

A. IMBACH.
 APPARATUS FOR CATCHING AND HOLDING THE RESERVE THREAD IN WEFT REPLENISHING LOOMS
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1,058,977.

Patented Apr. 15, 1913.

Fig. 1

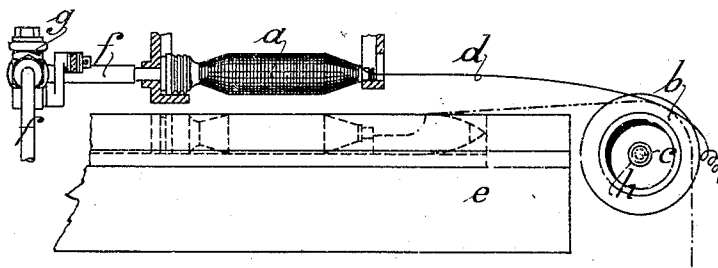
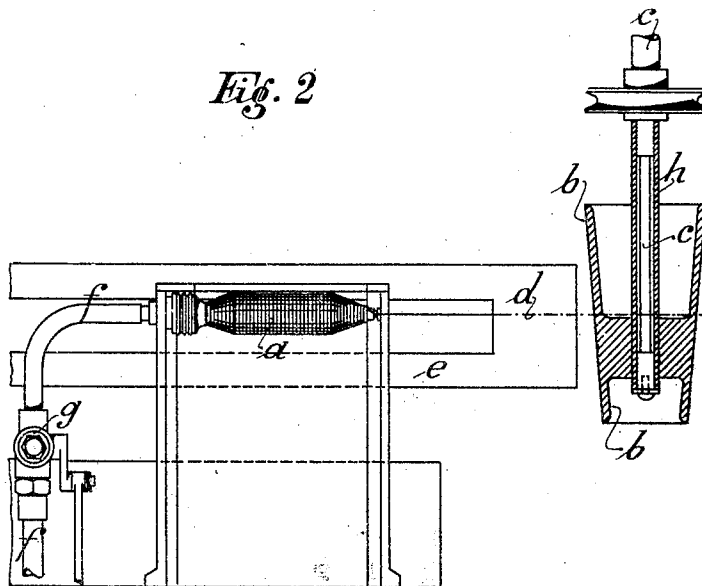


Fig. 2



Witnesses.

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APPARATUS FOR CATCHING AND HOLDING THE RESERVE THREAD IN WEFT-
REPLENISHING LOOMS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST IMBACH, a citizen of the Swiss Republic, and residing at Arlen, in Germany, have made certain new and useful Improvements in Apparatus for Catching and Holding the Reserve Thread in Weft-Replenishing Looms, of which the following is a specification.

It has already been proposed to provide apparatus for holding a loose thread end that has been blown off by compressed air from a spool for the purpose of threading the thread in the shuttle. Such apparatus have consisted either of boxes having peculiarly constructed false bottoms in which the loose end of the thread is caught, or of continuously rotating rollers or spindles upon which the blown-off thread is wound. These known apparatus are however not satisfactory because the threads very often break and thus get woven into the fabric where they cause faults in the weaving and other disturbances.

The present invention has now for its object to provide an apparatus wherein this frequent and undesirable breaking of the thread when blown off shall be effectually prevented and the thread shall be subjected to the least possible strain during the threading of the thread in the shuttle.

In the accompanying drawings: Figure 1 is a front elevation partly in section, and Fig. 2 is a plan also partly in section, of one form of the improved apparatus.

As shown, *a* is a spool ready to be pushed into the shuttle (indicated in dotted lines in Fig. 1). At a suitable distance from the point of this spool and at right angles thereto is a roller *b* fixed on a hollow shaft *h*. This shaft *h* is capable of rotating freely on a shaft *c*, which is mounted on in the loom framing (not shown) and is rotated by suitable means from the main loom shaft (not shown). The roller *b* is covered with card clothing or other suitable fabric, for instance velvet, plush or woollen cloth to which cotton threads adhere very readily. The roller *b* is normally carried around by friction by the shaft *c*. As soon however as the reserve thread is blown off the spool by compressed air in the well known manner and the trailing thread *d* has dropped upon

the roller *b* the latter is stopped by the pull of the thread adhering to it, while the shaft *c* continues to rotate. The friction of the hollow shaft *h* on the shaft *c* is rendered so slight by copious lubrication that the rotation of the shaft *c* scarcely places any strain upon the thread, at least none which is sufficient to break the latter. The thread *d* now remains stationary until the weft thread has been threaded in the shuttle (as indicated by a dash and dot line in Fig. 1) and the superfluous reserve thread has been cut off automatically in the usual manner. When this is done the roller *b* is carried around again by the shaft *c*, so that it rotates and thus winds up on to itself the loose reserve thread that is hanging on it. By this means the thread is removed from the range of the loom slay *e* and is thus prevented from being drawn into the fabric. The threads are removed from time to time as they accumulate, the roller *b* being made conical to facilitate this removal.

f is the compressed air supply pipe, and *g* is the air cock which is operated by the weft stop motion shaft.

What I claim is:

1. In weft replenishing looms, the combination of a continuously rotating shaft, a roller mounted upon said shaft, means for blowing off the reserve thread from a spool for the purpose of threading the thread in a shuttle, means for engaging said reserve thread as blown off with the roller, means for rotating the roller by aforesaid shaft with such slight friction that the roller is rendered stationary by the engagement therewith of the reserve thread, means for threading the shuttle and cutting off the reserve thread whereupon said roller again rotates and winds up on itself the cut-off reserve thread.

2. In weft replenishing looms, the combination of a continuously rotating shaft a roller mounted upon said shaft and covered with a material to which cotton threads will readily adhere, means for blowing off the reserve thread from a spool for the purpose of threading the thread in a shuttle, means for engaging said reserve thread as blown off with the roller, means for rotating the roller by aforesaid shaft with such

slight friction that the roller is rendered stationary by the engagement therewith of the reserve thread, means for threading the shuttle and cutting off the reserve thread
5 whereupon said roller again rotates and winds up on itself the cut-off reserve thread.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

AUGUST IMBACH.

Witnesses:

GEO. GIFFORD,

ARNOLD ZUBER.