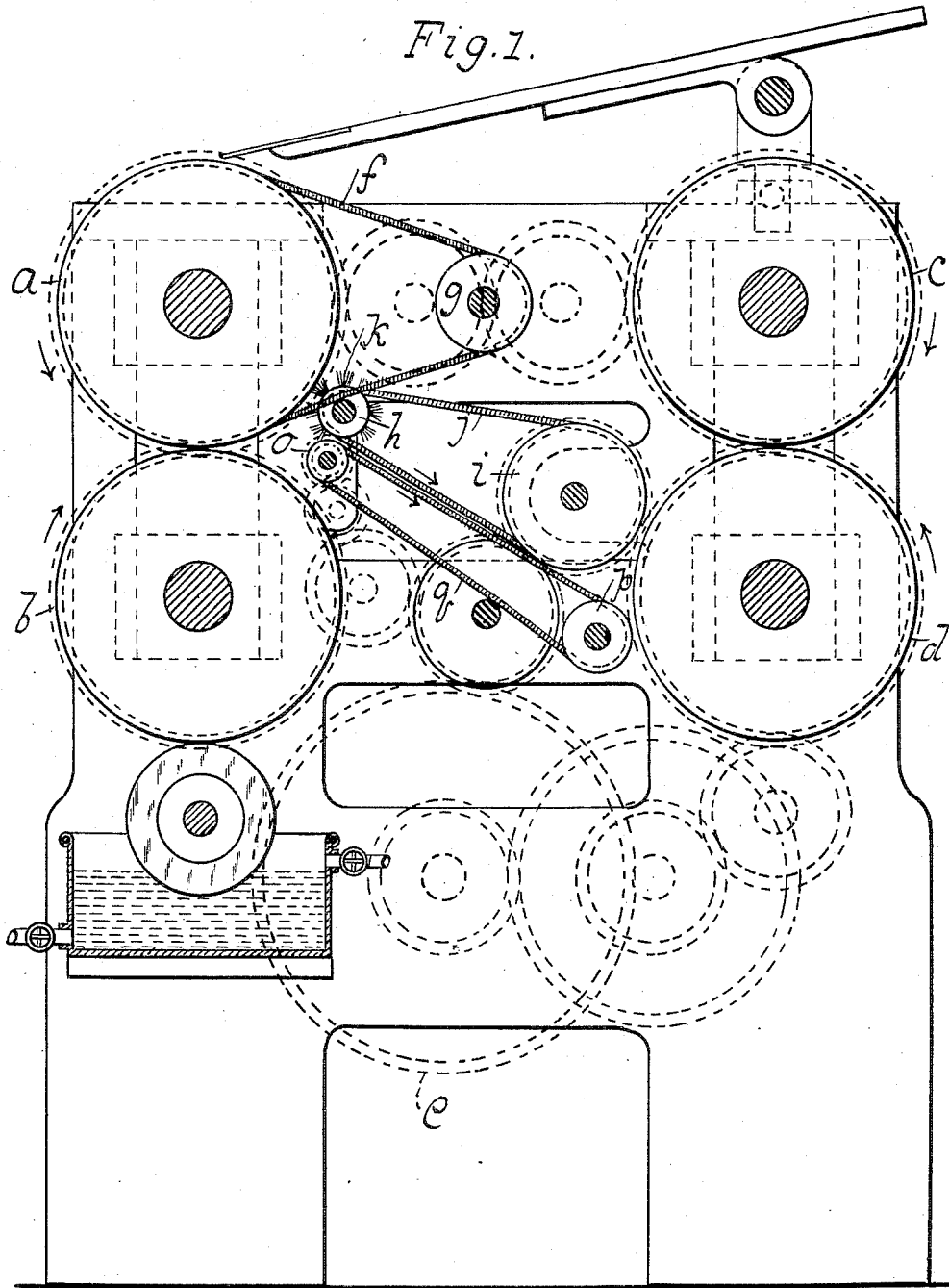
W. B. WAIT.
SHEET CONVEYING APPARATUS.
APPLICATION FILED JUNE 20, 1911.

1,044,713.

Patented Nov. 19, 1912.

2 SHEETS-SHEET 1.

Fig. 1.



Witnesses:
William Miller
Chris. H. Almstedt

Inventor
William B. Wait
By his Attorneys
Haufler & Barlow

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2 SHEETS—SHEET 2.

Fig. 2.

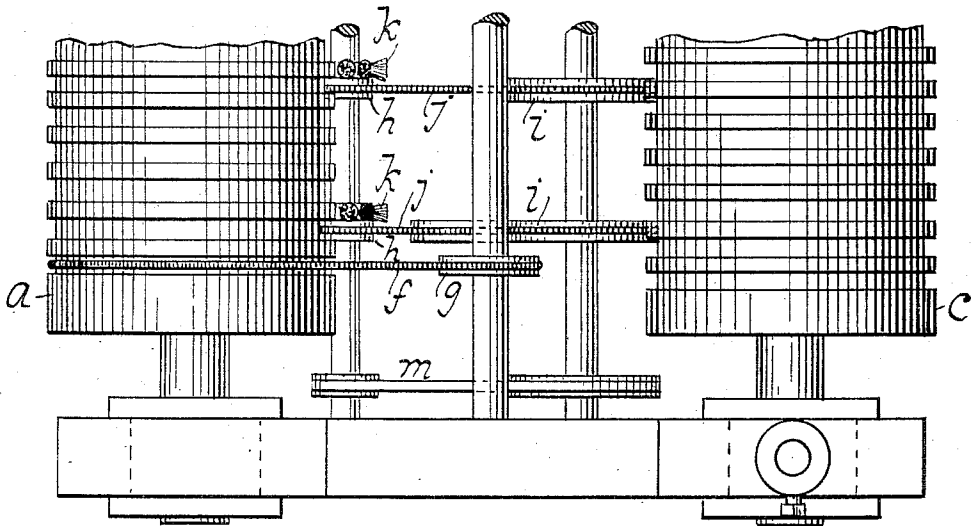
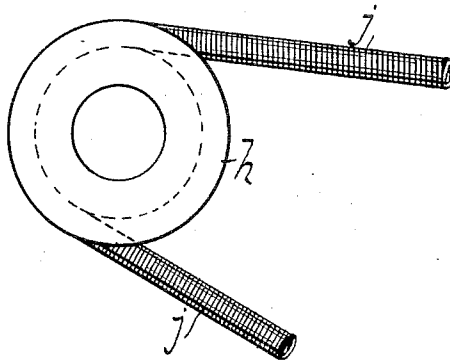


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM B. WAIT, OF NEW YORK, N. Y.

SHEET-CONVEYING APPARATUS.

1,044,713.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed June 20, 1911. Serial No. 634,287.

To all whom it may concern:

Be it known that I, WILLIAM B. WAIT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Sheet-Conveying Apparatus, of which the following is a specification.

This invention relates to a sheet conveyer designed for an embossing press adapted for punctographing characters on paper for reading by the blind and described in Patent No. 900,622 granted to me October 6th 1909.

The present invention consists in equipping a press of this kind with a conveyer whereby the sheet after the impressions have been embossed on one of its sides by one pair of cylinders is carried by means of a series of endless traveling spring belts to a second pair of cylinders, where the sheet is embossed on the reverse side. The belts are constructed of a non-oxidizing wire such as phosphor bronze and formed into endless spiral springs. These belts are guided over wheels located between the two pairs of cylinders the wheels being actuated in the proper direction by suitable driving mechanism. The coiled springs form a flexible traveling table between the two pair of cylinders, the springs being adapted to automatically keep their tension. Springs of this kind are self adjusting to changes of temperature or atmospheric conditions and are impervious to moisture. The ordinary tape or leather being pervious to water would be apt to contract or expand and consequently would have to be taken up by adjusting the guide wheels or rollers. By means of the spiral belts no adjustment of the guide wheels is necessary it being obvious that a coil spring belt will automatically tension itself and remain taut between the rollers. The invention also provides means to guide the sheet to the conveyers. Furthermore the machine has a series of strippers in contact with the upper embossing cylinder designed to rotate in reverse direction and brush the head of the sheet on to the conveyer.

The novel features of the invention are more fully described in the following specification and claim and illustrated in the accompanying drawings in which:

Figure 1 represents a sectional side elevation of a press embodying this invention.

Fig. 2 is a detail plan view showing the table removed. Fig. 3 is a detail side view of a guide wheel and the spiral belt.

In this drawing the letters *a* and *b* represent a pair of cylinders and *c* and *d* are a second pair of cylinders. These cylinders are operated in the proper direction by gears connected to the driving mechanism *e*. The first named pair of cylinders is adapted to emboss one side of the sheet while the second pair embosses the reverse side of said sheet. The upper embossing cylinder has a series of wire belts *f* rotated by the cylinder and connected to idler wheels *g*, these belts prevent the forward edge of the sheet from riding up on the embossing cylinder.

Between the two pairs of cylinders are located a series of wheels *h* and *i* over which travel a series of spiral wire belts *j*. Fingers *k* are mounted on the shaft which carries the wheels *h* and these fingers are of suitable construction to brush the head of the sheet on to the conveyer. The brushes are rotated by means of a belt *m* (see Fig. 2) connected to the shaft which carries the wheels *i*. The belt is in turn rotated by gear connection to the driving mechanism. Below the wheels *h* and *i* are situated a series of wheels *o* and *p* each wheel forms a guide for a spiral wire belt *q*. These belts are actuated in the proper direction by gear connection to the driving mechanism. It will be seen that the sheet when fed from the table passes between the upper embossing and lower impression cylinders where it is embossed on one side, the head of the sheet is then guided by means of the rotating stripper between the two spiral belts and conveyed to the second pair of cylinders. Each guide wheel is provided with a concaved groove formed in the periphery of the wheel for guiding or keeping the coil springs in alinement. The belts *j* and *q* travel in an inclined plane so that the paper will be conveyed below the axial line of the lower cylinder and thus led around the reverse portion of the cylinder with the reverse side up.

I claim:

In a sheet conveying apparatus, the combination with a series of cylinders positioned vertically in pairs, devices coöperating with an upper cylinder for preventing the forward edge of the sheet from being carried up on the cylinder, of two series of endless coiled spring belts arranged on an

inclined plane between the cylinders for conveying the sheet from a position in line with the meeting faces of the first pair of cylinders to a position below the meeting faces of the succeeding pair of cylinders, driving mechanism for rotating the cylinders in opposite directions and both series of belts in the same direction.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses. 19

WM. B. WAIT.

Witnesses:

WILLIAM MILLER,
CHRIS. H. OLMSTAEDT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
