

W. B. WAIT.
EMBOSSING MACHINE.
APPLICATION FILED NOV. 18, 1912.

1,111,334.

Patented Sept. 22, 1914.

Fig. 1.

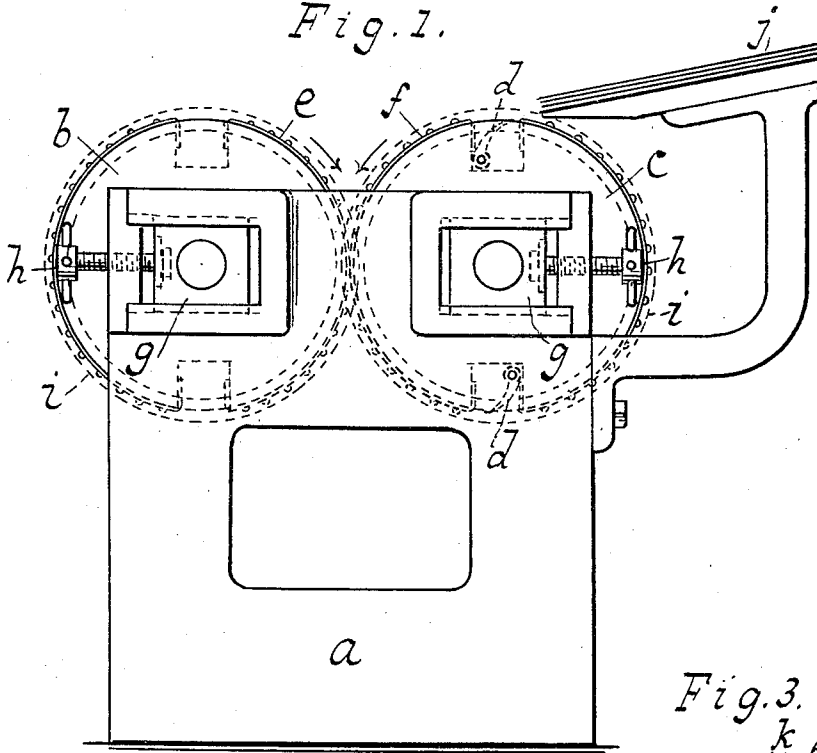


Fig. 2.

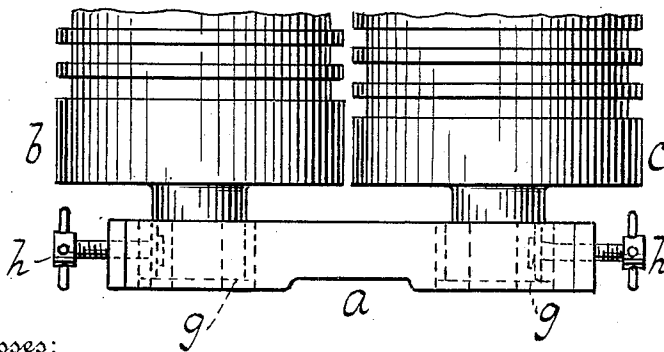
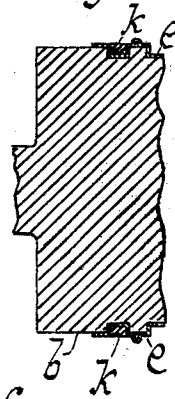


Fig. 3.



Witnesses:
William Miller
Chas. H. Amstaedt

Inventor
William B. Wait
By his Attorneys
Haufler & Harland

UNITED STATES PATENT OFFICE.

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

EMBOSSING-MACHINE.

1,111,334.

Specification of Letters Patent.

Patented Sept. 22, 1914.

Application filed November 18, 1912. Serial No. 732,079.

To all whom it may concern:

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

This invention relates to an embossing machine which is essentially adapted for embossing characters on a sheet of paper for reading by the blind.

The invention consists in the novel method of arranging the cylinders whereby the embossing process is accelerated, and the sheet kept in perfect time with the cylinders. The machine has a pair of cylinders which are preferably positioned in a row, and each cylinder has elevations and depressions on which is fitted a plate or plates provided with the embossed characters. The plates have elevations and depressions corresponding to the shape of the cylinder and the elevation of one plate is opposite the depression of the plate on the succeeding cylinder. The depressions or channels in the plates are preferably filled with elastic material so that the impressions made by the plates on the sheet of paper will be produced and protected.

In a machine designed like the foregoing the sheet is fed between the two cylinders and both sides thereof are simultaneously embossed. Both cylinders are of the same diameter and are rotated at the same speed so that the paper will be uniformly fed therebetween.

The novel details 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 side elevation of an embossing press embodying this invention. Fig. 2 is a plan view of a portion of the embossing cylinders showing the embossing plates removed. Fig. 3 is a detail vertical section of a cylinder.

In this drawing the letter *a* designates a frame on which is mounted a pair of cylinders *b* and *c* respectively. Each cylinder is provided with elevations and depressions and each cylinder carries one or more correspondingly shaped embossing plates *e* and *f* having bosses forming an integral portion of the plates. Each cylinder has its shaft journaled in a slide *g* and each slide can be

adjusted by means of a set screw *h*. The stem of the set screw can swivel in one end of the slide *g* and when actuated moves the slide and a cylinder. In this way each cylinder can be set forward and back horizontally to the thickness of the paper and also give proper engagement of the plates with the same. The cylinder *c* carries gripping devices *d* whereby the paper is grasped and held while it is being fed between the cylinders. Each cylinder has a gear *i* mounted on its shaft and these gears can be rotated by a motor or in any other well known way.

The operation of the machine shown in Fig. 1, is as follows: A sheet of paper *j* is grasped by one of the grippers of the cylinder *c* and carried downward between the meeting faces of the two cylinders then by means of the plates secured to the cylinders it is embossed at the same time on both sides. The depressions or channels of each plate when fitted to the cylinder can be filled, as indicated in Fig. 3; by concentric strips $\frac{1}{2}$ of elastic material. The strips of one of the cylinders, will then produce the impressions embossed by the other cylinder and vice versa. In this construction the embossing cylinders also constitute the impression cylinders.

It will be seen that the elastic filling material of the cylinders will receive and produce the impressions by the co-action of the embossing plates with the paper. The channels and elevations are shown extending circumferentially about the cylinders but they could be formed to extend longitudinally along the cylinders.

I claim:

An embossing machine comprising a pair of cylinders, each cylinder having elevations and channels, means for driving the cylinders, a plate having corresponding elevations and channels fitted to each of the cylinders for embossing characters on both sides of a sheet of paper, and elastic means carried in the channels and coöperating with the elevated portions of the plates for producing the impressions.

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

WILLIAM B. WAIT.

Witnesses:

CHRIS. H. ALMSTAEDT,
WILLIAM MILLER.