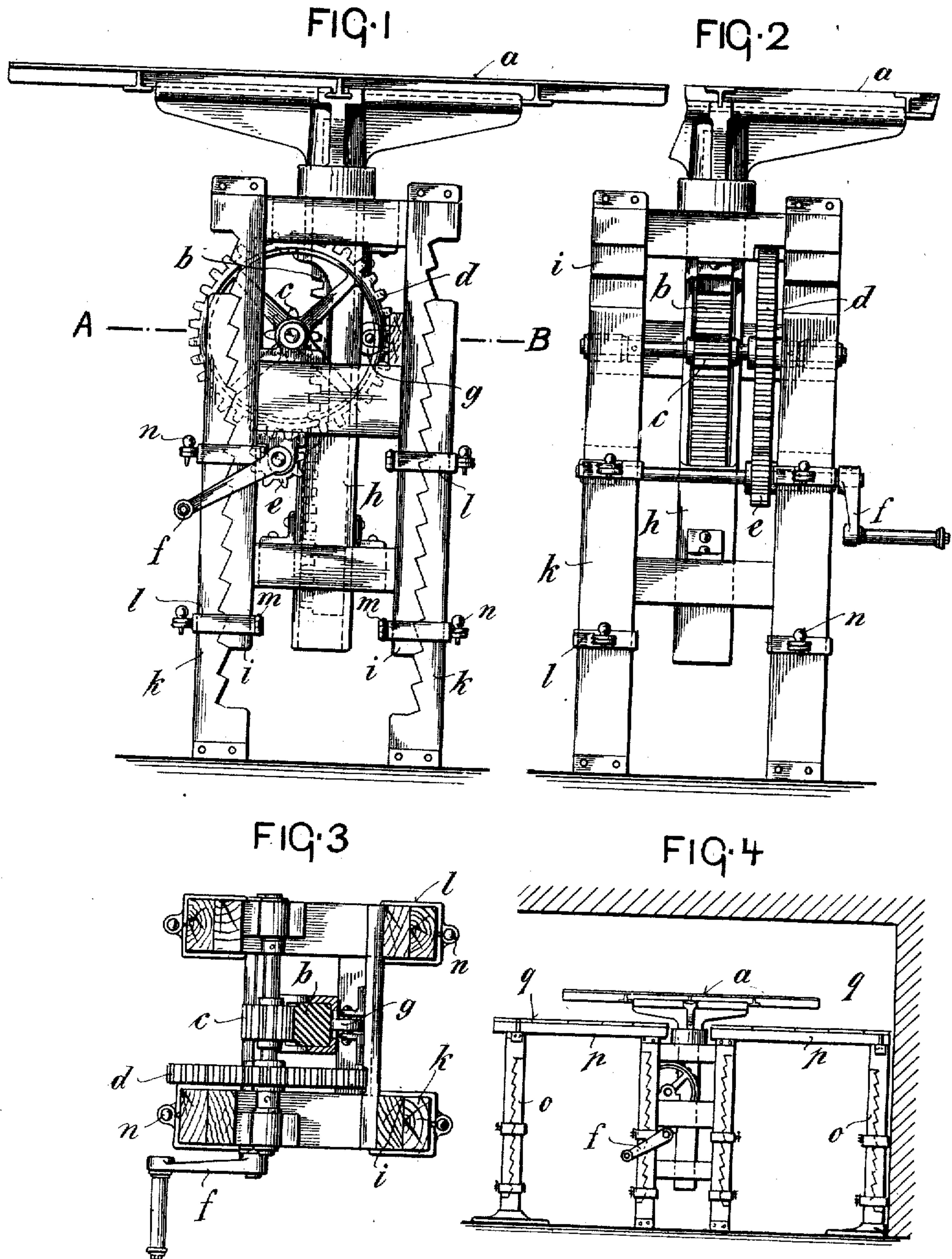


No. 829,532.

PATENTED AUG. 28, 1906.

M. LAU.  
APPARATUS FOR FIXING PLASTER WORK TO CEILINGS.  
APPLICATION FILED APR. 24, 1905.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

MORITZ LAU, OF BRESLAU, GERMANY.

## APPARATUS FOR FIXING PLASTER-WORK TO CEILINGS.

No. 829,532.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed April 24, 1905. Serial No. 257,171.

*To all whom it may concern:*

Be it known that I, MORITZ LAU, a subject of the German Emperor, residing at 98 Sternstrasse, Breslau, Germany, have invented certain new and useful Improvements in Apparatus for Fixing Plaster-Work to Ceilings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In fixing plaster-work to ceilings the practice hitherto has been to roughen the back of the finished piece of plaster-work at the place where it is to be fixed, to apply fresh plaster to it, and then to lay it against the ceiling, when it is easily fixed by means of screws or the like. The fresh plaster adheres on the one side to the ceiling and on the other side to the piece of work, which is thus fixed to the ceiling. This method can be successfully employed in the case of ceilings with wooden beams, but is not at all suitable for the new concrete ceilings. Even if the concrete ceiling be well roughened before the piece of work is laid on this method completely fails. The layer of plaster which is freshly laid on the finished piece of work and is intended for fixing it to the ceiling must for practical reasons be exceedingly thin. As soon, however, as this thin layer is put on the piece of plaster-work the moisture contained in it is absorbed thereby, and when the piece of work is laid against the ceiling the freshly-applied layer of plaster is deficient in the moisture which it has to give off to the body of concrete in order to insure the fixing of the piece of work thereto. In the case of concrete ceilings, therefore, the piece of work has to be fixed by screwing. As, however, the screws cannot be directly screwed into the concrete, wooden dowels having first to be let into the ceiling, this method of fixing the plaster-work is troublesome and expensive.

The present invention relates to an apparatus for affixing plaster-work to ceilings, especially concrete ceilings, without the employment of screws. This apparatus consists, substantially, of a platform for receiving the mold for the plaster-work. This mold is arranged in a suitable frame in such a manner that it can be raised or lowered and is forcibly pressed against the ceiling by means of a toothed gearing or equivalent means. The plaster is freshly poured into

the mold and pressed in this state against the ceiling. Thus the plaster which is in the mold is thoroughly moist when pressed against the ceiling, so that it is impossible for the moisture to be suddenly absorbed out of the parts which come in contact with the ceiling. In consequence of the powerful pressure applied to the plaster-work when the latter is pressed against the ceiling the moisture in the plaster is given off under powerful pressure to the lowest part of the layer of concrete, which is thoroughly moistened and then only in a condition to allow the plaster to set against the ceiling. When the plaster in the mold is set, the platform bearing the plaster-mold is lowered, and the freshly-set plaster-work adheres firmly to the ceiling.

Ornamental cement-work and the like can of course be fixed to ceilings in a similar manner.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a front elevation; Fig. 3, a section through A B in Fig. 1, and Fig. 4 a side elevation illustrating the apparatus in action.

The platform *a*, on which the plaster-mold is placed, is suitably made of angle-iron and pivoted on the rack *b*. With the rack *b* a pinion *c* engages, which can be actuated by means of gear-wheels *d e* and a crank-handle *f*. A guide-roller *g* is mounted at the back of the rack opposite the tooth-wheel *c*, the rack working in the guide *h*. The toothed gearing for operating the rack is mounted in a frame comprising extensible corner-columns *i*, which are provided with feet *k*. In order that the frame may be conveniently adjusted, the columns *i*, as well as the feet, are serrated and are held together by ties *l*. These ties *l* can be turned on hinges *m*, fixed to the columns *i* and locked by pins *n*. As accessories to the new apparatus columns *o*, Fig. 4, which can be raised or lowered, are provided. These columns serve for forming a stage on which the workman can conveniently serve the platform *a*.

The action of the new apparatus is as follows: The pins *n* are removed from the ties *l*, the ties turned on the hinges *m*, and the feet *k* placed against the columns *i* in such a manner that the platform *a*, which is in its lowest position, stands at the required distance from the ceiling. Hereupon the ties *l* are locked by means of the pins *n*. The columns *o*, Fig. 4, which are likewise adjusted



to the required height, are placed so that by means of beams *p* and boards *q* a stage can be formed on which the workman stands and can conveniently work on the platform *a*.

5 The plaster-mold for the piece of work is then put on the platform and the fresh plaster poured into the mold. When this has been done, the platform *a*, bearing the mold and the fresh plaster, is raised by turning  
10 the crank-handle *f* and forcibly pressed against the ceiling. While the plaster is being pressed against the ceiling the workman attending to the platform turns the platform slightly around its pivot on the  
15 upper end of the rack, so that during the pressing action the fresh plaster is at the same time rubbed against the ceiling. It will be seen that by means of this apparatus a large surface of the plaster is simultane-  
20 ously pressed against the ceiling.

When the plaster is set, the platform is lowered from the ceiling by turning the crank-handle in the reverse direction, the frame pushed farther, and the next part of  
25 the plaster-work formed in the same manner, and so on.

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

30 1. An apparatus for applying molded plaster-work to ceilings comprising a frame or

support, a platform mounted to rotate on the support and adapted to support the plaster-mold, and means for raising and lowering the platform on its support to first apply the plaster to the ceiling and then withdraw the  
35 platform and plaster-mold.

2. An apparatus for applying molded plaster-work to ceilings comprising a frame or support, a fixed vertical guide in the support, a rack mounted to slide in the guide, gearing  
40 for raising or lowering the rack and a platform mounted to rotate on the upper end of the rack adapted to receive the plaster-mold and press the plaster against the ceiling.

3. An apparatus for applying molded plaster-work to ceilings comprising an extensible  
45 frame or support, a fixed vertical guide in the support, a rack mounted to slide in the guide, gearing for raising or lowering the rack and a platform mounted to rotate on the upper  
50 end of the rack adapted to receive the plaster-mold and press the plaster against the ceiling.

In testimony whereof I have affixed my signature in presence of two witnesses.

MORITZ LAU.

Witnesses:

ERNST KATZ,  
ALBERT SCHENK.