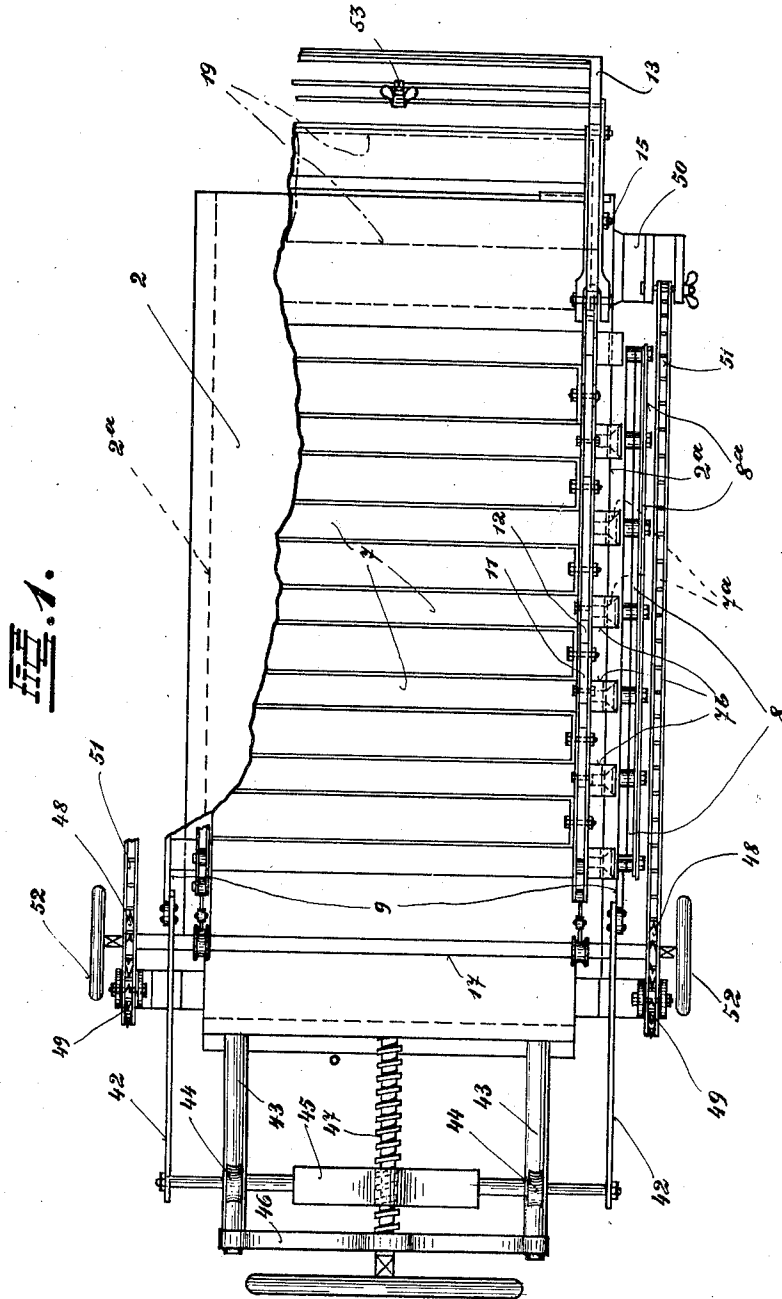


H. PAUL.
CORRUGATING PRESS.
APPLICATION FILED FEB. 11, 1910.

1,007,968.

Patented Nov. 7, 1911.
2 SHEETS—SHEET 1.



Witnesses

Amorill
S. Ford

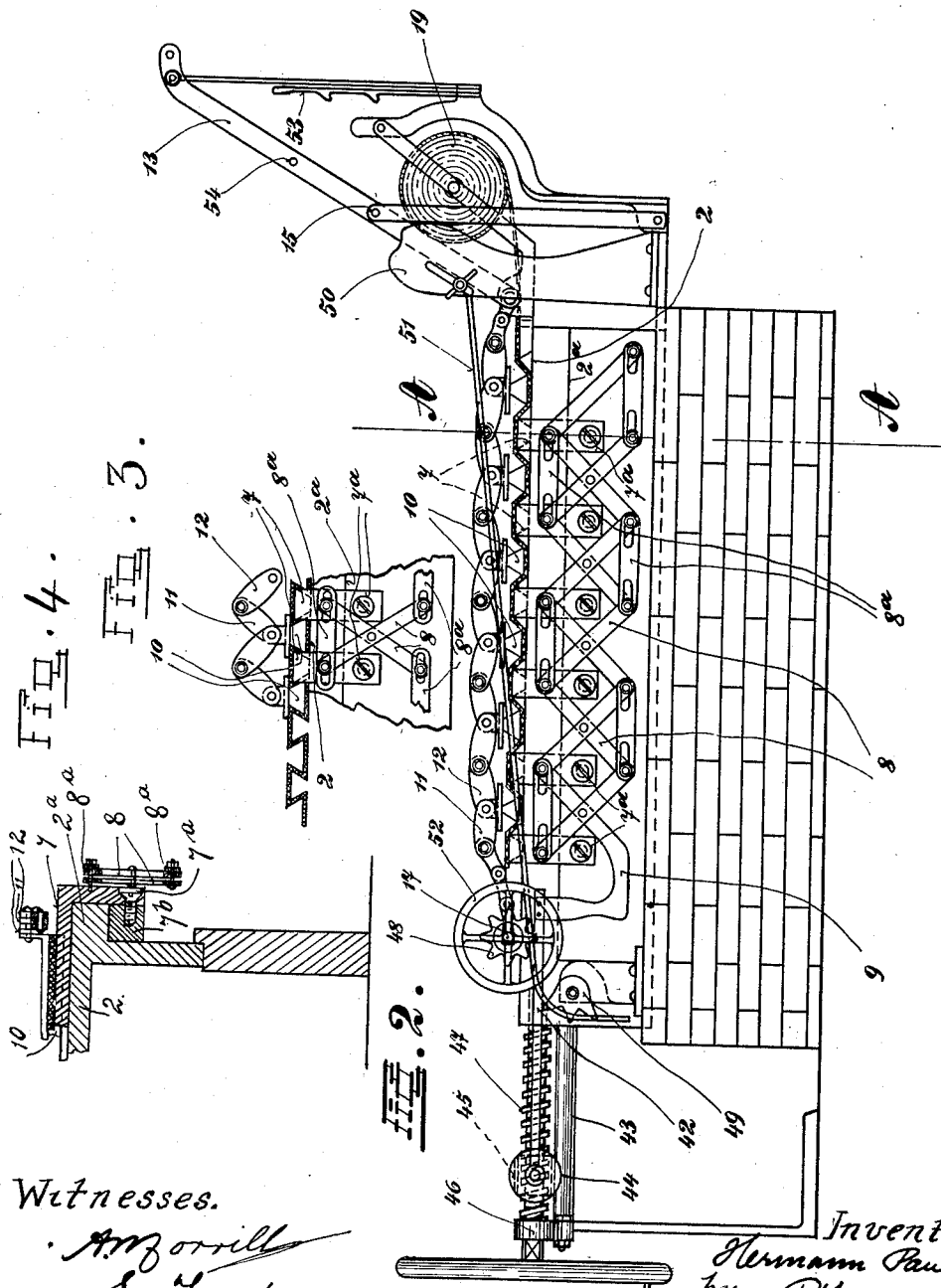
Inventor

Hermann Paul
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Attorney

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S. Ford

Inventor.
 Hermann Paul
 by *Waddan*
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UNITED STATES PATENT OFFICE.

HERMANN PAUL, OF Breslau, GERMANY.

CORRUGATING-PRESS.

1,007,968.

Specification of Letters Patent.

Patented Nov. 7, 1911.

Application filed February 11, 1910. Serial No. 543,396.

To all whom it may concern:

Be it known that I, HERMANN PAUL, a subject of the German Emperor, residing at Breslau, in Germany, have invented a certain new and useful Improvement in Corrugating-Presses, of which the following is a specification.

This invention relates to presses for corrugating roofing paper or felt and like material hereinafter referred to as felt, and more particularly to presses of the type wherein bottom dies are collectively actuated by means of a system of levers usually termed "lazy tongs" and top dies are connected to form a chain which is lowered upon the felt, on a heated table, and forces the felt downward between the bottom dies.

One object of the invention is to provide means for automatically limiting the movements of the lazy tongs, in order to obviate the necessity for manual adjustment; another object is to provide means for preventing the dragging of the die-chains on the felt, before and after the pressing, this dragging being attended with inconvenience, and often with injury to the felt.

A construction embodying the improvements referred to is shown in the accompanying drawings, in which—

Figure 1 is a plan view of the machine, with part broken away, Fig. 2 a side elevation, Fig. 3 a side-view of a detail, in another position, and Fig. 4 a section on the line A—A of Fig. 2.

In the drawings, 2 represents the heated table, on which the bottom-dies 7 are slidable. These dies 7 are engaged with the table by means of blocks 7^b, which are fixed to their depending ends by screws 7^a and project under flanges 2^a of the table. This arrangement allows of easily disengaging and exchanging the dies. At each side of the table a system of levers 8, forming a so-called lazy tongs, is connected to the depending ends of the dies 7. The expansion and contraction of the lazy tongs are limited by means of slotted links 8^a which connect consecutive knuckles of the tongs; these links are exchangeable, so that by using links and slots of different lengths the limits of the tong-movement can be varied. The terminal lever of each lazy tongs has an arm 9, and the two arms 9 are connected by rods 42 to a rider 45 mounted upon a screw 47. The rider is guided by means of rollers 44 running upon rails 43. The latter support

a cross-head 46, in which the screw, 47, has bearing. By rotating the screw, the rider is moved to or from the table, and causes the lazy tongs to be compressed or extended.

The upper dies 10 are hinged to alternate joints of chains consisting of alternating links 11 and 12. These chains are attached at the right-hand end of the table to double-armed levers 13 fulcrumed at 15. At the left-hand end of the table the chains are attached to a spindle 17, upon which they can be wound. Sprocket-wheels 48 are fixed to the spindle 17, near its ends, and engage chains 51, which are attached to supports 50 at the right-hand end, and engage toothed locking segments 49 at the left-hand end. These chains 51 prevent injury of the felt by the dies 10 during the stretching and relaxing of the chains 11, 12, and support the said dies 10 in suspension over the felt.

The stretching and relaxing of the die-chains are effected by rotating hand-wheels 52 fixed to the spindle 17. When the chains, in the course of being wound up, have reached the support 50, they are lifted on to the support by rocking the levers 13, and the latter are then engaged with a catch lever 53. The felt is then unwound from a roll 19, and drawn over the dies 7, whereupon the lever 53 is disengaged from the levers 13, and the spindle 17 is rotated to relax the die chains, so that the dies 10, acting on the felt by gravity, depress the felt between the dies 7. The screw 47 is then operated to move the dies 7 against the dies 10, by which means the felt is pressed into dove-tail shaped folds. When the felt has become sufficiently dry the dies are moved apart again, by operating the screw 47, and the dies 10 are then lifted by stretching the die chains.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a corrugating press, the combination of a bed, a series of lower dies movable along said bed, lazy tongs levers connecting said dies, a standard at one end of said bed, an upper series of dies, a chain of links connecting said upper series of dies, a spindle connected to one end of said chain of links and levers fulcrumed in said standard and connected to the other end of said chain of links, and a chain connected to said standard and serving as a runway for said spindle above the bed.

2. In a corrugating press, the combination of a bed, a series of lower dies, movable along said bed, lazy tongs levers connecting said dies, detachable spacing links for limiting the closing movements of said lazy tongs levers, an upper series of dies, a chain of links connecting said upper series of dies, means for stretching said chain for applying the dies and means for lifting said upper dies and holding same suspended

above the path of entry of the material to be pressed.

In witness whereof I have signed this specification in the presence of two witnesses.

HERMANN PAUL.

Witnesses:

JOHANN MENZ,
ERNST A. KATZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."