A. McCANN.

SHINGLE PRESS.

APPLICATION FILED JUNE 1, 1909. RENEWED FEB. 8, 1911.

1,032,489.

Patented July 16, 1912.

2 SHEETS—SHEET 1.

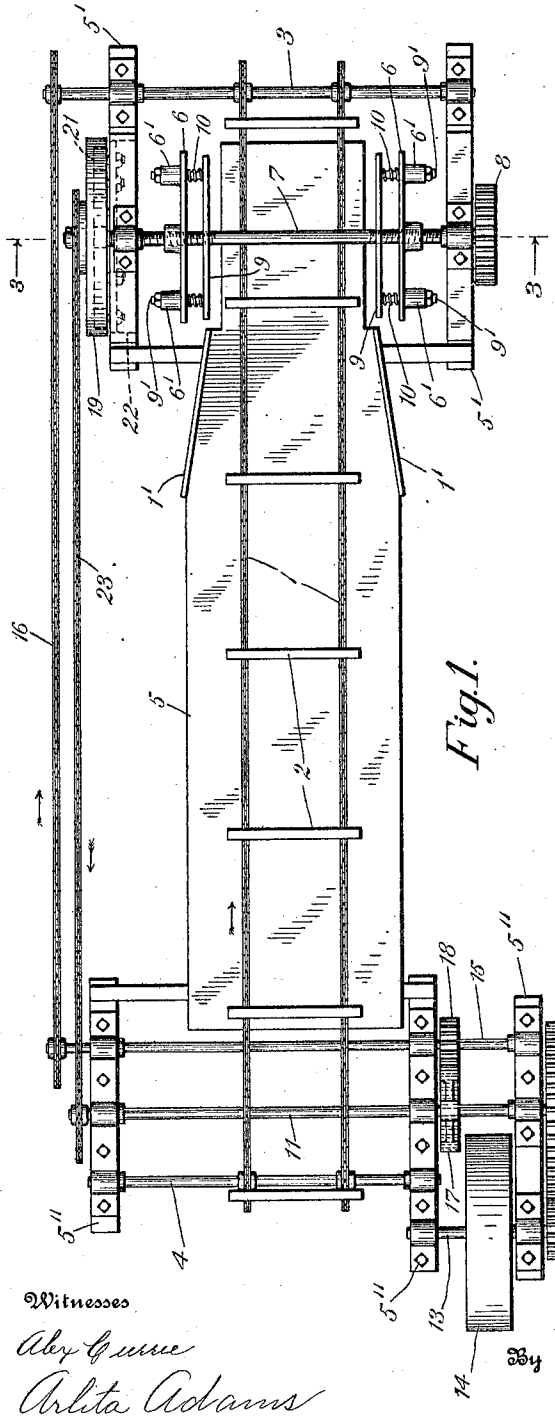

Fig. 1.

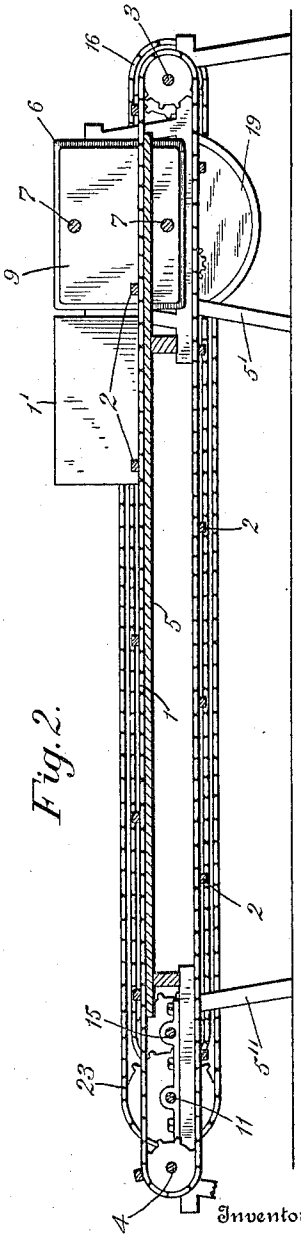

Fig. 2.

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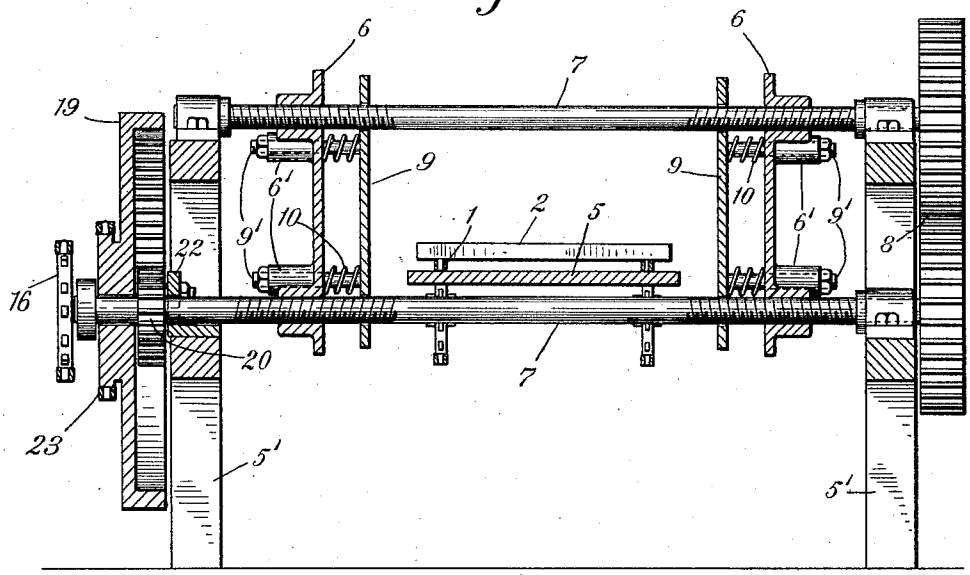
Fig. 3



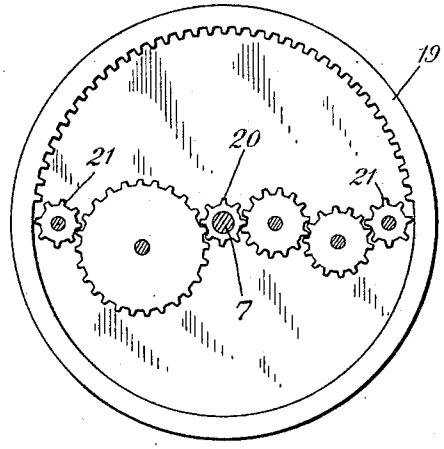


Fig. 4.

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UNITED STATES PATENT OFFICE.

ANDREW McCANN, OF FALL CITY, WASHINGTON.

SHINGLE-PRESS.

1,032,489. Specification of Letters Patent. Patented July 16, 1912.

Application filed June 1, 1909, Serial No. 499,585. Renewed February 8, 1911. Serial No. 607,414.

To all whom it may concern:

Be it known that I, ANDREW McCANN, a citizen of the United States of America, and a resident of Fall City, in the county of King and State of Washington, have invented certain new and useful Improvements in Shingle-Presses, of which the following is a specification.

The primary aim of my invention is to provide an improved press for compressing bundles to tighten the pack.

The invention resides in an efficient organization embracing novel features of construction, combination and arrangement of parts as hereinafter set forth and succinctly defined in the appended claims.

With reference to the accompanying drawings, wherein like reference numerals designate corresponding parts throughout: Figure 1 is a plan of a bundle press embodying my invention in such form as now preferred by me. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a vertical section on line 3—3 of Fig. 1, and Fig. 4 is a detail view of the reversing drive for operating the pressing mechanism.

The invention is particularly directed to the operation of compressing bundles of shingles endwise to tighten the packs, and includes a suitable conveyer in the form of endless belts 1 carrying flights 2 and passing about sprocket wheels secured to drive and idle shafts 3 and 4 respectively, which are mounted on suitable frame work at opposite ends of a supporting platform 5 extending beneath the upper runs of the belts.

Adjacent the head end of the conveyer are opposite press heads 6 having screw threaded engagement with upper and lower transversely disposed screws 7 connected by spur gearing 8 and rotatably supported on frame parts 5′ combined with platform 5. The screw threaded engagements between the screws and heads is suitable to effect movement of the latter in opposite directions when the screws are rotated, as clearly shown in Fig. 3. In common with platform 5 I have shown guides 1′ arranged to adjust the bundles on the conveyer as they are brought between the press heads.

The heads 6 are provided with adjustable spring pressed face plates 9 slidably receiving the screws 7 and having screw-threaded stems 9′ slidable in suitable bosses 6′ of respective heads and carrying on their outer end portions suitable adjusting nuts. By this arrangement the face plates may be adjusted as desired, while the springs 10 compensate for different degrees of looseness in the packing of shingles and thereby reduce the liability of bursting the bands of relatively tight bundles.

In conjunction with the conveyer and screw 7 I provide means for effecting intermittent movement of the former, and suitable rotations of the latter, to first apply the heads and then retract them relatively to the bundle, during pause of the conveyer. In this connection I have shown a main driving mechanism including a shaft 11 mounted on frame parts 5″ and connected by gearing 12 with a shaft 13 secured for rotation with a drive pulley 14. Shaft 11 has intermittent driving connection with a shaft 15, connected by link belt gearing, as 16 with conveyer shaft 3, through the medium of mutilated gearing comprising a segmental gear 17 and pinion 18 secured to shafts 11 and 15 respectively. The relative ratio for driving engagement between these gears is one full revolution of shaft 15 to one half revolution of shaft 11, consequently shafts 15 and 3 lie idle during the remaining part of each revolution of shaft 11.

The connection for driving the press screws includes a segmental internal gear 19 loosely mounted on lower screw 7, to revolve about a pinion 20 secured to said screw. This pinion meshes with opposite trains of gears rotatably mounted on a bracket 22 and including key pinions 21 equal in diameter to pinion 20. Gear 19 is connected with shaft 11 by link belt gearing 23 to be driven one to one and set relatively to gear 17 to effect the pressing operation during inactive movement of said gear.

In operation the bundles placed endwise across the conveyer and engaged with the flights, are presented successively between the heads 6 which are advanced for pressing action and retracted by the reverse gearing during each pause of the conveyer.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A press comprising rotatably mounted rods connected to operate in unison, work conveying means extending therebetween, and heads at opposite sides of said means for engagement with the ends of the work

conveyed and connected with the rods for movement thereby in relatively opposite directions.

2. A press comprising horizontal rotatably mounted rods connected to operate in unison, work conveying means extending between said rods, and heads at opposite sides of said means mounted on said rods and having screw threaded connections therewith for movement in relatively opposite directions.

3. A press comprising opposite heads, upper and lower horizontal head actuating means extending between said heads and supporting the same, and a conveying means passing between the heads and between said actuating means.

4. In a press, the combination of a rotatably mounted rod, a head having screw threaded connection therewith, and a face plate yieldingly supported from said head and movable on said rod.

5. In a press, the combination of a head, a rod extending through the head and having screw threaded engagement therewith, a face plate yieldingly supported from said head and movable on the rod, and means for adjusting said plate relatively to the head.

6. A press comprising a carrier, means for imparting a step by step movement thereto, means in the path of said carrier for pressing the work conveyed, means in the path of said carrier for adjusting the work conveyed thereon relatively to said second named means, and means operated by said first means for operating said second means for pressing after each movement of said carrier.

7. A press comprising a carrier, means for imparting a step by step movement thereto, spaced means arranged at the sides of said carrier for pressing the work conveyed, means in the path of said carrier for adjusting the work thereon relatively to said second means, and means operated by said first means for operating said second means for pressing after each movement of said carrier.

8. A press comprising a carrier, means for imparting a step by step movement thereto, two rotatably mounted rods one of which is arranged above said carrier and the other below the same, means connecting said rod for operation in unison, heads at the opposite sides of said carrier mounted on said rods and having screw threaded connection therewith for movement in relatively opposite directions, and means operated by said first means for imparting rotary movement to said rods for advancing said heads toward one another for pressing after each movement of said carrier.

9. A press comprising a carrier arranged to support shingles in bundles, means for imparting a step by step movement to said carrier, movable pressing heads supported at the sides of said carrier for engagement with the ends of the shingles, and means operated by said first means for operating said pressing heads toward one another after each movement of said carrier.

Signed at Seattle, Washington, this 19th day of May 1909.

ANDREW McCANN.

Witnesses:
J. E. PATRICK,
FRANK E. ADAMS.