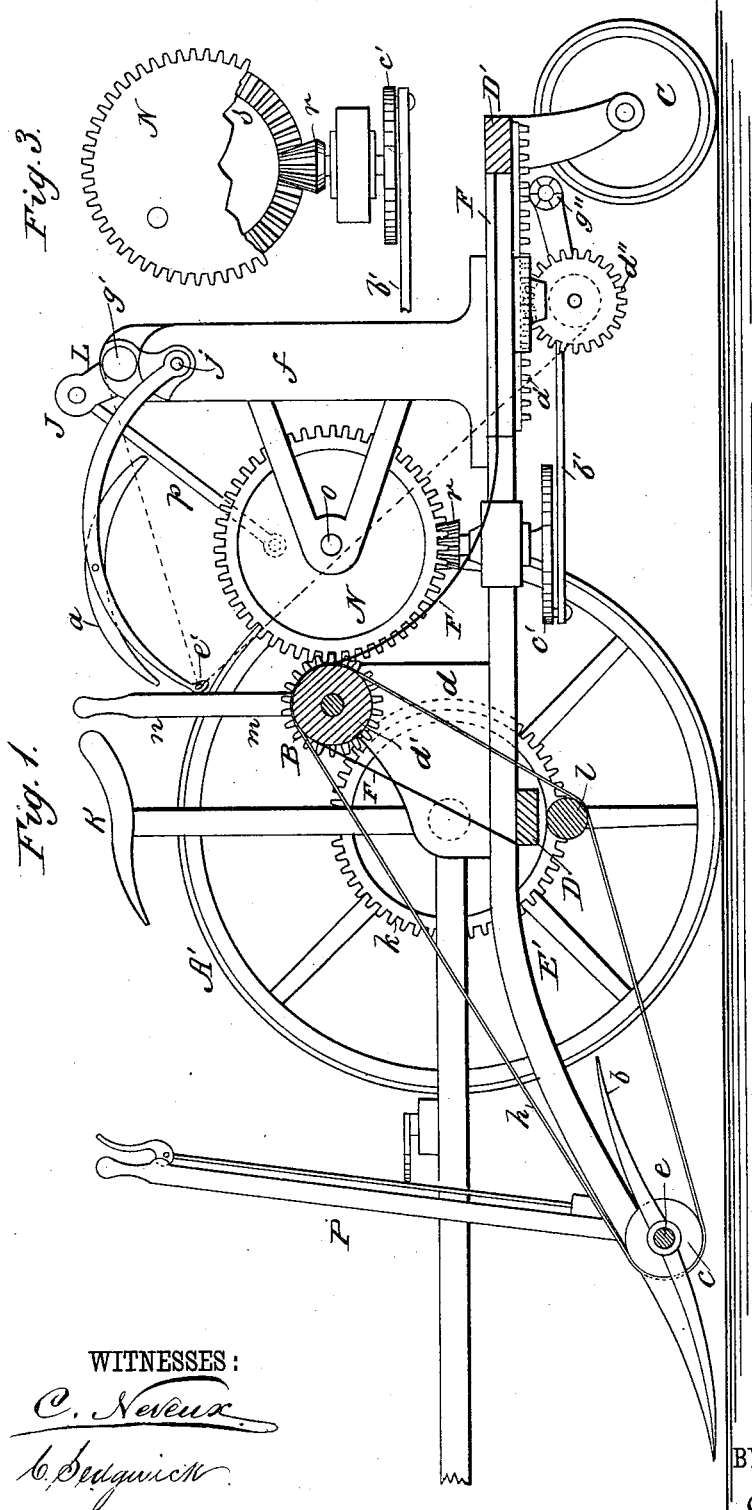


J. F. MAHON.

GLEANNING AND BINDING MACHINE.

No. 266,489.

Patented Oct. 24, 1882.



WITNESSES:

C. Newell
C. Sedgwick

INVENTOR:

J. F. Mahon
BY *Munn & Co*
ATTORNEYS.

(No Model.)

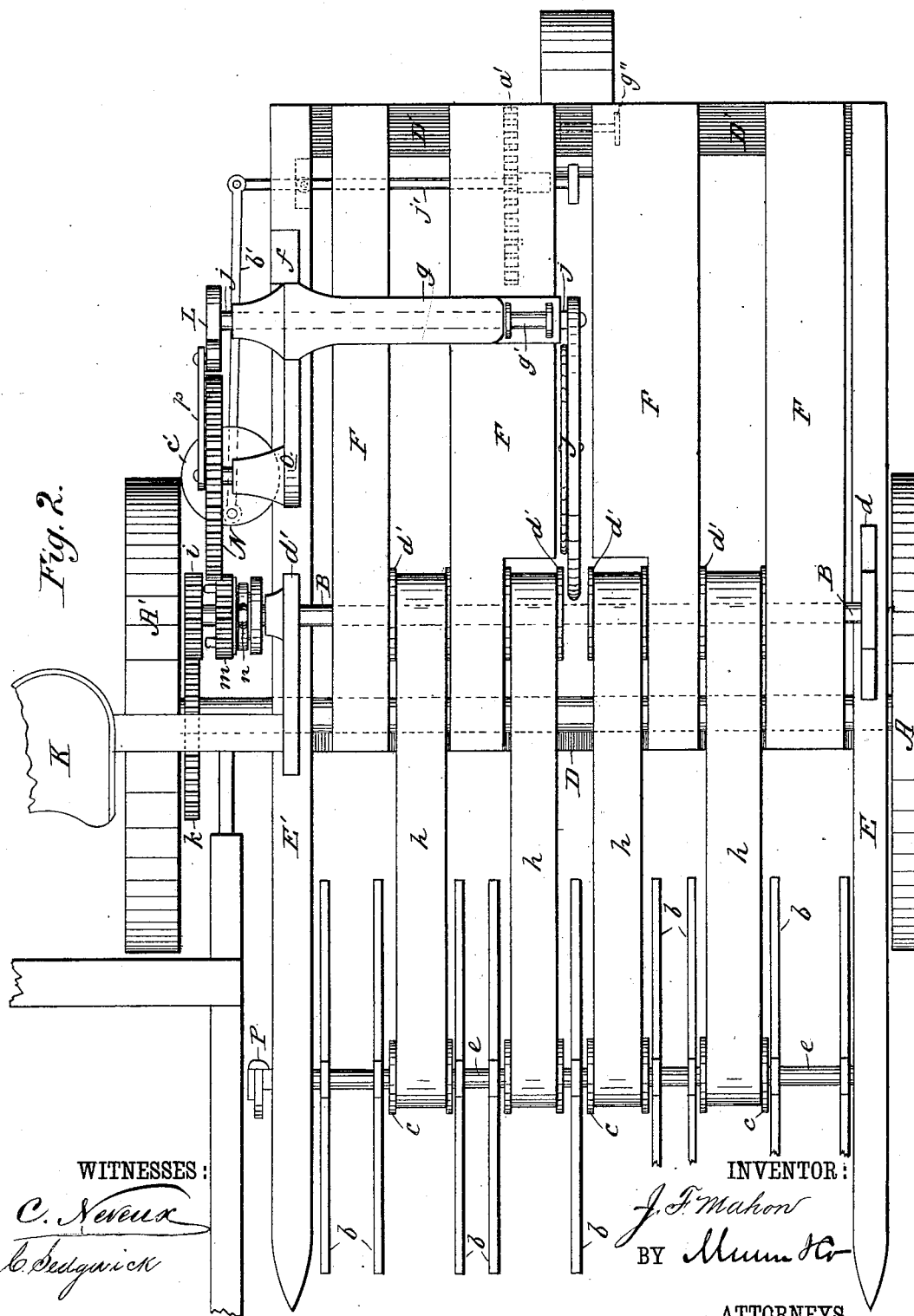
2 Sheets—Sheet 2.

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INVENTOR:

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BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN FRANCIS MAHON, OF LONDON, ONTARIO, CANADA.

GLEANNING AND BINDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 266,489, dated October 24, 1882.

Application filed November 25, 1881. (No model.) Patented in Canada January 13, 1882, No. 13,969.

To all whom it may concern:

Be it known that I, JOHN F. MAHON, of London, in the Province of Ontario and Dominion of Canada, have invented a new and useful
5 Improvement in Gleaning and Binding Machines, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
10 corresponding parts in all the figures.

Figure 1 is a sectional elevation of my improved gleaning and binding machine. Fig. 2 is a plan view of the same; and Fig. 3 is a
15 detailed view, showing the horizontal crank and connecting-rod.

The frame of the machine is supported upon the drive-wheels A and A', and upon the rear wheel, C.

20 To the main cross-piece D of the frame of the machine are attached the two side pieces, E E', which extend to the front and rear of the said cross-piece.

Near the downwardly-curved forward ends
25 of the side pieces, E E', is supported in suitable brackets or bearings the rod or cross-bar e, upon which the gathering fingers or teeth b, and the rollers c, over which the endless elevator-belts h pass, are placed. The top rollers,
30 d', of the elevators h are placed upon the shaft B, which is journaled in the brackets d d, secured upon the side pieces, E E', above and slightly in rear of the main cross-piece D, as shown.

35 Behind the top rollers, d', and forming a part of the main frame, is the binding-table, which is formed of the downwardly-curved plates F F, of sheet metal or other suitable material, the forward ends of which pass over the shaft
40 B and are secured to the cross-piece D, the rear ends being attached to the rear cross-piece, D', of the frame.

Upon the upper side of the side piece, E', is placed the vertical arm or bracket f, which
45 supports the horizontal hollow arm g, which incloses the shaft j, which shaft carries at its outer end the curved binding-arm J, to which is pivoted a compressor-arm, a.

To the shaft B, over which the elevators h h
50 pass, is keyed the pinion i, which is caused to

revolve continuously by means of the cog-wheel k, which is secured to and revolves with the main drive-wheel A', whereby the endless elevators are kept continually in motion.

Below the main cross-piece D of the frame
55 is placed the roller l, under and in contact with which the elevators h h pass, so that when the machine is in motion the elevators will be guided by the said roller l under and out of contact with the main cross-piece D, as will be
60 clearly understood from the drawings.

Upon the shaft B is placed the loose sliding clutch-pinion m, which is adapted to be moved upon the shaft by the hand-lever n to engage
65 with the pinion i, so as to revolve therewith, and thus cause the large cog-wheel N, which latter is journaled on a gudgeon formed upon or attached to the bracket o, secured to the vertical arm f, to revolve for communicating
70 motion to the binding-arm J, which is done through the medium of the connecting-rod p, which connects the lever L of the shaft j eccentrically with the said cog-wheel N, as shown in the drawings.

Upon the arm g, near its outer end, is placed
75 the spool g', upon which the binding wire or cord is to be wound.

To fit the machine for binding, the end of the binding wire or cord on the spool g' is first to be passed through the eye e', formed in the end
80 of the curved binding-arm J, and thence down between the central plates, F F, of the binding-table to the knotting or twisting device, placed under the binding-table in the same vertical
85 plane with the binding-arm, so that when a sufficient amount of grain to form a bundle shall have been elevated by the gathering-fingers b and the endless elevators h h and deposited upon the binding-table, upon setting
90 the binding mechanism in operation by movement of the clutch-pinion m the binding-arm will be forced down, compressing the grain and carrying the binding-cord around the gavel
95 down to the knotting or twisting device, where the loop around the gavel will be secured and the cord or wire cut for releasing the bundle. When the binding-arm shall have been brought
back to place again the loose clutch-pinion m will be moved out of engagement with the fast
100 pinion i and cog wheel N by the lever n; or a

spring may be used to throw it out of engagement with the said pinion and cog-wheel when the lever is released to await the gathering of sufficient grain for another bundle, when the operation is to be repeated. The knotting or twisting mechanism may be of any approved construction, and it is put in operation simultaneously with the downward movement of the binding-arm J by means of the rack *a'*, which meshes with the pinion *d''*, the rack being moved forward and backward by means of the lever *j*, connecting-rod *b'*, and the horizontal crank *c'*, which latter receives motion from the pinion *r*, which meshes with the cogs *s*, formed on the side of the cog-wheel N, as clearly shown in Fig. 3.

In order that the gathering fingers or teeth may be kept the proper distance from the ground, I provide the rod *e* with the handle-ver P, which is in convenient reach of the driver, as clearly shown in Fig. 1 of the drawings.

Two strands being advisable when wire is used for binding, I provide the machine with the spool *g''* under the frame of the machine for the second strand to be wound upon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the drive-wheel A',

provided with the pinion *k*, the shaft *e*, provided with the gathering-fingers *b* and the rollers *c*, the elevators *h*, and the gear-wheel N, of the shaft B, provided with the rollers *d'*, the fast pinion *i*, and the sliding pinion *m*, and means for operating said pinion, substantially as and for the purpose set forth.

2. The combination, with the drive-wheel A', provided with the pinion *k*, and the elevator-shaft B, provided with the fast pinion *i* and the sliding pinion *m*, of the upright arm *f*, the bracket O, the gear-wheel N, the rod *p*, the crank-shaft *j* L, the hollow arm *g*, and the binding-arm J, substantially as and for the purpose set forth.

3. The combination, with the drive-wheel A', provided with the pinion *k*, the shaft B, provided with the fast pinion *i* and the sliding clutch-pinion *m*, and the gear-wheel N for operating the binding-arm, of the pinion *r*, the crank *c'*, the connecting-rod *b'*, the lever *j*, rack *d*, and pinion *d''*, substantially as and for the purpose set forth.

JOHN FRANCIS MAHON.

Witnesses:

ALBERT BEDDOE,
Of the city of London, Canada, Solicitor's Clerk.
J. W. J. OWENS,
Of the same place, Law Clerk.