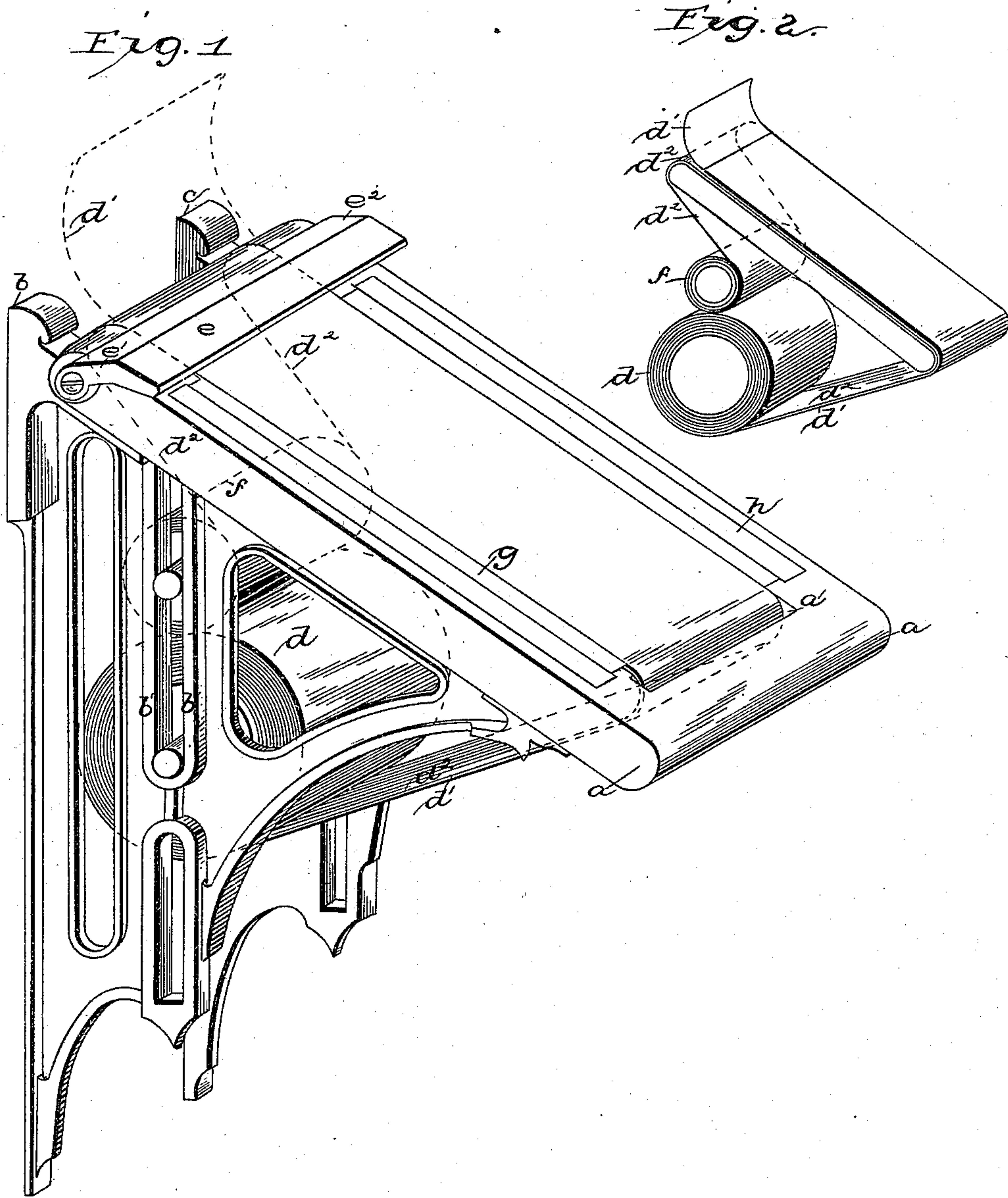


(No Model.)

B. VON SZCZAWINSKI.  
COPYING APPARATUS.

No. 537,944.

Patented Apr. 23, 1895.



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# UNITED STATES PATENT OFFICE,

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## COPYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 537,944, dated April 23, 1895.

Application filed January 13, 1894. Serial No. 496,803. (No model.)

*To all whom it may concern:*

Be it known that I, BOGUMIL VON SZCZAWINSKI, a subject of the King of Prussia, German Emperor, residing at Elberfeld, Rhenish Prussia, Germany, have invented certain new and useful Improvements in Automatic Controlling Copying Apparatus, of which the following is a specification.

This invention relates to apparatus for receiving writing and for producing by as simple means as possible at the same time as the original is written, any suitable number of transfer copies, one of which serving as a record of the written matter, is wound automatically on a drum thus forming an uninterrupted strip of record, while the original and the copies upon the other strips may according to their respective length of the writing be torn off or separated from the apparatus without any unnecessary loss of material.

In the annexed drawings:—Figure 1, represents a perspective view of the new or improved apparatus, and Fig. 2, is an illustration of the method of actuation of the essential constituent parts.

The desk plate *a* is hinged on the brackets *b* and *c*, which latter can be suspended on a wall. In the bearing *b'* of the bracket *b*—this bearing forming a slot—and in a similarly shaped corresponding bearing in the other bracket *c*, turns on its axle pins the roller *d*, on which is wound one or more strips of paper. Where, as is usually the case, only the original writing and one copy are required, the roller, as is assumed in the following description, receives two strips of paper only. Such a pair of strips *d'* *d''* is first led from the roller through the slot *a'* over the desk plate and then beneath the cutter or knife *e*. This knife is hinged by its lateral arms *e'* and *e''* on the desk plate and rests with slight pressure upon the pair of strips *d'* *d''*. The knife is secured to the desk plate by its pivotal screws.

In the above mentioned slot bearings of the two brackets rotate the axle pins of a receiving roller *f* the weight of which presses it upon the roller *d*. This roller *f* serves to receive the under strip *d''* of the two paper strips.

Between the two strips on the writing surface of the desk the transfer paper sheet *g* is

placed. This paper is stretched smoothly and is kept in position by the aid of two small bars *h* and *h'* running in appropriate grooves. When the upper strip *d'* is written upon, the pressure of writing produces an exact copy on the lower strip *d''*. The upper one is then drawn forward and to be torn off against the knife, while the lower strip, fixed on the roller *f* is wound up for a length exactly corresponding to that wound off from the lower roller *d*.

Fig. 2 illustrates the winding up and off of the paper strips and their leading over the desk surface. The different component parts are lettered in conformity with Fig. 1.

It is of importance that the paper strips are simultaneously wound over the roller and that the upper receiver roller winds up automatically as long a strip as the stock or supply roller winds off, while the written portion of the upper strip being of various length is capable of being torn off as far as the writing extends.

The winding up of the record strip being automatic instead of being done by hand, obviates the danger of forgetting to wind up the record strip after tearing off the upper strip, and which would result in the new writing being entirely or partially written over the underlying previous writing, thus confusing the record. If on the other hand the upper strip were not torn off by hand according to the respective lengths of the writing but automatically by the apparatus, namely, always for the same length, it would be necessary to sacrifice a whole strip even if only one line of writing or number as often in retail shops is written down, thus unnecessarily wasting paper on both or all strips.

This apparatus can obviously also be used as a standing instead of a hanging desk, if the lateral brackets are replaced by standards of a suitable shape.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

In combination in a copying apparatus the table, the frame supporting the same, the slotted bearings in the frame extending vertically, the stock roller journaled in the frame, and adapted to hold the strips which extend

from said roller over the table and the winding roller to receive the record strip, said winding roller being journaled in the vertically extending slotted bearings above the  
5 stock roller and in contact therewith to fall as the said stock roller decreases in size, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

BOGUMIL VON SZCZAWINSKI.

Witnesses:

WM. ESSENWEIN,  
F. H. STRAUSS.