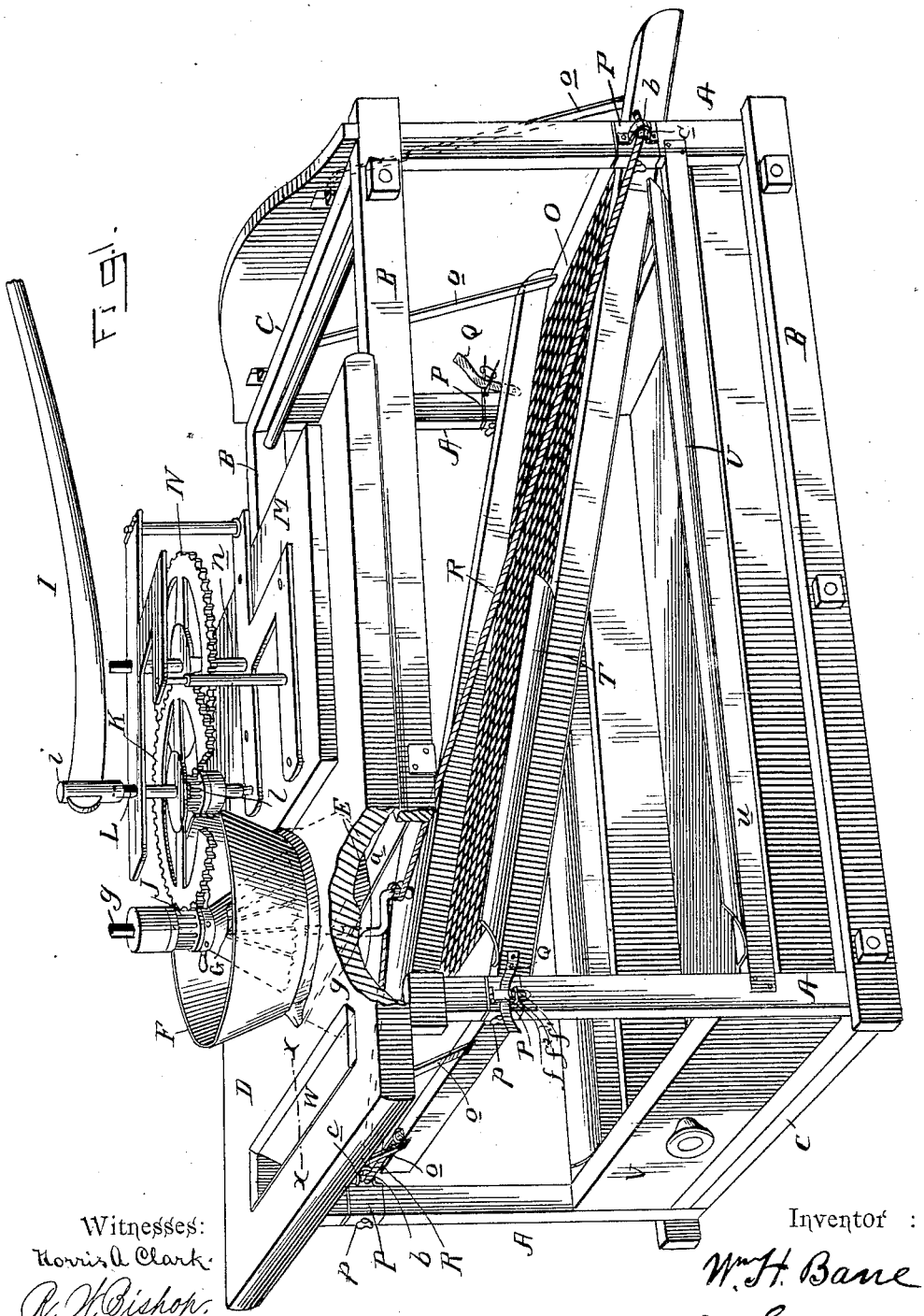
(No Model.) 2 Sheets—Sheet 1.

W. H. BANE.

SCREENING OR BOLTING MACHINE.

No. 342,166. Patented May 18, 1886.

Fig. 1.



Witnesses:
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Inventor:
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By his Attorney:
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(No Model.) 2 Sheets—Sheet 2.

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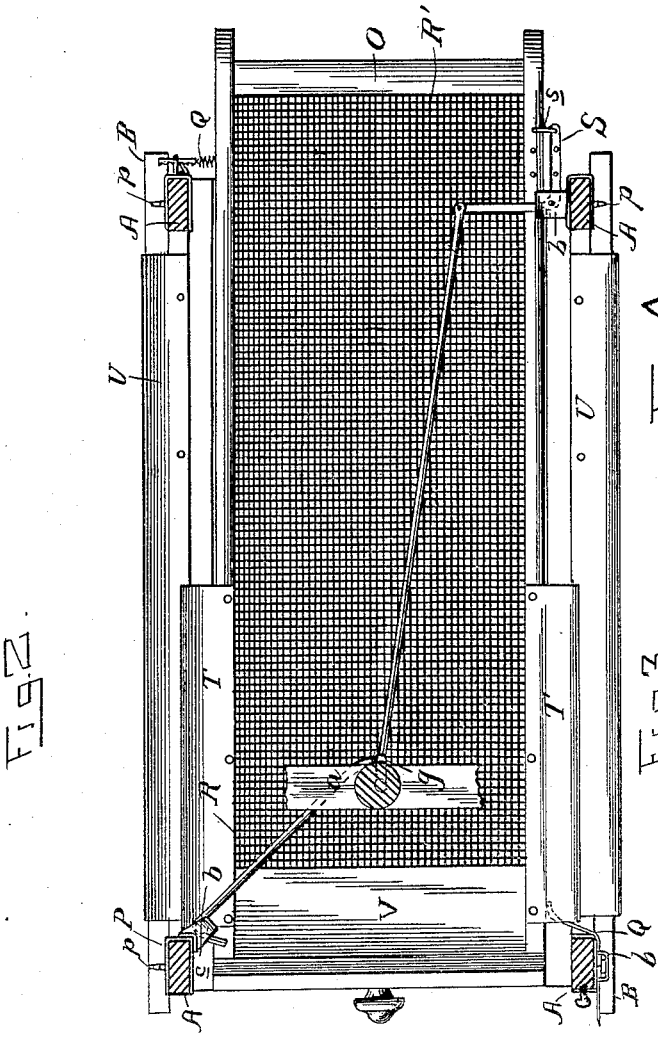


FIG. 2.

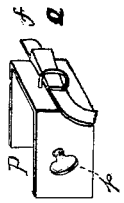
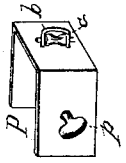


FIG. 4.



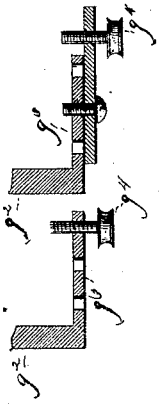


FIG. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY BANE, OF GALLIPOLIS, OHIO.

SCREENING OR BOLTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 342,166, dated May 18, 1886.

Application filed December 18, 1885. Serial No. 186,071. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY BANE, a citizen of the United States, residing at Gallipolis, in the county of Gallia and State of Ohio, have invented certain new and useful Improvements in Screening or Bolting Machines; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked theron, which form a part of this specification.

My invention relates to screening or bolting machines.

It consists in the details of construction shown and more fully hereinafter set forth and claimed.

In the drawings, Figure 1 is a perspective view of a machine constructed according to my invention, parts being broken away to better show the structure. Fig. 2 is a plan view with the top and grinding-mill and gearing removed, showing modifications in details of construction. Fig. 3 is a detail section of the lower end of the cone-shaft, showing the wrist-pin adjustably connected therewith. Fig. 4 is a detail perspective view of the castings on an enlarged scale.

The frame of the machine comprises posts A, upper and lower side and end bars, B and C, respectively, and the table D. A mill of the cone and shell type is supported on one end of the table in the usual manner, and driven by a train of gearing, the shafts of which project to afford a means for the application of a lever, I, having a socket-casting, *i*, to fit the ends of the several shafts *g*, L, and *n*, provided with the intermeshing gearing J, K, *l*, and N, respectively, whereby power or speed may be had, as occasion may require.

The shell E, hopper F, cone G, and the cone-bearing support *e* are of well-known construction, and are shown to illustrate the application of my improvements. Shaft *g* may be an integral part of or separate and keyed to the cone. Its lower end is provided with a crank-arm, g^3, having a wrist-pin, g^4, adjustably connected therewith. A shaking-screen, O, is suspended beneath the table D by hangers *o*, of rubber, leather, chains, or similar flexible material. Three-sided castings, P, are adjustably connected to the corner-posts by set-screws *p*. Each of the castings is provided with a staple or keeper, *b*. The castings on a pair of diagonally-arranged posts have each a pulley, *c*, vertically journaled in its keeper *b*, over which passes a cord or rope, R, having its ends attached to diagonally-opposite corners of the screen, said cord being in connection with and operated by the wrist-pin g^4 on the crank-arm of the cone-shaft. Elastic connections, Q, secured at one end to the other diagonally-opposite corner of the screen have the remaining ends adjustably connected with the castings on the second pair of diagonally-opposite posts, substantially in the manner shown, the form preferred being shown in Fig. 4, in which the end of the elastic connection is adjustably secured between the casting and a wedge, f', inserted beneath the keeper *b*. The elastic connections Q may be rubber or coil-spring, as desired.

The operation is manifest. Motion being imparted to the cone the crank on the end of its shaft will alternately pull and slacken that portion of the cord extending in opposite directions on each side thereof in such manner as to cause a side-to-side and up-and-down motion of the screen. The cord pulls against the elastic connections Q, and, when slackened, the tension of said connections gives the necessary backward pull to return the screen to its normal position. That portion of the rope to the right of the crank may be dispensed with and its place filled by a bell-crank lever, S, and connections R' *s*, as shown in Fig. 2. An upwardly-curved guard, T, is attached to each side of the screen, to prevent the ground material from dropping to the ground. Similar guards, U, are attached to side bars, *u*, and cause all the material falling from the screen to drop into a drawer or box, V, placed beneath the screen for the reception of such material.

A hopper, *w*, near the front end of the machine, communicating with the lower portion of the shell, is designed to supply small grain when it is desired to make oat-meal grits, cracked wheat, &c.

Having thus described my invention, what I

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

In a bolting-machine, the combination of a rectangular frame, a crank-shaft, a rectangular screen, flexible supports therefor, castings adjustably connected with the four corner-posts of the frame, adjustable elastic connections between the screen and the castings on two diagonally-opposite posts, connections uniting the crank-shaft with the other diagonally-opposite corners of the screen, and keepers on the adjacent castings for guiding said screen, substantially as shown and described.

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

WILLIAM HENRY BANE.

Witnesses:
F. F. THORNILEY,
A. S. ROUDANNOUR.