No. 629,104. Patented July 18, 1899.

K. EGGEMANN.

MACHINE FOR EXAMINING UMBRELLA STUFFS.

(Application filed Nov. 30, 1897.)

(No Model.)

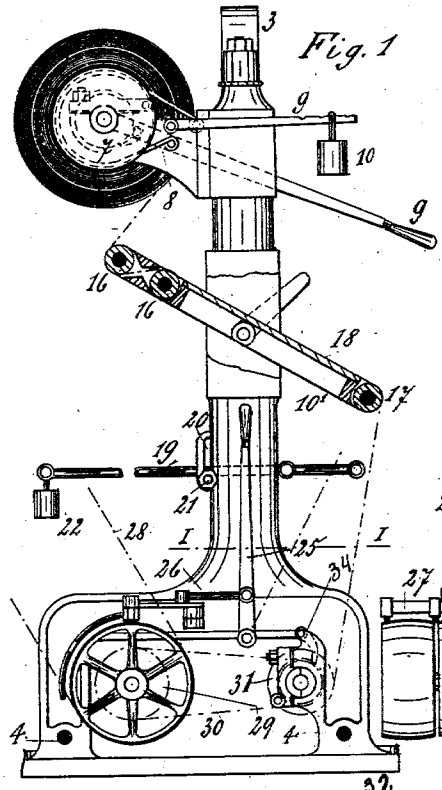


Fig. 1

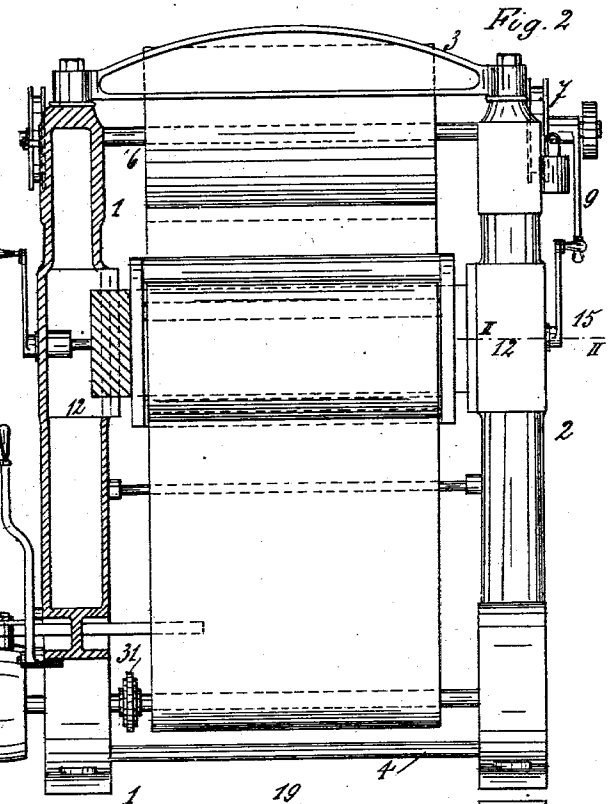


Fig. 2

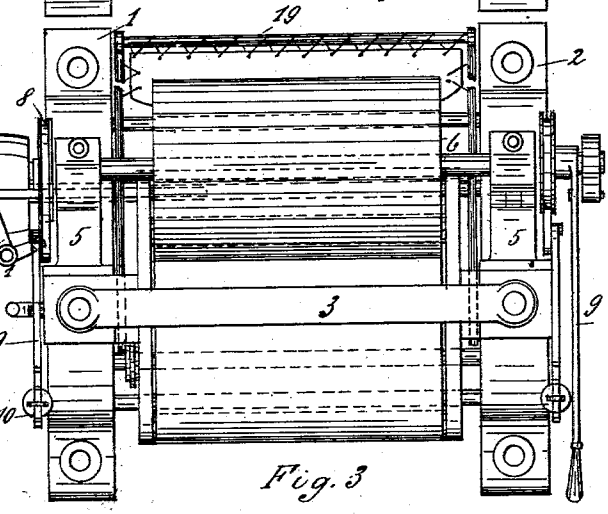


Fig. 3

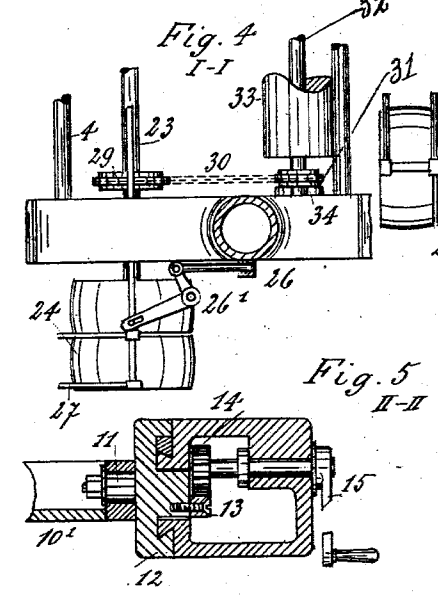


Fig. 4
I-I

Fig. 5
II-II

Witnesses
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UNITED STATES PATENT OFFICE.

KARL EGGEMANN, OF KLEINLAUFENBURG, GERMANY.

MACHINE FOR EXAMINING UMBRELLA STUFFS.

SPECIFICATION forming part of Letters Patent No. 629,104, dated July 18, 1899.

Application filed November 30, 1897. Serial No. 660,325. (No model.)

To all whom it may concern:

Be it known that I, KARL EGGEMANN, a subject of the Emperor of Germany, residing in Kleinlaufenburg, Baden, Germany, have invented certain new and useful Improvements in Apparatus for Examining Umbrella Stuffs and the Like Cloths, (for which I have obtained a patent in Germany, No. 89,261, bearing date April 8, 1895; in Switzerland, No. 11,145, bearing date November 29, 1895, and in Italy, No. XXX, 40,124, and XXIX, 481, bearing date December 30, 1895,) of which the following is a full, clear, and exact specification.

This invention relates to certain improvements in apparatus for examining umbrella stuffs or cloths; and it consists in the arrangement and use of an adjustable glass plate, over which the cloth—especially umbrella stuff—to be examined is carried in a stretched state, so that all defects which occur in weaving may be easily recognized and corrected.

The invention consists, further, in the combination of said plate with a reflector, which assists the examination by collecting the rays and reflecting them on the plate.

How I carry my invention into effect is shown on the accompanying drawings, described hereinafter, and finally pointed out in the claim at the end of this specification.

In the accompanying drawings, Figure 1 is a side view of the examination apparatus, partly in section. Fig. 2 is a front view of the same. Fig. 3 is a plan. Figs. 4 and 5 are horizontal sections along lines I I II II of Figs. 1 and 2.

Similar numerals of reference indicate corresponding parts.

The machine consists of two pillars of cast-iron 1 and 2, which at the top are connected by a bridge 3 and at their bottom by bolts 4. To the upper end of this frame are screwed bearings 5, in which is located a roller 6, from which the cloth is supplied to the device for examination purposes. The roller 6 is provided with a brake, consisting of a disk 7, keyed to one end of the axle of roller 6, over which is arranged a brake-band 8, that is fixed at one end to the frame and at its other end to a lever 9, which is acted upon by a weight 10, and it will be easily understood that by this arrangement the stuff may be pulled off from the roller 6 more or less rapidly.

The examination device consists of a square frame 10′, which is adjustably located between the pillars 1 and 2. For this purpose it is provided with pivots 11, which may turn in corresponding mortises of sliding pieces 12, arranged at each inner side of the frame. By means of racks 13, fixed to the slides, and pinions 14, fitted to the pillars 12, or vice versa, the frame 10′ may be raised and lowered if the cranks 15, situated on the spindles of said pinions, are respectively turned, and it may also be adjusted in the vertical plane by being turned around its pivots.

The frame 10′ has a number of leading rollers, preferably three, 16 17, which form the cross portions and are so arranged that two rollers are at the rear edge and one at the front edge of the machine. Between two rollers 16 17 the frame is open, and this opening is covered by a plate 18 of mirror-glass, which fits into a corresponding recess of the frame 10′. This plate serves as support for the cloth, which coming from the supplying-roller 6 is guided by the rollers 16 and 17 and carried over said plate in a stretched state. This plate affords the possibility to examine the cloth and find out the defects in it which happen by weaving, so that the same may be easily corrected by striking the respective warp and weft threads with a suitable instrument—for instance, a blunt knife.

For operating the device the machine must be placed near a window to catch the broad daylight; but in order that the glass plate may be also suitably enlightened on dark days or at late hours I have placed underneath the frame 10′ a reflector. The reflector consists of two lengthwise and two cross bars 19, which are joined together in any convenient manner to form a frame. This frame is rotatably mounted in the pillars 1 and 2 and may be adjusted by slots 20 and screw-bolts 21. A weight 22 serves to keep it in its proper position. This frame is provided with a white cloth or white pasteboard or other reflecting material, and thus it is adapted to collect the rays and reflect them to the glass plate, which

in such a manner is so perfectly lighted that the cloth may be thoroughly examined. The same effect will also be obtained when above the reflector lamps are arranged. Now the cloth or stuff may be pulled off from the roller 6 by hand or mechanically, as is shown in the drawings. For this purpose a shaft 23 is journaled in the frame of the machine, to which is keyed a loose and a fast pulley 24, which may be set in and out of motion by a lever 25, that engages, by means of a connecting-rod 26 and angle-lever 26′, the shifter-fork 27 of the belt 28. To the shaft 23 is keyed a chain-wheel 29, which imparts motion by a chain 30 to a chain-wheel 31 on a shaft 32, which carries the stuff-receiving roller 33. To prevent contrary revolving of the roller 33, a ratchet and pawl 34 are provided for.

The device and its special arrangement thus described are of great importance for the examination especially of umbrella stuffs, which operation could not before be carried out in such a simple and exact manner as by my device.

What I therefore claim, and desire to secure by Letters Patent, is—

A device for examining and correcting umbrella stuff, consisting of two standards having a roller at their top to receive the stuff, a brake arranged to act on said roller, a frame below said roller adjustable radially and vertically, a glass plate inclosed by said frame, a reflector arranged below the frame and adjustably mounted, and a second roller adapted to receive the stuff, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

KARL EGGEMANN.

Witnesses:
MAX HARTL,
FRANZ CONRAD.