

**No. 632,074.**

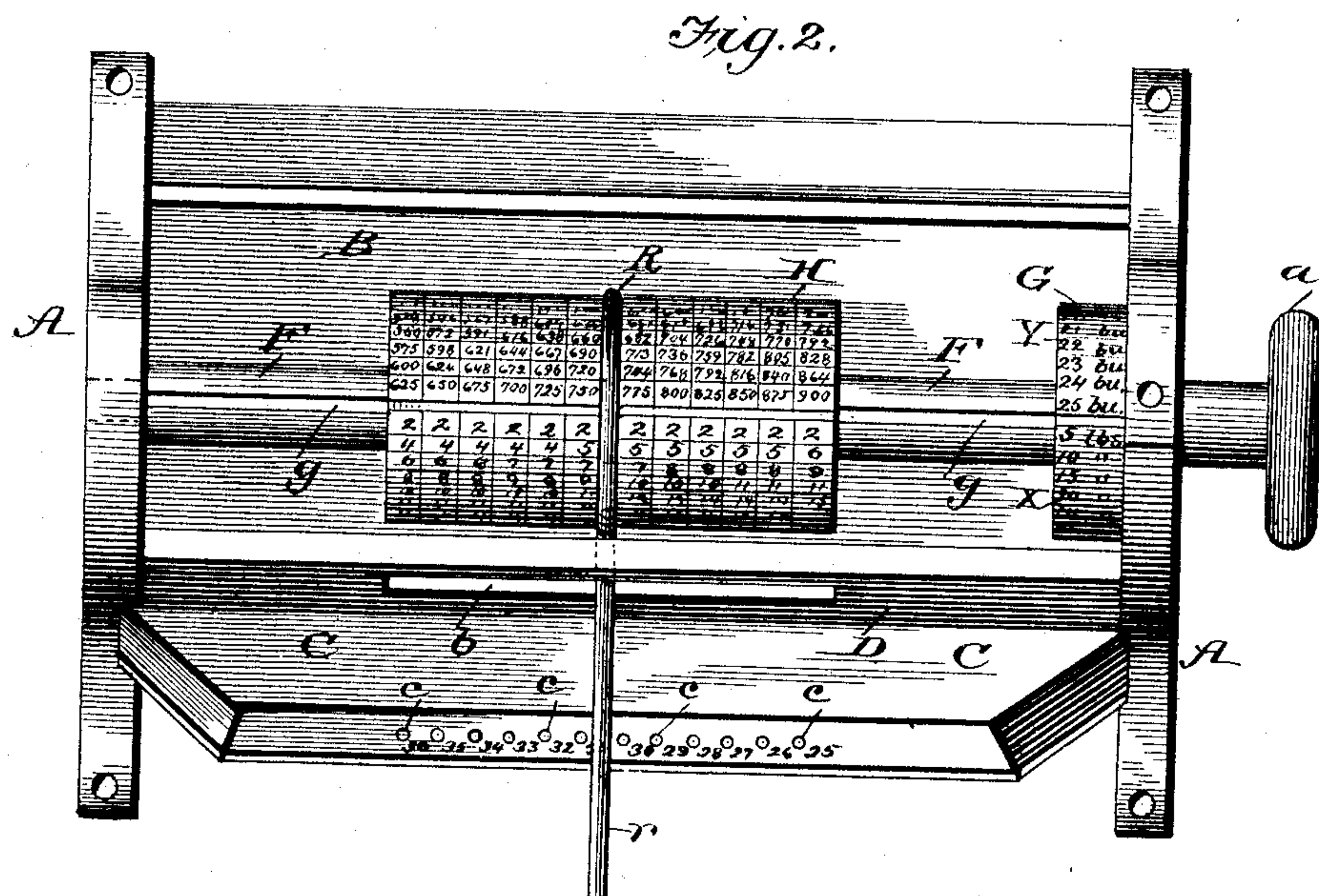
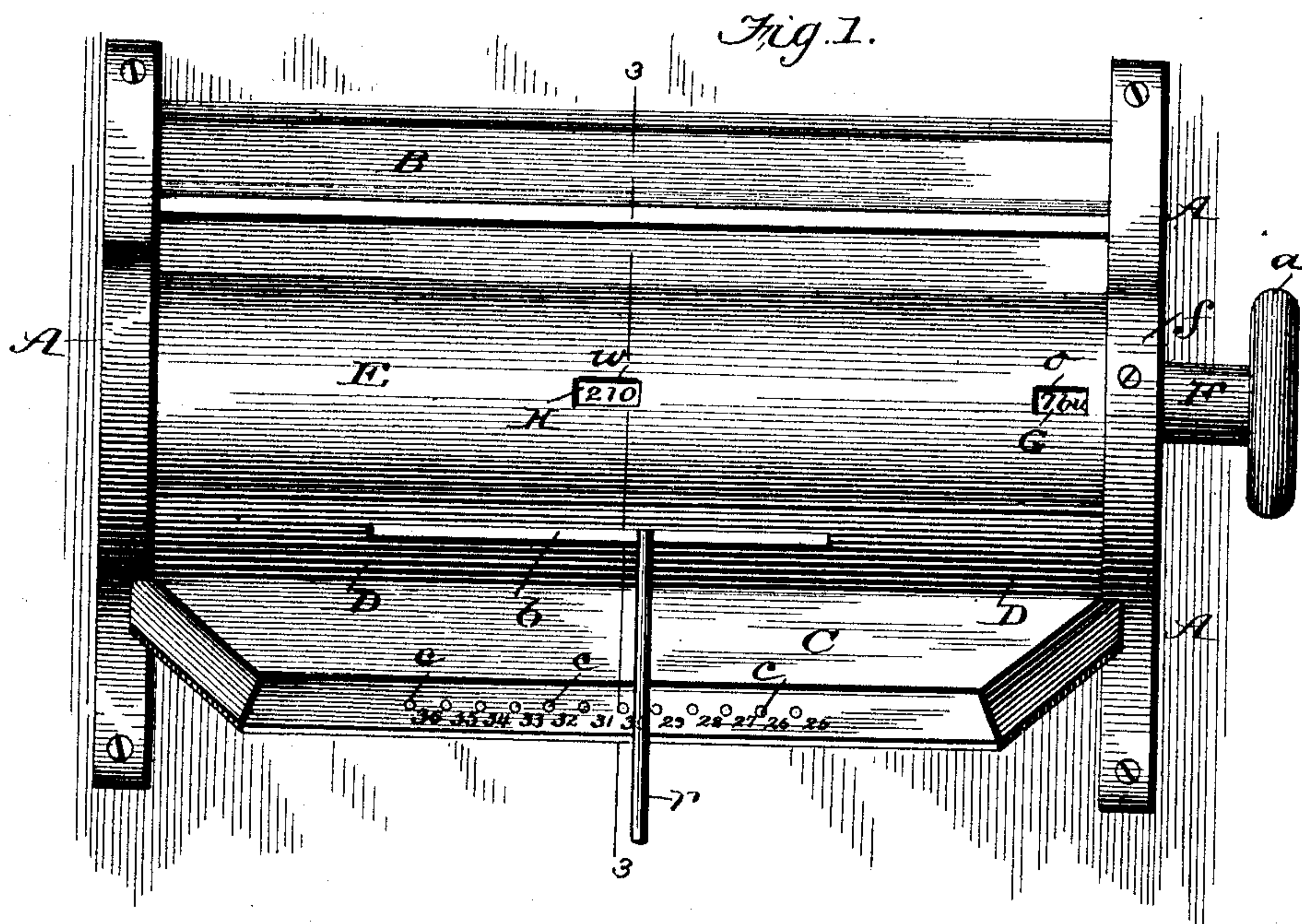
**Patented Aug. 29, 1899.**

**J. J. WALL & H. ROGALSKY.**  
**COMPUTING MACHINE.**

(No Model.)

(Application filed May 27, 1899.)

2 Sheets—Sheet 1.



WITNESSES:

WITNESSES:  
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**INVENTORS.**

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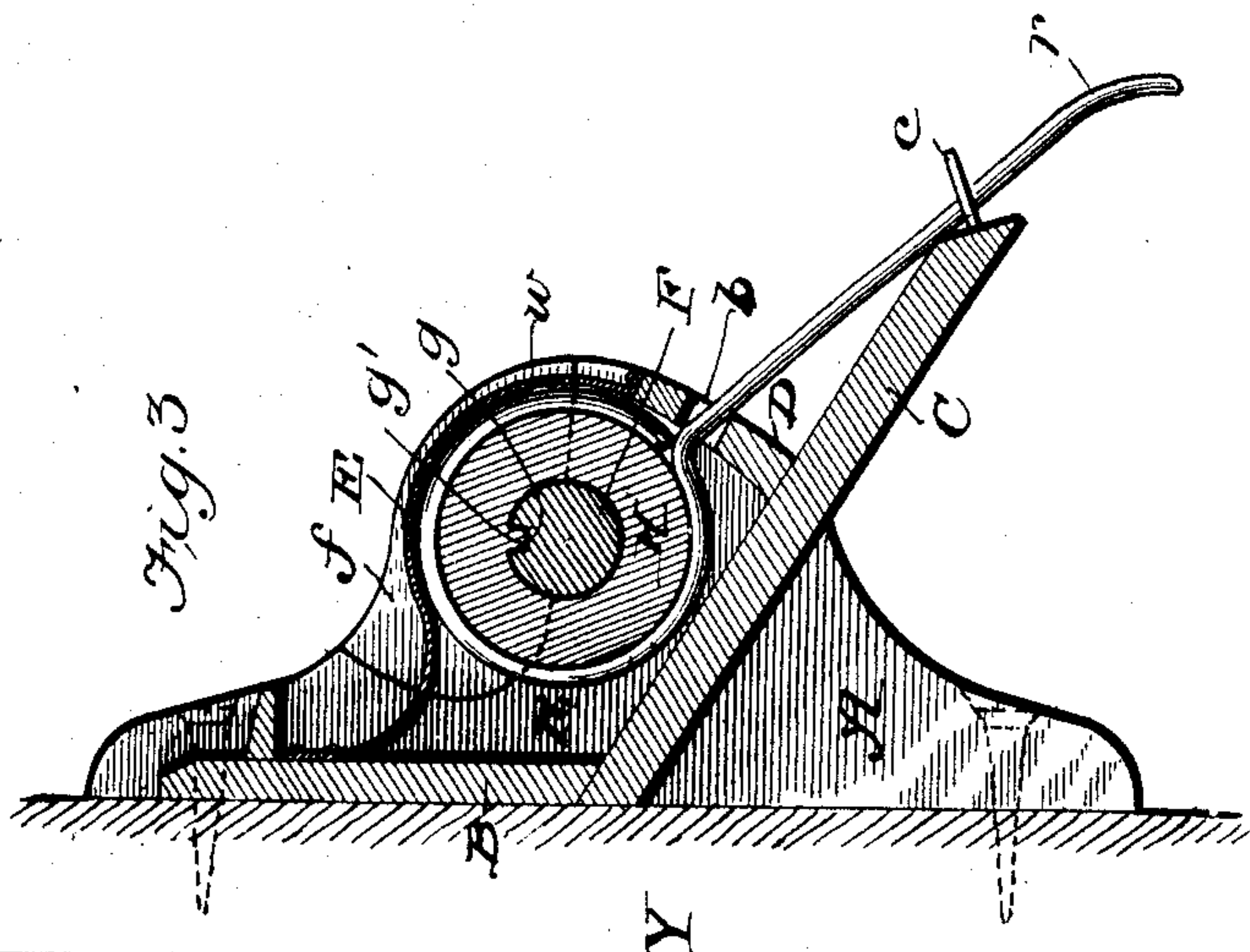
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2 Sheets—Sheet 2.



POUNDS OF FLOUR																WHEAT
25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	5 pounds
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	10 "
4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	15 "
6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	20 "
8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	25 "
10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	30 "
12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	35 "
14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	40 "
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	45 "
18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50 "
20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	55 "
22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	60 "
24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	2 bushels
50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	3 "
75	78	81	84	87	90	93	96	99	102	105	108	111	114	117	120	4 "
100	104	108	112	116	120	124	128	132	136	140	144	148	152	156	160	5 "
125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	6 "
150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	7 "
175	182	189	196	203	210	217	224	231	238	245	252	259	266	273	280	8 "
200	208	216	224	232	240	248	256	264	272	280	288	296	304	312	320	9 "
225	234	243	252	261	270	279	288	297	306	315	324	333	342	351	360	10 "
250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	11 "
275	286	297	308	319	330	341	352	363	374	385	396	407	418	429	440	12 "
300	312	324	336	348	360	372	384	396	408	420	432	444	456	468	480	13 "
325	338	351	364	377	390	403	416	429	442	455	468	481	494	507	520	14 "
350	364	378	392	406	420	434	448	462	476	490	504	518	532	546	560	15 "
375	390	406	420	435	450	465	480	495	510	525	540	555	570	585	600	16 "
400	416	432	448	464	480	496	512	528	544	560	576	592	608	624	640	17 "
425	442	459	476	493	510	527	544	561	578	595	612	629	646	663	680	18 "
450	468	486	504	522	540	558	576	594	612	630	648	666	684	702	720	19 "
475	494	513	532	551	570	589	608	627	646	665	684	703	722	741	760	20 "
500	520	540	560	580	600	620	640	660	680	700	720	740	760	780	800	21 "
525	546	567	588	609	630	651	672	693	714	735	756	777	798	819	840	22 "
550	572	594	616	638	660	682	704	726	748	770	792	814	836	858	880	23 "
575	598	621	644	667	690	713	736	759	782	805	828	851	874	897	920	24 "
600	624	648	672	696	720	744	768	792	816	840	864	888	912	936	960	25 "
625	650	675	700	725	750	775	800	825	850	875	900	925	950	975	1000	

WITNESSES:

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Edw. W. Ryan

Fig. 4

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Herman Rogalsky

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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN J. WALL AND HERMAN ROGALSKY, OF BUHLER, KANSAS.

## COMPUTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 632,074, dated August 29, 1899.

Application filed May 27, 1899. Serial No. 718,582. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN J. WALL and HERMAN ROGALSKY, of Buhler, in the county of Reno and State of Kansas, have invented a new and useful Improvement in Computing-Machines, of which the following is a specification.

The object of our invention is to provide, for the use of merchant and custom millers and others, a convenient computing-machine for the purpose of finding out at a glance how many pounds of flour or feed are to be given in exchange for a certain amount of bushels or pounds of wheat at a certain number of pounds to the bushel, thus saving much valuable time in computing and also avoiding the possibility of error in separately figuring the amounts.

It consists in a simple and convenient mechanical apparatus provided with suitable tables and arranged to be quickly adjusted to give the desired result, as will be hereinafter more fully described with reference to the drawings, in which—

Figure 1 is a front elevation of the machine. Fig. 2 is a front view with the casing removed. Fig. 3 is a vertical cross-section on line 3 3 of Fig. 1, and Fig. 4 shows the tables which are fixed upon the periphery of the cylinders in the machines, which tables are in this figure displayed as laid out flat.

A A represent two end brackets which are secured to a back board B and an inclined shelf C, which, together with a slotted front board D and sheet-metal cover E, form the case of the machine. As shown, all the parts except the front cover E are made of wood; but they may be made of metal or any other suitable material. The brackets are provided with screw-holes or other means for hanging the machine against a vertical wall, or the framework may be constructed with a base, so as to stand alone.

Within the hollow chamber of the case there is arranged a horizontal shaft F, journaled in bearings within the brackets, one of which is formed with a detachable upper section F to permit the shaft to be inserted or removed. On the outer end of this shaft there is a hand-wheel *a* or other suitable device for turning the shaft, and within the inclosure of the case the shaft carries a rigid

short cylinder G and a loose long cylinder H. The rigid short cylinder G is near the end of the shaft inside one of the brackets, and the loose cylinder H slides longitudinally on the shaft, but revolves with it, such connection being secured by means of a groove *g* and feather *g'* or by an angular shaft in a manner well known. Loosely connected to this cylinder and swiveling in a peripheral groove there is a ring or yoke R, which has a rigidly-attached arm *r*, which protrudes through the horizontal slot *b* in the front board. This ring allows the cylinder to turn within it; but when the ring is moved laterally by means of the arm *r* the cylinder is shifted longitudinally on the shaft. On the lower edge of the shelf C there are a series of pins *c*, marking subdivisions into which the arm *r* is dropped according as the cylinder is shifted one way or the other.

Before describing the operation of this machine it will first be necessary to understand the tables and their use, reference being had to Fig. 4.

In the vertical columns the heading row of figures "25" to "36" represent the number of pounds of flour per bushel. The side row X of figures at the top represent fractional parts of a bushel or pounds of wheat from five to sixty and the side row Y of figures below it represent bushels of wheat from one to twenty-five. The intersection of the horizontal readings in the upper section with the vertical readings of that section will give the pounds of flour or fractions of a bushel, and the intersection of the horizontal readings of the lower section with the vertical readings will give the pounds of flour in bushels. To illustrate, let us suppose that a customer brings in wheat to be exchanged for flour on a basis of thirty pounds to the bushel and he has seven bushels and fifteen pounds of wheat. Looking down in the lower section of figures in the column Y we find seven bushels, and running this horizontally to the heading of the vertical column indicating thirty pounds to the bushel we find the amount in pounds is two hundred and ten pounds. Then finding in the column X above the fifteen pounds of wheat and running it to the vertical column indicating thirty pounds to the bushel we find it is seven, which added to



two hundred and ten makes two hundred and seventeen pounds of flour to be given the customer for his seven bushels and fifteen pounds of wheat. Now applying these tables to the cylinder of the machine the column of figures X and Y, indicating bushels of wheat and pounds of wheat or fractions of a bushel, is applied to the short cylinder G, so as to completely cover its periphery and form a rotary index. The main tables, Fig. 4, are applied to the periphery of the long cylinder H, so as to completely cover its surface, care being taken that the horizontal readings on the two cylinders are exactly opposite each other, as they are in Fig. 4. Now in the sheet-metal case there are two openings or windows *o* and *w*, of which *o* is opposite the periphery of the short cylinder G and *w* opposite the long movable cylinder. The spacing-pins *c* are numbered with the pounds per bushel from "25" to "36" in opposite progression to the table-readings of Fig. 4, so that when the arm *r* is shifted to the extreme left to the space 36 then the column-spacing on the cylinder on the extreme right will come opposite to the window *w*.

To operate the machine, all that is necessary to do is to turn the cylinder by the external hand-wheel until the number of bushels of wheat to be exchanged is observed through the opening *o* on the rotary index, and then the arm *r* being already adjusted to the number of pounds to the bushel on the scale *c* the operator reads off at the opening *w* the number of pounds of flour. If fractions of a bushel in pounds are to be considered, the hand-wheel is turned until the portion of the table X of the rotary index comes around and the readings are taken from this in the same way.

It will be understood that the machine may be made of any size and its tables adapted to any range of use.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. A computing-machine comprising an enclosing casing, a rotary shaft, a loose cylinder bearing tables on its periphery and connected to the shaft so as to slide longitudinally thereon but revolve with it, means for adjusting it longitudinally, and a rotary index fixed rigidly to the shaft and related in its position to the longitudinal readings of the sliding cylinder substantially as and for the purpose described.

2. A computing-machine comprising an enclosing casing, a rotary shaft with means for turning it, a loose cylinder sliding on the shaft but turning with it and bearing tables as described, an arm loosely connected to the cylinder so as to move it without interfering with its rotation, an external set of seats or subdivisions numbered as described and adapted to receive the arm, a rotary index fixed to the shaft rigidly and related to the longitudinal readings of the cylinder-tables, and an external case with openings or windows *o w* substantially as and for the purpose described.

3. A computing-machine comprising an outer case having end brackets with journal-bearings, and a front part with a longitudinal slot and two windows *o* and *w*, a horizontal shaft F bearing rigid index-cylinder G, and a sliding table-cylinder arranged to revolve with the shaft, an arm having a swiveling connection with the sliding cylinder and protruding through the horizontal slot, numbered subdivisions *c* arranged to receive the arm and locate the figures on the cylinder in relation to the window *o*, and means for turning the shaft substantially as and for the purpose described.

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HERMAN ROGALSKY.

Witnesses:

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