

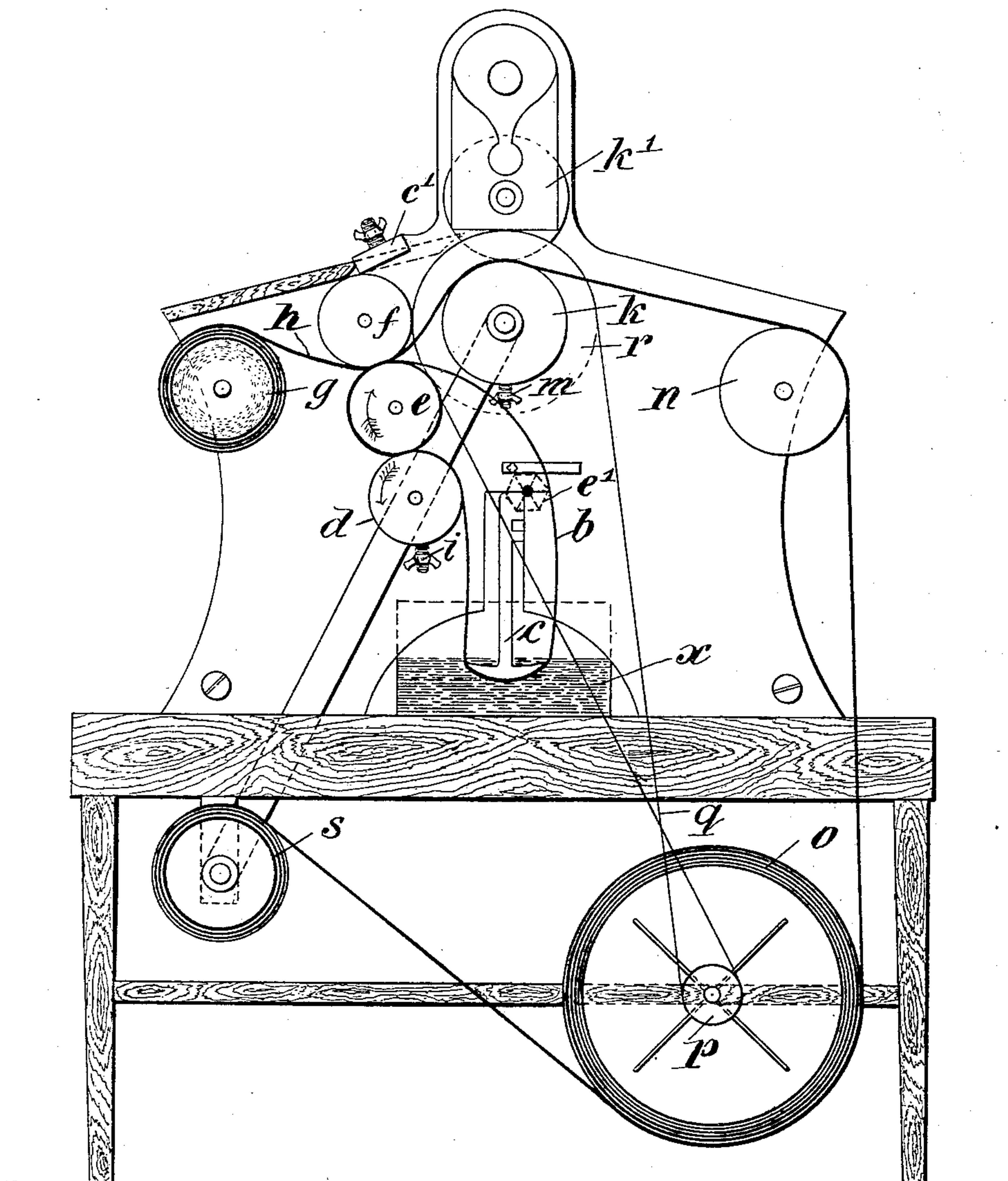
No. 630,901.

Patented Aug. 15, 1899.

H. KRANDT.
COPYING APPARATUS.

(Application filed June 14, 1897.)

(No Model.)



Witnesses

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Represent Ministry

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UNITED STATES PATENT OFFICE.

HERMANN KRANDT, OF ROSTOCK, GERMANY.

COPYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 630,901, dated August 15, 1899.

Application filed June 14, 1897. Serial No. 640,772. (No model.)

To all whom it may concern:

Be it known that I, HERMANN KRANDT, a subject of the Grand Duke of Mecklenburg-Schwerin, and a resident of Rostock, in the Grand Duchy of Mecklenburg-Schwerin, Germany, have invented certain new and useful Improvements in Copying Apparatus, of which the following is a full, clear, and exact description.

10 The present invention relates to apparatus for copying letters; and it consists of means in connection therewith for effecting an even moistening of the paper, as hereinafter described, and particularly pointed out in the
15 claim.

In order to render the present specification more easily intelligible, reference is had to the accompanying drawing, in which the apparatus is diagrammatically represented.

20 The roll of copying-paper is suitably mounted on a roller of the machine-frame and is moistened by means of a band *b*, which is endless and passes over a rubber roller *e*, between rollers *d* and *f*, which are advantageously of metal. The band *b* extends downwardly around an adjustable guide-head *c*, being guided by means of a roller or guide-bar
25 *e'*, the said guide *c* extending downwardly into a trough or reservoir of water, as at *x*. The pressure-head *c* is carried by a horizontal rod *c'*, the ends of which extend through slots *c²* of the lateral frame-plates and may be clamped in any desired position in said slots
30 by means of washers *c³* and nuts, (not shown,) but adapted to screw onto the ends of the said rod *c'* outside the frame-plates, as will be evident from the drawing. The roller *d* may be adjusted as regards the roller *e* by means of
35 any suitable adjusting mechanism, such as a screw *i* or the like, and the upper roller *f* is also adjustable by similar means. The paper *h* coming from the roller *g* passes between rollers *f* and *e*, where it comes into contact with the moistening-band *b* and is evenly

moistened. It then passes between the rollers 45 *k* and *k'*, between which the letter to be copied is inserted over the adjustable guide-bar *c'*. The copying-paper is then passed over the roller *n* and over a drying-drum *o*, on the axis of which is mounted a fan *p*, which dries the
50 copying-paper as it passes over the drum *o*. The copies produced are then finally wound on the roll *s*.

The lower copying-roller *k* is adjustable against the upper by means of a screw *m*. 55

The apparatus is driven by means of a wheel *r* and crank-handle or sheave-pulley. A belt connects the wheel *r* to the drying-drum axis and serves to drive the fan *p*, while the drum *o* is loosely mounted and driven by the paper 60 passing around it. The roller *s* is driven from the driving-shaft by means of a belt. Rollers *d* and *e* are connected or coupled by means of a belt or gearing, and roller *f* rotates roller *e* through the passage of the paper between 65 the two.

I claim as my invention—

In an apparatus for copying letters comprising a copying-paper strip and means for guiding the same and for producing the copy 70 thereon, the combination of means for moistening the said paper previous to the copying operation, said means consisting of an endless band of suitable absorbing material, an upper roll over which said band is guided, 75 and a lower adjustable pressure-head having lower rounded surface, a water-tank into which said head dips, the extremities of the said head extending just out of the water in the manner and for the purpose substantially 80 as described.

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

HERMANN KRANDT.

Witnesses:

E. BECKMANN,
A. BERIKE.