

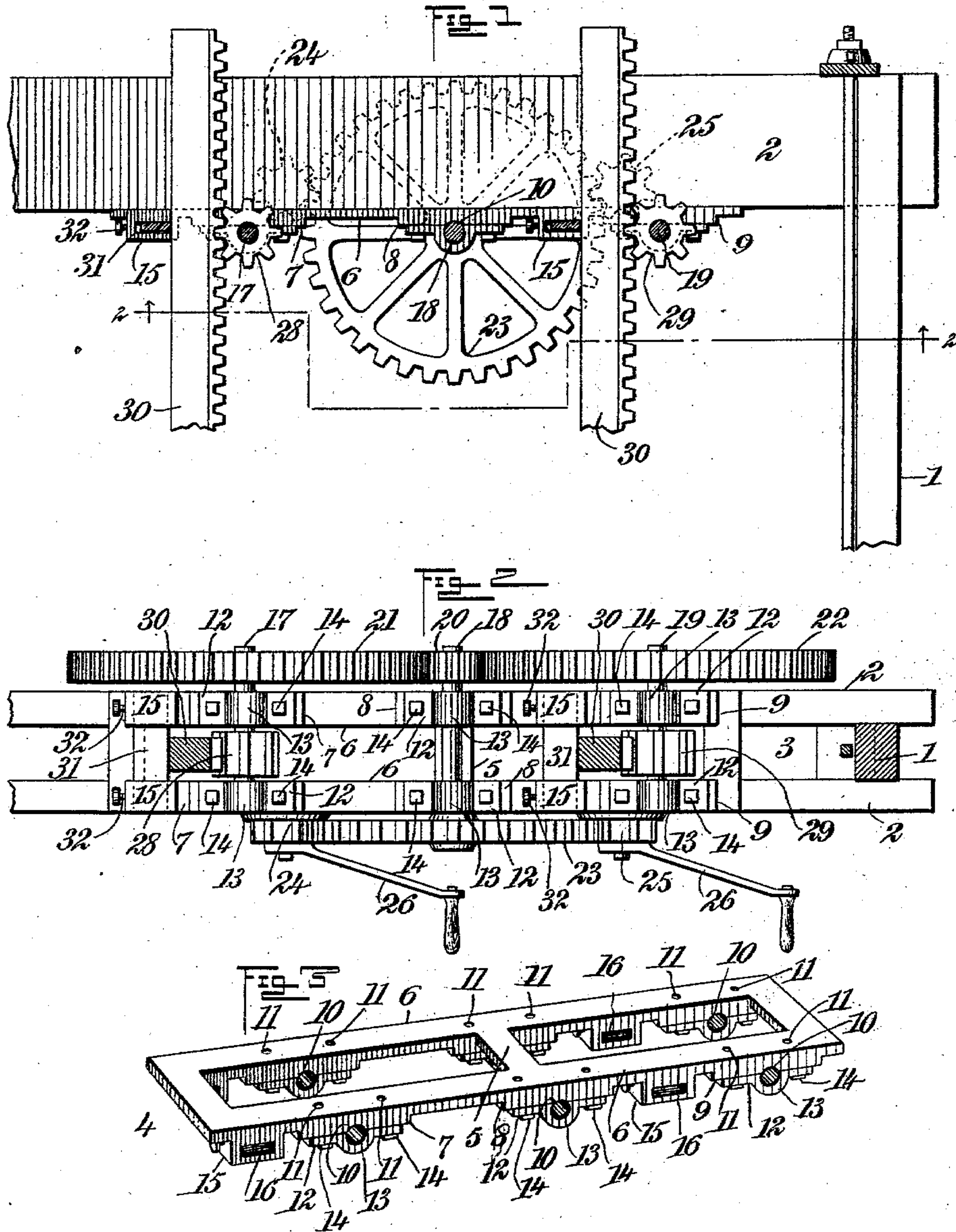
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F. J. COAD & E. BIDDLE.  
BED PLATE FOR BALING PRESSES.

APPLICATION FILED MAY 14, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANK J. COAD AND EDWARD BIDDLE, OF DALLAS, OREGON.

## BED-PLATE FOR BALING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 743,973, dated November 10, 1903.

Application filed May 14, 1903. Serial No. 157,134. (No model.)

*To all whom it may concern:*

Be it known that we, FRANK J. COAD and EDWARD BIDDLE, both citizens of the United States, and residents of Dallas, in the county of Polk and State of Oregon, have invented a new and Improved Bed-Plate for Baling-Presses, of which the following is a full, clear, and exact description.

This invention relates to presses; and it consists, substantially, in certain parts and details and combinations thereof, as hereinafter particularly described and claimed.

Though applicable to presses of other kinds, our improvements are intended more especially for use in connection with baling-presses and the like, and while we have herein represented the same in a certain preferred embodiment it will be understood, of course, that we are not limited to the precise details thereof in practice, since immaterial changes therein may be resorted to coming within the scope of our invention.

Considerable difficulty and expense are frequently encountered with many forms of baling-presses at present in use, due to the bearings and other elements thereof either spreading apart or getting out of alignment and which often results in the breaking out of the teeth and other parts of the different cogs, racks, and pinions employed or else causes such an excessive binding between these elements as to render it exceedingly difficult to operate the press.

One of the principal objects of our invention is to provide a baling-press with means whereby the above-mentioned difficulties and objections are overcome and to provide a baling-press which is strong and durable, besides being easily operated and possessing the capacity for long and repeated service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional elevation of the upper part of one form of baling-press having our improvements embodied in connection therewith. Fig. 2 is a sectional bottom plan view on the line 2 2 of Fig. 1, showing the general organization of elements more clearly; and Fig. 3 is a view in perspec-

tive illustrating the principal element of our improvements detached.

Before proceeding with a more detailed description it may be stated that in the form of our improvements herein shown we preferably employ a type of baling-press comprising vertically-disposed rack-bars which are operated through the medium of suitable gearing, said press also being provided at the upper part thereof with parallel horizontal frame timbers or members, and secured to the under side of these timbers or members are the principal devices or elements of our improvements, the latter being of special construction and organization whereby the intended objects of our invention are accomplished in a manner to reduce friction between the movable parts and to render the machine or press considerably stronger and more durable, besides more easily operated.

Specific reference being had to the drawings by the designating characters marked thereon, 1 represents a standard or upright portion of the baling-press, and 2 2 are duplicate parallel horizontal timbers or members supported in position in any suitable way and at the desired distance apart to form a space 3 between them.

Our present improvements relate, mainly, to the construction and organization of the means by which the principal movable elements of the press are held or supported in coöperative relationship with each other and comprise a continuous solid cast bed piece or plate 4 of any suitable metal and being substantially a rectangular frame in shape, said bed piece or plate preferably having a central connecting portion 5 between the longer members 6 thereof by which to impart increased strength thereto. As herein shown, this bed piece or plate 4 is formed on the under side thereof at appropriate points or places with three sets of duplicate integral sections 7, 8, and 9, which are each preferably of increased depth or thickness over the remaining parts of the plate, as shown, the sections of each pair being formed with corresponding substantially semicircular recesses 10 at practically the longitudinal centers thereof, also as shown. Formed in the said members 6 of the bed piece or plate on



opposite sides of each of the said recesses 10 are openings 11, and fitted to the under side of each of the integral sections referred to is a plate 12, which is curved downwardly at 5 13 opposite the corresponding recess 10, said plates being securely fastened to said sections by means of bolts 14, passing through openings (not shown) in each of the plates corresponding or registering with the sets of 10 openings 11, and said bolts 14 may also constitute the means for fastening the bed piece or plate to the under side of the said parallel timbers or members 2 2, although independent means may be employed therefor. Also 15 constituting integral parts of the under side of the members 6 of the bed piece or plate are two sets of opposite duplicate branches 15, each having substantially a rectangular slot 16 therein, one set being located, preferably, at one end of the said bed piece or plate 20 and the other set between the integral sections 8 and 9, as shown, although this arrangement may be altered or changed, if desired. The concentric duplicate sets of said 25 integral sections 7, 8, and 9 and their attached plates 12 constitute bearings or hangers for shafts 17, 18, and 19, respectively, (see Figs. 1 and 2,) the shaft 18 being provided at one end with a pinion 20, the teeth of which are in 30 mesh with the teeth of enlarged gear-wheels 21 and 22 on the corresponding ends of said shafts 17 and 19, respectively, and said shaft 18 is provided at its other end with a gear-wheel 23, the teeth of which are engaged on 35 opposite sides of said wheel by the teeth of pinions 24 and 25, mounted in any suitable manner to turn at one side of the upper part of the machine, as shown, the spindles of said pinions each having an operating crank or 40 handle 26, whereby an increased amount of power may be applied to said shafts 17 and 19 through the instrumentality of the intermediate elements already described. Carried by said shafts 17 and 19, intermediate of the 45 inner sides of the timbers or members 2 2, are the pinions 28 and 29, the teeth of each of which mesh or engage with the teeth of a vertically-movable rack-bar 30, (see Figs. 1 and 2,) and in order to maintain close and effective engagement between these parts we employ a key 31, located in the slot 16 of each pair of integral branches 15 of the bed piece or plate, said keys each being adjustable in 50 any suitable way, as by means of screws 32, whereby such engagement may be perfectly regulated, as is apparent.

From the foregoing the construction and operation of the parts will be fully understood, and it will be seen that in virtue of the 60 organization of the bed-plate and the parts directly associated therewith the different

bearings are maintained in true alinement without liability to spreading apart, this alone being a decided advantage in machines or presses of this kind. On operating the handles in the same direction the motion imparted thereto will be communicated to the racks to operate the latter, as and for the purpose well understood. 65

Having thus described our invention, we claim as new and desire to secure by Letters Patent— 70

1. The combination with the parallel upper horizontal members, triplicate transverse shafts geared together, and the duplicate rack-bars having engagement with the outer ones of said shafts, of a single continuous bed-plate detachably secured to the under side of said members, and carrying the bearings for the shafts, parts of said bearings being integral 75 with said plate, and the remaining parts detachably secured to said integral parts. 80

2. The combination with the parallel upper horizontal members, triplicate transverse shafts geared together, duplicate rack-bars 85 having engagement with the outer ones of the shafts, and adjusting-keys for holding the rack-bars to such engagement, of a single continuous bed-plate detachably secured to the under side of said members, and carrying the 90 bearings for the shafts, parts of said bearings being integral with said plate, and the remaining parts detachably secured to said integral parts, the plate also having integral slotted branches in which said keys are supported. 95

3. The combination with the parallel horizontal members, of a single continuous bed-plate secured to the under side of said members, and formed at suitable intervals with 100 triplicate pairs of oppositely-disposed integral sections, each section having a semicircular recess therein, and provided on its under surface with a plate bent downwardly adjacent the recess, said bed-plate being also 105 formed with duplicate pairs of oppositely-disposed integral branches, each having a rectangular slot therein, shafts supported by each pair of said integral sections and their attached plates, operating-gear for these shafts, 110 duplicate rack-bars having engagement with the outer ones of said shafts, and adjustable keys for said bars, working in the slots of said sets of integral branches of the bed-plate.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses. 115

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Witnesses:

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