

(No Model.)

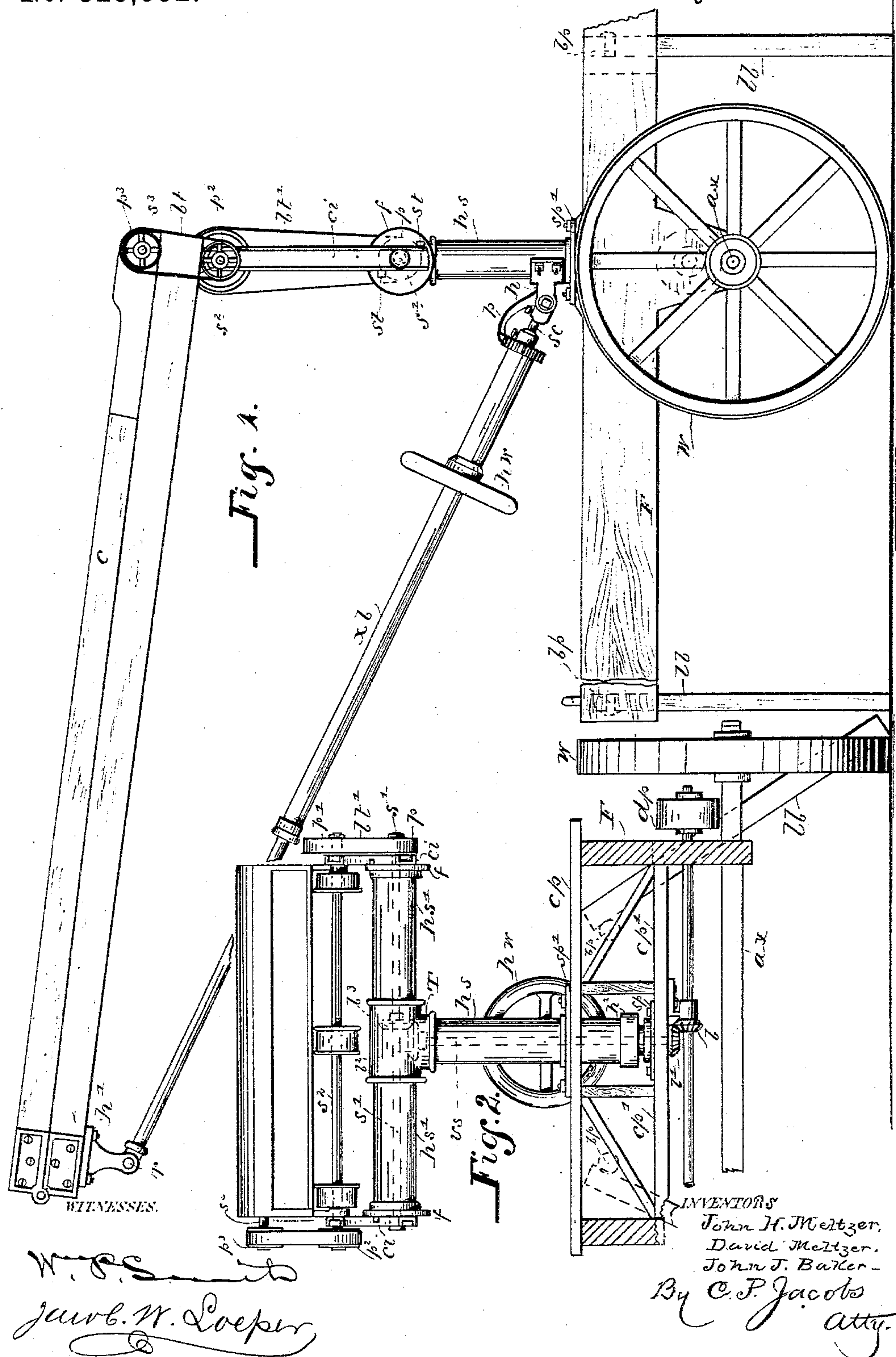
3 Sheets—Sheet 1.

J. H. & D. MELTZER & J. J. BAKER.

STRAW STACKER.

No. 323,352.

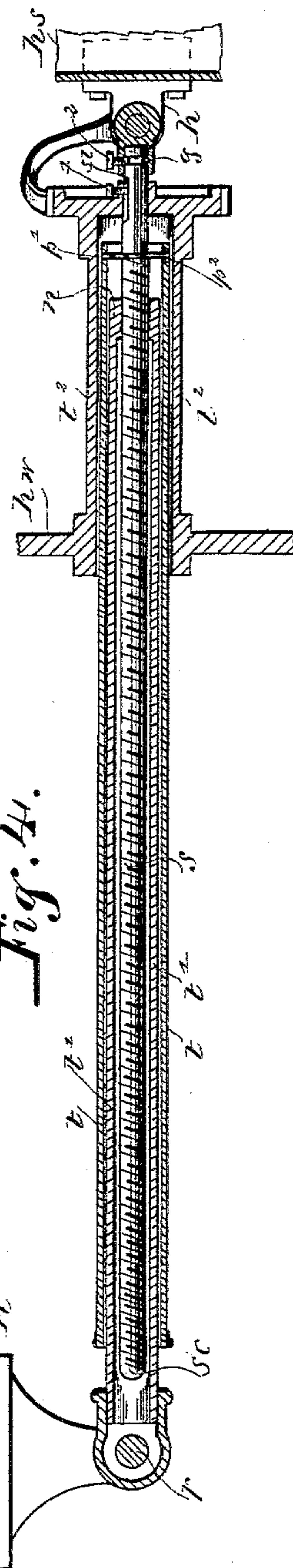
Patented July 28, 1885.



3 Sheets—Sheet 2.

STRAW STACKER.

Patented July 28, 1885.



REFERENCES

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(No Model.)

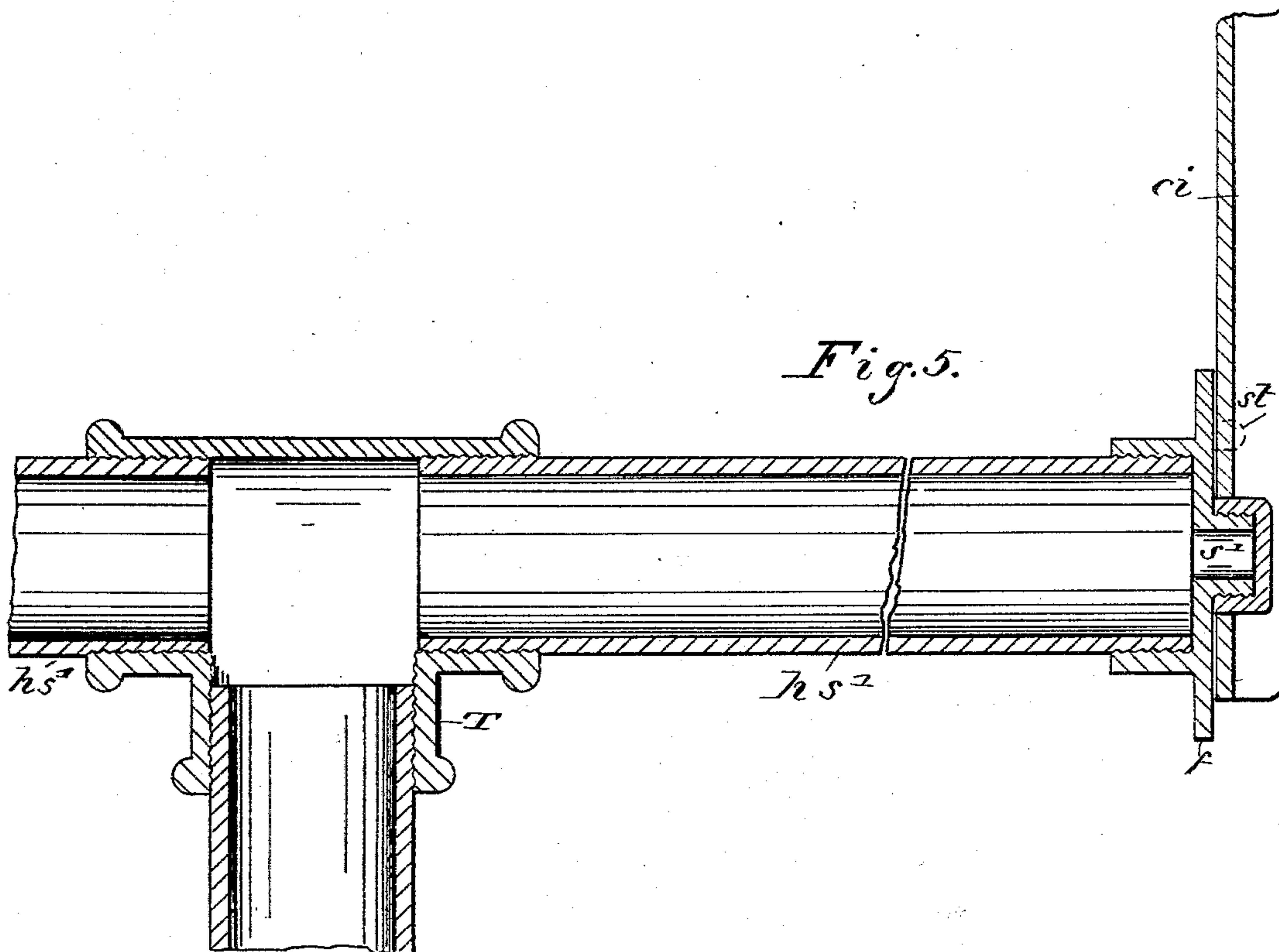
3 Sheets—Sheet 3.

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No. 323,352.

Patented July 28, 1885.



WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN HENRY MELTZER, DAVID MELTZER, AND JOHN J. BAKER, OF
MELTZER, INDIANA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 323,352, dated July 28, 1835.

Application filed August 14, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. MELTZER, DAVID MELTZER, and JOHN J. BAKER, residents of Meltzer, Shelby county, Indiana, have made certain new and useful Improvements in Straw-Stackers, a description of which is set forth in the following specification, reference being made to the accompanying drawings, in the several figures of which like letters indicate like parts.

Our invention relates to the construction of straw-stacking machines, and is an improvement on the machine for which Letters Patent No. 282,210 were issued to us, jointly with our assignees, on the 31st day of July, 1883.

In the drawings, Figure 1 represents a side view of the machine, the carrier raised but not opened its entire length. Fig. 2 is an end view looking from the rear, one wheel being removed for want of space on the sheet. Fig. 3 is a side view, the carrier being let down upon the frame, the hollow standard *hs*, being shown in vertical section and the hollow cross-pipe *hs'* being shown in cross-section, the rear wheel being also removed, showing the axle and driving-shaft in cross-section. Fig. 4 is a longitudinal section of the extension-brace and its upper and lower connections, showing the interior construction and arrangement of the parts; and Fig. 5 is a longitudinal vertical central section through the hollow cross-pipe *hs'*, showing the hubs flanged and bored.

In detail, *w* are the two wheels, having an axle, *ax*, upon which rest the sills of the frame *F*, as shown in Fig. 3. In the cross end pieces of this frame are driven brace-pins *bp*, which form rests upon the sides of the adjustable leveling-braces *lb*. Two of these braces are placed at each end of the frame in the manner shown in Fig. 2. Each one of these braces consists simply of a plain straight piece of wood, of such length that, when one end rests upon the ground, the brace passing up under the sill will extend far enough in an oblique direction so that the under side of its top end may rest against one of the brace-pins, while its upper edge impinges against the under side of the sills. It will be seen, therefore, that the brace is easily extensible in the direction of its length by moving it along by

the hand. One of these, being placed on each side of each end of the frame, as shown in Fig. 2, makes a firm support for such frame, and by means of them the machine may be firmly placed and evenly supported on uneven ground, either in connection with or independent of the truck-wheels *w*. The braces, having no rigid connection whatever with the frame-work, but simply resting upon the brace-pin at the top and the ground at the bottom, passing under the sills of the frame, may be readily set up or taken down or adjusted by the operator, and need no slots, thumb-screw, or overlapping parts to make them effective.

We are aware that leveling-braces for use in connection with straw-stackers are not broadly new, and therefore do not broadly claim the same as our invention. Above the axle is seen a driving-shaft, *ds*, with driving-pulley, *dp*, on one end, as shown in Fig. 2. This driving-shaft has bearings in the sills of the frame. Upon this shaft, near its center, is mounted a bevel gear-wheel, *b*, which meshes with another, *b'*, mounted on the lower end of the vertical shaft *vs*, which passes up through a wooden cross-piece, *cp'*. (See Fig. 2.) An iron socket-plate, *sp*, bolted to the top of *cp'* through the hub *h'*, which is fitted to revolve in the socket-plates *sp*, passing upward through hollow standard *hs* and cap *k*, and on its upper end is mounted a bevel-gear, *b'*, which meshes with a bevel-gear, *b''*, mounted on the end of the shaft *s'*, which runs at right angles to shaft *vs*, and inside a horizontal hollow cross-pipe, *hs'*, which is connected with hollow standard *hs* by the union-piece *T*. (See Fig. 2.) The upright hollow standard is secured to an upper cross-piece, *cp*, by means of a rim and flange and bolts, as shown in Fig. 3. The shaft *s'* and shaft *s''* above it (See Fig. 2) have bearings at each end in channel-irons *ci*, (see Fig. 1,) and a pulley, *p*, on one end of shaft *s'* is connected by belt *bt'* with pulley *p'* on the end of shaft *s''*. On the other end of this shaft *s''* is fixed pulley *p''*, which is connected by belt with pulley *p'''* on shaft *s'''*, which drives the fan, and is shown in our former patent. On the end of hollow shaft *hs'* are flanged hubs *f*, having stops *st* on the faces on opposite sides to limit the movement of channel-iron *ci*, as shown in Fig. 1.

The carrier-frame *c* is made of two parts, hinged together, and has the usual endless slatted belt inside, moved by means of power communicated through the belt *bt*. By a hinge, *h*, bolted to the outside of the upright hollow standard *hs*, the extension-brace *xb*, hinged also at its upper end to the carrier-frame just below its middle, may be made to revolve, inasmuch as the lower end of *hs* revolves in the socket or step formed in the upper part of the hub *h*². This extension-brace is an improvement on the one shown in our former patent, and consists of an outer short tube, *t*², to which the hand-wheel *hw* is attached for turning it, a tube, *t*, of greater length, fitting loosely in tube *t*²; a third tube, *t'*, having a nut, *n*, at its lower end, and a screw, *s*, running about the entire length of the tube *t'*, and working in the thread of the nut *n*. At the lower end of the screw *s* are two annular grooves. The upper one of these, opposite pins *p'* *p*², fastened in the sides of the tube *t*, moves as the screw is turned, and prevents the tube *t* from working upward when the screw revolves. The lower annular groove receives set screw 2, passing through a projection of the jaws of the hinge *h*, and this set-screw allows the screw *s* to turn, and yet prevents it from getting away from the hinge *h* as it revolves. A slot, *sl*, is also formed in the lower end of the screw *s*, which receives the set-screw 1, which, passing through a projection on the rear of the flange formed on the tube *t*², holds the screw to tube *t*². On the rear end of tube *t*² a ratchet-wheel, *rw*, (see Fig. 3,) is formed, which is engaged by a twisted pawl, *p*, mounted on the bolt of hinge *h*. Thus, as hand-wheel *hw* is turned, screw *s* revolves with it, and pushes, by nut *n*, the tube *t'* outward, and lifts the carrier-frame, and a reverse movement withdraws the screw and lowers the carrier-frame, and the pawl *p*, engaging the teeth of the ratchet-wheel *rw*, holds it at any desired point.

What we claim, and desire to secure by Letters Patent, is the following:

1. In a stacker, the combination of a two-wheel truck and means whereby the framework is adapted to be sustained independent of the wheels, comprising solid leveling-braces at each end, their lower ends resting upon the ground, the braces passing obliquely upward and under the sills, and brace-pins driven

into the cross-pieces of the frame for supporting the upper ends of the braces and allowing their ready adjustment to any suitable length, substantially as shown and described.

2. The adjustable leveling-braces *lb*, each consisting of a straight solid piece of wood, the frame *F*, the brace-pins *bp*, driven into the cross-pieces of said frame, wheels *w*, axle *ax*, carrier *c*, extension-brace *xb*, standard *hs*, channel-irons *ci*, and the connection with the carrier-frame, all combined, substantially as described.

3. The combination, with a carrier-frame and its support, of the extension-brace *xb*, composed of tube *t*², having hand-wheel *hw*, ratchet-wheel *rw*, tube *t*, having pins *p'* *p*² at its lower end, tube *t'*, hinged at *v* to hanger *h'* and provided with nut *n* at its lower end, a screw, *s*, adapted to work in said nut *n*, hinge *h*, set-screws 1 2, and pawl *p*, mounted on the bolt of hinge *h*, substantially as described.

4. The combination, with frame *F*, of the hollow upright standard *hs*, hub *h*², socket-plate *sp*, seated on cross-piece *cp'* of the frame *F*, the horizontal pipe *hs'*, having flanges *f* at either end, union *T*, vertical shaft *vs*, bevel-gears *b b'* *b*² *b*³, shaft *s'*, channel-irons *ci*, stops *st*, driving-shaft *ds*, and pulley *dp*, all operating substantially as described.

5. The combination of the upright hollow standard *hs*, the inclosed vertical shaft *vs*, the carrier-frame *c*, standard *hs*, means for supporting the receiving end of said carrier, and the extensible brace *xb*, comprising a series of pipes, and the screw rod and nut for throwing the inner one out or drawing it in, the whole brace connected with the standard *hs* and adapted to swing round with such standard, all arranged and operating substantially as described.

6. The combination of shafts *ss'*, hollow standard *hs*, union *T*, cross-pipe *hs'*, and flanged hubs bored to form journal-bearings for shaft *s'*, all substantially as described.

In witness whereof we have hereto set our hands this 24th day of June, 1884.

JOHN HENRY MELTZER.

DAVID MELTZER.

JOHN J. BAKER.

Witnesses:

JACOB QUERY,

JAMES TILLISON.